



PART - A : INTRODUCTORY MICROECONOMICS

UNIT - 1 : INTRODUCTION

Chapter - 1 : Introduction

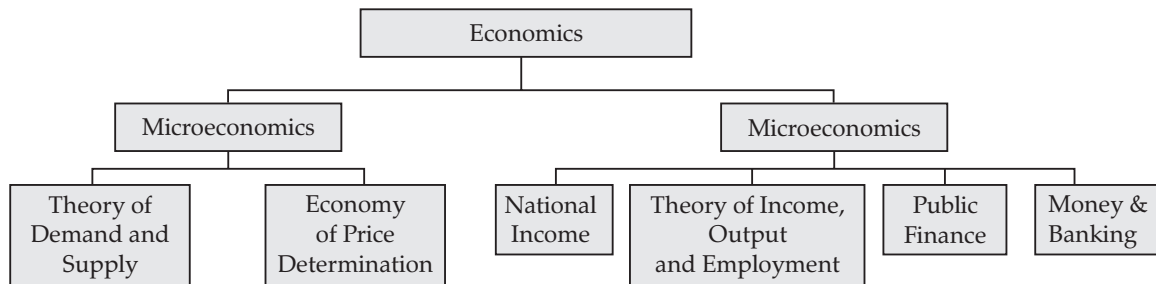


TOPIC-1

An Introduction to Economics

Quick Review

- Microeconomics studies the behaviour of an individual economic unit. **Example** : Demand of an individual consumer, Production of a firm, etc.
- Macroeconomics studies the behaviour of the economy as a whole.
Example : Aggregate Demand, National Income, etc.
- Positive economics is the branch of economics that concerns the description and explanation of economic phenomena. It focuses on facts and cause-and-effect behavioural relationships and includes the development and testing of economic theories. Positive economics is objective and fact based.
- Normative economics is a part of economics that expresses value or normative judgments about economic fairness or what the outcome of the economy or goals of public policy ought to be. Normative economics is subjective and value based.
- **Subject matter of economics:**



Know the Terms

- **Economy** : An economy is a system that helps to produce goods and services and enables people to earn their living.
- **Economics** : It is a social science which studies the way a society chooses to use its limited resources, which have alternative uses, to produce goods and services and to distribute them among different groups of people.
- **Economic Problem** : Economic problem is the problem of making the choice of the use of scarce resources for satisfying unlimited human wants.



TOPIC-2

Economy and Its Central Problems : Production Possibility Curve and Opportunity Cost

Quick Review

- **Causes of economic problems are :**
 - (a) Unlimited Human Wants
 - (b) Scarcity of Economic Resources
 - (c) Alternative uses of Resources

- **Central Problems of an Economy** : At the micro level, every economy faces three central problems, i.e., what to produce, how to produce and for whom to produce.
 - (a) **What to Produce** : The problem of 'what to produce' arises as the producers have limited resources. In an economy because of scarcity of resources, producers are unable to produce everything in bulk but they will have to make a choice as to which one is important as a whole so that limited resources can be rationally managed. Problem of 'what to produce' involves two-fold decisions : kinds of goods to be produced and quantum of goods to be produced.
 - (b) **How to Produce** : It is concerned with how to organise production. This problem is related to the choice of technique of production. It arises due to the availability of various techniques for the production of a commodity such as Labour-Intensive Technique and Capital-Intensive Technique.
 - (c) **For Whom to Produce** : The problem of 'for whom to produce' is the problem of distribution of produced goods and services. At the micro level, the decision relates to different sets of buyers in the economy. In an economy, producers would obviously be inclined to produce more for the rich buyers to maximise their profits but, government also intervenes to regulate the use of resources so that enough production is done for the poorer sections of the society also.
- **Properties of PPC** : The two basic characteristics or properties of PPC are :
 - **PPC slopes downward** : It slopes downwards from left to right because more of one good can be produced only by taking resources away from the production of another good.
 - **PPC is concave shaped** : PPC is concave shaped because of increasing MRT, that is, more and more units of a commodity are sacrificed to gain an additional unit of another commodity.
- **Attainable Point** : Any point that lies either on the production possibility curve or to its left is said to be an attainable point.
- **Unattainable Point** : The points that lies to the right of production possibility curve is said to be an unattainable point.
- **Efficient Point** : An efficient point is one that lies on the PPC.
- **Inefficient Point** : The Point that lies within the curve is said to be an inefficient point.
- **Shifts in PPC** : The PPC can shift either towards right or left, when there is change in resources or technology with respect to both the goods.
- **Rotation of PPC** : Rotation of PPC takes place when there is change in resources or technology with respect to only one good.



UNIT - 2 : CONSUMER'S EQUILIBRIUM AND DEMAND

Chapter - 2 : Consumer's Equilibrium: Utility Analysis & Indifference Curve Analysis



TOPIC-1

Consumer's Equilibrium and Utility Analysis

Quick Review

- Consumer is an economic agent who consumes final goods and services to fulfil his basic needs
- The consumer is in equilibrium when, given his income and market prices, he plans his expenditure on different goods and services, in such a manner that he maximises his total satisfaction.
- Law of diminishing marginal utility states that as more and more units of a commodity are consumed, marginal utility derived from every additional unit must decline.
- **Law of Equi-Marginal utility** : The law of equi-marginal utility states that the consumer will distribute his money income between the goods in such a way that the utility derived from the last rupee spent on each goods is equal.
- **Consumer Equilibrium in case of a Single Commodity** : A consumer purchasing a single commodity will be at equilibrium when he is buying such a quantity of that commodity which gives him maximum satisfaction. Being a rational consumer, he will be at equilibrium when marginal utility is equal to the price paid for the commodity *i.e*

$$\frac{MU_x}{P_x} = MU_m$$

- **Consumer Equilibrium in case of Two Commodities** : A consumer purchasing two commodities will be at equilibrium when he spends his limited income in such a way that the ratios of marginal utilities of two commodities and their respective prices are equal and MU falls as consumption increases, i.e.,

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_m$$

- **Conditions of Consumer's Equilibrium using Marginal Utility Analysis** :
 - (i) Marginal utility per rupee must be the same across all goods purchased by the consumer.
 - (ii) Marginal utility of money remains constant.
 - (iii) Law of diminishing marginal utility remains valid.
- **Relationship between Total Utility and Marginal Utility** :
 - (i) When MU is positive, TU will be increasing.
 - (ii) When MU is zero, TU is maximum.
 - (iii) When MU is negative, TU will be decreasing.

Know the Terms

- **Utility** : Wants satisfying capacity of goods and services is called utility
- **Marginal Utility** : It refers to an additional utility on account of the consumption of an additional unit of a commodity. It is calculated as:

$$MU = TU_n - TU_{(n-1)} \text{ or } MU = \frac{\Delta TU}{\Delta Q}$$

- **Total Utility** : It is the sum total of utility derived from the consumption of all units of a commodity.
- **Cardinal Measurement of Utility** : It is that measurement of utility which is measured in terms of units like 2, 4, 6, 8, etc.
- **Ordinal Measurement of Utility** : Comparison of utility depending on consumer's tastes and preferences is called Ordinal Measurement of Utility. It is measured in terms of ranks.
- **Marginal Rate of Substitution (MRS)** : It refers to the number of units of good Y which the consumer is willing to sacrifice for an additional unit of good X. It is expressed as : AY/AX.



TOPIC-2 Indifference Curve Analysis

Quick Review

- Consumer's preferences becomes monotonic if the consumer between various bundles of two goods, prefers the bundle which has more of atleast one of the goods and no less of other goods as compared to the other bundle.
- **Properties or Characteristics of Indifference Curves** :
 - (i) It slopes downwards from left to right.
 - (ii) Indifference Curves are convex to the origin.
 - (iii) Indifference Curves will never intersect each other.
 - (iv) A higher Indifference Curve represents higher level of satisfaction.
 - (v) Indifference Curve neither touches X-axis nor Y-axis.
- **Indifference Map** : It refers to a set of indifference curves corresponding to different income levels of the consumers. An indifference curve which is to the right and above another indifference curve corresponds to higher level of income and therefore, represents higher level of satisfaction.
- **Conditions of Consumer's Equilibrium** :
 - (i) $MRS_{xy} = \frac{P_x}{P_y}$
 - (ii) At the point of equilibrium, Indifference Curve is convex to the origin.
- Monotonic preference means that a rational consumer always prefers more of a commodity as it offers him a higher level of satisfaction.
- **Change in Budget Line** : There can be parallel shift (leftwards or rightwards) due to change in income of the consumer and change in price of goods.

Know the Terms

- **Consumer's Bundle** : It is a quantitative combination of two goods which can be purchased by a consumer from his given income at given prices.

- **Budget set** : It is quantitative combination of those bundles which a consumer can purchase from his given income at prevailing market prices.
- **Budget Set** : $P_x \cdot X + P_y \cdot Y < M$
- **Budget Line** : It is a line showing different combinations of two goods which a consumer can buy by spending his whole income at given price of the goods.
- **Budget line** : $M = P_x \cdot x + P_y \cdot y$
- **Consumer Budget** : It states the real income or purchasing power of the consumer from which he can purchase certain quantitative bundles of two goods at given price.
- **Monotonic Preferences** : Consumer's preferences are called monotonic when between any two bundles, consumer always choose a bundle having more of one good and no less of other goods.
- **Indifference Set** : It is a set of those combinations of two goods which offer the consumer the same level of satisfaction, so that the consumer is indifferent across any number of combinations in his indifference set.
- **Indifference Curve** : It is a curve showing different combination of two goods, each combinations offering the same level of satisfaction to the consumer.

OR

- **Indifference Curve** : A curve which is graphical presentation of an indifference set showing different combinations of two commodities between which a consumer is indifferent.
- **Indifference Map** : It refers to a set of indifference curves placed together in a diagram.

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Chapter - 3 : Demand and Elasticity of Demand



TOPIC-1 Demand and Law of Demand

Quick Review

- **Demand** : The quantity of a commodity that a consumer is willing and able to buy at each possible price during a given period of time.
- **Demand Schedule** : Demand schedule is that schedule in which relationship between price and quantity demanded is exhibited.
 - (a) **Individual Demand Schedule** : It is a tabular representation of different quantity of goods demanded by an individual at different prices in a different time period.
 - (b) **Market Demand Schedule** : It is a schedule that show different quantities of a commodity that all the consumers in the market are willing to buy at different possible prices of the commodity at a point of time.
- **Demand curve and its slope** :

Demand Curve : Demand Curve is a graphic presentation of a demand schedule showing the relationship between different quantities of a commodity demanded at different possible prices during a given period of time.

$$\text{Slope of demand curve} = \frac{\text{Change in price}}{\text{Change in quantity demanded}} = \frac{\Delta P}{\Delta Q}$$
 - (a) **Individual Demand Curve** : It is a curve showing different quantities of a commodity that one particular individual buyer is ready to buy at different possible prices of a commodity at a point of time.
 - (b) **Market Demand Curve** : It is a curve showing different quantities of a commodity that all the buyers in the market are ready to buy at different possible prices of a commodity at a point of time.
- **Demand Function** : It is the functional relationship between demand of a goods and factors affecting it. It is expressed as :

$$D_x = f(P_x, P_r, Y, T, E \dots\dots\dots)$$
- **Determinants of Demand** : Important determinants of demand are:
 - (a) Price of commodity,
 - (b) Price of related commodities,
 - (c) Money income of the consumers,
 - (d) Tastes and preferences of consumers,
 - (e) Changes in weather conditions,
 - (f) Changes in population,
 - (g) Distribution of income,

- (h) Changes in structure of population,
- (i) Changes in quantity of money,
- (j) Distribution of National Wealth,
- (k) Phases of business cycles,
- (l) Change in saving habits, etc.
- **Types of Demand**
 - (a) **Price Demand** : It expresses the inverse functional relationship between the price and demand of a commodity, other things being equal. It is expressed as : $D_x = f(P_x)$
 - (b) **Income Demand** : It expresses the direct relationship between income of the consumer and quantity demanded of a commodity, other things remaining constant. It is expressed as :
 - a. **Normal Goods** : These are those goods whose income effect is positive and price effect is negative.
 - b. **Inferior Goods** : These are those goods whose income effect is negative.
 - (c) **Cross Demand** : Other things being equal, when a change in the price of commodity X results in a change in the demand for commodity Y, when X and Y are related goods, is called Cross Demand. It is expressed as : $D_y = f(P_x)$
 - a. **Substitutes** : Substitute goods are those goods which can be used in place of one another to satisfy human wants. For example : Tea and Coffee are substitutes. When price of a goods increases, the demand of its substitute goods also increases and vice versa.
 - b. **Complementary Goods** : These are those goods which are used together to satisfy a particular want. They complete the demand for each other. For example : Car and Petrol. There exists an inverse relationship between price and quantity demanded of complementary goods.
- **Cross Price Effect** : It refers to the effects of a change in price of commodity-X on demand for commodity-Y when X and Y are related goods.
- **Law of Demand** : Other things being equal, it expresses inverse relationship between price of goods and its quantity demanded.
- **Law of Demand operates because of the following :**
 - (a) Law of Diminishing Marginal Utility,
 - (b) Substitution Effect,
 - (c) Income effect,
 - (d) Different uses,
 - (e) Change in consumer's number.
- **Exceptions to the Law of Demand :**
 - (a) Prestigious goods,
 - (b) Expected rise in future price,
 - (c) Ignorance,
 - (d) The Giffen Paradox, and
 - (e) Necessities.
- **Change in Quantity Demanded :**
 - (a) **Movement along Demand Curve** : When demand of goods changes due to change in its own price it is represented at different points on the same demand curve. It is called, movement along demand curve. It shows 'Extension and Contraction' of demand. Demand curve does not change in both these conditions.
 - (b) **Extension of Demand** : Other things being equal, when demand of goods increases due to decline in price of that goods, then it is called Extension of Demand.
 - (c) **Contraction of Demand** : Other things being equal, when demand of goods decreases due to increase in price of that goods, it is called Contraction of Demand.
 - (d) **Shifting of the Demand Curve** : Shifts in demand curve takes place when quantity demanded changes due to change in factors other than the own price of commodity. It shows increase or decrease in demand.
 - a. **Increase in Demand** : When due to change in factors, other than price of goods, demand of goods increases, it is called 'Increase in Demand'. In this case, demand curve shifts to right of the original demand curve.
 - b. **Decrease in Demand** : When due to change in factors, other than price of goods, demand of a goods decreases, it is called "Decrease in Demand". In this case, demand curve shifts to left of the original demand curve.

Know the Terms

- **Quantity Demanded** : Quantity Demanded refers to a specific quantity to be purchased against a specific price of a commodity.
- **Income Effect** : It refers to change in quantity demanded of a commodity when real income of the consumer changes owing to change in own price of the commodity.
- **Substitution Effect** : It refers to change in quantity demanded of commodity-X when relative price of the commodity (P_x/P_y) changes owing to change in P_x .
- **Price Effect** : It refers to change in quantity demanded of a commodity owing to change in its own price, other things remaining constant.

- **Law of Demand** : Other things being equal, it expresses inverse relationship between price of good and its quantity demanded.
- **Giffen Goods** : Those goods whose income effect is negative and price effect is positive are known as Giffen Goods. Law of Demand is not applicable in case of Giffen Goods.



