AAM
Business School

Economics for Managers

I SEMESTER

(Approved by Alagappa University)

13 Economics for Managers

Course content:

Module I

Introduction to economics - Three key economic questions- Basic postulates- Economic terms and concepts-Economic and noneconomic goals of firm- The circular flow of economic activity. Theory of the firm – Basic Model of the Firm and Role of Profits. Optimisation: Concepts and Technique. Demand analysis and theory of consumer choice: Individual and market effects, marginal utility theory - Elasticity of demand - Elasticity of supply-The theory of consumer choice

Module II: Theory of Production and Cost Analysis, Pricing and output decisions in different market settings

Estimation of production function-The Theory of Production: Returns to a Variable Factor, Production Function with Two Variable Inputs, Optimum Input Combination. Perfect competition-Monopoly-Monopolistic competition-Oligopoly- Break-Even Analysis. Firm's responses: Non-price competition and advertisement expenses. Government regulations towards competition, monopoly, real life examples (US markets, India - Competition Commission). Cartel arrangements- Price leadership-Price discrimination- Non-marginal, multiproduct and transfer pricing-Game theory- Markets with Asymmetric information

Module III: Macroeconomic theory

The arts and science of economic analysis - Measurement of National Income- Economic fluctuations and growth-Issues and concerns of Macroeconomics. Unemployment and inflation- Aggregate expenditure -Aggregate expenditure and aggregate demand- Aggregate supply - The multiplier effect, Inflation: Nature and Causes. Analysis of Business Cycles and need for economic stabilization, role of economic policy. Economic policy and economic growth with special reference to India

Module IV: Economic environment for businesses

Two levels of macro-policy: Fiscal and Monetary. Meaning, scope and evolution of fiscal policy-Fiscal instruments-The union budget process- Impact of the budget-The national debt- Fiscal policy in India-Economic development under the Five-year plans

The evolution of money-Financial institutions in India- Money aggregates- Role of commercial banks – Evolution, functions & instruments of a Central bank- Monetary theory and policy

Module V: Impact of external trade

Balance of payments- Foreign exchange rates and markets-Exchange rate system-Development of international monetary system- Application of macro variables in Business Cycle; Business process re-engineering and the new world trade order

Text Book:

1. Paul G Keat, Philip K Y Young and Sreejata Banerjee, Managerial Economics: Economic Tools For Today's Decision Makers, 6th Edition, Pearson Education Inc., 2011
2. William A. McEachern and A. Indira, Macro ECON: A South Asian Perspective, Cengage Publishing (Latest Edition)
3. H L Ahuja, Managerial Economics: Analysis of Managerial Decision Making, 9th Edition, S Chand Publishing.

Reference Books:

1. Dominick Salvatore, Managerial Economics: Principles and Worldwide Applications, 6th Edition, Oxford Higher Education, 2009
2. Robert S. Pindyck, Daniel L. Rubinfeld and Prem L. Mehta, Microeconomics,7th Edition, Pearson Education Inc., 2009.
3. G S Gupta, Macroeconomics: Theory and Applications, 4th Edition (latest edition), McGraw-Hill Education (India) Private Ltd, 2014

UNIT I

Production and costs: the short run

Production

An entrepreneur must put together resources -- land, labour, capital -- and produce a product people will be willing and able to purchase

Production function

The relationship between the amount of input required and the amount of output that can be obtained is called the production function

What can you say about marginal product?

As the quantity of a variable input (labour, in the example) increases while all other inputs are fixed, output rises. Initially, output will rise more and more rapidly, but eventually it will slow down and perhaps even decline.

This is called the law of diminishing marginal returns

Law of diminishing returns

It holds that we will get less & less extra output when we add additional doses of an input while holding other inputs fixed. It is also known as law of variable proportions.

Combining resources

There are many combinations of resources that could be used

Consider the following table showing different number of mechanics and amount of capital that the hypothetical firm, india inc., might use

Alternative quantities of output that can be produced by different combinations of resources

ALTERNATIVE QUANTITIES OF OUTPUT THAT CAN BE PRODUCED BY DIFFERENT COMBINATIONS OF RESOURCES

Number of Mechanics	CAPITAL							
	5	10	15	20	25	30	35	40
0	0	0	0	0	0	0	0	0
1	30	100	250	340	410	400	400	390
2	60	250	360	450	520	530	520	500
3	100	360	480	570	610	620	620	610
4	130	440	580	640	690	700	700	690
5	130	500	650	710	760	770	780	770
6	110	540	700	760	800	820	830	840
7	100	550	720	790	820	850	870	890

Production in the short run

The short run is a period just short enough that at least one resource (input-industrial plant, machines) cannot be changed -- is fixed or inelastic. Thus, in the short run production of a commodity can be increased by increasing the use of only variable inputs like labour and raw materials.

Quantities of Output that Can Be Produced When One Resource is Fixed

Number of Mechanics	CAPITAL							
	5	10	15	20	25	30	35	40
0	0	0	0	0	0	0	0	0
1	30	100	250	340	410	400	400	390
2	60	250	360	450	520	530	520	500
3	100	360	480	570	610	620	620	610
4	130	440	580	640	690	700	700	690
5	130	500	650	710	760	770	780	770
6	110	540	700	760	800	820	830	840
7	100	550	720	790	820	850	870	890

LONG RUN

The long run is a period sufficiently long that all factors including capital can be adjusted or are variable.

This means that the firm can choose any combination on the manufacturing table -- not just those along column labelled "10"

The Long Run or Planning Period: As we double both resources, what happens to output?

Number of Mechanics	CAPITAL		
	5	10	15
0	0	0	0
1	30	100	250
2	60	250	360
3	100	360	480
4	130	440	580
5	130	500	650
6	110	540	700
7	100	550	720

THREE STAGES OF PRODUCTION

No. of workers (N)	Total product – TP_L (tonnes)	Marginal Product (MP_L)	Average Product (AP_L)	Stage of production
(1)	(2)	(3)	(4)	(5)
1	24	24	24	I INCREASING AND CONSTANT RETURNS
2	72	48	36	
3	138	66	46	
4	216	78	54	
5	300	84	60	
6	384	84	64	
7	462	78	66	II DIMINISHING RETURNS
8	528	66	66	
9	576	48	64	
10	600	24	60	
11	594	-6	54	III -VE RETURNS
12	552	-42	46	

BEHAVIOUR OF TPP,MPP AND APP DURING THE THREE STAGES OF PRODUCTION

TOTAL PHYSICAL PRODUCT	MARGINAL PHYSICAL PRODUCT	AVERAGE PHYSICAL PRODUCT
STAGE I INCREASES AT AN INCREASING RATE	INCREASES, REACHES ITS MAXIMUM & THEN DECLINES TILL MR = AP	INCREASES & REACHES ITS MAXIMUM
STAGE II INCREASES AT A DIMINISHING RATE TILL IT REACHES MAXIMUM	IS DIMINISHING AND BECOMES EQUAL TO ZERO	STARTS DIMINISHING
STAGE III STARTS DECLINING	BECOMES NEGATIVE	CONTINUES TO DECLINE

from the above table only stage ii is rational which means relevant range for a rational firm to operate. in stage i it is profitable for the firm to keep on increasing the use of labour. in stage iii, mp is negative and hence it is inadvisable to use additional labour. i.e only stage i and iii are irrational

Isoquant

An isoquant or iso product curve or equal product curve or a production indifference curve show the various combinations of two variable inputs resulting in the same level of output.

it is defined as a curve passing through the plotted points representing all the combinations of the two factors of production which will produce a given output.

- **For example from the following table we can see that different pairs of labour and capital result in the same output.**

Labour (Units)	Capital (Units)	Output (Units)
1	5	10
2	3	10
3	2	10
4	1	10
5	0	10

For each level of output there will be a different isoquant. When the whole array of isoquants is represented on a graph, it is called an isoquant map.

Important assumptions

the two inputs can be substituted for each other. For example, if labour is reduced in a company it would have to be compensated by additional machinery to get the same output.

Slope of isoquant

the slope of an isoquant has a technical name called the marginal rate of technical substitution (mrts) or the marginal rate of substitution in production. Thus, in terms of capital services k and labour l

$$mrts = dk/dl$$

Types of isoquants

Linear isoquant

Right-angle isoquant

Convex isoquant

Linear isoquant

Linear Isoquants

linear isoquants there is perfect substitutability of inputs. for example, in a power plant equipped to burn oil or gas. various amounts of electricity could be produced by burning gas, oil or a combination. i.e oil and gas are perfect substitutes. hence the isoquant would be a straight line.

Right-Angle Isoquant

in right-angle isoquants there is complete non-substitutability between inputs. for example, two wheels and a frame are required to produce a bicycle these cannot be interchanged. this is also known as Leontief isoquant or input-output isoquant.

Convex Isoquant

in convex isoquants there is substitutability between inputs but it is not perfect. for example

(1) a shirt can be made with large amount of labour and a small amount machinery.

(2) the same shirt can be with less labourers, by increasing machinery.

(3) the same shirt can be made with still less labourers but with a larger increase in machinery.

while a relatively small addition of machinery from m1(manual embroidery) to m2(tailoring machine embroidery) allows the input of labourers to be reduced from l1 to l2. a very large increase in machinery to m3 (computerised embroidery) is required to further decrease labour from l2 to l3. thus substitutability of labourers for machinery diminishes from m1 to m2 to m3.

Properties of Isoquants

an isoquant is downward sloping to the right. i.e negatively inclined. this implies that for the same level of output, the quantity of one variable will have to be reduced in order to increase the quantity of other variable.

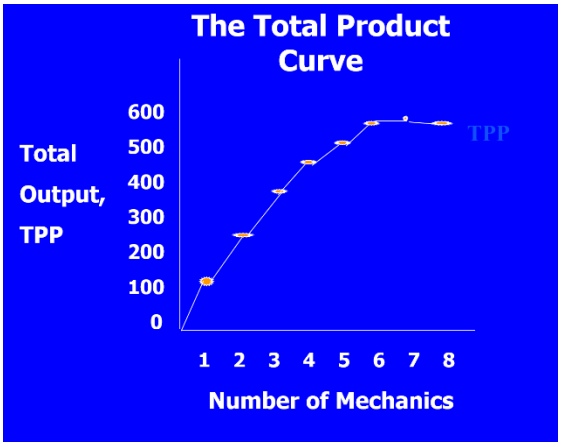
a higher isoquant represents larger output. that is with the same quantity of 0ne input and larger quantity of the other input, larger output will be produced.

no two isoquants intersect or touch each other. if the two isoquants do touch or intersect that means that a same amount of two inputs can produce two different levels of output which is absurd.

isoquant is convex to the origin. this means that the slope declines from left to right along the curve. that is when we go on increasing the quantity of one input say labour by reducing the quantity of other input say capital, we see less units of capital are sacrificed for the additional units of labour.

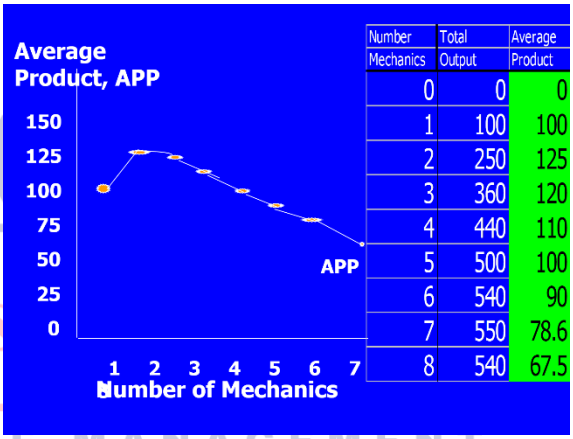
Now, let's just consider the column under "10 capital"

Number Mechanics	Total Output
0	0
1	100
2	250
3	360
4	440
5	500
6	540
7	550
8	540



Average Product = Total Output / # of mechanics

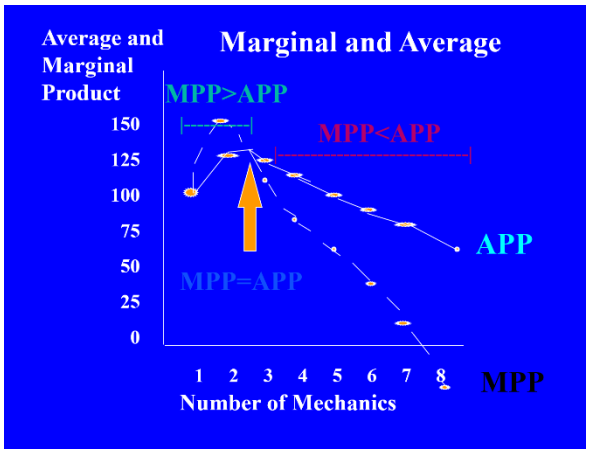
0	0	0
1	100	100
2	250	125
3	360	120
4	440	110
5	500	100
6	540	90
7	550	78.6
8	540	67.5



Number Mechanics	Total Output	Average Product
0	0	0
1	100	100
2	250	125
3	360	120
4	440	110
5	500	100
6	540	90
7	550	78.6
8	540	67.5

Marginal Product = Change in Total Output / Change in Number of Mechanics

Mechanics	Output	Product	Product
0	0	0	0
1	100	100	100
2	250	125	150
3	360	120	110
4	440	110	80
5	500	100	60
6	540	90	40
7	550	78.6	10
8	540	67.5	-10



Returns to Scale

Diminishing returns refer to response of output to an increase of a single input while other inputs are held constant. We have to see the effect by increasing all inputs. What would happen if the production of wheat if land, labour, fertilisers, water etc,. Are all doubled. This refers to the returns to scale or effect of scale increases of inputs on the quantity produced.

Constant returns to scale

This denotes a case where a change in all inputs leads to a proportional change in output. For example, if labour, land capital and other inputs doubled, then under constant returns to scale output would also double.

Increasing returns to scale

This is also called economies of scale. This arises when an increase in all inputs leads to a more-than-proportional increase in the level of output. For example, an engineer planning a small-scale chemical plant will generally find that by increasing inputs of labour, capital and materials by 10% will increase the total output by more than 10%.

Decreasing returns to scale

This occurs when a balanced increase of all inputs leads to a less than proportional increase in total output. in many process, scaling up may eventually reach a point beyond which inefficiencies set in. These might arise because the costs of management or control become large. This was very evident in electricity generation when plants grew too large, risk of plant failure increased.

Importance of returns to scale concept

if an industry is characterized by increasing returns to scale, there will be a tendency for expanding the size of the firm and thus the industry will be dominated by large firms. the opposite will be true in industries where decreasing returns to scale prevail.in case of industries with constant returns to scale, firms of all sizes would survive equally well.

From production to cost

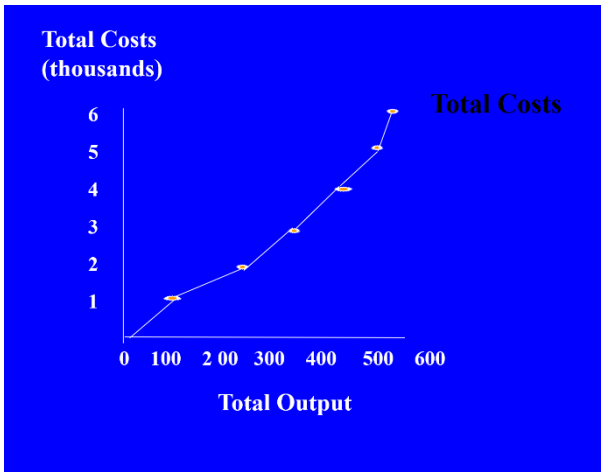
To get to where we really want to be, we must translate the product schedules and curves to costs.

Let's assume the cost per variable resource -- per work -- is $1000 per week.

Assume this is the only cost.

Production and Costs

# of mechanics	Total Output	Total Cost
0	0	0
1	100	1000
2	250	2000
3	360	3000
4	440	4000
5	500	5000
6	540	6000
7	550	7000



Production and Costs

# of mechanics	Total Output	Total Cost
0	0	0
1	100	1000
2	250	2000
3	360	3000
4	440	4000
5	500	5000
6	540	6000
7	550	7000

Quantity of Output	Total Cost	Average Cost	Marginal Cost
100	1,000	10	**10**
250	2,000	8	**6.7**
360	3,000	8.33	**9.1**
440	4,000	9	**12.5**
500	5,000	10	**16.7**
540	6,000	11.1	**25**
550	7,000	12.7	**100**

Average and Marginal

Economists find it useful to talk about three dimensions of something:

Total

Average = per unit

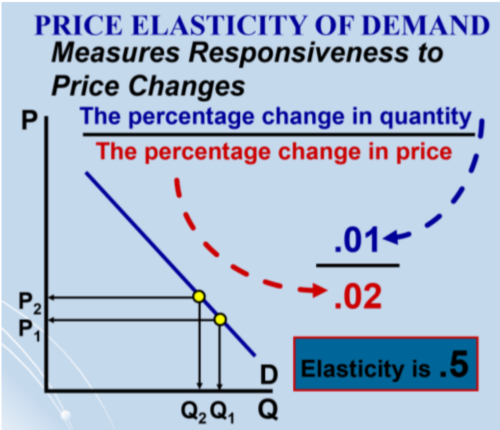
Marginal = incremental

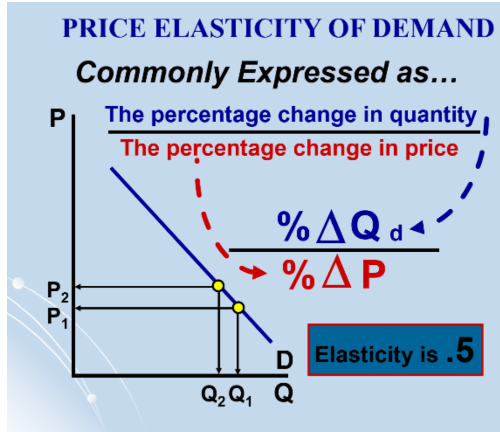
Plot the Average Cost and the Marginal Cost Schedules

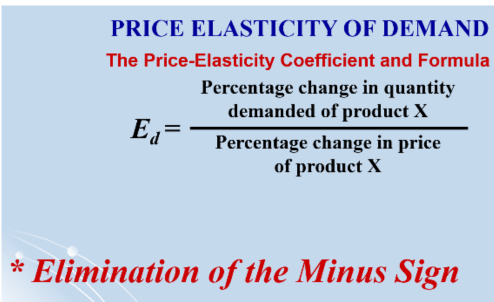
Average Cost is the per unit cost: total cost divided by quantity of output

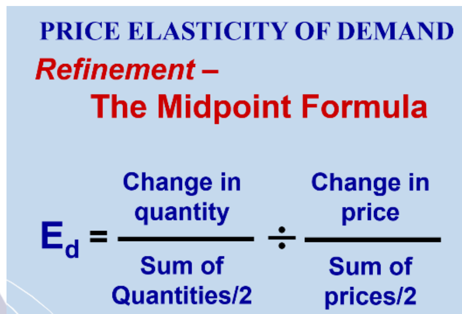
Marginal Cost is the change in total cost divided by the change in total output.

Elasticity of Demand & Supply









Why Use Percentages?

Because, using absolute changes, our choice of units would arbitrarily affect our impression of buyer responsiveness:

With a $1 reduction in the price of a bag of popcorn, consumers increase their consumption from 60 to 100 bags (a 1 unit price change causes a 40 unit quantity change)

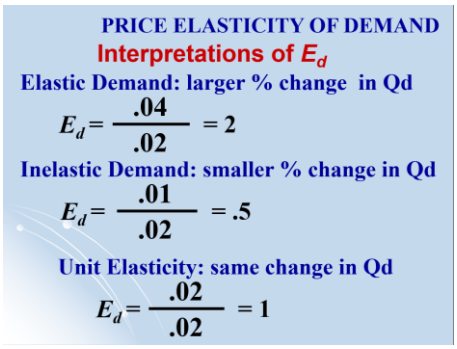
If we change the monetary unit from dollars to pennies, now it appears that it takes a price change of 100 units to cause the 40 unit quantity change

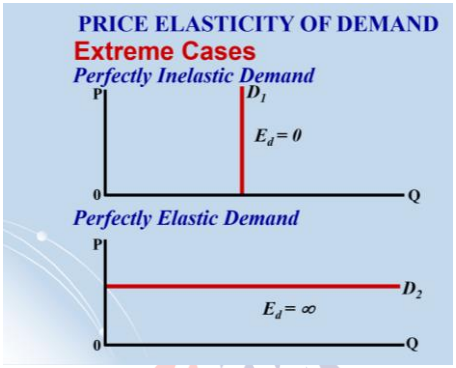
Why Use Percentages?

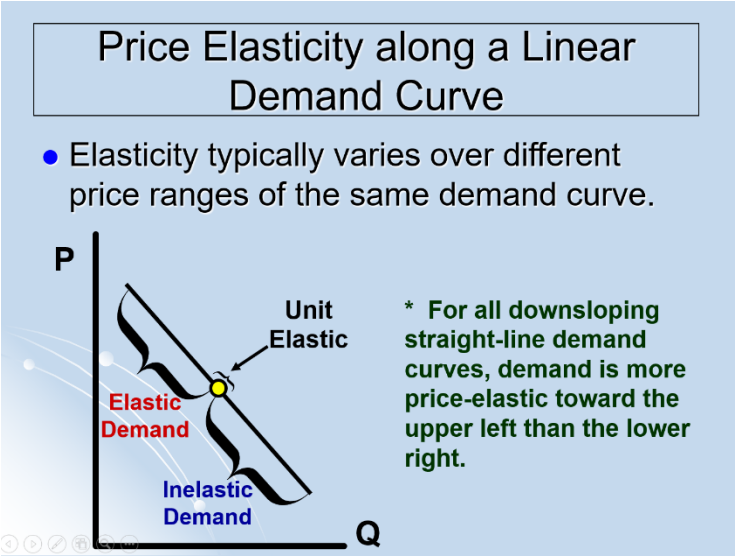
Because, using absolute changes, it would make little sense to compare the effects on quantity demanded of

A $1 increase in the price of a $20,000 car with

A $1 increase in the price of a $1 soft drink







Price Elasticity of Demand and the Shapes of Demand Curves

The Relationship between Elasticity and Slope

If a demand curve has a constant slope (straight-line), the elasticity is not constant.

If a demand curve has a constant elasticity (unit elastic), the slope is not constant.

Total Revenue Test

Total Revenue (TR) = P x Q

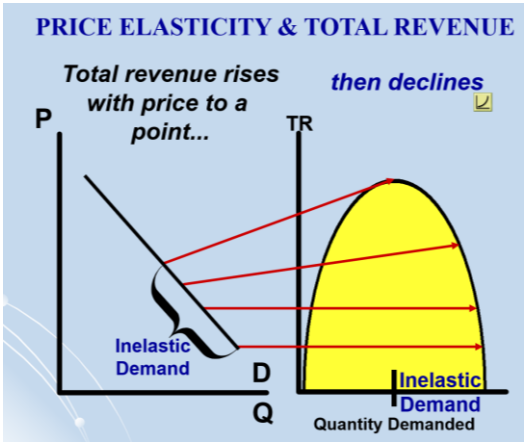
Total Revenue and the price elasticity of demand are related.

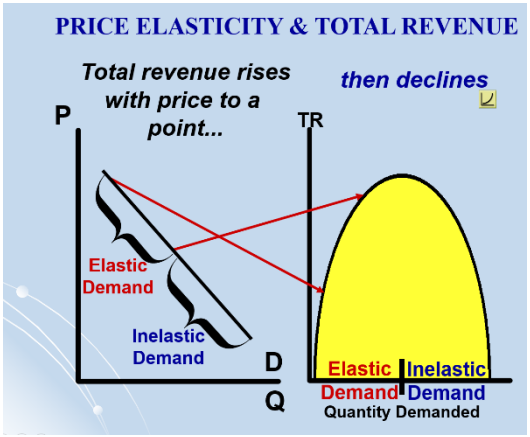
Here's the test: When price changes…

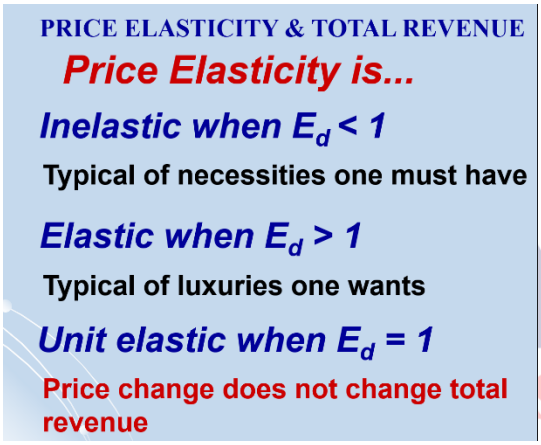
If TR changes in the opposite direction from price, demand is elastic.

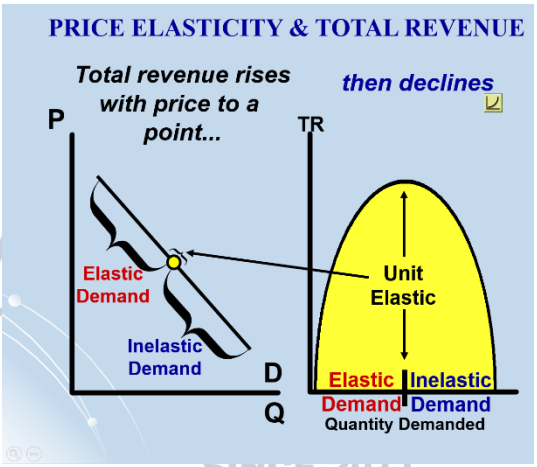
If TR changes in the same direction as price, demand is inelastic.