TOPIC-2

Elasticity of Demand

Quick Review

- **Price Elasticity of Demand** : Price Elasticity of Demand is defined as the measurement of percentage in quantity demanded in response to a given percentage change in own price of the commodity.

$$E_d = \frac{\text{Percentage Change in Quantity Demanded}}{\text{Percentage Change in Price}}$$

$$E_d = \frac{\frac{\Delta Q}{Q} \times 100}{\frac{\Delta P}{P} \times 100} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

- **Degrees of Price Elasticity of Demand**

- (a) **Perfectly Elastic Demand ($E_d = \infty$)** : When percentage change in quantity demanded is infinite with a slight rise in the price, then demand for such a commodity is said to be perfectly elastic. In such a situation, demand curve is parallel to X axis.
- (b) **Perfectly Inelastic Demand ($E_d = 0$)** : When change in price produces no change in demand, then such a demand is called perfectly inelastic demand. In this situation, demand curve is a straight line parallel to the Y axis.
- (c) **Unitary Elastic Demand ($E_d = 1$)** : When percentage change in quantity demanded is equal to percentage change in price, then demand for such a commodity is said to be unitary elastic. Shape of demand curve is rectangular hyperbola and elasticity at every point on this curve is unity.
- (d) **Highly Elastic Demand ($E_d > 1$)** : When percentage change in price of a commodity causes greater percentage change in quantity demanded then demand is said to be highly elastic.
- (e) **Relativity Inelastic Demand ($E_d < 1$)** : When the demand is said to be inelastic, percentage change in price of a commodity causes relatively less percentage change in quantity demanded.

- **Factors Determining the Elasticity of Demand**

(i) **Objective Factors :**

- (a) Nature of commodity,
- (b) Existence of substitutes,
- (c) Alternative uses of a commodity,
- (d) Postponement of consumption, and
- (e) Joint demand.

(ii) **Subjective Factors :**

- (a) Habits of consumers,
- (b) Change in income of consumers,
- (c) Standard of living of people,
- (d) Share in total expenditure, and
- (e) Class of buyers.

(iii) **Social Factors :**

- (a) Distribution of National Income, and
- (b) Rationing System.

(iv) **Price Factors :**

- (a) General price level, and
- (b) Effect of time element.

➤ **Measurement of Elasticity of Demand**

(a) **Total Outlay Method** : Under this method, impact (effect) of change in price on the expenditure of a goods is studied. When price of a goods changes, consumer's total expenditure on it may increase, decrease, or remain constant. Thus, elasticity is measured by comparing the total expenditure made on the goods before and after the price change.

(i) If total expenditure on a commodity remains unchanged before and after the price change, the elasticity is said to be unity $E_d = 1$.

(ii) If total expenditure increase with fall in price (and vice-versa), elasticity of demand is said to be greater than unity $E_d > 1$.

(iii) If total expenditure decreases with fall in price (and vice-versa), elasticity of demand is said to be less than unity $E_d < 1$.

(b) **Proportionate or Percentage Method** : The percentage method measures price elasticity of demand by dividing the percentage change in amount demanded by percentage change in price of commodity.

(i) The elasticity of demand is unity, greater than unity and less than unity.

(ii) Demand is unity if change in demand is proportionate to the change in price.

(iii) Demand is greater than unity when change in demand is more than proportionate change in price.

(iv) The demand is less than unity if change in demand is less than proportionate change in price.

(v) The coefficient of price elasticity of demand is always negative because change in price brings a change in demand in opposite direction. Negative signs are usually disregarded.

$$E_d = \frac{\text{Percentage Change in Quantity Demanded}}{\text{Percentage Change in Price}}$$

$$E_d = (-) \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$$

(c) **Point Method or Geometric Method** : Geometric method was suggested by Prof. Marshall and is used to measure the elasticity at a point on the demand curve.

(i) When there are infinitely small changes in price and demand, then the 'Geometric Method' is used.

(ii) This method is also known as 'Graphic Method' or 'Point Method' or 'Arc Method'. Elasticity of demand (E_d) is different at different points on the same straight line demand curve.

(iii) In order to measure E_d at any particular point, lower portion of the curve from that point is divided by the upper portion of the curve from the same point.

$$E_d = \frac{\text{Lower Sector of the Demand Curve}}{\text{Upper Sector of the Demand Curve}}$$

➤ **Total Outlay Method** : Under this method, impact (effect) of change in price on the expenditure of a goods is studied. When price of a goods changes, consumer's total expenditure on it may increase, decrease, or remain constant.

➤ Percentage method measures price elasticity of demand by dividing the percentage change in amount demand by percentage change in price of commodity.

➤ When there are infinitely small changes in price and demand, then the 'Geometric Method' is used. In order to measure E_d at any particular point, lower portion of the curve from that point is divided by the upper portion of the curve from the same point.

Know the Terms

➤ **Price Elasticity of Demand** : Price Elasticity of Demand is defined as the measurement of percentage in quantity demanded in response to a given percentage change in own price of the commodity.

➤ **Perfectly Elastic Demand ($E_d = \infty$)** : When percentage change in quantity demanded is infinite with a slight rise in the price, then demand for such a commodity is said to be perfectly elastic. In such a situation, demand curve is parallel to X axis.

➤ **Perfectly Inelastic Demand ($E_d = 0$)** : When a change in price produces no change in demand, then such a demand is called perfectly inelastic demand. In this situation, demand curve is a straight line parallel to the Y axis.

➤ **Unitary Elastic Demand ($E_d = 1$)** : When percentage change in quantity demanded is equal to percentage change in price, then demand for such a commodity is said to be unitary elastic. Shape of demand curve is rectangular hyperbola and elasticity at every point on this curve is unity.

➤ **Highly Elastic Demand ($E_d > 1$)** : When percentage change in price of a commodity causes greater percentage change in quantity demanded then demand is said to be highly elastic.

➤ **Relativity Inelastic Demand ($E_d < 1$)** : When the demand is said to be inelastic, percentage change in price of a commodity causes relatively less percentage change in quantity demanded.

UNIT - 3 : PRODUCER BEHAVIOUR AND SUPPLY

Chapter - 4 : Production Function

Quick Review

- Addition to utility should be regarded as production which brings about an addition in the value of goods.
- Production Function shows the functional relation between physical inputs and physical output of a goods. It can be expressed as $Q = (f_1, f_2, f_3 \dots f_n)$. Where Q = Physical output of a goods; $f_1, f_2, f_3, \dots, f_n$ = Physical inputs. Technology remains constant.
- **Types of Production Function :** There are two types of Production Function :
 - (i) **Short Run Production Function or Returns to a Factor :** In this production function one factor of production is variable and all others are fixed. So, law of return to a factor is applied. It is also called variable proportion type production function.
 - (ii) **Long Run Production Function or Returns to Scale :** In this production function all the factors of production are variable. So, law of returns to scale is applied. It is also called constant proportion type production function.
- **Total Product or Total Physical Product :** Total production refers to total output produced by a firm during a given period of time with given number of inputs.
- **Average Product :** Average Product refers to output per unit of a variable input. To get Average Product, we divide total product by amount of variable factor.

$$AP = \frac{TP}{L}$$

- **Marginal Product :** Marginal Product is the change in Total Product resulting from the use of one more (or one less) unit of the variable input, keeping all other inputs constant.

$$MP = \frac{\Delta TP}{\Delta N}$$

OR

$$MP_n = TP_n - TP_{(n-1)}$$

- **Law of Production or Law of Variable Proportion :** Law of Variable Proportion states that as more and more of the variable factor is combined with the fixed factor, a stage must ultimately come when marginal product of the variable factor starts declining. According to this law, there are three stages of production :
 - (i) **First Stage :** Total Product increases at an increasing rate and marginal production rises till it reaches its maximum point.
 - (ii) **Second Stage :** Total product increases at a decreasing rate and reaches maximum, and MP becomes zero.
 - (iii) **Third Stage :** Total product also decreases and marginal product becomes negative.
- **Causes of the Operation of Law of Variable Proportion :**
 - (i) Indivisibility of factors,
 - (ii) Division of labour or specialisation,
 - (iii) Imperfect substitute,
 - (iv) Change in factor ratio.
- **Postponement of the law of variable proportion :** Improvement in technique of production and discovery of fixed factor substitute can postpone the operation of Law for some time, but ultimately it will apply.
- **Relation between Total, Average and Marginal Product :**
 - (i) So long as marginal product rises, total product increases at increasing rate.
 - (ii) When marginal product starts falling but remains positive, total product rises at diminishing rate.
 - (iii) When $MP = 0$, TP is maximum.
 - (iv) When marginal product becomes negative, then total product starts falling.
- **Relation between MP and AP**
 - (i) When $MP > AP$, AP rises.
 - (ii) When $MP = AP$, AP is maximum and constant.
 - (iii) When $MP < AP$, AP falls.
- **Returns to a factor :** In a short period when additional unit of variable factors are employed with fixed factors, then returns to a factor operates. Returns to a factor shows the changes in total product of a goods when only the quantity of one input is increased, while other inputs are kept constant.

Know the Terms

- **Point of inflexion** : It is a point where the slope of TP curve changes from convex to concave. From this point TP increases but at a diminishing rate.
- **Imperfect substitutes** : Imperfect substitutes refers to a product or service that cannot be used in exactly the same way as the good or service it replaces.
- **Fixed Factors** : Factor inputs whose quantity does not vary from day-to-day like machinery, management building etc. are known as fixed factors or fixed inputs.
- **Variable Factors** : Factor inputs whose quantity may vary from day-to-day, like labour, raw materials, etc., are known as fixed factors or fixed inputs.

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Chapter - 5 : Cost of Production and Revenue



TOPIC-1 Cost of Production

Quick Review

- **Cost** : It refers to the expenditure incurred by a producer on the factor as well as non-factor inputs for a given amount of output of a commodity.
- **Cost Function** : A Cost Function shows the functional relationship between output and cost of production. It is given as : $C = f(Q)$
- **Cost of Production** : It refers to the expenditure incurred by a producer used in the process of production on factor as well as non-factor inputs.
- **Opportunity Cost** : Opportunity Cost is the cost of the next best alternative foregone.
- **Money Cost** : The money cost of producing a certain output of a commodity is the sum of all the payments to the factors of production engaged in the production of that commodity.
- **Explicit Costs** : Explicit Costs are those cash payments which firms make to outsiders for their services and goods.
- **Implicit Costs** : Implicit Costs are the costs of entrepreneurs' own factors or resources.
- **Normal Profits** : The minimum return which the entrepreneur must receive to continue the production process.
- **Cost** : Explicit cost + Implicit cost + Normal Profit.
- **Total Fixed Costs or Supplementary Cost** : Fixed Cost are the sum total of expenditure incurred by the producer on the purchase or hiring of fixed factors of production.
- **Total Variable Costs** : Variable Costs are the expenditure incurred by the producer on the use of variable factors of production.
- **Total Costs** : It is the total expenditure incurred by a firm on the factors of production required for the production of a commodity.
 $TC = TFC + TVC.$
- **Average Costs** : Cost per unit of output is called Average Cost. It is obtained by dividing the total cost by the quantity of output.

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

- **Average Fixed Cost (AFC)** : It is defined as the fixed cost of producing per unit of the commodity. It is obtained by dividing TFC by the level of output.

$$APC = \frac{TFC}{\text{Number of Units Produced}} = \frac{TFC}{Q}$$

- **Average Variable Cost (AVC)** : It is defined as the variable cost of producing per unit of commodity. It is obtained by dividing TVC by the level of output

$$AVC = \frac{TVC}{\text{Number of Units Produced}} = \frac{TVC}{Q}$$

- **Marginal Cost :** Marginal Cost is the addition made to the total cost by the production of one more unit of a commodity.

$$MC = TC_n - TC_{(n-1)}$$

or

$$MC = \frac{\Delta TC}{\Delta Q} \text{ or } \frac{\Delta TVC}{\Delta Q}$$

- **Relationship between Average Cost (AC) and Marginal Cost (MC) :**
 - Both are derived from TC.
 - When AC falls, MC is lower than AC.
 - When AC rises, MC is greater than AC.
 - MC cuts AC at its minimum point.
- **Relationship between TC and MC :**
 - MC is the addition to total cost, when one more unit of output is produced. MC is calculated as :
 $MC_n = TC_n - TC_{n-1}$.
 - TC increases at an increasing rate when MC is increasing.
 - TC increases at a constant rate when MC is constant.
 - TC increases at a diminishing rate when MC is decreasing.

Know the Terms

- **Imputed Costs :** An imputed cost is a cost that is incurred by virtue of using an assets instead of investing it or undertaking an alternative course of action.
- **Real Costs :** Besides explicit costs and implicit costs, real costs also include certain subjective factors like emotions, sacrifices, love etc.



TOPIC-2 Concepts of Revenue

Quick Review

- **The concept of revenue consists of three important terms :** Total Revenue (TR), Average Revenue (AR) and Marginal Revenue (MR)
- **Revenue/Total Revenue :** Total revenue of a firm is its sales receipts or total money receipts of a firm from the sale of a given output is called Total Revenue.
- **Average Revenue (AR) :** Average revenue is the per unit revenue received from the sale of one unit of a commodity.

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

- Average revenue curve and demand curve are one and same thing. Average revenue is also called firms' price line.
- **Marginal Revenue :** Marginal revenue is the change in total revenue which results from the sale of one more or one less unit of output.

$$MR = TR_n - TR_{n-1}$$

or

$$MR = \frac{\Delta TR}{\Delta Q}$$

- **Revenue Curves in Different Markets :**
 - In perfect competition, AR is a horizontal line parallel to 'X' axis. It is equal to MR and TR curve is a straight positively sloping line from the origin and TR increases in same proportion as increase in output sold. The area below the price line is total revenue in perfect competition.
 - In monopoly and monopolistic competition, AR and MR both are downward sloping and MR is always below AR. The main difference in these two markets is that in monopolistic competition, AR and MR curve is more elastic than monopoly.
- **Relationship between TR and MR :**
 - Initially or at first unit $TR = MR$
 - When TR increases at increasing rate then MR also increases.
 - When TR increases at constant rate then MR is also constant.
 - When TR increases at a diminishing rate then MR declines.