If TR does not change when price changes, demand is unit-elastic.









DETERMINANTS OF PRICE ELASTICITY OF DEMAND

Substitutability: Generally, the more substitute goods available, the greater the price elasticity of demand.

Proportion of Income: Other things equal, the higher the price of a good relative to consumers' incomes, the greater the price elasticity of demand.

Luxuries versus Necessities: In general, the more a good is considered to be a "luxury", the greater is the price elasticity of demand.

Time: Generally, product demand is more elastic the longer the time period under consideration. Consumers often need time to adjust to changes in prices.

Applications

Large Crop Yields:

Demand for most farm products is inelastic.

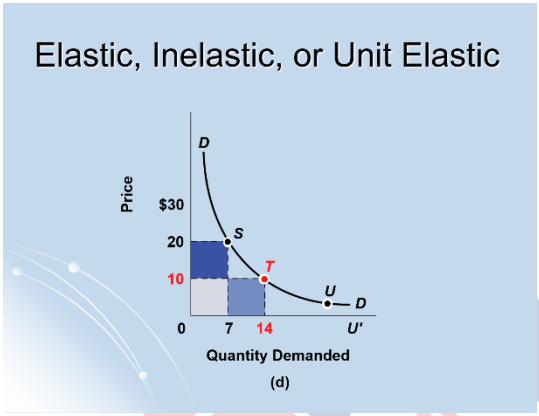
Consequently, increases in the supply of farm products tend to lower both prices and the total revenues farmers receive.

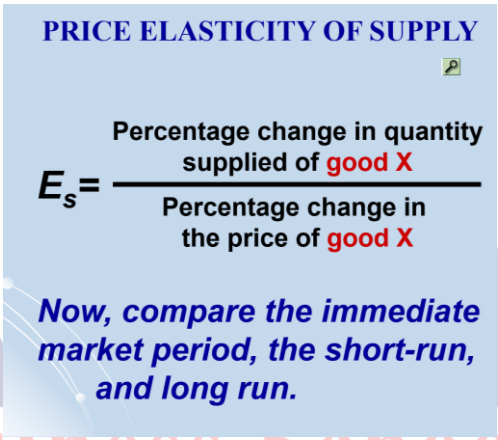
So, are large crop yields necessarily desirable for farmers?

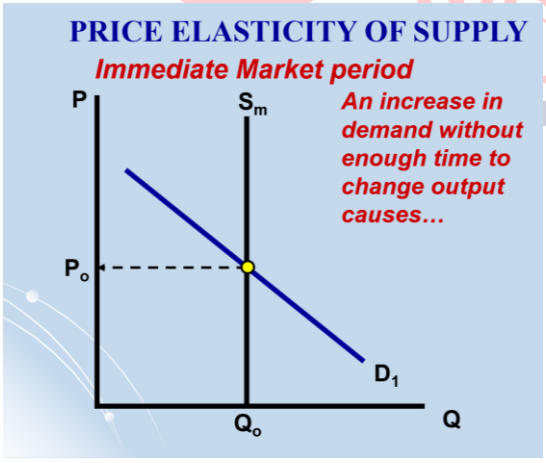
Excise Taxes:

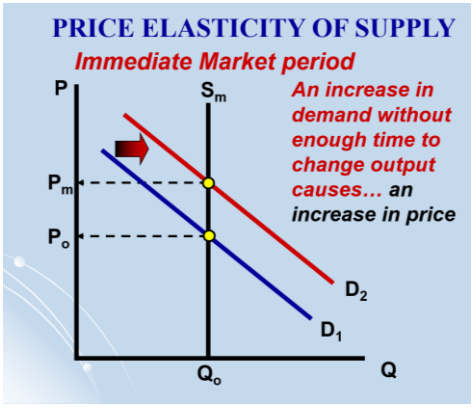
A government is looking to raise the amount of tax levied on each unit of a specific product sold.

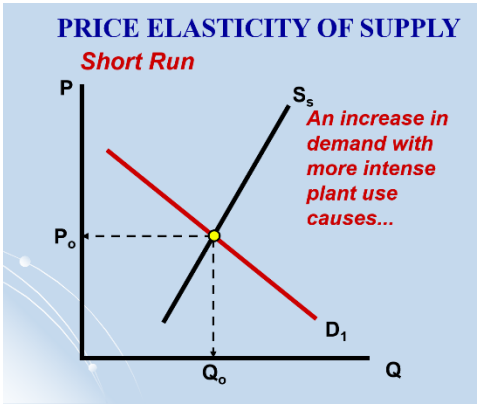
If the government is concerned about the amount of tax revenue it will generate, should it levy the tax on a product with elastic or inelastic demand?

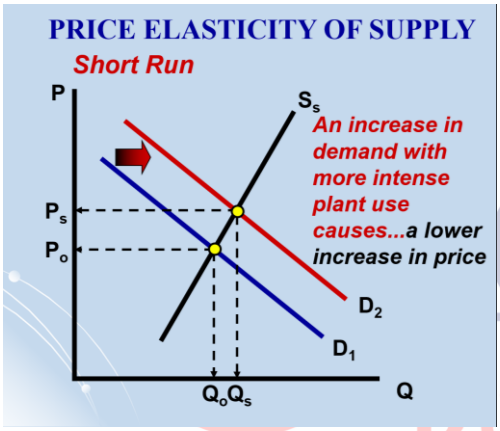


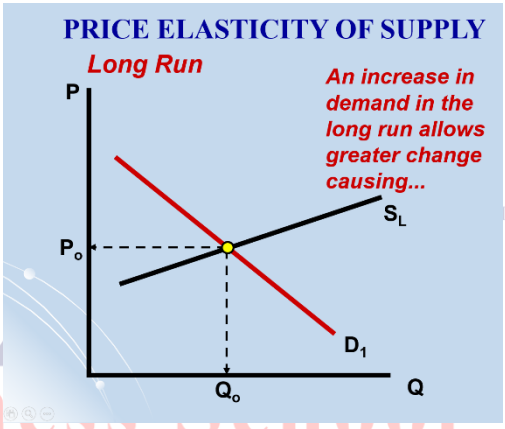










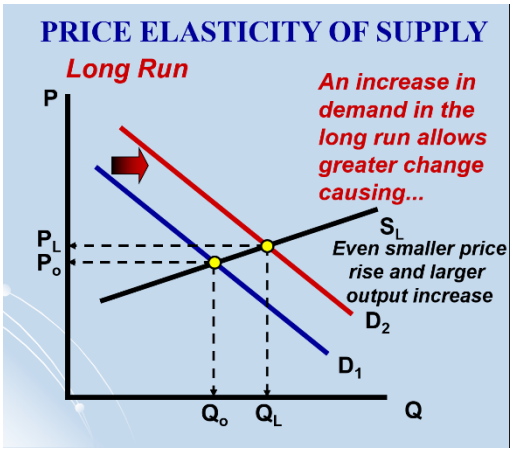


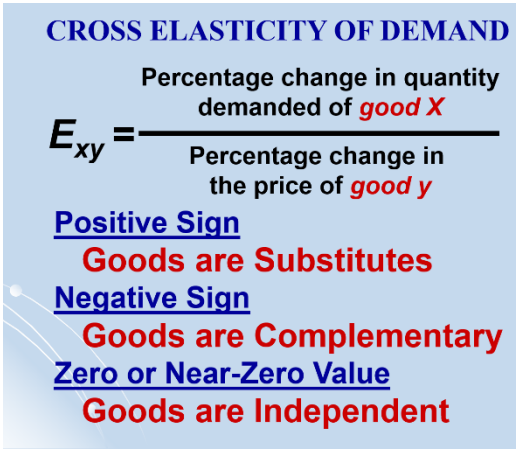
DEMAND $E_d = \frac{\%\text{ change in } Q_d}{\%\text{ change in P}}$

CROSS $E_{xy} = \frac{\%\,\Delta\, Q_d \text{ of X}}{\%\Delta \text{ Price of Y}}$

INCOME $E_I = \frac{\%\,\Delta\, Q_d}{\%\Delta \text{ Income}}$

Supply $E_s = \frac{\%\text{ change in } Q_s}{\%\text{ change in P}}$





BASIC POSTULATES OF CLASSICAL MACROECONOMICS

The classical macroeconomic structure is built upon the writings of famous classical economists like Adam Smith, David Ricardo, J.B. Say, T.R. Malthus, A.C. Pigou, Irving Fisher to mention the greatest few. Their scattered writings, when put together, produce a systematic and coherent macroeconomic framework.

Full Employment

Classicals believed that there will always be full employment (or, near full employment) in the economy – full employment not only of labour but also of their major resources such as land, capital and other factors of production. In case of labour, for instance, they held the view that all labour will normally find employment in a free enterprise capitalist economy with 'flexible labour market' full employment does not mean that temporary unemployment --- [unemployment for a temporarily short period] will not exist. But unemployment of relatively longer period or what Keynes later termed 'involuntary unemployment' is totally ruled out by the classicals. For instance, temporary unemployment may occur due to maladjustment between demand and supply of resources in a capitalist economy or frictions in the economy – workers changing jobs, locations, etc. – or change in the structure of the economy such as old industries shutting down and new ones coming up or unemployment that occurs during business cycles (recessions or depression). Full employment will, then, occur only in the long run. So, long run perspective is implicit in all these postulates. The classicals generally ignore short run problems however serious they may be. In the long run, total demand for labour will always be equal to total supply of labour and total output (of goods and services) will be at its full potential level. Lapses from full employment may be corrected by appropriate wage cut given sufficient flexibility in the wage system. classical economists viewed unemployment as a passing phase in the development of capitalist economy while full employment being a normal phenomenon.

2.1.2 Wage-Price Flexibility

wages as also prices (including interest rates) are flexible and not rigid. Rates are capable of moving upward and downward under normal pressures of demand and supply in their respective markets. In other words, the demand and supply curves are fairly responsive to prices and wages – or, to say the same thing, demand and supply curves are price-elastic (as also wage-elastic). wage rate flexibility is always in the interest of both the employers and workers. Employers gain from wage rate reduction because this reduces their wage cost and hence increases their profit margin , they will be tempted to employ more workers to increase output. Workers will gain in terms of increased employment of labour force (though not in terms of wage rate or wage per worker). Wage rate rise, similarly, works in opposite direction. On the other hand, workers will respond by increasing their supply when wage rate is higher and decrease their supply when wage rate is lower.

Wage price flexibility will ensure that such

1. deviations will soon disappear and the economy will eventually return to the equilibrium position.

2. Wage rate here means “real wage rate” and not money wage rate. Any change in money wage rate is suitably adjusted by change in price level so that

the impact of price level change on real wage rate is neutralized. Money wage and price level move in the same direction and to thesame extent to leave the real wages unaffected.

3. On the other hand, the price level determined in the real sector is known as relative price level (price of one product in terms of other product).

Let us suppose there are two goods: wheat and potato whose nominal prices are ` 10.00 per kg and ` 15.00 per kg respectively (or, their real price ratio is 1.5 units of wheat: 1 unit of potato). If, for some reason, the supply of money in the economy suddenly doubles, the prices of wheat and potato also double to ` 20 per kg and ` 30 per kg. But their relative price ratio remains the same, i.e., 1.5 units of wheat : 1 unit of potato. This is because the relative price level is something determined by factors such as, relative factor supplies of goods services and technology of production which are independent of the factors affecting the monetary sector. the reverse causation is not true, so that changes in the real sector do influence the monetary sector.

THE CLASSICAL QUANTITY THEORY OF MONEY

One of the basic tenets of classical macroeconomics is the quantity theory of money supply (or quantity) of money determines the level of prices in the economy.

Quantity theory has two approaches:

(a) transaction approach and (b) cash balance approach.

The transaction approach, in turn, has two versions, Fisherian equation of exchange or pure transaction version and aggregate income or national income version. The latter version has become more popular and convenient expression of quantity theory.

The Fisherian version of quantity theory is expressed in terms of the following equation:

$$M V = P T$$

[where M = Supply of money used for purchase-sale of goods, V = velocity of circulation of money, T = Total volume of transactions of all goods, P = Average

price level.] Equation is an expression that simply equates two sides of transactions (purchase and sale) of all goods in the economy, with the help of money, during a certain period of time. The right hand side of equation shows the total quantity of goods sold valued at their average price level while the left hand side shows the total amount of money required for goods bought. This seems to be an obvious fact and shows the equilibrium condition of the economy. The explanation of the terms (M, V, P and T) is as follows: [M, the supply of money, refers to the money in circulation (notes and coins) as also bank money (demand deposits). M is supposed to be exogenously given.

At the time when quantity theory was originally developed, M was supposed to constitute only the currency in circulation. However, when transactions by individuals and businesses included operations through banks, bank deposits

were also included in M. V, the velocity of circulation of M, stands for the average number of times money is used up in the process of transaction of goods during the specified period of time.] In other words, individual units of money (for instance, individual coins or notes of different denominations) may be used up different number of times, but V stands only for their average number. T refers to the total volume of goods transacted. It includes all goods –

intermediate (goods used as inputs to industries) as well as final goods. P is the average price-level, i.e., money prices of all goods taken at their average value.

Referring back to equation (2.1), T is assumed given and constant and is also independent of M and V. Recalling the dichotomy postulate which states that goods sector (or, real sector) is independent of monetary sector, the constancy of T can be better understood. T, representing the total outputs of goods is determined by the factor supplies and technology. The total volume of T signifying total output of the economy, is constant at its maximum feasible level.

In other words, full use of available technology and resources (including labour) is assumed to have been made to produce total volume of T (or, supply of goods) at full employment. V is a significant factor in the equation. It is also constant and unrelated to either M or T. It is determined by institutional and structural factors of the economy and society such as payment system as also the structure of the economy.

For instance, if the receipt and payment pattern of either an individual or business is once a week as against once a month, the velocity of money in the case of the former will be greater than in the latter. Similarly, if the structure of the economy requires that most payments are made in cash than in any other form, the velocity will be higher. Now, V is not only constant but its value will be maximum, given the assumption that money is meant only for transaction purposes, and hence, people would hold money for minimum period necessary. Constancy of V is also obvious from the fact that it is the ratio between PT and M (V = PT/M) and while T part is independent, M is exogenously determined and P, of course, is calculated part depending on measurement yardsticks. Thus, if V is constant (at maximum value), T is also constant, it is easy to establish that P varies proportionately (and, of course, directly) with M. If M increases (decreases) by say 100 per cent, P also increases (decreases) by 100 per cent.

Another version of the classical quantity theory, known as Income Version has gained popularity on account of aggregation and of problem of measurement of large number of physical goods under the volume of transactions (T) and the problem of measurement of price levels of all such goods. The income version, instead, can be stated as:

$MW = P0Y$ (2.2)

where, M = money supply, W = income velocity of money, Y = real national income or product P0 = average price level of Y. P0 can be defined as GNP deflator also (an index number used to obtain real GNP – from GNP at current prices to GNP at constant prices).

The utilimate conclusion – M and P0 are directly and proportionately related hold equally truly. One significant implication of equation is that now W, the velocity, can be expressed as a ratio of nominal GNP (P0Y) and money supply (M). If both P0Y and M change proportionately W remains constant. If, by assumption, Y is at full employment level and hence constant, proportionate change in M will produce proportionate change in P0.

Quantity Theory and Demand for Money

From the quantity theory formulation in equation (2.2), a demand for money equation can be derived. This approach is known as Cash Balance Approach of quantity theory. A relationship between, Y, the real income (or, real GNP) and the proportion of Y held in cash balance by the community is sought to be established. This is opposite of spending of money for transaction purposes as shown in equation (2.1). The demand for money equation can be expressed as:

Md = mP0Y (2.3)

where, Md = demand for money, P0 = average price level (the same as in equation 2.2) Y = real national income or product (GNP) and m = fraction of money national income (nominal GNP) that the community desires to hold I cash balance.

High or low proportion of GNP kept in cash by the community. If, for instance, m = 0.2, Md will be 20 per cent of GNP and if m = 0.4, Md will be 40 per cent of GNP. just as V is assumed constant in the earlier formulation, m is also assumed constant in the present formulation for reasons not related to either M or Y. The value of m is opposite (reciprocal) of V, i.e.,

m = 1/V. Therefore, if V is at its maximum feasible level, m is at its minimum feasible level. In other words, people hold money in cash only for the minimum period necessary.

Now, if we divide through equation (2.2) by V, we get

M = 1/V P0Y (2.3a)

so that m = 1/V. Alternately, V = 1/m

Equation (2.3) is an equation in two unknowns, viz., demand for money (Md) and price level (P0). This equation can be supplemented by the equilibrium condition of the money economy, i.e., total demand for money is equal to its total supply: Md = M, further, substituting this condition into equation (2.3) yields

M = mP0Y (2.4)

Equation (2.4) states that supply of money (nominal) is a fraction, M, of the value of real national income. It is an equilibrium condition of the economy stating that the community's desired cash balance is always equal to the actual cash balance at any point in time. If this equilibrium is disturbed by any discrepancy between the desired cash balance and the actual cash balance, the economy eventually regains its equilibrium by appropriate changes in community's expenditure. Ultimately, the higher desired cash balance will be equal to actual cash balance and the economy will again be in equilibrium. The formulations in terms of equations (2.3) and (2.4) suggest that quantity

theory is, indeed, a theory of the demand for money which has, in the middle of twentieth century, been taken up for further analysis by Milton Friedman and his associates.

2.3 THE CLASSICAL THEORY OF SAVING AND INVESTMENT

To ensure full employment, the classical economists provided a separate theory of saving and investment. Say's law to hold in an economy where all incomes are not spent but a part is saved and also the same take the form of investment by entrepreneur class. Investment refers to production and acquisition of any real capital asset such as factories, raw materials, machinery, inventories of finished and semifinished goods etc. It is the time rate of increase in capital asset. the theory of saving and investment explains the determination of the rate of interest, is real phenomenon in the sense that interest rate is determined by real factors. While productivity of capital is the main factor behind the behaviour of investment, time preference is the factor behind the behaviour of savings. Both these factors are real factors and are not influenced by monetary factors. Further, interest rate acts as a mechanism for bringing about equality between volumes of investment and savings. Let us elaborate these factors in some detail.

The meaning of investment is addition to capital stock. The classical economists believe that such investment takes place in the economy mainly because capital is more productive. Now, the acquisition of new capital asset, such as purchasing a new machine involves costs – costs in terms of interest for borrowed fund from savers. But, as more and more investment is taken up, the marginal productivity of capital declines just as the marginal productivity of labour or any other factor declines with its increasing volume.

Therefore, any rational entrepreneur would be interested in acquiring more capital assets (investment) so long as the marginal productivity of an additional capital is higher than the interest cost. Hence, investment is higher at lower rate volume of investment by CD amount.

Hence, we conclude that classical macroeconomics provides a consistent set of theories, viz., an employment theory (in fact, a full employment theory), a monetary theory and a saving-investment theory, each of which, even though seemingly separate, is connected with other and supporting one another.

WAGE-PRICE RELATIONSHIP AND FULL EMPLOYMENT

In this section, we examine the relationship between wages and prices in the classical system that would ensure full employment. We refer to Fig. 2.2(b), given below, which shows the equilibrium condition in the labour market in terms of total demand for labour being equal to the total supply of labour. The real wage rate W/P, in this situation, is (W/P)0. In other words, the labour market clears only at (W/P)0 real wage rate; hence this is the full employment equilibrium. This is because employers optimize their resources in order to maximize their profits at the output level of Yp- the potential output and at (W/P)0 wage rate.

According to classical, this situation is easily attainable the capitalist system given sufficient flexibility of wages and prices. Assumtion;

all labourers are homogeneous and wages paid to them are standardized wages paid in terms of money, i.e., money wages(w). [normally all employers pay their workers in terms of money wages.] But how do they get at the real wages then? if there is flexibility of wage rate, the employerswill be induced to hire more labourers only when (W/P) falls from the present level. Also, the unemployed labourers are prepared to accept lower wage rate rather than remaining unemployed. This would, most likely, happen given the type of competition we have assumed in the labour market. However, falling (W/P) implies any of the following possibilities: DL curve is decreasing throughout. The supply of labour curve, SL, is rising from left to right reflecting the labour supply behaviour – more and more labour hours are offered at higher and higher real wage rates. This is consistent with the normal behaviour of the labour at microeconomic level. Given such behaviour of the labour market, the total available labour supply, No, is equal to its total demand at the real wage rate equal to (W/P)0. Panel (c) shows the demand for money for different levels of national income (PY). The straight line mPY from the origin shows that given the value of m – the proportion of PY demanded in the form of money – there are different combinations of money supply (= demand) and national income. For instances, for M0 money supply, the corresponding national income is (PY)0 and for M1 money supply, national income is (PY)1. The slope of the line mPY is 1/m since,

P0Y/Md = 1/m. (if for instance, m = 0.4, 1/m = 2.5; if m = 0.5, 1/m = 2 and so

higher the value of m, lower the value of the slope and lower the value of m, higher the value of the slope). Interpreted otherwise, it shows that (PY)0 level of national income can be sustained by M0 money supply and (PY)1 level of national income can, similarly, be sustained by M1 money supply. But since Y is constant at Y0, an increased money supply will simply push up the price level from P0 to P1. Therefore, (PY) level of national income will be equal to the original level of national income (Y0) measured at increased price level (P1); that is (PY)1 = P1Y0.

Finally, we can determine the level of money wage rate for different price levels such as P0 and P1 as shown in panel (d). The straight-line W/P indicates the real wage rate for different values of W and P, provided they change by equal proportions. Thus, if M0 level of money supply generates P0 price level, the corresponding money wage rate will be W0. Similarly, if M1 money supply results in P1 price level, the corresponding money wage rate will be W1 and so on, although the real wage rate, W/P is the same.

Thus, the diagrammatic representation of the classical macroeconomic structure also tries to demonstrate the following results: Real sector (labour and commodity) is independent of the monetary sector. Employment and output and real wage rates are determined in the real sector. Monetary sector determines the price level which, in turn, determines the money wage rate.

2.5.1 Critical Evaluation

In spite of many shortcomings and simplistic assumptions of the classical macroeconomic system and Keynesian revolution in the post-1930s, the 1970s and period thereafter has witnessed a kind of revival of classical system. The new classical macroeconomics has focussed on further refinements of the basic classical tenets and popularization of policy tools based on these tenets. The rise

of supply side economics with its root is Say's law, market fundamentalism of the capitalist economy with minimum government intervention in the functioning of the economic system and rising importance of monetary policy vis-a-vis fiscal policy are some of the recent developments in the macroeconomics field with their application in most of the western capitalist economies and gradual policy changes in emerging economies of the world. The most important drawback of the classical/new classical economic policies being pursued in most of western capitalist world based on free enterprise and market economy rules is the failure of predicting correctly the occurrence of 'crises'. Business cycles do occur in spite of tall claims by the authors belonging to this group which virtually jeopardize the functioning of the capitalist system.