- (e) When TR is maximum, MR is zero.
- (f) When TR declines, MR is negative.
- **Relation between AR and MR :**
 - (a) If AR is constant, $AR = MR$
 - (b) If AR is diminishing, $AR > MR$
 - (c) MR can be negative, but AR is always positive.
- **Negative (MR) :** It is possible only when price is declining under monopoly or monopolistic competition. It is not possible in case of perfect competition where price remains constant for a firm.
- **AR Curve is Firm's Demand Curve :** Firm's demand curve is a curve showing relationship between price of the products and its quantity demanded in the market.
- **AR Curve is a Horizontal Straight Line under Perfect Competition :** A firm under perfect competition is a price taker. It cannot influence/change the market price, implying a constant AR for a firm corresponding to all levels of output.
- **AR Curve Slopes Downwards under Conditions of Monopoly and Monopolistic Competition :** Under monopoly and monopolistic competition, more of the commodity can be sold only at a lower price. This implies an inverse relationship between price of the commodity and demand for the firm's output. Hence, a downward sloping firm's demand curve.
- **Relation between TR, AR and MR when more quantity sold at the same price under perfect competition :**
 - (a) Average revenue and marginal revenue remains constant at all levels of output and AR and MR curves are parallel to x-axis. ($AR = MR$)
 - (b) Total revenue increases at constant rate MR is constant and TR curve is positively sloped straight line passing through the origin.
- **Relation between TR, AR and MR when more quantity is sold at the lower price or there is monopoly or monopolistic competition in the market.**
 - (a) Average revenue and marginal revenue curves have negative slope. MR curve lies below AR curve. ($AR > MR$)
 - (b) Marginal revenue falls twice the rate of average revenue.
 - (c) So long as marginal revenue decreases and positive, total revenue increases at diminishing rate. When marginal revenue is zero, total revenue is maximum and when marginal revenue becomes negative, TR starts falling.

Know the Terms

- **Revenue/Total Revenue :** Sales receipts or total money receipts of a firm from the sale of a given output is called Total Revenue.
- **Average Revenue (AR) :** Average revenue is the per unit revenue received from the sale of one unit of a commodity.
- **Marginal Revenue :** Marginal revenue is the change in total revenue which results from the sale of one more or one less unit of output.



Chapter - 6 : Producer's Equilibrium

Quick Review

- **Conditions of Profit Maximization :**
 - (a) **Necessary Condition :** MR must equal to MC.
 - (b) **Supplementary Condition :** MC should cut MR from below. It simply means after equilibrium point MC should be greater than MR or MC is rising.
- **Concept of Producer's Equilibrium :** It refers to the stage where producer is getting maximum profit or minimum uses with given cost and he has no incentive to increase or decrease the level of output.
- **There are two methods for determination of Producer's Equilibrium :**
 - (i) Total Revenue and Total Cost Approach (TR and TC Approach)
 - (ii) Marginal Revenue and Marginal Cost Approach (MR and MC Approach).
- **Producer can attain the equilibrium level under two different situations :**
 - (i) When the Price remains Constant (it happens under Perfect Competition). In this situation, firm has to accept the same price as determined by the industry. It means, any quantity of a commodity can be sold at that particular price.

(ii) When the price falls with rise in output (it happens under Imperfect Competition). In this situation, firm follows its own pricing policy. However, it can increase sales only by reducing the price.

➤ **Firm's Equilibrium under Time Period**

(a) **In Short Run : Three conditions :**

- (i) $MR = MC$.
- (ii) MC should be greater than MR after equilibrium point.
- (iii) Price should be either equal to or more than AVC .

(b) **In Long Run**

- (i) $MR = MC$.
- (ii) After equilibrium MC should be greater than MR .
- (iii) Price should be either equal to or more than AC .

Know the Terms

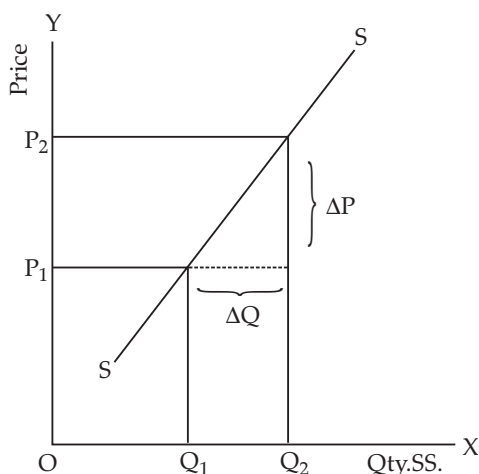
- **Producer :** A producer is one who produces and/or sells goods and services for the generation of income.
- **Normal profits :** Normal profits are defined as the minimum return that the producer expects from his capital invested in the business. It is a situation when $TR = TC$.
- **Abnormal profits :** It is a situation when $TR > TC$.
- **Sub-normal profits (or losses) :** It is a situation when $TR < TC$.
- **Producer's or Firm's Equilibrium :** A producer is said to be in equilibrium when he maximises his profit or minimises his losses.
- **Profit :** The difference between TR and TC is profit. $\pi = TR - TC$
- **Breakeven point :** It occurs when a firm is able to cover all its costs of production. This situation prevails at the point where $TC = TR$ or where, $AR = AC$.
- **Shut down point :** It occurs when a firm is not able to recover its variable costs.



Chapter - 7 : Concept of Supply

Quick Review

- **Factors Affecting Supply :**
 - (i) The price of commodity
 - (ii) Price of related goods
 - (iii) Price of factor inputs
 - (iv) Goal of the firm
 - (v) Level of technology
 - (vi) Expected change in price
 - (vii) Number of firms in the industry
 - (viii) Government policies.
- **Types of Supply Schedules :**
 - (i) Individual Supply Schedule
 - (ii) Market Supply Schedule
- **Types of Supply Curve :**
 - (i) Individual Supply Curve
 - (ii) Market Supply Curve
- Slope of supply curve = $\Delta P / \Delta Q$



➤ **Assumptions to the law of supply :**

- (a) No change in the state of technology.
- (b) No change in the price of factors of production.
- (c) No change in the number of firms in the market.
- (d) No change in the goals of the firm.
- (e) No change in the seller's expectations regarding future prices.
- (f) No change in the tax and subsidy policy of the products.
- (g) No change in the price of other goods.

➤ **Change in Supply : It is of two kinds :**

- (i) Movement along a supply curve due to change in prices.
- (ii) Shifting of supply curve due to change in factors other than price.

➤ **Movement along the Supply Curve :** Two types of movement :

- (i) **Extension of Supply :** Other things being constant, when supply increases due to increase in price only, it is termed as "Extension of Supply";
- (ii) **Contraction of Supply :** Other things being equal, when supply decreases due to decrease in price only, it is termed as "contraction of supply."

➤ **Shifting of Supply Curve :** Two types of shifting :

- (i) **Increase in Supply :** It refers to a rise in the supply of a commodity caused due to any factor other than the own price of the commodity.
- (ii) **Decrease in Supply :** It refers to a fall in the supply of commodity caused due to any factor other than own price of the commodity.

➤ **Causes of Increase in Supply :**

- (i) Fall in the price of competing product.
- (ii) Fall in the price of factors of production.
- (iii) Improvements in technology.
- (iv) Increase in the number of firms in the market.
- (v) Reduction in taxes or grant of subsidy.

➤ **Causes of Decrease in Supply :**

- (i) Obsolescence of technology.
- (ii) Increase in the prices of substitute.
- (iii) Increase in factor prices.
- (iv) Increase in taxation or withdrawal of subsidy.
- (v) Decrease in the number of firms in the market.

Know the Terms

- **Stock :** It refers to the total quantity of goods which is available with the sellers in the market at a particular point of time.
- **Supply :** Supply refers to the quantity of a commodity that a firm is willing and able to offer for sale at a given price during a given period of time.

- **Supply Schedule** : It is a tabular statement which shows various quantities of a commodity being supplied at various levels of price during a given period of time.
- **Individual Supply Schedule** : It is a schedule which represents different quantities of a commodity which an individual producer or seller is ready to supply at various possible prices at a given period of time.
- **Market Supply Schedule** : It is a schedule which represents the total quantity of a commodity that all producers will supply at each market price per period of time. It is a horizontal summation of individual supply schedules.
- **Supply Curve** : It is a graphical representation of the supply schedule.
- **Individual Supply Curve** : It shows the quantity supplied by an individual firm at various prices.
- **Market Supply Curve** : It shows the quantities supplied by all the firms taken together in a market at various prices.
- **Supply Function** : It refers to functional relationship between supply of a commodity and its determining factors.
- **Law of Supply** : Other things being constant, supply increases with rise in price and supply decreases with fall in price.

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Chapter - 8 : Elasticity of Supply

Quick Review

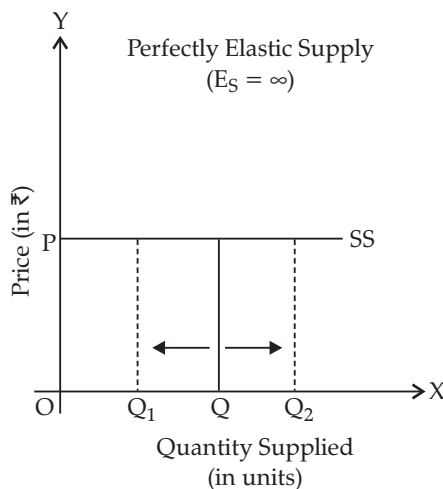
- **Elasticity of Supply** : It refers to the degree of responsiveness of quantity supplied of a commodity with reference to a change in price of the commodity. It is always positive due to direct relationship between price and quantity supplied.

$$e_s = \frac{\text{Proportionate Change in Quantity Supplied}}{\text{Proportionate Change in Price}}$$

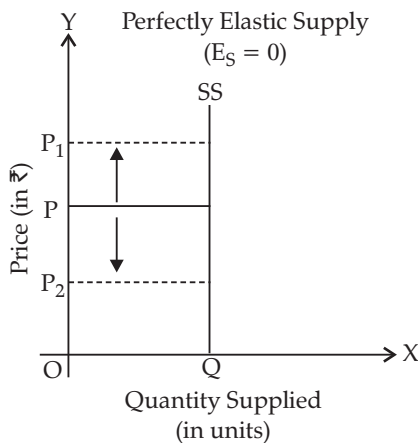
$$= \frac{\frac{\Delta Q}{Q} \times 100}{\frac{\Delta P}{P} \times 100} = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$$

- **Degrees of Elasticity of Supply** :

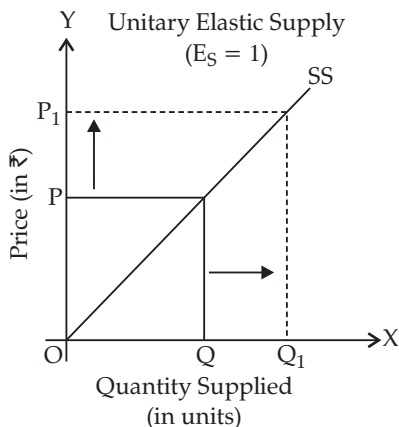
- (i) **Perfectly Elastic Supply** ($e_s = \infty$) : When there is an infinite supply at a particular price and the supply becomes zero with a slight fall in price, then the supply of such commodity is said to be perfectly elastic.



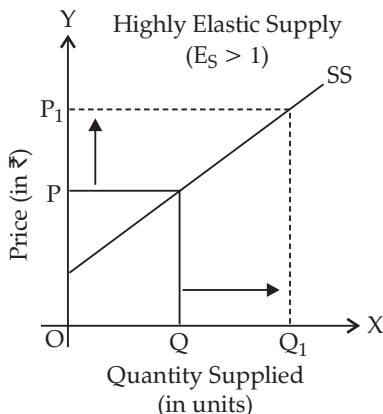
- (ii) **Perfectly Inelastic Supply** ($e_s = 0$) : When no change in quantity supplied takes place even after any price change, elasticity of supply becomes zero.



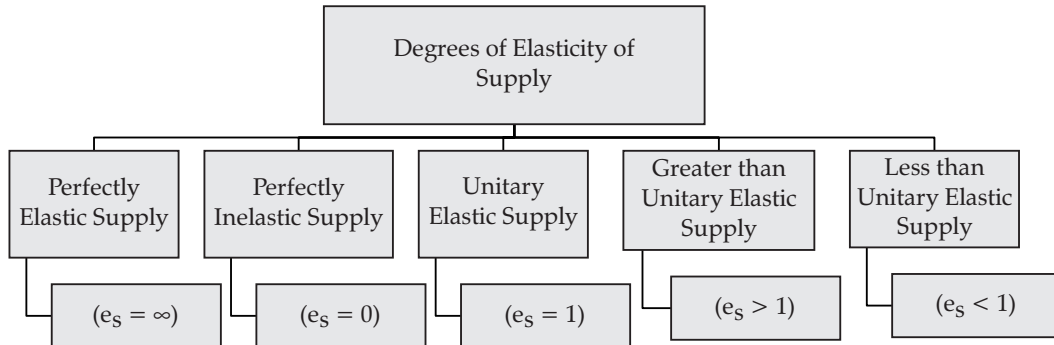
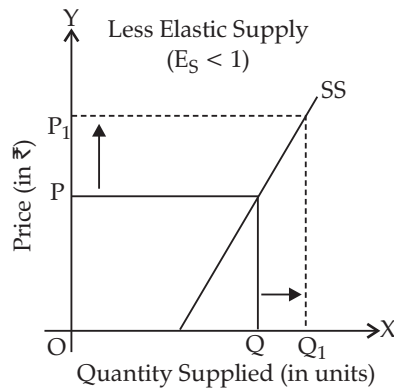
(iii) **Unitary Elastic Supply ($e_S = 1$)** : When the proportionate change in quantity supplied is equal to the proportionate change in price, the elasticity of supply becomes equal to one.



(iv) **Elastic or Greater than Unitary Elastic Supply ($e_S > 1$)** : When the proportionate change in quantity supplied is more than proportionate change in price, elasticity of supply becomes greater than unity.



(v) **Inelastic or Less than Unitary Elastic Supply ($e_S < 1$)** : When the proportionate change in quantity supplied is less than the proportionate change in price, elasticity of supply is less than unity.



➤ **Measurement of Elasticity of Supply :**

(i) **Percentage or Proportionate Method :**

$$e_s = \frac{\frac{\text{Change in Supply}}{\text{Initial Supply}}}{\frac{\text{Change in Price}}{\text{Initial Price}}} = \frac{\frac{\Delta Q}{Q}}{\frac{\Delta P}{P}} = \frac{\Delta Q}{Q} \cdot \frac{P}{\Delta P}$$

(ii) **Geometric Method :** Under this method, we can conceive following three possible situations of elasticity of supply :

- (a) Any straight line supply curve passing through the origin has value of elasticity equal to one ($e_s = 1$).
- (b) If a straight line supply curve goes through the X axis, it is inelastic ($e_s < 1$).
- (c) If a straight line supply curve goes through the Y axis, it is elastic or highly elastic ($e_s > 1$).

➤ **Factors Influencing Elasticity of Supply :**

- (1) Nature of commodity,
- (2) Cost of production,
- (3) Estimates of future prices,
- (4) Natural constrains,
- (5) Techniques of production,
- (6) Nature of inputs used, and
- (7) Time element.

Know the Terms

- **Supply :** It implies the quantity of a commodity which is actually brought into the market for sale.
- **Quantity Supplied :** Quantity Supplied is the quantity of a commodity that producers are willing to sell at a particular price at a particular point of time.

Chapter - 9 : Forms of Market



TOPIC-1 Perfect Competition

Quick Review

- **Types of Market :** On the basis of competition :
 - (1) Perfect competition,
 - (2) Monopoly,
 - (3) Monopolistic competition and
 - (4) Oligopoly.
- Under perfect competition, per unit price remains constant therefore, average and marginal revenue curves coincide each other and becomes parallel to x-axis.
- **Characteristics or Features of Perfect Competition :**
 - (1) Large number of buyers and sellers,
 - (2) Homogeneous products,
 - (3) Free entry and exit,
 - (4) Perfect knowledge,
 - (5) Perfect mobility of factors of production,
 - (6) Absence of transportation cost,
 - (7) No selling cost,
 - (8) Uniform prices, and
 - (9) Horizontal average and marginal revenue curves.
- **Features of Pure Competition : First three conditions of perfect competition only :**
 - (1) Large number of buyers and sellers,
 - (2) Homogeneous products,
 - (3) Free entry and exit,
- **Two important conclusions of Perfect Competition Market :**
 - (1) Firm is price taker not maker,
 - (2) Perfectly elastic demand curve.
- In practice, very few industries can be described as perfectly competitive, though agriculture comes close.
- In a perfectly competitive market, there are many producers and consumers, no barriers to exit and entry into the market, perfectly homogeneous goods, perfect information, and well-defined property rights.
- Perfectly competitive producers are price taker that can choose how much to produce, but not the price at which they can sell their outputs.
- Under perfect competition, price is determined by the market forces of demand and supply in an industry. No individual firm or buyer can influence the price of the product. So industry is price maker and firm is price taker.

Know the Terms

- **Meaning of Market :** Market is a system through which the buyers and sellers of a commodity or service comes in contact of one another for sale and purchase of the commodity or service on specific price.
- **Perfect Competition :** It is defined as the situation in which large number of sellers sell homogeneous products at uniform price in the market.
- **Perfect Information :** The assumption that all consumers know all things, about all products, at all times, and therefore, always make the best decision regarding purchase.



TOPIC-2 Monopoly

Quick Review

- **Features of Monopoly :**
 - (1) Single seller and large number of buyers,
 - (2) Firms and industries are synonymous,

- (3) No close substitutes,
- (4) Effective control on entry of new firms,
- (5) Negatively sloped AR and MR curves,
- (6) Price discrimination possible,
- (7) Full control over supply of goods, and
- (8) Abnormal profit in the long run.
- **Reasons for emergence of Monopoly :**
 - (a) Government licensing,
 - (b) Patent Rights and
 - (c) Cartel
 - (d) Control on raw materials.
- **Demand Curve :** Demand curve under monopoly is negatively sloped as more quantity can be sold only at a lower price.
- AR (Demand) curve is left to right downward sloping curve and less elastic than that of monopolistic competition.
- Typically, a monopoly selects a higher price and lesser quantity of output than a price-taking company.
- A monopoly, unlike a perfectly competitive firm, has the market all to itself and faces the downward sloping market demand curve.
- Graphically, one can find a monopoly's price, output and profit by examining the demand, marginal cost, and marginal revenue curves.

Know the Terms

- **Monopoly :** Monopoly is that type of market where there is a single seller, selling a product which does not have close substitutes. Monopoly is the price maker.
- A 'price maker' firm is one which can influence price on its own.



TOPIC-3 Monopolistic Competition

Quick Review

- **Characteristics of Monopolistic Competition :**
 - (1) Large number of firms,
 - (2) Product differentiation,
 - (3) Free entry and exit of firms,
 - (4) Selling Cost,
 - (5) Non-price competition,
 - (6) Sales techniques,
 - (7) Absence of collective action,
 - (8) Consumer's attachment,
 - (9) Price policy of a firm,
 - (10) Lack of perfect knowledge.
- **Demand curve :** In a monopolistic competition, the demand curve is relatively elastic. Due to availability of close substitutes, monopolistic competition have limited power to decide and regulate the prices of their products.
- Monopolistic competition is different from a monopoly. A monopoly exists when a person or entity is the exclusive supplier of a good or service in a market.
- Markets that have monopolistic competition are inefficient for two reasons. First, at its optimum output, the firm charges a price that exceeds marginal costs. The second source of inefficiency is the fact that these firms operate with excess capacity.
- Monopolistic competitive markets have highly differentiated products, have many firms providing the goods or services, firms can freely enter and exits in the long-run, make decisions independently, there is some degree of market power and sellers have imperfect information.

Know the Term

- **Monopolistic Competition :** Monopolistic competition is that type of market under which there are large number of buyers and sellers, selling differentiated product to the consumers who have imperfect knowledge about the product.

$$\text{Monopoly} + \text{Competition} = \text{Monopolistic Competition}$$



TOPIC-4 Oligopoly

Quick Review

- **Main Features of Oligopoly :**
 - (1) Few sellers,
 - (2) Monopoly power,
 - (3) Interdependence,
 - (4) Indeterminate demand,
 - (5) Role of selling costs,
 - (6) Lack of uniformity,
 - (7) Price rigidity,
 - (8) Non-price competition,
 - (9) Barriers to entry of firms,
 - (10) Nature of product.
- **Types of Oligopoly :** Perfect oligopoly, Imperfect oligopoly, Collusive oligopoly, Non-collusive oligopoly.
- The existence of oligopoly requires that a few firms are able to gain significant market power, preventing other smaller competitors from entering the market.
- **Shapes of Firm's Demand Curve Under Different Markets :**
 - (i) It is a horizontal straight line under perfect competition. It signifies the elasticity of demand $E_d = \infty$.
 - (ii) It slopes downwards under monopoly. Relatively less elastic. This is because there are no close substitutes of the monopoly product in the market.
 - (iii) It slopes downwards under monopolistic competition but it is relatively more elastic than under monopoly. This is because there are large number of close substitutes of a product in monopolistic competition.
 - (iv) It is indeterminate under oligopoly. This is because of a high degree of interdependence between the firms. Price and output policy of one firm significantly impacts the price and output policy of the rival firms in the market.

Know the Terms

- **Oligopoly :** It is a situation in which there are few firms producing either homogeneous or differentiated products in a given line of production. It is the form of market in which there are few large firms, mutually dependent for taking price and output decisions.
- **Collusive oligopoly :** It is that form of oligopoly in which all the firms determine price and quantity of output on the basis of cooperative behaviour.
- **Non-collusive oligopoly :** It is that form of oligopoly in which all the firms determine the price and quantity of output according to the action and reaction of the firms.
- **Perfect Oligopoly :** If firms produce homogeneous product then it is called perfect oligopoly.
- **Imperfect Oligopoly :** If firms produce heterogeneous product it is called imperfect Oligopoly.

□□

Chapter - 10 : Price Determination Under Perfect Competition with Simple Application

Quick Review

- **Effect of Change in Demand :** Increase in demand raises and decrease in demand lowers the equilibrium price. Also, equilibrium quantity will increase when demand increases and will decrease when demand decreases. However,
- **In Case of Perfectly Elastic Supply :** Increase or decrease in demand for a commodity does not cause any change in its price in case the supply of the commodity is perfectly elastic.
- **In Case of Perfectly Inelastic Supply :** Increase or decrease in demand causes a change in the price of the commodity. Equilibrium quantity remains constant.

- **Effect of Change in Supply** : Increase in supply causes a fall in equilibrium price and decrease in supply causes a rise in equilibrium price. Equilibrium quantity will increase if supply increases and decrease if supply decreases. However :
- (a) **In Case of Perfectly Elastic Supply** : Increase or decrease in demand for a commodity does not cause any change in its price in case the supply of the commodity is perfectly elastic.
- (b) **In Case of Perfectly Inelastic Supply** : Increase or decrease in demand caused a change in the price of the commodity. Equilibrium quantity remains constant.
- **Effect of a simultaneous change in Demand and supply in equilibrium Price** :
- (a) When demand increase more than supply, equilibrium price will increase.
- (b) When demand and supply increases equally, equilibrium price remains constant.
- (c) When supply increases more than demand, equilibrium price falls.
- **Application of Demand and Supply** :
- (a) **Price Ceiling** : It is the maximum price, the producers of goods or services are allowed to charge. Government imposes such a ceiling below the equilibrium price when it finds that the demand for necessary goods exceeds its supply, that is, when consumers are facing shortages and equilibrium price is too high. Government does it in the interest of consumers.
- (b) **Price floor** : Government imposes lower limit on the price, which is higher than the equilibrium price or above the equilibrium price to safe guard the interest of producers. The price is also called minimum support price and price floor.

Know the Terms

- **Market Equilibrium** : It is a state in which market demand is equal to market supply.
- **Equilibrium Price** : It is the price at which market demand is equal to market supply.
- **Equilibrium Quantity** : It is the quantity which corresponds to equilibrium price.



PART - B : INTRODUCTORY MICROECONOMICS

UNIT - 5 : MACROECONOMICS : BASIC CONCEPTS

Chapter - 11 : Macroeconomics : Basic Concepts



TOPIC-1

Macroeconomics : Introduction

Quick Review

- **Macroeconomics** : Macroeconomics is the branch of economics that studies the behaviour and performance of an economy as a whole. It focuses on the aggregate changes in the economy such as unemployment, growth rate, gross domestic product and inflation. It studies not the individual economic units like a household, a firm or an industry but the whole economic system. Macroeconomics is the study of aggregates and averages of the entire economy.
- **Characteristics of Macroeconomics** :
 - (1) Macroeconomics Variable,
 - (2) Related to Economy as a whole,
 - (3) Aggregate Quantities,
 - (4) Tools of Macroeconomics.
- **Scope of Macroeconomics** :
 - (1) Theory of National Income,
 - (2) Theory of Employment,
 - (3) Theory of Supply of Money,
 - (4) Theory of General Price Level,
 - (5) Theory of International Trade,
 - (6) Theory of Economic Growth,
 - (7) Macro Theory of Distribution,
 - (8) Theory of Trade Cycles.

- **Significance of Macroeconomic Analysis :**
 - (1) Importance in studying the working of complex economy,
 - (2) Importance in formulation of economic policies,
 - (3) Study of economic development,
 - (4) Useful for studying microeconomics,
 - (5) Importance in study of economic fluctuations,
 - (6) International comparisons.
- **Limitations :**
 - (1) Nature of problems,
 - (2) Macroeconomics paradoxes,
 - (3) Misleading aggregates,
 - (4) The aggregates, which compose a system may not be significant,
 - (5) Heterogeneous units.
- **Interdependence of Micro and Macroeconomics :**
 - (1) Microeconomics analysis depends upon macroeconomics analysis,
 - (2) Macroeconomics analysis also depends upon microeconomics analysis.

Know the Terms

- **General Price level :** An index that measures the change in price of goods in an economy over time and hence the purchasing power of the currency of the country.
- **Economic Growth :** Economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another.
- **Trade cycle :** A trade cycle refers to fluctuations in economic activities specially in employment, output and income, prices, profits etc.



TOPIC-2

Some Basic Concepts of Macroeconomics

Quick Review

- **Basis of Classification of Consumer and Producer Goods :** Consumption or use is the basis of their classification, not the nature of commodity.
- Producer Goods can be divided into two parts : (i) Intermediate Goods (ii) Capital Goods.
Two classes of Investment are :
 - (a) **Stock / Inventory Investment :** Changes in stock of raw-material, semi-finished goods and final products in a year.
 - (b) **Fixed Investment :** Fixed investment is the sum of new assets and net purchases of second hand physical assets.
- **Gross Investment :** Total addition made to physical stock of capital during a period of time. It includes depreciation. It is also known as Gross Capital formation. It is the sum of Stock Inventory Investment and Fixed Investment.
$$\text{Gross Investment} = \text{Inventory Investment} + \text{Fixed Investment}$$
- **Net Investment :** Net addition made to the real stock of capital during a period of time. It excludes depreciation. It refers to the amount of expenditure which is obtained after deducting the replacement investment from the gross investment.
$$\text{Net Investment} = \text{Gross Investment} - \text{Depreciation}$$
- **During the process of production, there is decline in the value of capital assets. It is due to two reasons :**
 - (a) Normal wear and tear, and
 - (b) Foreseen obsolescence.
- **Stock and Flow**
 - (a) **Stock :** A Stock is a quantity measurable at a particular "point of time", e.g., wealth, assets, money, inventory, etc. A stock variable is nothing but an accumulated sum of flows.
 - (b) **Flow :** A Flow is a quantity that can be measured over a specific "period of time". e.g., national income, change in stock, etc.
- **Relation and Difference between Stock and Flow :** Stock relates to a point of time whereas flow relates to the period of time. Flows change the stocks over a period of time.

Know the Terms

- **Capital :** Anything used to produce goods in an economy (excluding land and labour)
- **Physical capital :** Material goods used to produce other goods.

- **Human capital** : The training, teaching, and education of workers to produce goods.
- **Factors of production** : Also known as inputs, resources used in production of goods.
- **Goods** : In economics goods is defined as any physical object, natural or man made, that could command a price in the market.
- **Services** : It is a part of production that is intangible. A service is consumed at the point of production.
- **Consumer Goods** : Those final goods which are used by the consumers to satisfy human wants directly.
- **Single Use Consumer Goods** : Goods which lose their identity in a single act of consumption.
- **Durable Consumer Goods** : Goods which can be used again and again in consumption over a considerable period of time.
- **Producer Goods** : Those goods which are used for production of other goods are called Producer Goods.
- **Capital Goods** : All goods which help in the production of other goods either as fixed assets or as inventory stock are called Capital Goods.
- **Producer Services** : Those services which are needed for the production of goods and services.
- **Consumer Services** : The services which satisfy consumer's need directly are called Consumer Services.
- **Final Goods** : Those goods which are purchased either for final consumption by consumers (consumers goods) or for investment by producers (capital goods).
- **Intermediate Goods** : Those goods and services which are purchased for as a raw material for further production or for resale in the same year.
- **Investment** : Value of addition made to the physical stock of capital during a period of time (financial year) is called investment. It is also called capital formation.
- **Stock/ Inventory Investment** : Changes in stock of raw-material, semi-finished goods and final products in a year is called investment.
- **Fixed Investment** : Fixed investment is the sum of new assets and net purchases of second hand physical assets.
- **Gross Investment** : Total addition made to physical stock of capital during a period of time. It includes depreciation. It is also known as Gross Capital formation.
- **Net Investment** : Net addition made to the real stock of capital during a period of time.
- **Depreciation** : It means fall in value of fixed capital goods due to normal wear and tear, expected obsolescence and efflux of time.
- **Stock** : A Stock is a quantity measurable at a particular "point of time".
- **Flow** : A Flow is a quantity that can be measured over a specific "period of time".



TOPIC-3

Circular Flow of Income

Quick Review

- **Why is the Flow of Income called Circular Flow ? Income flow is a circular flow because :**
 - (i) Flow of receipts and payments of various sectors remain equal.
 - (ii) Every real flow has its money flow, which flows in its reverse direction.
- **Conditions of Equilibrium :**
 - (i) **Two Sector Model**

$$S = I$$

Or

$$C + S = C + I$$
 - (ii) **Three Sector Model :**

$$C + S + T = C + I + G$$
 - (iii) **Four Sector Model :**

$$Y = C + I + G + (X - M)$$
- **Four Sectors of the Economy :**
 - (i) Household sector
 - (ii) Firms or producer sector
 - (iii) Government sector
 - (iv) External sector
- **Significance of Circular Flow of Income :** (1) It reflects structure of an economy, (2) It shows interdependence among different sectors, (3) It shows injections and leakages from flow of money, (4) It helps in estimation of national income and related aggregates.