Circular Flow Diagram

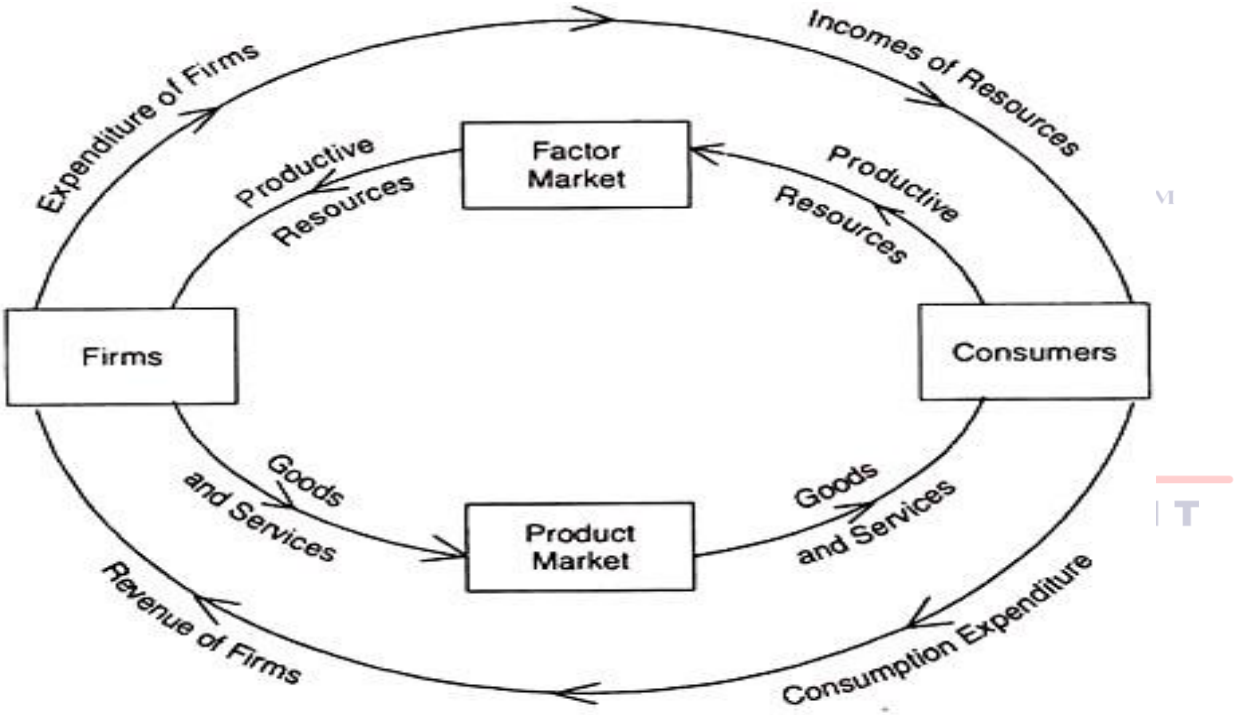
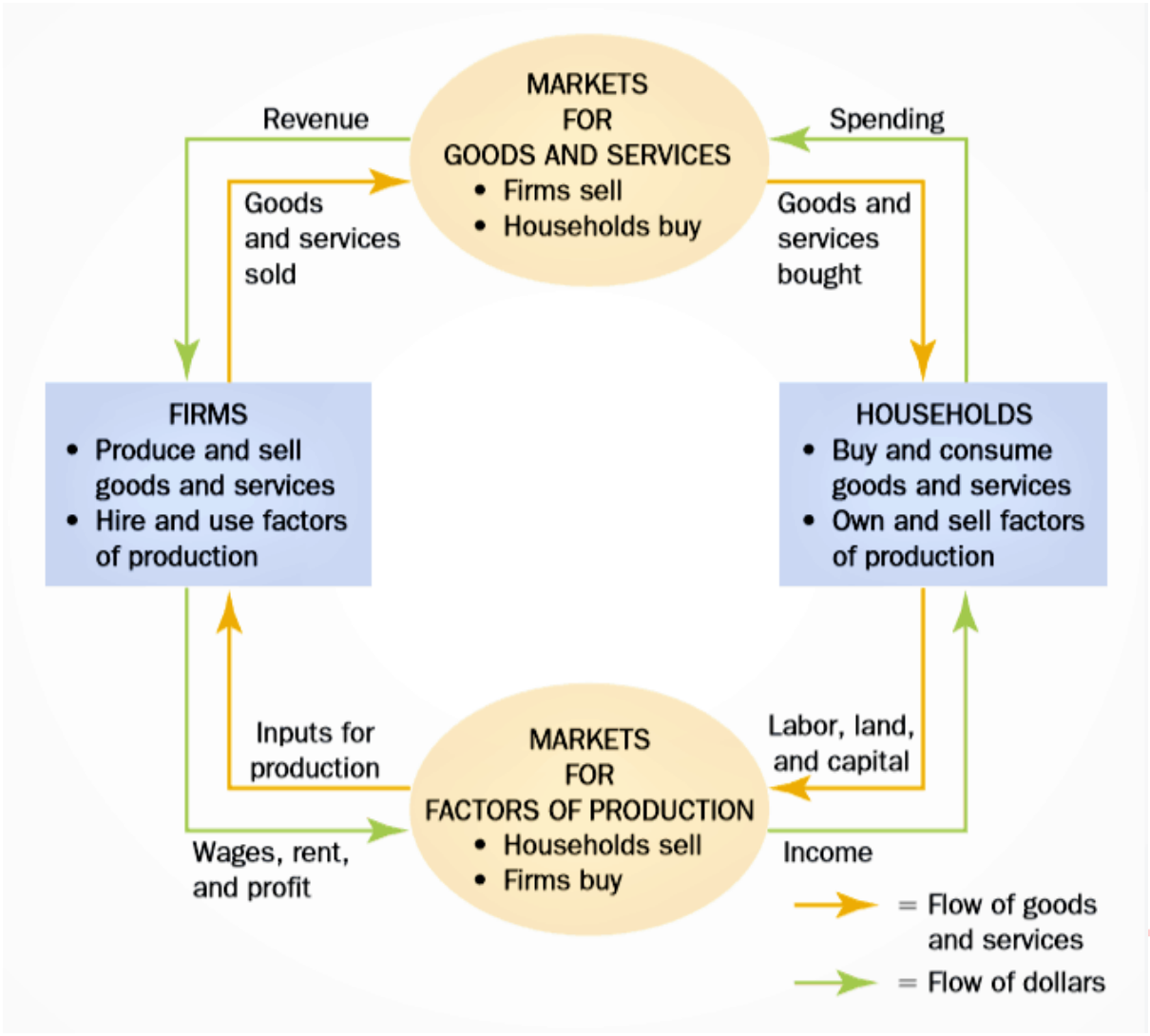


Fig. 10

circular flow Diagram is a visual model of the economy that shows how dollars flows through markets among households and firms. Breaking down Circular Flow Diagram The economy consists of millions of people engaged in many activities—buying, selling, working, hiring, manufacturing, and so on. To understand how the economy works, we must find some way to simplify our thinking about all these activities. In other words, We need a model that explains, in general terms, how the economy is organized and how participants in the economy interact with one another.



Above Diagram presents a visual model of the economy, called a circular flow diagram. In this model, the economy has two types of decisionmakers—households and firms.

Firms produce goods and services using inputs, such as labor, land, and capital (buildings and machines). These inputs are called the factors of production.

Households own the factors of production and consume all the goods and services that the firms produce.

Households and firms interact in two types of markets.

In the markets for goods and services, households are buyers and firms are sellers. In particular, households buy the output of goods and services that firms produce.

In the markets for the factors of production, households are sellers and firms are buyers. In these markets, households provide firms the inputs that the firms use to produce goods and services.

The circular flow diagram offers a simple way of organizing all the economic transactions that occur between households and firms in the economy.

The inner loop of the circular-flow diagram represents the flows of goods and services between households and firms.

The households sell the use of their labor, land, and capital to the firms in the markets for the factors of production.

The firms then use these factors to produce goods and services, which in turn are sold to households in the markets for goods and services.

Hence, the factors of production flow from households to firms, and goods and services flow from firms to households.

The outer loop of the circular-flow diagram represents the corresponding flow of dollars. The households spend money to buy goods and services from the firms.

The firms use some of the revenue from these sales to pay for the factors of production, such as the wages of their workers.

What's left is the profit of the firm owners, who themselves are members of households.

Hence, spending on goods and services flows from households to firms, and income in the form of wages, rent, and profit flows from firms to households.

Example of Circular Flow Diagram

The dollar begins at a household, sitting in, the wallet.

If you want to buy a cup of coffee, you take the dollar to one of the economy's markets for goods and services, such as your local Starbucks coffee shop.

here you spend it on your favorite drink. When the dollar moves into the Starbucks cash register, it becomes revenue for the firm.

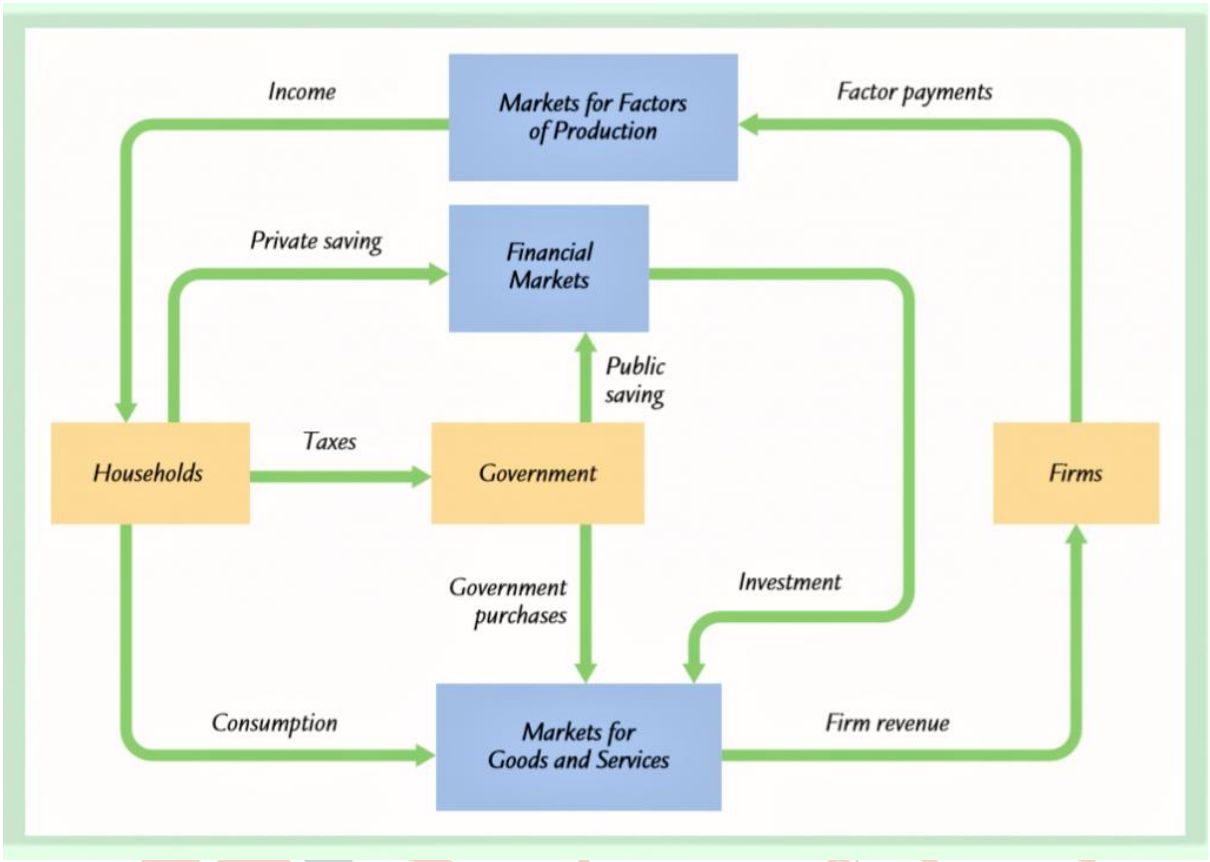
The dollar doesn't stay at Starbucks for long, however, because the firm uses it to buy inputs in the markets for the factors of production.

For instance, Starbucks might use the dollar to pay rent to its landlord for the space it occupies or to pay the wages of its workers. In either case, the dollar enters the income of some household and, once again, is back in someone's wallet.

At that point, the story of the economy's circular flow starts once again.

Realistic Circular flow diagram

The image below more accurately reflects how real economies function.



It shows the linkages among the economic actors—households, firms, and the government. And how dollars flow among them through the various markets in the economy.

Let's look at the flow of dollars from the viewpoints of these economic actors.

Households receive income and use it to pay taxes to the government to consume goods and services, and to save through the financial markets.

Firms receive revenue from the sale of goods and services and use it to pay for the factors of production.

Both households and firms borrow in financial markets to buy investment goods, such as houses and factories.

The government receives revenue from taxes and uses it to pay for government purchases. Any excess of tax revenue over government spending is called public saving, which can be either positive (a budget surplus) or negative (a budget deficit).

Summary

The above circular flow diagram in Figure is one simple model of the economy. It dispenses with details that, for some purposes, are significant.

A more complex and realistic circular-flow model would include, for instance, the roles of government and international trade.

Yet these details are not crucial for a basic understanding of how the economy is organized.

Because of its simplicity, this circular flow diagram is useful to keep in mind when thinking about how the pieces of the economy fit together.

ELASTICITY OF DEMAND: -

Concept of Elasticity of Demand

2. Types of Elasticity of Demand.

Concept of Elasticity of Demand:

In reality we often come across one or two surprising facts. For example, we observe that an increase in supply of an agricultural commodity, because of a bumper crop or import of cheap corn from abroad, is likely to reduce its price. This fall in price is unlikely to raise demand because consumption of stable agricultural crops remain more or less unchanged in all situations. large output of any agricultural crop tends to be associated with low revenue (= P x Q) of the farmers. To understand this peculiar phenomenon we must learn an important economic concept, viz., 'elasticity of demand'. Business firms, desirous of reducing prices in order to sell more of goods and services, and making more profit by doing so, must also be interested in the concept of elasticity.

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And when a government department allows a public utility concern like the Calcutta Corporation to raise its price of water, or the Calcutta Electric Supply Corporation to raise the electricity tariff in order to wipe out its losses, the elasticity concept is very much involved.

The demand for a commodity depends on a number of variables like the price of the commodity, the income of the buyers, prices of related goods and son on.

Consumers do respond to a change in one of the variables affecting demand, other variables remaining unchanged. The elasticity of demand measures the responsiveness of the market demand for a commodity to a change in one of the variables affecting demand.

The concept of elasticity is extremely useful in any business situation. It is often made use of by marketing managers to set prices of various products and services.

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It is also used by a discriminating monopolist like the Calcutta Electric Supply Corporation to set different prices for the same commodity in two different markets. The Finance Minister also makes use of the concept to explore the possibility of raising revenue by imposing sales tax or excise duty on a wide variety of goods.

There are two other concepts of elasticity, viz., market share elasticity and promotional elasticity (or advertisement elasticity of sales). The former measures the responsiveness of the percentage share one firm has of the market, to changes in the ratio of its prices to industry prices. The latter measures the responsiveness of sales to change in advertising or any other sales promotion outlay.

In other words, it is a measure of market sensitivity of demand. And there are three types of demand elasticity's, viz., price elasticity, income elasticity and cross elasticity.

Types of Elasticity of Demand:

I. Price Elasticity of Demand:

Price elasticity is "a concept for measuring how much the quantity demanded responds to changing price". In other words, "it is a relative measure of the responsiveness of changes in quantity demanded, the dependent variable, to changes in price, the independent variable". In fact, various commodities differ in the degree to which the quantity demanded will respond to changes in their respective prices.

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If the price of salt falls by 1% the quantity of salt demanded may go up by less than 1%. But the sales of colour TV sets may rise more than 1% for every 1% price cut. We can also think of an intermediate situation where 1% cut in price may lead to exactly 1% increase in sales when percentage change in price balances percentage changes in quantity.

The first case is one of weak percentage response of Q to changes in P and if this is the case demand is said to be inelastic. The second case is of strong percentage response of Q to changes in P and falls in the category of elastic demand. The intermediate (borderline) case is one of 'unitary elasticity of demand.

The Total Revenue Test:

The conventional way of measuring elasticity is to look at the effect of price changes on the total revenue of business firm (or total expenditure of consumers). Total revenue is P x Q. If consumers buy 10 litre of petrol at Rs. 8 per litre, the total revenue is Rs. 80.

It is possible to see whether demand is elastic, unitary elastic or inelastic by examining the effect on total revenue of a price cut along the same demand curve:

Price elasticity is a measure of the degree of responsiveness of quantity demanded of a commodity to changes in its market price. We can think of the following three alternative categories of price elasticity.

1. When percentage cut in P results in such a large change in Q that TR = (P x Q) rises, demand is said to be elastic (i.e., P1Q1 > P0Q0.)

2. When a percentage cut in P results in exactly the same percentage increase in Q so that TR remains unchanged (i.e., P1Q1 = P0Q0), demand is said to be unitary elastic.

3. When a percentage cut in P results in such a small percentage increase in Q that TR falls (i.e., P1Q1 < F0Q0) demand is said to be inelastic. The three figures below illustrate the three situations.

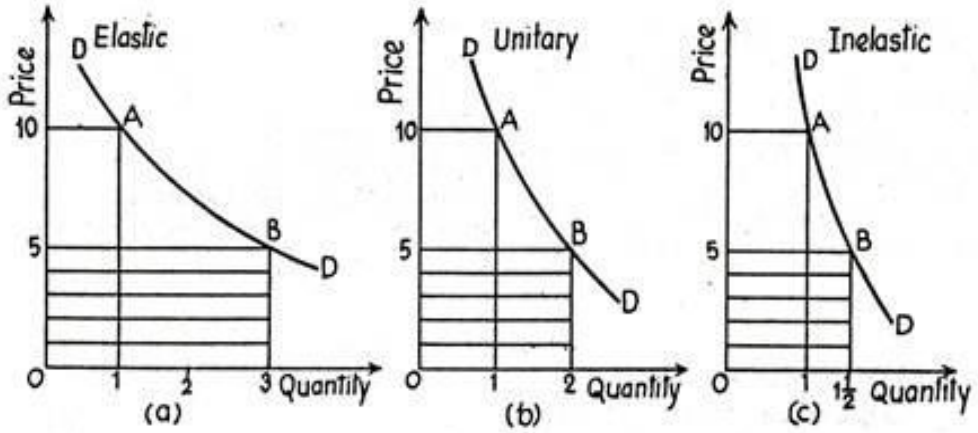


Figure 10.5
Three categories of demand elasticity

also the following table which is self-explanatory.

Table 10.2 : Demand Schedules with Different Elasticities

Elastic Demand			Unit Elastic Demand			Inelastic Demand		
P	*Q*	*PQ*	*P*	*Q*	*PQ*	*P*	*Q*	*PQ*
Rs. 10	1,000	Rs. 10,000	Rs. 10	1,000	Rs. 10,000	Rs. 10	1,000	Rs. 10,000
9	2,000	18,000	9	1,111	10,000	9	1,050	9,450
8	3,000	24,000	8	1,250	10,000	8	1,100	8,800

The concept of elasticity has practical relevance. By using the concept in the business world, or in the labour market or in the Ministry of Finance (Government of India) it is possible to determine the sensitivity of changes in quantity demanded to changes in price. However, application of the concept is possible only after calculation of an elasticity coefficient.

Calculation of Price Elasticity:

Elasticity can be calculated in two ways. Firstly it as an average value over some range of the demand function, in which case it is called arc elasticity.

The arc price elasticity can be calculated using the following mid-point formula:

Arc price elasticity of demand

$$\frac{\text{Change in quantity demanded}}{\text{(Initial quantity + Final quantity)/2}}$$
$$\frac{\text{Change in price}}{\text{(Initial price + Final price)/2}}$$

The formula for calculating arc elasticity may be expressed as:

$$E_p = \frac{\frac{\Delta Q}{(Q_1 + Q_2)/2}}{\frac{\Delta P}{(P_1 + P_2)/2}} = \frac{\Delta Q}{\Delta P} \cdot \frac{P_1 + P_2}{Q_1 + Q_2}$$

in which Ep is arc elasticity of quantity demanded with respect to price,

P1 and Q1 are the original price and quantity,

P2 and Q2 are the final price and quantity,

ΔP is the absolute change in price and

ΔQ is the absolute change in quantity.

Note that Ep is always a pure number like 1, 1/2, 1/ 4 etc.. because it is the ratio of two percentage changes.

Since the demand curve is downward sloping, either ΔP or ΔQ will be negative. Therefore, the calculated value for elasticity has negative sign.

On the basis of mid-point formula we may compute arc price elasticity. If Ep > 1 demand is said to be elastic; if Ep = 1 demand is unitary elastic and it Ep < 1 demand is inelastic. Consider the following example.

Example 1:

Suppose income is constant at Rs. 3,000 per year, present price of a good is Rs. 10 and present quantity demanded is 125 units per month. Now the price falls to Rs. 9 and a large quantity of 150 units per month is likely to be demanded. What is the arc price elasticity over this range of the demand curve?

Solution:

Substituting values into the arc elasticity formula, we get:

$$E_p = \frac{25}{-\text{Re.}1} \cdot \frac{\text{Rs. } 10 + \text{Rs. } 9}{125 + 150} = -1.73$$

What is the significance of the calculated elasticity coefficient? It simply indicates that quantity expands by 1.73% for each 1% fall in price over the relevant range of the demand curve. The negative value of the coefficient of demand elasticity simply implies that quantity Q goes up when P falls and vice-versa.

The virtue of this method of calculation is that it is a more accurate measure than if we had used the initial or final P and Q bases. This is because, when we deal with a range over which the price varies, it is always better to obtain a measure that reflects the average degree of consumer responsiveness.

For discrete (big) or once-for-all P change, we make use of the above formula. However, as a special case of arc elasticity we may use the concept of point elasticity. For small (or continuous) P and Q changes, Ep can be calculated for a point on the demand function, so as to be called point price elasticity.

Point Price Elasticity:

The responsiveness of quantity demand to price can alternatively be determined for a point on the demand function provided its slope is known to us. If we make P and Q changes smaller and smaller, at the limit, $\Delta Q/\Delta P$ becomes $\delta Q/\delta P$, the partial derivative of the demand equation with respect to price (holding other variables constant).

The formula used for calculating point elasticity (i.e., elasticity at a particular point of the demand curve) is expressed as follows:

$$e_p = \frac{\partial Q}{\partial P} \cdot \frac{P}{Q} \qquad (10.1)$$

in which ep is the point price elasticity of quantity demanded with respect to price, P and Q are any price and quantity chosen arbitrarily.

Example 2

The demand curves of commodities x and y are given by Px = 6- 0,8qx and Py = 6 – 0.4qy respectively. Show that at any given price, the two curves have the same elasticity of demand.

Solution:

We know elasticity of demand

$$e = -\frac{dq}{dp} \cdot \frac{p}{q}$$

Now, the demand function of commodity x is px = 6 – 0.8 qx

Example 3:

You have the sole authority to sell sandwiches in Eden Gardens during a test Match. Each costs 50 p. (including all relevant costs such as that of your labour).

Thus $\frac{dp_x}{dq_x} = 0 - 0.8,$

i.e., $\frac{dq_x}{dp_x} = \frac{1}{(-0.8)}$

and $e_x = -\frac{dq_x}{dp_x} \cdot \frac{p_x}{q_x} = -\frac{1}{(-0.8)} \cdot \frac{p_x}{q_x} = 1.25\frac{p_x}{q_x}$

Again the demand function for y is $p_y = 6 - 0.4\, q_y$

Thus $\frac{dp_y}{dq_y} = 0 - 0.4 = -0.4,$

i.e., $\frac{dq_y}{dp_y} = \frac{1}{(-0.4)}$

and $e_y = -\frac{dq_y}{dp_y} \cdot \frac{p_y}{q_y} = -\frac{1}{(-0.4)} \cdot \frac{p_y}{q_y} = 2.50 \cdot \frac{p_y}{q_y}$

Now at any given price, say, Rs. 2,

$$q_x = \frac{6 - q_x}{0.8} = \frac{6 - 2}{0.8} = 5$$

and $q_y = \frac{6 - p_y}{0.4} = \frac{6 - 2}{0.4} = 10$

$\therefore \quad e_x = 1.25 \cdot \frac{p_x}{q_x} = 1.25 \times \frac{2}{5} = 0.5$

and $e_y = 2.50 \cdot \frac{p_y}{q_y} = 2.50 \times \frac{2}{10} = 0.5$

Therefore, it follows that

$$e_x = e_y$$

From previous experience your best estimate of the demand is the following:

Price						
90p.	95p.	Re.1.00	Rs.1.05	Rs.1.10	Rs.1.15	Rs. 1.20
Sales (per day)						
2400	2200	2000	1800	1600	1400	1200

Calculate the elasticity of demand on this demand schedule around the price of Re. 1. Explain precisely the concept of elasticity you use.

Solution:

Elasticity of demand around a price of Re. 1:

Elasticity of demand =

Proportionate change in quantity demanded/Proportionate change in price

When price increases from Re. 1 to Rs. 1.05, proportionate increase is 5%. At Rs. 1.05 proportionate decrease in quantity demanded, i.e., from 2000 to 1800 is of 10%.

Elasticity of demand:

Conversely if price decreased from Re. 1 to 95 p., there is a decrease of 5%. At 95 p. quantity demanded increases from 2000 to 2200, an increase of 10%.

... Elasticity of demand = 10%/5% = 2

Since we get the same result for price increase and price fall, we need not use the mid-point formula.

Example 4

Consider the following equation relating the number of passengers (road users) per year on a rapid transit system to the fare charges:

Q = 2207 – 52.4P (10.2)

in which Q = number of passenger per year

P = fare in paise

The partial derivative of the function with respect to price is:

$$\frac{\delta Q}{\delta P} = -52.4.$$

Suppose a subsidized price of 10 paise per trip is offered to children below 2 years of age and the quantity at the subsidized price is : 1683 (millions).

Substituting the values into equation (10.2) we get

$$e_p = -5.2 \times \frac{10}{1683} = -0.3113 \qquad (10.3)$$

The coefficient of price elasticity – 0.31 simply implies that passenger traffic would fall by 0.31% for each 1% rise in fares.

II. Income Elasticity of Demand:

So long we have examined the responsiveness of changes in quantity demand to changes in price. But in reality the quantity demanded of a commodity also depends on the income of the buyer, which may refer to personal income or disposable income or national income, or per capita income.

The demand for meat, for example, depends on disposable personal income (i.e., personal income after paying all taxes). This variable is of greatest significance in determining the responsiveness of changes in quantity demanded of almost all consumer durable goods like cars, bicycles, T.V. sets, refrigerators, etc.

Income elasticity may be defined as the responsiveness of changes in Q to a change in the income of the buyer(s). The coefficient of arc elasticity may be expressed as

$$E_y = \frac{\frac{\Delta Q}{Q_1 + Q_0}}{\frac{\Delta Y}{Y_1 + Y_2}}$$

where Q = quantity demanded and
Y = income

Similarly the coefficient of point elasticity may be expressed as :

$$e_y = \frac{\Delta Q}{\Delta y} \cdot \frac{y}{Q}$$

where $\partial Q/\partial Y$ = the partial derivative of quantity with respect to price;
Y = income at some specific point on the curve; and
Q = the quantity demanded at that level of income.

It may be noted that the demand for a particular commodity may be price elastic but income inelastic. For example, the demand for V.C.R. or T.V. sets or cars may be price inelastic but income elastic. If this is true, a marginal drop in the price of these items is unlikely cause a fall in the quantity demanded of those items, whereas an increase in income would lead to an increase in the number of V.C.R. T.V., or cars demanded.