Know the Terms

- **Circular Flow of Income** : It refers to the continuous flow of goods and services and money income between firms and households in two sector economy.
- **Real Flow** : It shows the flow of goods and services among the various sectors of economy.
- **Money Flow** : It shows the flow of money among various sectors of economy.
- **Leakages of Income** : It is the amount of money which is withdrawn from circular flow of income.
- **Injections of Income** : It is the amount of money which is added to the circular flow of income.

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Chapter - 12 : National Income and its Related Aggregates



TOPIC-1 National Income

Quick Review

- **Scope of Economic Territory** :
 - (a) Political frontiers including territorial waters and airspace.
 - (b) Embassies, consulates, military bases, etc., located abroad.
 - (c) Ships and aircrafts operated by the residents between two or more countries.
 - (d) Fishing vessels, oil and natural gas rigs operated by residents in the international waters.
- **Some Important Relations**
 - (a) Gross = Net + Depreciation (consumption of fixed capital)
 - (b) National = Domestic + NFIA (Net factor income from abroad)
 - (c) Market Price = Factor Cost + NIT (Net Indirect Tax)
 - (d) Net Indirect Tax (NIT) = Indirect Tax – Subsidies
 - (e) Net Factor Income from Abroad (NFIA) = It is difference between factor income received/earned by normal residents of a country and factor income paid to non-residents of the country.
- Conversion of Nominal GDP into Real GDP

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index}} \times 100$$

Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

- **GNP Deflator** : It shows the change in GNP with the change in price levels.

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GNP}} \times 100$$

- **GDP and Welfare** : In general Real GDP and Welfare are directly related with each other. A higher GDP implies more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people.
- Welfare mean material well being of the people. It depends on many economic factors like national income, consumption level, quantity of goods, etc., and non-economic factors like environmental pollution, law and order etc. The welfare which depends on economic factors is called economic welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare.
- **GDP is not appropriate indicator for Welfare** : GDP may be a good indicator of economic growth but not of economic welfare or economic development because of :
 - (a) **Externalities** : Externalities refer to benefits or harms of an activity caused by a firm or an individual, for which they are not paid or penalized. For example, environmental pollution caused by industrial plants is a negative externality and building a flyover is a positive externality.
 - (b) **Composition of GDP** : GDP does not exhibit the structure of the product. If the increase in GDP is mainly due to increased production of war equipment and ammunitions, then such an increase cannot improve welfare in economy.

(c) **Distribution of GDP** : When GDP is unevenly distributed, increase in GDP does not increase welfare.

(d) **Non-monetary exchanges** : Many activities in an economy are not evaluated in monetary terms, they are not included in GDP, due to non availability of data. However, such activities influence the economic welfare of people of the economy.

Know the Terms

- **Net Factor Income from Abroad (NFIA)** : This is the difference between the income earned from abroad for rendering factor services by the normal residents of the country to the rest of the world and the income paid for the factor services rendered by non-residents in the domestic territory of a country.
- **Factor Income** : These are incomes received by the owners of factors of production for rendering their factor services to the producers.
- **Transfer Payments** : These are all those unilateral payments corresponding to which there is no value addition in the economy, e.g., gifts, donations, etc.
- **Private Income** : It is the total income from all sources (factor income as well as current transfers) that accrues to the private sector during the period of one year.
Private Income = Factor Income from Net Domestic Product Accruing to Private Sector + Net Factor Income from Abroad + Interest on National Debt + Current Transfers from Rest of the World + Current Transfer from Government.
- **Personal Income** : It is the income actually received by the individual households from all sources in the form of current transfer payment and factor incomes.
- **Personal Disposable Income** : It is the amount, which is actually available to the households and the non-corporate businesses after the deduction of all tax obligations to the government.
Personal Disposable Income = Personal Income – Direct Personal Taxes – Miscellaneous Receipts of the Government.
- **National Disposable Income (NDI)** : It is defined as the maximum, the country can afford to spend on consumption goods or services during an accounting year without having to finance its expenditure by disposing of assets or by increasing its liabilities.
National Disposable Income can be 'Gross' or 'Net'.
Net National Disposable Income = NNP_{FC} + Net Indirect Taxes + Net Current Transfers from Rest of the World
Gross National Disposable Income = Net National Disposable Income + Depreciation
- **Private Sector** : It refers to all those businesses and enterprises which are owned and controlled by the private individuals.
- **Public Sector** : It refers to all those departmental and non-departmental businesses and enterprises which are owned or controlled by government. For Example : (i) Departmental-Post Offices, Railways, Tourism Corporation of India, etc. (ii) Non-Departmental Indian Aviation, Indian Oil, etc.
- **Domestic Territory** : Domestic or Economic territory is the geographical territory administered by a Government within which persons, goods and capital circulate freely.
- **Normal Residents** : A resident (or a normal resident) of a country is a person or institution who ordinarily resides in a country and whose centre of interest also lies in that country.
- **Intermediate Goods** : Goods which are used for further production or for resale in the same year are known as Intermediate Goods.
- **Final Goods** : Goods which are used either for final consumption by the consumers or for investment by the producers are called Final Goods.
- **Value of Output** : It is the monetary value of goods and services produced during the year.
- **Market Price** : It is the price at which a commodity is sold and purchased in the market.
- **Factor Cost** : It refers to all factor payments made by the producing units (firms) to the factors of production involved in the production of goods and services.
- **Domestic Income** : It is the money value of all final goods and services produced within the domestic territory of a country during the period of one year.
- **National Income** : National Income is the sum total of factor incomes earned by normal residents of a country during the period of an accounting year.
- **Net National Product at Factor Cost (NNP_{FC})** : It is the sum total of factor incomes (rent + interest + profits + wages) earned by normal residents of a country during the period of an accounting year. It is also known as the National Income.
 $NNP_{FC} = GNP_{FC} - \text{Depreciation}$
OR
 $NNP_{FC} = NDP_{FC} + NFIA$
- **Net National Product at Market Price (NNP_{MP})** : It refers to market value of final goods and services produced during the year inclusive of Net Factor Income from Abroad but exclusive of depreciation.
 $NNP_{MP} = GDP_{MP} - \text{Depreciation} + NFIA$

- **Gross Domestic Product (GDP)** : It is the total value of all the final goods and services by all the enterprises (both resident and non-resident) within the domestic territory of a country in a particular year. GDP is considered as one of the best indicators of judging the economic performance of a country.
- **Gross National Product** : It is defined as the total value of all final goods and services produced in a country in a particular year, plus the income which is earned by its citizens who are located abroad and minus the income of non-residents located within the country.
- **Nominal Gross Domestic Product** : When the goods and services are produced by all producing units in the domestic territory of a country during an accounting year and valued at current year's prices or current prices, it is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It is not considered a true indicator of economic development.
- **Real Gross Domestic Product** : When the goods and services are produced by all producing units in the domestic territory of a country during an accounting year and valued at base year's prices or constant price, it is called real GDP or GDP at constant prices. It changes only by change in physical output not by change in price level. It is called a true indicator of economic development.
- **Externalities** : Externalities refer to benefits or harms of an activity caused by a firm or an individual, for which they are not paid or penalized. For example, environmental pollution caused by industrial plants is a negative externality and building a flyover is a positive externality.

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Chapter - 13 : Methods of Calculating National Income



TOPIC-1

Methods of Calculating National Income

Quick Review

- **Measurement of National Income** : In every economy, the circular flow of production, income and expenditure remains in operation continuously due to economic activities. Production generates income which creates demand and hence, expenditure. In this way, the national income of a country may be measured by three alternative methods. These are : (a) In the form of flow of goods and services, (b) In the form of income flow, (c) In the form of expenditure flow.
- **Value Added Method or Production Method** : Product Method or Valued Added Method is the method which measures the national income by estimating the contribution of each producing enterprise to production in the domestic territory of the country in an accounting year. For measuring national income by this method, we have to estimate the following components :
 - **Net Domestic Product at Market Price (NDP_{MP})** : Gross Valued Added by [Primary Sector + Secondary Sector + Tertiary Sector] + Depreciation.
 - **Net National Product at Factor Cost (NNP_{FC}) or NI** : NNP_{FC} or NI = NDP_{MP} – Indirect Tax + Net Income from Abroad.
 - **Value Added Method (Product Method)** : Gross Value Added at Market Price (GVA_{MP}) = Sales + Change in Stock – Intermediate Consumption.
 $GDP_{MP} = GVA_{MP}$ of all sectors
 OR
 Value of output – Intermediate consumption
 $NVA_{FC} = GVA_{MP} - \text{Depreciation} - \text{NIT}$
- **Precautions While Using Value Added Method** :
 - (i) The value of intermediate goods should not be included.
 - (ii) Purchase and sale of second hand goods should not be included.
 - (iii) Imputed value of self-consumed goods should be included but self-consumed services should not be included.
 - (iv) Own account production should be included.
 - (v) Commission earned on account of sale and purchase of second hand goods is included.
- **Income Method** : It measures national income in term of payments made in the form of wages, rent, interest and profit to the primary factors of production, *i.e.*, labour, land, capital and enterprise respectively for their productive services in an accounting year.
- **Net Domestic Income or Net Domestic Product at Factor Cost** :
 - (1) Compensation to Employees + (2) Operating Surplus + (3) Mixed Income from Self Employment. National Income = Net Domestic Income + Net Income from Abroad.

- **Precautions While Using Income Method :**
 - (i) Income from illegal activities like smuggling, theft, gambling, etc., should not be included.
 - (ii) Corresponding to production for self consumption, these are reward for rendering services.
 - (iii) Brokerage on the sale/purchase of shares and bonds is to be included.
 - (iv) Income in terms of wind fall gains should not be included.
 - (v) Transfer earning like old age pensions, unemployment allowances, scholarships, pocket expenses, etc., should not be included.
 - **Expenditure Method :** By this method, the total sum of expenditures on the purchase of final goods and services produced during an accounting year within an economy is estimated to obtain the value of GDP.
 - **Final Expenditure :** It is the expenditure on the purchase of final goods and services, during an accounting year. It is broadly classified into four categories :
 - (i) Private final consumption expenditure,
 - (ii) Government final consumption expenditure,
 - (iii) Investment expenditure,
 - (iv) Net exports, *i.e.*, difference between exports and imports during an accounting year.
- fig.
- Computation of National Income (by expenditure method) $NNP_{FC} = GDP_{MP} - \text{Depreciation} + NFIA - \text{Net Indirect Tax}$. Where, $GDP_{MP} = \text{Private Final Consumption Expenditure} + \text{Government Final Consumption Expenditure} + \text{Gross Domestic Capital Formation} + \text{Net Exports (Exports - Imports)}$. Where, $\text{Gross Domestic Capital Formation} = \text{Gross Domestic Fixed Capital Formation} + \text{Change in Stock (Closing Stock - Opening Stock)}$
 - **Precautions While Using Expenditure Method :**
 - (i) Only final expenditure is to be taken into account to avoid error of double counting.
 - (ii) Expenditure on second hand goods is not to be included.
 - (iii) Expenditure on transfer payments by the government is not to be included.
 - (iv) Imputed value of expenditure on goods produced for self consumption should be taken into account.
 - (v) Expenditure on shares and bonds is not to be included in total expenditure.
 - **Gross Domestic Product at Market Price (GDP_{MP}) :** (1) Private Final Consumption Expenditure (C) + (2) Government Final Consumption Expenditure (G) + (3) Investment or Gross Capital Formation (I) + Net Exports. $\text{National Income} = GDP_{MP} - \text{Depreciation} - \text{Net Indirect Taxes} + \text{Net Income from Abroad}$.

Know the Terms

- **Value Added :** Means additions in value by each firm in the process of production at each stage.
- **Double Counting :** Counting the value of the same product more than once in calculation of National Income.
- **Mixed Income of the Self-Employed :** It includes both the profits earned on business in which you are employed as well as the stipulated wage for the labour put in by you to yourself.



UNIT - 6 : MONEY AND BANKING

Chapter - 13 : Methods of Calculating National Income



TOPIC-1

Methods of Calculating National Income

Quick Review

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Know the Terms

- **Value Added** : Means additions in value by each firm in the process of production at each stage.
- **Double Counting** : Counting the value of the same product more than once in calculation of National Income.
- **Mixed Income of the Self-Employed** : It includes both the profits earned on business in which you are employed as well as the stipulated wage for the labour put in by you to yourself.

UNIT - 6 : MONEY AND BANKING

Chapter - 14 : Money: Meaning, Evolution & Functions



TOPIC-1

Money—Meaning and Functions

Quick Review

- **History of Evolution of Money :** (1) Commodity Money, (2) Metallic Money, (3) Paper Money, (4) Bank Money or Credit Money and (5) Plastic Money.
- **Barter System :** Direct exchange of goods against goods without use of money is called Barter Exchange.
- **Difficulties of Barter Exchange :** (1) Lack of double coincidence of wants (2) Lack of common measure of value, (3) Lack of standard of deferred payments, (4) Difficulty in storing wealth, and (5) Indivisibility of goods.
- **Definitions of Money :**
 - (a) **Descriptive or Functional Definitions :** These definitions relates to the functions of money.
 - (b) **Legal Definitions :** Anything which is declared by the state as money, becomes money.
- **Suitable Definition of Money :** Money may be defined as anything which is generally acceptable as a medium of exchange and also acts as common measures of value, store of value and standard of deferred payment.
- **Functions of Value :**
 - (a) **Primary Functions :** (1) Medium of Exchange, (2) Measure of Value.
 - (b) **Secondary Functions :** (1) Standard of Deferred Payments, (2) Store of Value, (3) Transfer of Value.
 - (c) **Contingent Functions :** (1) Basis of distribution of social national income, (2) Basis of credit, (3) Basis of maximum satisfaction, (4) Guarantee of solvency, (5) Bearer of option.
- **Static and Dynamic Functions of Money :**
 - (a) **Static Functions of Money :** Helps in the operation of the economy but do not create movement in the economy.
 - (b) **Dynamic Functions of Money :** Influence the economic system through its impact on price level, interest rates, volume of production, distribution of wealth, etc.
- **Classification of Money**
 - (a) **On the Basis of Nature or Accountability :** (i) Actual Money and (ii) Money of Account.
 - (b) **On the Basis of Legality or General Acceptability :** (a) Legal Tender Money, (i) Limited Legal Tender, (ii) unlimited Legal Tender,
 - (c) Optional Money.
- **Money on the Basis of Material Used or Physical Form :**
 - (a) **Metallic Money—**(i) Standard Money, (ii) Token Money,
 - (b) **Paper Money—**(i) Representative Paper Money, (ii) Convertible Paper Money, (iii) Non-Convertible Paper Money, and (iv) Fiat Money, (v) Electronic Money,
 - (c) Credit Money,
 - (d) Electronic Money

Know the Terms

- **Money :** Set of assets in an economy used regularly by people to buy goods and services.
- **Currency :** Paper bills and coins held in an economy by the public.
- **Medium of exchange :** Money can be exchanged for goods and services between buyers and sellers.
- **Unit of account :** Money is used to post prices and record debt.
- **Store of value :** Money can be held for future use and later purchasing power.
- **Fiat Money :** Money that hold value only because the government declares it legal tender.
- **Commodity Money :** Money that holds value even when not used as legal lender (e.g. gold).



TOPIC-2

Money Supply

Quick Review

- **Money Supply** : Total stock of money (currency notes, coins and demand deposits of banks) in circulation are held by the public at a given point of time.
Measures of Money Supply = Currency held by Public + Net Demand Deposit of Banks
 $M = C + DD$
- **Narrow Approach of Money Supply** : In narrow sense, we include only liquid assets which are easily acceptable for payments.
 $M_1 = C + DD + OD$
- **Currency with Public (C)** : Currency of a country is issued either by government or the Central Bank. It is called Legal Tender Money.
- **Demand Deposits (DD)** : Public deposits with bank which public may withdraw at any time or on demand, bank has to pay it.
- **Broad Approach of Money** : It includes currency held by public, demand deposits and time deposits.
 $M_3 = M_1 + \text{Net time deposits with Commercial Banks.}$
- **Time Deposits (TD)** : Those deposits of public with bank which can be withdrawn only after completion of that period for which it has been deposited with banks.
- **Stock of Money** : If supply of money is studied at a point of time it is stock of money.
- **Flow of Money** : When supply of money is considered over a period of time, it is Flow of Money.
- **Measures of Money Supply** : In India, RBI uses four measures of money supply. These are M_1 , M_2 , M_3 and M_4 .
(a) $M_1 = C + DD + OD$
(b) $M_2 = M_1 + \text{Saving Deposits with Post Office}$
(c) $M_3 = M_1 + \text{Time Deposits of Public with Banks}$
(d) $M_4 = M_3 + \text{Total Deposits with the Post Offices.}$
- **High Powered Money or Reserve Money** : It is the sum of (i) Currency held by the public (ii) Cash reserve of the banks.
 $H = C + R$
- **Factors Affecting Money Supply** : (i) Central Bank, (ii) Commercial Banks, (iii) Government, (iv) Banking Habits of the People, (v) Velocity of Circulation, (vi) Volume of Trade and (vii) Amount of Demand Deposits.
- **Who Supplies Money** : Central Bank of the country. In India, Reserve Bank of India.

Know the Terms

- **Money** : Total stock of money in circulation held by the public at a given point of time.
- **Money Market Graph** : Displays the money supply and money demand of an economy and their relation to the nominal rates in the economy.



TOPIC-3

Money Creation by the Commercial Banking System

Quick Review

- **Development of Banking** : The present day Commercial Bank has three ancestors—"The Merchant", "The Money Lenders" and "The Gold Smith".
- **Derivation of the term Bank** : The word 'Bank' is supposed to have been derived from German word 'Banc'. A few believe that the word 'bank' has been derived from bancus or banque which means a bench at which the money changers used to change one kind of money into another.
- **Meaning of Commercial Banks** : A Commercial Bank is an institution that operates for profit. It accepts deposits from the general public and extends loans to the households, the firms and the government.
- **Functions of Commercial Banks** :
(a) **Primary Functions**
(i) Accepting Deposits,
(ii) Granting Loans,
(iii) Credit Creation.

(b) Secondary Functions

- (i) Overdraft facility,
- (ii) Discounting bills of exchange,
- (iii) Agency functions,
- (iv) General utility functions.

➤ Social Functions or Functions of Economic Development :

- (i) **Credit Creation by Commercial Banks** : Credit Creation signifies that power of Commercial Bank with which they create derived deposits on the basis of primary deposits.
- (ii) **Primary Deposits** : Primary deposits are those deposits which people deposit in cash in their own account with the bank.
- (iii) **Derived Deposits** : Derived Deposits are the result of primary deposits because banks provide credit on the basis of primary cash deposits. Derived deposits are also called Credit Deposits.

$$\text{Total Deposits}_{(TD)} = \frac{\text{Primary Deposits (P)}}{\text{Cash Reserve Ration (r)}}$$

Know the Terms

- **Asset** : Something that is owned.
- **Liability** : An obligation, debt, or other object, due to someone in the future.
- **Reserves** : The money deposited in a bank.
- **Reserve requirement** : The fraction of all reserves of a bank that must be held by the bank in vaults.
- **Legal reserves** : The money held by the bank in vaults to satisfy the reserve requirement .
- **Excess reserves** : Money that isn't required to be stored by the bank. This money can be loaned out.
- **Discount rate** : Interest rate on a loan from the Federal Reserve to a bank.
- **Federal funds rate** : Interest rate on a loan from a bank to another bank.

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Chapter - 15 : Central Bank: Meaning & Functions**TOPIC-1
Central Bank****Quick Review**

- **Functions of Central Bank** : The functions of the Central Bank can broadly be studied under two headings :
 - (a) **Issuance and Regulatory Functions** : (1) Monopoly of note issue, (2) Banker fiscal agent and advisor to the Government, (3) Bankers' bank, (4) Lender of the last resort, (5) Custodian of foreign exchange reserves, (6) Clearing house function, (7) Control of credit.
 - (b) **Functions of Economic Development** : (1) Money and Capital Market, (2) Industrial Credit, (3) Agriculture Credit, (4) Export Assistance, (5) Price Stability, and (6) Exchange Rate.
- **Monetary Management** : It means to regulate money and credit in such a way that it may satisfactorily meet the demand for money needed for trade, business and economic activities.
- **Methods of Credit Control / Instruments of Monetary Policy** : Methods of credit control can be classified into two categories. These are :
 - (1) **Quantitative Credit Control Methods** :
 - (a) **Cash Reserve Ratio (CRR)** : This refers to the proportion of total deposit of the commercial banks which they must keep as Cash Reserves with Central Bank.
 - (b) **Statutory Liquidity Ratio (SLR)** : This refers to liquid assets of the commercial banks which they must maintain (on daily basis) as a minimum percentage of their total deposits.
 - (c) **Repo Rate** : It is the rate of interest at which the Central Bank gives short-period loan to the commercial banks.
 - (d) **Reverse Repo Rate** : It is the rate of interest at which the Central Bank of a country borrows money from commercial banks.
 - (e) **Bank Rate** : It is the rate of interest at which the Central Bank gives long-term loan to the commercial banks.
 - (f) **Open Market Operations** : Open market operations refer to the sale and purchase of securities in the open market by the Central Bank. By selling the securities (like, National Saving Certificates— NSCs), the central bank soaks liquidity (cash) from the economy. And, by buying the securities, the central bank releases liquidity.

- (2) **Methods** : Selective or qualitative methods of credit control are meant to regulate and control the supply of credit among its possible users and uses.
- It includes** : Margin requirements, rationing of credit, regulation of consumers credit, direct action, moral suasion and publicity.
- RBI performs all those functions which the Central Bank of other countries performs.
 - **Functions of RBI** : (1) Monopoly of Note Issue, (2) Banker to the Govt., (3) Bankers' Bank, (4) Controller of Credit, (5) Custodian of Foreign Exchange Reserves.
 - **Sterilization by RBI** : RBI sterilizes the economy against adverse external shocks.

Know the Terms

- **Central Bank** : A Central Bank is an apex institution in the banking structure of the country. It supervises, controls and regulates the activities of Commercial Banks and acts as a banker to them. RBI is the Central Bank of India.
- **Cash Reserve Ratio (CRR)** : This refers to the proportion of total deposit of the commercial bank which they must keep as cash reserves with Central Bank.
- **Statutory Liquidity Ratio (SLR)** : This refers to liquid assets of the commercial banks which they must maintain (on daily basis) as a minimum percentage of their total deposits.
- **Repo Rate** : It is the rate of interest at which the Central Bank gives short-period loan to the commercial banks.
- **Reverse Repo Rate** : It is the rate of interest at which the Central Bank of a country borrows money from commercial banks.
- **Bank Rate** : It is the rate of interest at which the Central Bank gives long-term loan to the commercial banks.
- **Open Market Operations** : Open market operations refer to the sale and purchase of securities in the open market by the Central Bank. By selling the securities (like, National Saving Certificates— NSCs), the central bank soaks liquidity (cash) from the economy. And, by buying the securities, the central bank releases liquidity.
- **Credit Rationing** : Rationing of credit is a method by which the Reserve Bank seeks to limit the maximum amount of loans and advances, and also in certain cases fix ceiling for specific categories of loans and advances.
- **Rationing of Credit** : Under this method, the credit is rationed by limiting the amount available to each applicant. The Central Bank puts restrictions on demands for accommodations made upon it during times of monetary stringency.
- **Direct Action** : Under this method if the Commercial Banks do not follow the policy of the Central Bank, then the Central Bank has the only recourse to direct action.
- **Moral Persuasion** : Under this method, Central Bank gives advice, then requests and persuades the Commercial Banks to co-operate with the Central Bank in implementing its credit policies.
- **Regulation of Consumer's Credit** : Under this method, consumers are given credit in a little quantity and this period is fixed for 18 months; consequently credit creation is expanded within the limit.

□□

UNIT - 7 : DETERMINATION OF INCOME AND EMPLOYMENT

Chapter - 16 : Aggregate Demand: Components and Related Concepts



TOPIC-1

Aggregate Demand and Its Components

Quick Review

- **Aggregate Demand** : Aggregate Demand refers to the total demand for all goods and services in the economic system as a whole. This is expressed in terms of total expenditure made in the economy.
- **Constituents of Aggregate Demand (A·D)** : In an open economy, constituents of A.D. are :
 - (a) Consumption Demand
 - (b) Investment Demand
 - (c) Government Expenditure
 - (d) Net Exports.

$$AD = C + I + G + (X - M)$$

- **Private Consumption Expenditure** : The total demand for all goods and services by the household in an economy during an accounting year, is termed as Private Consumption Expenditure. It is determined by the level of personal disposable income of the economy.
- **Private Investment Expenditure** : The expenditure of households and private investor to purchase goods or services that adds to their stock of capital, is termed as Private Investment Expenditure. It is mainly depends on market rate of interest.
- **Government Expenditure** : It includes the total expenditure of government on the purchase of consumption goods and investment expenditure. There is a significant difference between government and private investment. Private investments are done on consideration of profit and termed as Induced Investment.
- **Autonomous Investment** : Government investment expenditure is done on considerations of social welfare like construction of roads, school, dams and flyover are termed as Autonomous Investment.
- **Aggregate Demand Schedule** : Aggregate Demand Schedule shows the levels of consumption and investment at different levels of income.
- **Aggregate Supply** : The concept of aggregate supply is related to the total supply of goods and services made available by all the producers in the economy. It can be expressed in three forms :
 - (a) Money value of goods and services produced during a year in an economy, i.e., National Income.
 - (b) In the form of total income, i.e., consumption + saving.
 - (c) In the form of minimum income which the firm will receive as sale proceeds from the sale of goods and services.
- **Aggregate Supply Price** : The minimum expected sale proceeds of the output resulting from a given amount of employment is called the 'Aggregate Supply Price' of that output.
- **Aggregate Supply Schedule** : This schedule represents the addition of consumption expenditure and saving at various levels of income.
- **Effective Demand** : It signifies the point where aggregate demand equals to aggregate supply. Thus, that level where aggregate demand equals aggregate supply is called Effective Demand.
- **Consumption Function** : The relationship between consumption and income is Consumption Function.

$$C = f(Y)$$

- **Propensity to Consume** : It expresses the consumption levels at different levels of income.
- **Average Propensity to Consume (APC)** : It is the ratio of Consumption Expenditure to any particular level of income.

$$APC = \frac{(C) \text{ Consumption}}{(Y) \text{ Income}}$$

- **Marginal Propensity to Consume (MPC)** : It is the ratio of a Change in Consumption to a Change in Income.

$$MPC = \frac{\text{Change in Consumption}}{\text{Change in Income}} = \frac{\Delta C}{\Delta Y}$$

- **Algebraic Expression of Consumption Function** : The algebraic expression of consumption function is given by :

$$C = \bar{C} + b(Y).$$

$$C = \text{Consumption}$$

where,

$$\bar{C} = \text{Minimum Level of Consumption at Zero Income.}$$

$$b = \text{Marginal Propensity to Consume}$$

$$Y = \text{Income}$$

- **Propensity to Save** : It is the ratio of saving to income at different levels of income.
- **Saving Function** : It denotes the relation between saving and income. It shows the desire of savings at various levels of income.

$$S = f(Y).$$

- **Average Propensity to Save (APS)** : It is the ratio of saving to income.

$$APS = \frac{S \text{ Saving}}{Y \text{ Income}}$$

- **Marginal Propensity to Save (MPS)** : It is the ratio of change in saving to a change in income.

$$MPS = \frac{\Delta S \text{ Change in Saving}}{\Delta Y \text{ Change in Income}}$$

- **Algebraic Expression of Saving Function** : The algebraic expression of saving function is given by :
 where, $S = (-)\bar{S} + b(Y)$.
 S = Saving
 \bar{S} = Level of saving when Income is Zero
 b = Marginal Propensity to Save
 Y = Income

- **Relationship between Propensity to Save and Propensity to Consume :**

$$\begin{aligned} \text{MPC} + \text{MPS} &= 1 \\ \text{or} \quad \text{MPC} &= 1 - \text{MPS} \\ \text{or} \quad \text{MPS} &= 1 - \text{MPC} \\ \text{APC} + \text{APS} &= 1 \\ \text{APC} &= 1 - \text{APS} \\ \text{APS} &= 1 - \text{APC} \end{aligned}$$

- **Investment** : Investment expenditure includes expenditure for producer's durable equipment, new construction and the change in inventories.
 ➤ **Investment Function** : It refers to the behaviour of investment corresponding to different levels of income employment.
 ➤ **Induced Investment** : It depends upon income and profit in the economy. Investment made with expectation of profit is called induced investment. It depends upon (i) Marginal efficiency of capital, and (ii) rate of interest.
 ➤ **Autonomous Investment** : This investment is independent of income and employment. Such investment is made by the government with the motive of social welfare.
 ➤ **Marginal Efficiency of Capital (MEC)** : Marginal efficiency of capital is expected rate of return on an additional unit of capital goods over its cost.

$$\text{MEC} = \frac{\text{Prospective Yield}}{\text{Cost (Supply Price of Capital)}}$$

- **Prospective Yield** : Prospective yield of an asset is the aggregate net return expected from this capital asset during its whole life-time.
 ➤ **Supply Price** : The expenditure made on capital goods at the time of initial investment is known as Supply Price.
 ➤ **Rate of Interest** : Interest is the reward for parting with liquidity for a specified period.
 ➤ **Equilibrium Volume of Investment** : Investment decisions depend upon the relative superiority of MEC over rate of interest.
 $\text{MEC} = r$ [Passive Effect on Investment or Neutral]
 $\text{MEC} > r$ [Favourable effect on Investment]
 $\text{MEC} < r$ [Adverse effect on Investment]
 ➤ **Full Employment** : It refers to situation in which all those who are able to work and are willing to work get employment at the existing wage rate.
 ➤ **Involuntary Unemployment** : It is a situation when some people are not getting jobs even when they are able to work and are willing to work at the existing wage rate.