In general price elasticity of demand for cars in developing countries like India is found to be very high, whereas the income elasticity of demand is unitary. The implication is that a fall in the price of cars will lead to a sharp rise in the number of cars demanded. This will occur whether the economy is in the expansionary or contractionary phase of the business cycle.

The numerical value of the co-efficient of income elasticity may be zero, positive, or negative. There may be a particular commodity like salt the quantity demanded of which may not respond to a small change in the income of the buyers. It is positive in case of normal goods and negative in case of inferior goods.

If the quantity demanded of a commodity rises (falls) with an increase in income, the commodity is called a normal (inferior) good. Even in case of the same commodity – the coefficient of income elasticity may vary at different levels of income. See Figure 10.12.

Here Yd is the income demand curve showing the relationship between Yd (disposable income) and Q. At low levels of income (for income range OY0) demand is elastic. Subsequently it becomes completely inelastic (for income range Y0 – Y1). Finally, at higher levels of income Y1 and above) demand is inelastic again.

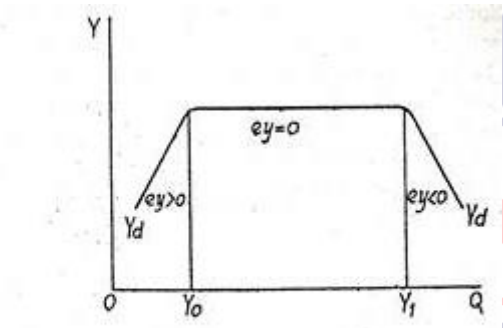


Figure 10.12
Income demand curve

Practical Relevance:

The concept of income elasticity has practical relevance. In fact, in order to determine the effect of changes in business activity, the business economist must have a knowledge of income elasticities. On the basis of forecast of national or disposable personal income it is possible to apply income elasticities in estimating the changes in the purchases of consumer goods (especially durables).

However, such forecasts have limited value for two reasons:

(1) Sales are influenced by various other factors not included in the elasticity measure and

(2) The past pattern of purchase of a commodity is not an accurate indicator of the future.

III. Cross-Elasticity of Demand:

Cross elasticity of demand measures the interrelationship of demand. In reality, the quantity demanded of a commodity, say motor cars, depends not only on its own price but also on the prices of fuel, tyres,

mopeds, scooters, etc. Cross-elasticity measures the responsiveness of the quantity demanded of a commodity to a change in the market price of another commodity.

The following formula is used to find out the numerical value of the elasticity coefficient:

$$E_c = \frac{\frac{Q_2 - Q_1}{(Q_2 + Q_1)/2}}{\frac{P_2 - P_1}{(P_2 + P_1)/2}}$$

in which P1 and P2 represent the new and old prices of the other commodity.

Likewise point cross-elasticity is measured by the formula:

$$E_c = \frac{\partial Q}{\partial P_0} \cdot \frac{P_0}{Q}$$

in which $\partial Q/\partial P_0$ = the first derivative of the demand equation with respect to price

P_0 = price of the other commodity, and

Q = quantity of the original commodity.

The coefficient of cross elasticity can be zero, positive or negative. It is zero in case of unrelated goods like tractors and motor cars. It is positive if the two commodities are substitutes.

For instance, an increase in the price of a substitute (say coffee) increases the quantity of the original commodity (say tea) demanded. Finally, it is negative if the two goods are complimentary. An increase in the price of petrol, for example, reduces the number of cars demanded.

Five most important objectives of business may be classified are as follows:

1. economic objectives,

2. social objectives,

3. human objectives,

4. national objectives,

5. global objectives.

Objectives represent the purpose for which an organisation has been started. Objectives guide and govern the actions and behaviour of businessmen. According to William F. Glueck, “Objectives are those ends which the organisation seeks to achieve through its existence and operations.”

Another term for objectives is goals. Logically, objectives ought to specify ends or results sought that are derived from and congruent with the mission the organization has set itself Attempts to set objectives should always be guided by references to the mission they are meant to fulfill.

Business objectives are something which a business organisation wants to achieve or accomplish over a specified period of time. These may be to earn profit for its growth and development, to provide quality goods to its customers, to protect the environment, etc.

Classification of Objectives of Business:

It is generally believed that a business has a single objective. That is, to make profit. But it cannot be the only objective of business. While pursuing the objective of earning profit, business units do keep the interest of their owners in view. However, any business unit cannot ignore the interests of its employees, customers, the community, as well as the interests of society as a whole.

For instance, no business can prosper in the long run unless fair wages are paid to the employees and customer satisfaction is given due importance. Again a business unit can prosper only if it enjoys the support and goodwill of people in general. Business objectives also need to be aimed at contributing to national goals and aspirations as well as towards international well-being. Thus, the objectives of business may be classified as;

A. Economic Objectives

B. Social Objectives

C. Human Objectives

D. National Objectives

E. Global Objectives

A. Economic Objectives:

Economic objectives of business refer to the objective of earning profit and also other objectives that are necessary to be pursued to achieve the profit objective, which include, creation of customers, regular innovations and best possible use of available resources.

(i) Profit Earning:

Profit is the lifeblood of business, without which no business can survive in a competitive market. In fact profit making is the primary objective for which a business unit is brought into existence. Profits must be earned to ensure the survival of business, its growth and expansion over time.

Profits help businessmen not only to earn their living but also to expand their business activities by reinvesting a part of the profits. In order to achieve this primary objective, certain other objectives are also necessary to be pursued by business, which are as follows:

(a) Creation of customers:

A business unit cannot survive unless there are customers to buy the products and services. Again a businessman can earn profits only when he/she provides quality goods and services at a reasonable price. For this it needs to attract more customers for its existing as well as new products. This is achieved with the help of various marketing activities.

(b) Regular innovations:

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

Reduction in cost and increase in sales gives more profit to the businessmen. Use of power looms in place of handlooms, use of tractors in place of hand implements in farms etc. are all the results of innovation.

(c) Best possible use of resources:

As we all know, to run any business we must have sufficient capital or funds. The amount of capital may be used to buy machinery, raw materials, employ men and have cash to meet day-to-day expenses. Thus, business activities require various resources like men, materials, money and machines.

The availability of these resources is usually limited. Thus, every business should try to make the best possible use of these resources. Employing efficient workers. Making full use of machines and minimizing wastage of raw materials, can achieve this objective.

B. Social Objectives:

Social objective are those objectives of business, which are desired to be achieved for the benefit of the society. Since business operates in a society by utilizing its scarce resources, the society expects something in return for its welfare. No activity of the business should be aimed at giving any kind of trouble to the society.

If business activities lead to socially harmful effects, there is bound to be public reaction against the business sooner or later. Social objectives of business include production and supply of quality goods and services, adoption of fair trade practices and contribution to the general welfare of society and provision of welfare amenities.

(i) Production and Supply of Quality Goods and Services:

Since the business utilizes the various resources of the society, the society expects to get quality goods and services from the business he objective of business should be to produce better quality goods and supply them at the right time and at a right price It is not desirable on the part of the businessman to supply adulterated or inferior goods which cause injuries to the customers.

They should charge the price according to the quality of e goods and services provided to the society. Again, the customers also expect timely supply of all their requirements. So it is important for every business to supply those goods and services on a regular basis.

(ii) Adoption of Fair Trade Practices:

In every society, activities such as hoarding, black- marketing and over-charging are considered undesirable. Besides, misleading advertisements often give a false impression about the quality of products. Such advertisements deceive the customers and the businessmen use them for the sake of making large profits.

This is an unfair trade practice. The business unit must not create artificial scarcity of essential goods or raise prices for the sake of earning more profits. All these activities earn a bad name and sometimes make the businessmen liable for penalty and even imprisonment under the law. Therefore, the objective of business should be to adopt fair trade practices for the welfare of the consumers as well as the society.

(iii) Contribution to the General Welfare of the Society:

Business units should work for the general welfare and upliftment of the society. This is possible through running of schools and colleges better education opening of vocational training centres to train the people to earn their livelihood, establishing hospitals for medical facilities and providing recreational facilities for the general public like parks, sports complexes etc.

C. Human Objectives:

Human objectives refer to the objectives aimed at the well-being as well as fulfillment of expectations of employees as also of people who are disabled, handicapped and deprived of proper education and training. The human objectives of business may thus include economic well-being of the employees, social and psychological satisfaction of employees and development of human resources.

(i) Economic Well-being of the Employees:

In business employees must be provided with tan remuneration and incentive for performance benefits of provident fund, pension and other amenities like medical facilities, housing facilities etc. By this they feel more satisfied at work and contribute more for the business.

(ii) Social and Psychological Satisfaction of Employees:

It is the duty of business units to provide social and psychological satisfaction to their employees. This is possible by making the job interesting and challenging, putting the right person in the right job and reducing the monotony of work Opportunities for promotion and advancement in career should also be provided to the employees.

Further, grievances of employees should be given prompt attention and their suggestions should be considered seriously when decisions are made. If employees are happy and satisfied they can put then best efforts in work.

(iii) Development of Human Resources:

Employees as human beings always want to grow. Their growth requires proper training as well as development. Business can prosper if the people employed can improve their skills and develop their abilities and competencies in course of time. Thus, it is important that business should arrange training and development programmes for its employees.

(iv) Well-being of Socially and Economically Backward People:

Business units being inseparable parts of society should help backward classes and also people those are physically and mentally challenged. This can be done in many ways. For instance, vocational training programme may be arranged to improve the earning capacity of backward people in the community. While recruiting its staff, business should give preference to physically and mentally challenged persons. Business units can also help and encourage meritorious students by awarding scholarships for higher studies.

D. National Objectives:

Being an important part of the country, every business must have the objective of fulfilling national goals and aspirations. The goal of the country may be to provide employment opportunity to its citizen, earn revenue for its exchequer, become self-sufficient in production of goods and services, promote social justice, etc. Business activities should be conducted keeping these goals of the country in mind, which may be called national objectives of business.

The following are the national objectives of business.

(i)Creation of Employment:

One of the important national objectives of business is to create opportunities for gainful employment of people. This can be achieved by establishing new business units, expanding markets, widening distribution channels, etc.

(ii) Promotion of Social Justice:

As a responsible citizen, a businessman is expected to provide equal opportunities to all persons with whom he/she deals. He/ She is also expected to provide equal opportunities to all the employees to work and progress. Towards this objectives special attention must be paid to weaker and backward sections of the society.

(iii) Production According to National Priority:

Business units should produce and supply goods in accordance with the priorities laid down in the plans and policies of the government. One of the national objectives of business in our country should be to increase the production and supply of essential goods at reasonable prices.

(iv) Contribute to the Revenue of the Country:

The business owners should pay their taxes and dues honestly and regularly. This will increase the revenue of the government, which can be used for the development of the nation.

(v) Self-sufficiency and Export Promotion:

To help the country to become self-reliant, business units have the added responsibility of restricting import of goods. Besides, every business units should aim at increasing exports and adding to the foreign exchange reserves of the country.

E. Global Objectives:

Previously India had very restricted business relationship with other nations. There was a very rigid policy for import and export of goods and services. But, now-a-days due to liberal economic and export-import policy, restrictions on foreign investments have been largely abolished and duties on imported goods have been substantially reduced.

This change has brought about increase in competition in the market. Today because of globalisation the entire world has become a big market. Goods produced in one country are readily available in other countries. So, to face the competition in the global market every business has certain objectives in mind, which may be called the global objectives. Let us learn about them.

(i) Raise General Standard of Living:

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

(ii) Reduce Disparities among Nations:

Business should help to reduce disparities among the rich and poor nations of the world by expanding its operation. By way of capital investment in developing as well as underdeveloped countries it can foster their industrial and economic growth.

(iii) Make Available Globally Competitive Goods and Services:

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

THE POSTULATES OF THE CLASSICAL ECONOMICS

The theory of Value and Production are primarily concerned with the distribution of a given volume of employed resources between different uses and with the conditions which, assuming the employment of this quantity of resources, determine their relative rewards and the relative values of their products.

[1] the volume of the available resources, in the sense of the size of the employable population,

[2] the extent of natural wealth and

[3] the accumulated capital equipment.

I The classical theory of employment

The two fundamental postulates:

I. The wage is equal to the marginal product of labour

The wage of an employed person is equal to the value which would be lost if employment were to be reduced by one unit (after deducting any other costs which this reduction of output would avoid); subject to the qualification that the equality may be disturbed, in accordance with certain principles, if competition and markets are imperfect.

II. The utility of the wage when a given volume of labour is employed is equal to the marginal disutility of that amount of employment.

The real wage of an employed person is that which is just sufficient to induce the volume of labour actually employed to be forthcoming

This postulate is called "frictional" unemployment. it allows for various in exactnesses of adjustment which stops continuous full employment: for example, unemployment due to a temporary want of balance between the relative quantities of specialised resources as a result of miscalculation or intermittent demand; or to time-lags consequent on unforeseen changes; or to the fact that the change-over from one employment to another cannot be effected without a certain delay, so that there will always exist in a non-static society a proportion of resources unemployed "between jobs". "voluntary" unemployment due to the refusal or inability of a unit of labour, because of social practices or of combination for collective bargaining or of slow response to change or of mere human obstinacy, to accept a reward corresponding to the value of the product attributable to its marginal productivity.