TOPIC-2

Short Run Equilibrium Output

Quick Review

- **SHORT RUN** : According to J. M. Keynes, "A period of time during which level of output is determined exclusively by the level of employment in the economy, is termed as short run."
 ➤ **FULL EMPLOYMENT** : It refers to a situation, where all those workers who are able to work and willing to work get employment at prevailing wage rate.
 ➤ **IN AN ECONOMY :**
 Income Equilibrium Level = Output Equilibrium Level = Employment Equilibrium Level
 (Y) (O) (N)
 ➤ **CLASSICAL CONCEPT OF EQUILIBRIUM**
 It is based on J.B. Say's Law, " Supply creates its own demand". Main contribution of classical concept of equilibrium are as follows :
 (a) Every Economy works at full employment level.
 (b) Economy has a capacity of self-adjustment. Whatever is produced in an economy is automatically consumed, i.e., supply creates its own demand.

- (c) Over production in an economy is impossible, because every additional production generates additional income and as a result total income equals to total saving.
- (d) General unemployment in the economy is not possible because no possibility of over production arises in the economy.
- (e) Wage flexibility helps in elimination of unemployment.
- (f) Interest rate flexibility maintains the equality between saving and investment.
- Short Run Equilibrium, i.e., Keynesian Approach
- AD = AS Approach
- (a) Employment is determined at a point where AD = AS.
- (b) If $AD > AS$, firm will employ more factors of production and it will again attain $AD = AS$.
- (c) If $AD < AS$, firm will cut employment and it will bring again $AD = AS$.
- CHANGE IN EQUILIBRIUM : Equilibrium position described above may be of full employment or may not be of full employment. It only determines the level of income. Therefore, for full employment we have to twist AD or AS. But AS depends on technological factors therefore if AD increases, it will raise the level of employment.
- S = I Approach
- According to Keynes income-employment 'equilibrium is determined at a point where $S = I$.
- (a) If $S > I$ then equilibrium income will have a tendency to reduce.
- (b) If $S < I$ then equilibrium income will have a tendency to increase.
- EX-ANTE SAVING : It is the planned or desired or intended saving during a particular period.
- EX-ANTE INVESTMENT : It is the planned or desired or intended investment during a particular period.
- EX-POST SAVING : It is realised saving. It is equal to Ex-Ante saving + Unplanned saving.
- EX-POST INVESTMENT : It is realised investment. It is equal to Ex-Ante investment + unplanned investment.
- EX-POST (S) = Ex-Post (I) : At all levels of income and they are necessarily be equal.
- EX-ANTE (S) = Ex-Ante (I) : Only at equilibrium level of income.



TOPIC-3

Investment Multiplier and Its Working

Quick Review

- **Multiplier** : It establishes relation between investment and income. It measures the change in income due to change in investment.

$$K = \frac{\Delta Y}{\Delta I} = \frac{\text{Change in Income}}{\text{Change in Investment}}$$

- **Relationship between Multiplier and Marginal Propensity to Consume (MPC)** : The size of multiplier is determined by the Marginal Propensity to Consume. There is a direct relation between MPC and K. Higher the MPC, higher is the value of K and vice-versa.

$$K = \frac{1}{1 - MPC}$$

and

$$K = \frac{1}{MPS}$$

if

$$MPC = \text{Zero}, K = 1$$

$$MPC = 1 \quad K = \infty$$

Value of K lies between 1 and infinity.

- Forward and Backward action of multiplier
- Multiplier is two-edge instrument and hence, it works in both direction.
- (a) **Forward Action** : Additional investment creates additional income many more times.
- (b) **Backward Action** : Withdrawal of investment decreases income many more times.

Know the Terms

- **Aggregate Demand** : Aggregate Demand refers to the total demand for all goods and services in the economic system as a whole. This is expressed in terms of total expenditure made in the economy.
- **Private Consumption Expenditure** : The total demand for all goods and services by the household in an economy during an accounting year, is termed as Private Consumption Expenditure. It is determined by the level of personal disposable income of the economy.

- **Private Investment Expenditure** : The expenditure of households and private investor to purchase goods or services that adds to their stock of capital, is termed as Private Investment Expenditure. It mainly depends on market rate of interest.
- **Government Expenditure** : It includes the total expenditure of government on the purchase of consumption goods and investment expenditure. There is a significant difference between government and private investment. Private investments are done on consideration of profit and termed as Induced Investment.
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- **Propensity to Save** : It is the ratio of saving to income at different levels of income.
- **Saving Function** : It denotes the relation between saving and income. It shows the desire of savings at various levels of income.
- **Average Propensity to Save (APS)** : It is the ratio of saving to income.
- **Marginal Propensity to Save (MPS)** : It is the ratio of change in saving to the change in income.
- **Investment Function** : It refers to the behaviour of investment corresponding to different levels of income employment.
- **Induced Investment** : It depends upon income and profit in the economy. Investment made with expectation of profit is called induced investment. It depends upon (i) Marginal efficiency of capital, and (ii) rate of interest.
- **Autonomous Investment** : This investment is independent of income and employment. Such investment is made by the government with the motive of social welfare.
- **Marginal Efficiency of Capital (MEC)** : Marginal efficiency of capital is expected rate of return on an additional unit of capital goods over its cost.
- **Full Employment** : It refers to situation in which all those who are able to work and are willing to work get employment at the existing wage rate.
- **Involuntary Unemployment** : It is a situation when some people are not getting jobs even when they are able to work and are willing to work at the existing wage rate.
- **Short Run** : According to J. M. Keynes, "A period of time during which level of output is determined exclusively by the level of employment in the economy, is termed as short run."
- **Full Employment** : It refers to a situation, where all those workers who are able to work and willing to work get employment at prevailing wage rate.
- **In an economy** :
- **Ex-Ante Saving** : It is the planned or desired or intended saving during a particular period.
- **Ex-Ante Investment** : It is the planned or desired or intended investment during a particular period.
- **Ex-Post Saving** : It is realised saving. It is equal to Ex-Ante saving + Unplanned saving.
- **Ex-Post Investment** : It is realised investment. It is equal to Ex-Ante investment + unplanned investment.
- **Multiplier** : It establishes relation between investment and income. It measures the change in income due to change in investment.

Chapter - 17 : Problems and Measures of excess and Deficient Demand



TOPIC-1

Aggregate Demand and Its Components

Quick Review

- **Deficient Demand** : When AD falls short of AS at full employment it is called deficient demand.
Deficient Demand = $AD < AS$ (at full employment level).
- **Deflationary Gap or Measurement of Deficient Demand** : Deflationary gap is the gap by which actual aggregate demand is less than the level of aggregate demand required to establish full employment. It measures the amount of deficiency of aggregate demand.
Deflationary Gap = $ADF - AD$
- **Reasons for Deficient Demand** : (i) Reduction in supply of currency, (ii) Increase in Bank Rate, (iii) Increase in Taxes, (iv) Reduction in Public Expenditure, (v) Increase in Propensity to Save, (vi) Decline in Export Demand.
- **Effects of Deficient Demand** : (i) Fall in production level, (ii) Fall in price level (iii) Increase in unemployment.
- **Excess Demand** : Excess demand refers to a situation when aggregate demand exceeds aggregate supply corresponding to full employment. $AD > AS$ (at full employment level)
- **Inflationary Gap or Measurement of Excess Demand** : Inflationary gap is the gap by which actual aggregate demand exceeds the level of aggregate demand required to establish full employment. It measures the amount of excess of aggregate demand.
Inflationary Gap = $AD - ADF$
- **Reasons for Excess Demand** : (i) Increase in public expenditure, (ii) Reduction in taxes, (iii) Deficit financing, (iv) Extension of credit facilities, (v) Increase in investment demand, (vi) Increase in propensity to consume (vii) Increase in export demand.
- **Effects of Excess Demand** : (i) Effects on employment, (ii) Effects on production, and (iii) Effects on prices.
- **Cyclical Fluctuations** : In real life, Aggregate demand does not match Aggregate Supply. Consequently economy faces economic fluctuations like :
Depression → Recovery → Full employment → Propensity → Recession → Again depression and process goes on.

Know the Links

- **Deficient Demand** : When AD falls short of AS at full employment it is called deficient demand.
- **Deflationary Gap or Measurement of Deficient Demand** : Deflationary gap is the gap by which actual aggregate demand is less than the level of aggregate demand required to establish full employment. It measures the amount of deficiency of aggregate demand.
Excess Demand : Excess demand refers to a situation when aggregate demand exceeds aggregate supply corresponding to full employment.
- **Inflationary Gap or Measurement of Excess Demand** : Inflationary gap is the gap by which actual aggregate demand exceeds the level of aggregate demand required to establish full employment. It measures the amount of excess of aggregate demand.
- **Fiscal Policy** : Government measures related to public expenditure, taxation and public debt are referred as fiscal measures and the policy related to these measures is called Fiscal Policy.
- **Monetary Policy** : A policy, which controls the money supply, credit availability and its cost is termed as monetary policy. Central Bank of the country frames this policy and ensures its execution.



TOPIC-2

Measures to Correct Deficient and Excess Demand

Quick Review

- There are four important ways to correct excess and deficient demand :
 - (a) Fiscal Policy
 - (b) Monetary Policy

- (c) Foreign Trade Policy
- (d) Other Measures.
- **Fiscal Policy** : Government measures related to public expenditure, taxation and public debt are referred as fiscal measures and the policy related to these measures is called Fiscal Policy.
- **Instruments of Fiscal Policy** : Public expenditure, taxation, public debt and deficit financing.
- **Monetary Policy** : A policy, which controls the money supply, credit availability and its cost is termed as monetary policy. Central Bank of the country frames this policy and ensures its execution.
- **Measures of Monetary Policy** :
 - (a) **Quantitative** : Bank Rate, Open Market Operations, Minimum Reserve Ratio and Liquidity Ratio.
 - (b) **Qualitative** : Margin requirement of loans, Rationing of credit, Direct action and Moral pressure.

Measures to Correct Deficient Demand and Excess Demand

| S. No. | Deficient Demand [Deflationary Gap] | Excess Demand [Inflationary Gap] |
|--------|---|--|
| 1. | Fiscal Policy : (a) Increase in Expenditure (b) Reduction in Tax burden (c) Reduction in Public Debt (d) Deficit Budget. | Fiscal Policy : (a) Reduction in Public Expenditure (b) Increase in tax burden (c) Increase in Public Debt (d) Surplus Budget. |
| 2. | Monetary Policy : (a) Reduction in Bank rate (b) Purchase of Securities in Open Market (c) Reduction in Cash Reserve Ratio (d) Reduction in Liquidity Ratio (e) Reduction in Margin requirement of money (f) Abolition of Credit Rationing (g) Direct Action. | Monetary Policy : (a) Rise in Bank rate (b) Sale of Securities in Open Market (c) Rise in Cash Reserve Ratio (d) Increase in Liquidity Ratio (e) Increase in Margin Requirement of money (f) Credit Rationing (g) Direct Action. |
| 3. | Others : (a) Less imports, more exports (b) Stable Wage Policy (c) Government purchases at higher support price. | Others : (a) More import, less exports (b) Linking of wages with productivity (c) Increase in production. |



UNIT - 8 : GOVERNMENT BUDGET AND ECONOMY

Chapter - 18 : Government Budget and Economy

Quick Review

- **Budget** : Budget is a financial statement showing the expected receipt and expenditure of Government for the coming fiscal or financial year.
- **Objectives of Government Budget** : (i) Encouragement to economic development, (ii) Balanced Regional development, (iii) Redistribution of Income and Property, (iv) Economic stability, (v) Generation of employment, (vi) Management of public enterprises.
- **Structure of the Government Budget** : Components of Government Expenditure :
- **Revenue Budget** : It shows revenue receipts and revenue expenditure of the government.
- **Capital Budget** : It shows capital receipts and capital expenditure of the government.
- **Revenue Receipts** : (a) Which do not cause any reduction in assets and; (b) Which do not create any corresponding liability to the government. [Example : Tax receipts of the government].
- **Capital Receipts** : (a) Which creates corresponding liability for the government [Example : Loans by the Government] and; (b) Which causes reduction in assets of the government [Example : Disinvestment]
- **Tax** : It is a compulsory contribution by an individual, household or a firm to the government without receiving anything in return.

- **Non-Tax Receipts** : These are those receipts which are received from sources other than taxes. e.g., Fees, Fines, Escheats, Grants / Donations etc.
- **Direct Tax** : Direct Taxes are those taxes which are paid by the same person on whom they are levied. When Government imposes a tax on a person and paid by the same person is called direct tax. Its burden can not be shifted to others. For example : Income Tax, Property Tax.
- **Indirect Tax** : It is a tax on goods and services. It is to be initially paid by the producers / traders but its final burden can be passed on to the final buyers by way of increase in price of the taxed commodity. Sales Tax or VAT is an example of it.
- **Revenue Expenditure : It is the expenditure by the government which :**
 - (a) Does not cause increase in government assets, and;
 - (b) Does not cause any reduction in government liability.
- **Capital Expenditure : It is the expenditure by the government which :**
 - (a) Causes increase in government assets, and;
 - (b) Causes reduction in government liability.
- **Development Expenditure** : It is directed towards development programmes of the country, and which directly contributes to the flow of goods and services in the economy.
- **Non-Development Expenditure** : It is not directly related to development programmes of the country, and which does not directly contribute to the flow of goods and services in the economy.
- **Planned Expenditure** : It is incurred in accordance with planned development programmes of the country.
- **Non-Planned Expenditure** : It refers to general expenditure incurred on essential general services of routine nature.
- **Disinvestment** : It refers to withdrawal of existing investment, e.g., Government of India is undertaking disinvestment by selling the shares of Maruti Suzuki.
- **Budget Deficit** : It is the excess of total estimated expenditure over total estimated revenue.
 - (a) **Revenue Deficit** : Revenue Receipts < Revenue Expenditure.
 - (b) **Fiscal Deficit** : [Revenue Expenditure + Capital Expenditure] – Revenue Receipts + Capital Receipts (other than government borrowings)].
- **Implications of Revenue Deficit are :**
 - (a) It leads to repayment burden in future without investment.
 - (b) It shows wasteful expenditures of Govt. on administration.
 - (c) It increase the burden of taxes.
- **Effects of Fiscal Deficit** : The effects of Fiscal Deficit are :
 - (a) High Inflation
 - (b) Increased foreign dependence
 - (c) Financial Burden on citizens
 - (d) Increased borrowings by government.
- **Implications of Fiscal Deficits are :**
 - (a) It leads to inflationary pressure.
 - (b) A country has to face debt trap.
 - (c) It reduces future growth and development.
- **Primary Deficit** : By deducting Interest payment from fiscal deficit we get primary deficit.
- **Primary Deficit** = Fiscal Deficit – Interest Payment
- **Types of Budget**
 - (a) **Balanced Budget** : Total Expenditure = Total Revenue
 - (b) **Deficit Budget** : Total Expenditure > Total Revenue
 - (c) **Surplus Budget** : Total Anticipated Expenditure < Total Anticipated Revenue
- **Measures to Correct Different Deficit** : (i) Raising government revenue, (ii) Monetary Expansion or Deficit Financing, (iii) Borrowing from general public, (iv) Disinvestment, (v) Lowering government expenditure.

Know the Terms

- **Budget** : Annual financial statement of the country.
- **Property Tax** : Is frequently the basis for municipal and country revenues.
- **Sale/Income Tax** : Are the basis for state revenues.
- **Income/Corporate Tax** : Are the basis for National revenues.
- **Balanced Budget** : When governments revenue and expenditure are equal.
- **Surplus Budget** : When anticipated revenues exceed expenditure.
- **Deficit Budget** : When anticipated expenditure is greater than revenues.

- **Budget** : Budget is a financial statement showing the expected receipt and expenditure of Government for the coming fiscal or financial year.
- **Revenue Budget** : It shows revenue receipts and revenue expenditure of the government.
- **Capital Budget** : It shows capital receipts and capital expenditure of the government.
- **Tax** : It is a compulsory contribution by an individual, household or a firm to the government without receiving anything in return.
- **Non-Tax Receipts** : These are those receipts which are received from sources other than taxes. e.g., Fees, Fines, Escheats, Grants / Donations etc.
- **Direct Tax** : Direct Taxes are those taxes which are paid by the same person on whom they are levied.
- **Indirect Tax** : It is a tax on goods and services. It is to be initially paid by the producers / traders but its final burden can be passed on to the final buyers by way of increase in price of the taxed commodity.
- **Development Expenditure** : It is directed towards development programmes of the country, and which directly contributes to the flow of goods and services in the economy.
- **Non-Development Expenditure** : It is not directly related to development programmes of the country, and which does not directly contribute to the flow of goods and services in the economy.
- **Planned Expenditure** : It is incurred in accordance with planned development programmes of the country.
- **Non-Planned Expenditure** : It refers to general expenditure incurred on essential general services of routine nature.

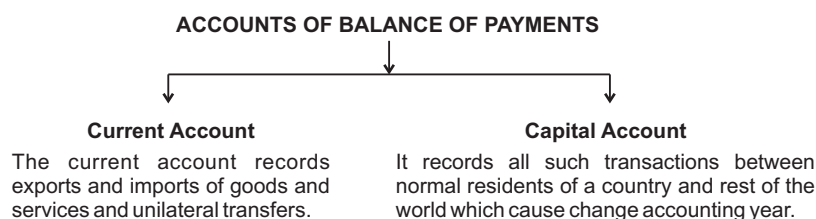


UNIT - 9 : BALANCE OF PAYMENT

Chapter - 19 : Balance of Payment

Quick Review

- **Balance of Trade** : Balance of trade is the net difference of import and export of all visible items between the normal residents of a country and rest of the world.
- **Balance of Payments** : Balance of Payments of a country is the systematic record of all economic transactions between the residents of a country and the rest of the world, during a year. In other words, BOP is a record of inflows and outflows of foreign exchange.
- **Balance of payments has two accounts** :
(a) Current Account, and (b) Capital Account.



- The components of current account do not cause a change in assets or liabilities status of the residents of a country or its government.
- The components of Capital accounts cause change in assets or liability status of the residents and the government of a country.
- **Classification of Economic Transactions in BOP** : The economic transactions in BOP are classified as :
(i) Visible items (physical goods), (ii) Invisible items (services), (iii) Capital transfers (capital receipts and payments).
- **Features of Balance of Payments** : (1) Systematic Record, (2) Fixed Time Period, (3) Comprehensive, (4) Self Balanced, (5) Double Entry System, (6) Adjustment of Differences.
- **Components of BOP Account** : The transactions entering into the balance of payments account can be grouped under three broad accounts :
(a) Current Account
(b) Capital Account
(c) Official International Reserve Account
- **Current Account** : Transactions related to trade in goods and services and transfer of payments constitute the current account.
- **Items of Current Accounts** : (i) Merchandise account, (ii) Invisible items, and (iii) Unilateral transfers.

- **Capital Accounts** : Capital account represents international capital transactions which include sale and purchase of assets such as bonds, equities, lands, loans, bank accounts, etc.
- **Other Items of BOP** : (i) The official settlements account, and (ii) Errors and omissions.
- **Balance of Payment is always balanced** : The equality of both sides of balance of payment is only accounting equality, not the real equality.
- **Autonomous and Accommodating Items** :
 - (a) **Autonomous Transactions** : Autonomous items are those items of balance of payment which are related to such transactions as are determined by the motive of profit maximisation and not to maintain equilibrium in balance of payments. These items are generally called 'Above the Line items' in balance of payment.
 - (b) **Accommodating Items** : Refers to all the items related to the monetary transfers (or official reserve transactions), correcting balance of payments disequilibrium. Accommodating item refers to transactions that take place because of other activities in Balance of Payment. These transactions are meant to restore the Balance of Payment identity. These items are generally called 'Below the Line items'.
- **Importance of Balance of Payments** : (i) Guide to economic conditions and directions, (ii) Indicator of economic changes, (iii) Indicator of foreign dependency, (iv) Knowledge of foreign receipts and payments, (v) Knowledge of foreign investment, (vi) Indicator of foreign trade, (vii) Basis of economic planning and policy, (viii) Helpful for international financial organizations.
- **Deficit of BOP Account** : When total inflows of foreign exchange on account of autonomous transactions are less than the total outflows on account of such transactions then there is a deficit in BoP.
- **Causes of Disequilibrium of Balance of Payments** :
 - (i) **Natural Causes** : (a) Natural Calamity occurs, (b) Any total disease spreads
 - (ii) **Economic Factors** : (a) Development activities, (b) High rate of inflation, (c) Trade cycle, (d) Change in cost structure of trading partners, (e) Development of import substitutes.
 - (iii) **Political Factors** : (a) Political Stability, (b) Political influence on foreign trade
 - (iv) **Social Factors** : (a) Demonstration effect, (b) Change in tastes and preferences, (c) Cross border prejudices.
- **Measures to Correct Adverse Balance of Payments** :
 - (i) **Economic Measures** : (a) Export promotion, (b) Devaluation of domestic currency, (c) Exchange control, (d) Depreciation, (e) Reducing inflation, (f) Import restrictions and import substitution.
 - (ii) **Social Measures**.
 - (iii) **Political Measures** : (i) Less expenses on embassies, (ii) End of political alliances, (iii) Political and Administrative thriftiness, (iv) Participation of non-residents, (v) Changes in basic political ideology.
- **Relationship between BOP and National Income Accounts** :

Generation of Income : $Y = C + I + G + X$
 Disposition of Income : $Y = C + S + T + M$
 $C + I + G + X = C + S + T + M$
 or
 $I + G + X = S + T + M$
 or
 Injections = Leakages

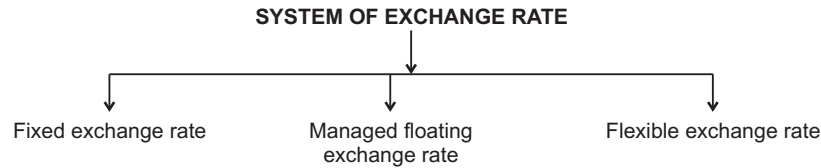
Know the Terms

- **Currency Exchange Market** : The international market for a currency.
- **Appreciation** : The value of a currency increases.
- **Depreciation** : The value of a currency decreases.
- **Balance of Trade** : Balance of Trade refers to export of goods less and 'import of goods' during a given year.
- **Balance of Payments** : Balance of Payments of a country is the systematic record of all economic transactions between the residents of a country and the rest of the world, during a year. In other words, BOP is a record of inflows and outflows of foreign exchange.
- **Current Account** : Transactions relating to trade in goods and services and transfer payments constitute the current account.
- **Capital Accounts** : Capital account represents international capital transactions which include sale and purchase of assets such as bonds, equities, lands, loans, bank accounts, etc.
- **Autonomous Transactions** : Autonomous items are those items of balance of payment which are related to such transactions as are determined by the motive of profit maximisation and not to maintain equilibrium in balance of payments. These items are generally called 'Above the Line items' in balance of payment.
- **Accommodating Items** : Refers to all the items related to the monetary transfers (or official reserve transactions), correcting balance of payments disequilibrium. Accommodating item refers to transactions that take place because of other activities in Balance of Payment. These transactions are meant to restore the Balance of Payment identity. These items are generally called 'Below the Line items'.

Chapter - 20 : Foreign Exchange Rate

Quick Review

- **Foreign Exchange Rate** : Foreign exchange rate refers to the rate at which one unit of currency of a country can be exchanged for the number of units of currency of another country.



- **Types of Foreign Exchange Regimes :**

(a) **Fixed Exchange Rate** : When the Central Bank of a country fixes (or pegs) the value of exchange rate, it is called Fixed Exchange Rate system or Pegged Exchange Rate System.

- Arguments in Favour of Fixed Exchange Rate : (1) Promotion of international trade, (2) Incentives of foreign capital, (3) Acceleration in capital formation, (4) Economic planning, (5) Source of economic benefit, (6) Helpful in maintaining favourable balance of payments, (7) Ensures stability in exchange rate, (8) Helpful to check inflation.

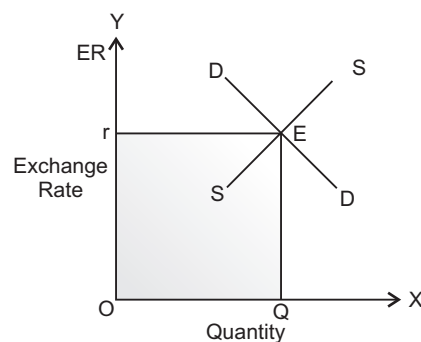
- **Arguments against Fixed Exchange Rates** : (1) Neglects of national interest, (2) Control over various sectors, (3) High fluctuation in exchange rates, (4) Intervention of Central Bank.

(b) **Flexible Exchange Rate System** : The system of exchange rate in which value of a currency is allowed to adjust freely or to float as determined by the demand for and supply of foreign exchange is called Flexible Exchange Rate System.

- **Arguments in favour of Flexible Exchange Rate System** : (1) Simple system, (2) Continuous adjustment, (3) Lesser requirement of reserve funds, (4) Efficient utilization of resources.

- **Arguments against Flexible Exchange Rate System** : (1) Bad effects of less elasticity, (2) Creates uncertainty, (3) Instability in international trade.

- Determination of Flexible Exchange Rate Demand and Supply theory of exchange rate determination Equilibrium Rate of Exchange : Exchange rate is determined by the interaction of demand and supply in foreign exchange market. There is an inverse relationship between price of foreign exchange (i.e., rate of exchange) and demand for foreign exchange rate. On the contrary, there is direct relation between foreign exchange rate and supply of foreign exchange.



- **Reasons for the Demand of Foreign Exchange** : The demand of foreign exchange has inverse relation with flexible exchange rate. If flexible exchange rates rises, the demand of foreign exchange falls and vice versa. The demand for Foreign Exchange is created due to the following purposes :

(a) To purchase goods and services from the rest of world.

(b) To purchase financial assets (i.e., to invest in bonds and equity shares) in a foreign country.

(c) To invest directly in shops, factories, buildings in foreign countries.

(d) To send gifts and grants abroad.

(e) To speculate on the value of foreign currency.

(f) To undertake foreign tours.

- The supply of foreign exchange has positive relation with foreign exchange rate. If foreign exchange rate rises, the supply of foreign exchange rate also rises and vice versa. Sources of Supply of Foreign Exchange :

(a) Direct purchase by foreigners in domestic market.

(b) Direct investment by foreigners in domestic market.

(c) Remittance by non-residents living abroad.

(d) Flow of foreign exchange due to speculative purchases by N.R.I.

(e) Export of goods and services.

- **Foreign Exchange Market** : It refers to the market for national currencies of different countries of the world.

- **Functions of Foreign Exchange Market** : (a) Transfer function, (b) Credit function, and (c) Hedging function.

- **Spot Market** : It refers to the class of Foreign Exchange transaction which requires immediate delivery.
- **Forward Market** : It refers to the deal for the sale and purchase of a foreign currency at some future date at a pre-settled exchange rate.
- **Factors Influencing Exchange Rate** : (a) Change in trade, (b) Capital Movement, (c) Sale and purchase of securities, (d) Bank Rate, (e) Speculation, (f) Political conditions.
- **Nominal Exchange Rate** : It refers to the number of units of domestic currency, one must give up to get a unit of foreign currency. In simple terms, it refers to the price of foreign currency in terms of domestic currency.
- **Real Exchange Rate** : It refers to the relative price of foreign goods in terms of domestic goods.
- **Adjusted Peg System** : It is also referred to as Bretton Woods System, which allows some adjustments in exchange rate, it is as rigid as Gold Exchange Rate System.
- **Gold Standard System of Exchange Rate** : According to the Gold Standard System of Exchange Rate, value of one currency in terms of the other currency was fixed considering gold value of each currency. This system was prevailing before 1920's where gold was taken as the common unit of parity between the currencies of different countries.
- **Venture Capital** : Investments in the purchase of foreign exchange in the International Foreign Exchange Market with a speculative view is termed as Venture Capital.
- **Devaluation of a Currency** : When government or monetary authority of a country officially lowers the external value of its domestic currency (in respect of all other foreign currency) it is called devaluation of a currency. It takes place by government order under fixed exchange rate system.
- **Revaluation of a currency** : When government or monetary authority of a country officially raises the external value of its domestic currency (in respect of all other foreign currency) is called revaluation. It takes place by government order under fixed exchange rates system.
- In currency depreciation, there is a fall in the value of domestic currency, in term of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.
- In currency appreciation, there is a rise in the value of domestic currency in terms of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.
- Managed floating system is a system in which the central bank allows the exchange rate to be determined by market forces but intervenes at times to influence the rate. When central bank finds the rate is too high, it starts selling foreign exchange from its reserve to bring it down. When it finds that the rate is too low, it starts buying to raise the rate.

Know the Terms

- **Hybrid System of Exchange Rate** : (i) Wider Bands, (ii) Crawling Peg, and (iii) Managed Floating :
- These systems are in between fixed exchange rate and flexible exchange rate.
- **Spot Exchange Rate** : The rate of exchange which happens to prevail in the market at the time when transactions are incurred, is called Spot Exchange or Current Exchange Rate.
- **Forward Exchange Rate** : The rate of exchange at which forward transactions are to be done is termed as Forward Exchange Rate.
- **Managed Floating** : A system of adjusting the exchange rates as per the rules and regulations of Foreign Exchange Market is termed as Managed Floating.
- **Dirty Floating** : When adjustment of exchange rates are done without following the rules and regulations of Foreign Exchange Market is termed as Dirty Floating.
- **Foreign Exchange Rate** : Foreign exchange rate refers to the rate at which one unit of currency of a country can be exchanged for the number of units of currency of another country.
- **Fixed Exchange Rate** : When the Central Bank of a country fixes (or pegs) the value of exchange rate, it is called Fixed Exchange Rate system or Pegged Exchange Rate System.
- **Flexible Exchange Rate System** : The system of exchange rate in which value of a currency is allowed to adjust freely or to float as determined by the demand for and supply of foreign exchange is called Flexible Exchange Rate System.
- **Foreign Exchange Market** : It refers to the market for national currencies of different countries of the world.
- **Forward Market** : It refers to the deal for the sale and purchase of a foreign currency at some future date at a pre-settled exchange rate.
- **Nominal Exchange Rate** : It refers to the number of unit of domestic currency, one must give up to get an unit of foreign currency. In simple term, it refers to the price of foreign currency in terms of domestic currency.
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