But these two categories of "frictional" unemployment and "voluntary" unemployment are comprehensive.

There are only four possible means of increasing employment:

(a) An improvement in organisation or in foresight which diminishes "frictional" unemployment;

(b) a decrease in the marginal disutility of labour, as expressed by the real wage for which additional labour is available, so as to diminish "voluntary" unemployment;

(c) an increase in the marginal physical productivity of labour in the wage-goods industries

(d) an increase in the price of non-wage-goods compared with the price of wage-goods, associated with a shift in the expenditure of non-wage-earners from wage-goods to non-wage-goods.

II

The classical school reconcile this phenomenon with their second postulate by arguing that, while the demand for labour at the existing money-wage may be satisfied before everyone willing to work at this wage is employed, this situation is due to an open or tacit agreement amongst workers not to work for less, and that if labour as a whole would agree to a reduction of money-wages more employment would be forthcoming.

This calls for two observations, the first of which relates to the actual attitude of workers towards real wages and money-wages respectively and is not theoretically fundamental, but the second of which is fundamental.

Let us assume, for the moment, that labour is not prepared to work for a lower money-wage and that a reduction in the existing level of money-wages would lead, through strikes or otherwise, to a withdrawal from the labour market of labour which is now employed. Does it follow from this that the existing level of real wages accurately measures the marginal disutility of labour? Not necessarily. For, although a reduction in the existing money-wage would lead to a withdrawal of labour, it does not follow that a fall in the value of the existing money-wage in terms of wage-goods would do so, if it were due to a rise in the price of the latter. In other words, it may be the case that within a certain range the demand of labour is for a minimum money-wage and not for a minimum real wage. The classical school have tacitly assumed that this would involve no significant change in their theory. But this is not so. if the supply of labour is not a function of real wages as its sole variable, their argument breaks down entirely and leaves the question of what the actual employment will be quite indeterminate. Their method is tied up with their very special assumptions and cannot be adapted to deal with the more general case.

, that a situation where labour stipulates (within limits) for a money-wage rather than a real wage, so far from being a mere possibility, is the normal case. Whilst workers will usually resist a reduction of money-wages, it is not their practice to withdraw their labour whenever there is a rise in the price of wage-goods. It is sometimes said that it would be illogical for labour to resist a reduction of money-wages but not to resist a reduction of real wages. For reasons given below (p. 14), this might not be so illogical as it appears at first; and, as we shall see later, fortunately so. But, whether logical or illogical, experience shows that this is how labour in fact behaves.

Moreover, the contention that the unemployment which characterises a depression is due to a refusal by labour to accept a reduction of money-wages is not clearly supported by the facts. It is not very plausible to assert that unemployment in the United States in 1932 was due either to labour obstinately refusing to accept a reduction of money-wages or to its obstinately demanding a real wage beyond what the productivity of the economic machine was capable of furnishing. Wide variations are experienced in the volume of employment without any apparent change either in the minimum real demands of labour or in its productivity. Labour is not more truculent in the depression than in the boom¾far from it. Nor is its physical productivity less. These facts from experience are a prima facie ground for questioning the adequacy of the classical analysis.

It would be interesting to see the results of a statistical enquiry into the actual relationship between [p.10] changes in money-wages and changes in real wages. In the case of a change peculiar to a particular industry one would expect the change in real wages to be in the same direction as the change in money-wages. But in the case of changes in the general level of wages, it will be found, I think, that the change in real wages associated with a change in money-wages, so far from being usually in the same direction, is almost always in the opposite direction. When money-wages are rising, that is to say, it will be found that real wages are falling; and when money-wages are falling, real wages are rising. This is because, in the short period, falling money-wages and rising real wages are each, for independent reasons, likely to accompany decreasing employment; labour being readier to accept

wage-cuts when employment is falling off, yet real wages inevitably rising in the same circumstances on account of the increasing marginal return to a given capital equipment when output is diminished.

If, indeed, it were true that the existing real wage is a minimum below which more labour than is now employed will not be forthcoming in any circumstances, involuntary unemployment, apart from frictional unemployment, would be non-existent. But to suppose that this is invariably the case would be absurd. For more labour than is at present employed is usually available at the existing money-wage, even though the price of wage-goods is rising and, consequently, the real wage falling. If this is true, the wage-goods equivalent of the existing money-wage is not an accurate indication of the marginal disutility of labour, and the second postulate does not hold good.

But there is a more fundamental objection. The second postulate flows from the idea that the real wages of labour depend on the wage bargains which labour makes with the entrepreneurs. It is admitted, of course, that the bargains are actually made in terms of money, and even that the real wages acceptable to labour are [p.11] not altogether independent of what the corresponding money-wage happens to be. Nevertheless it is the money-wage thus arrived at which is held to determine the real wage. Thus the classical theory assumes that it is always open to labour to reduce its real wage by accepting a reduction in its money-wage. The postulate that there is a tendency for the real wage to come to equality with the marginal disutility of labour clearly presumes that labour itself is in a position to decide the real wage for which it works, though not the quantity of employment forthcoming at this wage.

The traditional theory maintains, in short, that the wage bargains between the entrepreneurs and the workers determine the real wage; so that, assuming free competition amongst employers and no restrictive combination amongst workers, the latter can, if they wish, bring their real wages into conformity with the marginal disutility of the amount of employment offered by the employers at that wage. If this is not true, then there is no longer any reason to expect a tendency towards equality between the real wage and the marginal disutility of labour.

The classical conclusions are intended, it must be remembered, to apply to the whole body of labour and do not mean merely that a single individual can get employment by accepting a cut in money-wages which his fellows refuse. They are supposed to be equally applicable to a closed system as to an open system, and are not dependent on the characteristics of an open system or on the effects of a reduction of money-wages in a single country on its foreign trade, which lie, of course, entirely outside the field of this discussion. Nor are they based on indirect effects due to a lower wages-bill in terms of money having certain reactions on the banking system and the state of credit, effects which we shall examine in detail in Chapter 19. They are based on the belief that in a closed system a reduction [p.12] in the general level of money-wages will be accompanied, at any rate in the short period and subject only to minor qualifications, by some, though not always a proportionate, reduction in real wages.

Now the assumption that the general level of real wages depends on the money-wage bargains between the employers and the workers is not obviously true. Indeed it is strange that so little attempt should have been made to prove or to refute it. For it is far from being consistent with the general tenor of the classical theory, which has taught us to believe that prices are governed by marginal prime cost in terms of money and that money-wages largely govern marginal prime cost. Thus if money-wages change,

one would have expected the classical school to argue that prices would change in almost the same proportion, leaving the real wage and the level of unemployment practically the same as before, any small gain or loss to labour being at the expense or profit of other elements of marginal cost which have been left unaltered. They seem, however, to have been diverted from this line of thought, partly by the settled conviction that labour is in a position to determine its own real wage and partly, perhaps, by preoccupation with the idea that prices depend on the quantity of money. And the belief in the proposition that labour is always in a position to determine its own real wage, once adopted, has been maintained by its being confused with the proposition that labour is always in a position to determine what real wage shall correspond to full employment, i.e. the maximum quantity of employment which is compatible with a given real wage.

To sum up: there are two objections to the second postulate of the classical theory. The first relates to the actual behaviour of labour. A fall in real wages due [p.13] to a rise in prices, with money-wages unaltered, does not, as a rule, cause the supply of available labour on offer at the current wage to fall below the amount actually employed prior to the rise of prices. To suppose that it does is to suppose that all those who are now unemployed though willing to work at the current wage will withdraw the offer of their labour in the event of even a small rise in the cost of living. Yet this strange supposition apparently underlies Professor Pigou's Theory of Unemployment, and it is what all members of the orthodox school are tacitly assuming.

But the other, more fundamental, objection, which we shall develop in the ensuing chapters, flows from our disputing the assumption that the general level of real wages is directly determined by the character of the wage bargain. In assuming that the wage bargain determines the real wage the classical school have slipt in an illicit assumption. For there may be no method available to labour as a whole whereby it can bring the wage-goods equivalent of the general level of money wages into conformity with the marginal disutility of the current volume of employment. There may exist no expedient by which labour as a whole can reduce its real wage to a given figure by making revised money bargains with the entrepreneurs. This will be our contention. We shall endeavour to show that primarily it is certain other forces which determine the general level of real wages. The attempt to elucidate this problem will be one of our main themes. We shall argue that there has been a fundamental misunderstanding of how in this respect the economy in which we live actually works.

III

Though the struggle over money-wages between individuals and groups is often believed to determine [p.14] the general level of real-wages, it is, in fact, concerned with a different object. Since there is imperfect mobility of labour, and wages do not tend to an exact equality of net advantage in different occupations, any individual or group of individuals, who consent to a reduction of money-wages relatively to others, will suffer a relative reduction in real wages, which is a sufficient justification for them to resist it. On the other hand it would be impracticable to resist every reduction of real wages, due to a change in the purchasing-power of money which affects all workers alike; and in fact reductions of real wages arising in this way are not, as a rule, resisted unless they proceed to an extreme degree. Moreover, a resistance to reductions in money-wages applying to particular industries does not raise the same insuperable bar to an increase in aggregate employment which would result from a similar resistance to every reduction in real wages.

In other words, the struggle about money-wages primarily affects the distribution of the aggregate real wage between different labour-groups, and not its average amount per unit of employment, which depends, as we shall see, on a different set of forces. The effect of combination on the part of a group of workers is to protect their relative real wage. The general level of real wages depends on the other forces of the economic system.

Thus it is fortunate that the workers, though unconsciously, are instinctively more reasonable economists than the classical school, inasmuch as they resist reductions of money-wages, which are seldom or never of an all-round character, even though the existing real equivalent of these wages exceeds the marginal disutility of the existing employment; whereas they do not resist reductions of real wages, which are associated with increases in aggregate employment and leave relative money-wages unchanged, unless the reduction proceeds so far as to threaten a reduction of the real [p.15] wage below the marginal disutility of the existing volume of employment. Every trade union will put up some resistance to a cut in money-wages, however small. But since no trade union would dream of striking on every occasion of a rise in the cost of living, they do not raise the obstacle to any increase in aggregate employment which is attributed to them by the classical school.

IV

We must now define the third category of unemployment, namely "involuntary" unemployment in the strict sense, the possibility of which the classical theory does not admit.

Clearly we do not mean by "involuntary" unemployment the mere existence of an unexhausted capacity to work. An eight-hour day does not constitute unemployment because it is not beyond human capacity to work ten hours. Nor should we regard as "involuntary" unemployment the withdrawal of their labour by a body of workers because they do not choose to work for less than a certain real reward. Furthermore, it will be convenient to exclude "frictional" unemployment from our definition of "involuntary" unemployment. My definition is, therefore, as follows: Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment. An alternative definition, which amounts, however, to the same thing, will be given in the next chapter (p. 26 below).

It follows from this definition that the equality of the real wage to the marginal disutility of employment presupposed by the second postulate, realistically interpreted, corresponds to the absence of "involuntary" unemployment. This state of affairs we shall describe [p.16] as "full" employment, both "frictional" and "voluntary" unemployment being consistent with "full" employment thus defined. This fits in, we shall find, with other characteristics of the classical theory, which is best regarded as a theory of distribution in conditions of full employment. So long as the classical postulates hold good, unemployment, which is in the above sense involuntary, cannot occur. Apparent unemployment must, therefore, be the result either of temporary loss of work of the "between jobs" type or of intermittent demand for highly specialised resources or of the effect of a trade union "closed shop" on the employment of free labour. Thus writers in the classical tradition, overlooking the special assumption underlying their theory, have been driven inevitably to the conclusion, perfectly logical on their assumption, that apparent unemployment (apart from the admitted exceptions) must be due at bottom

to a refusal by the unemployed factors to accept a reward which corresponds to their marginal productivity. A classical economist may sympathise with labour in refusing to accept a cut in its money-wage, and he will admit that it may not be wise to make it to meet conditions which are temporary; but scientific integrity forces him to declare that this refusal is, nevertheless, at the bottom of the trouble.

Obviously, however, if the classical theory is only applicable to the case of full employment, it is fallacious to apply it to the problems of involuntary unemployment¾if there be such a thing (and who will deny it?). The classical theorists resemble Euclidean geometers in a non-Euclidean world who, discovering that in experience straight lines apparently parallel often meet, rebuke the lines for not keeping straight¾as the only remedy for the unfortunate collisions which are occurring. Yet, in truth, there is no remedy except to throw over the axiom of parallels and to work out a non-Euclidean geometry. Something similar is required to-day in economics. We need to throw over [p.17] the second postulate of the classical doctrine and to work out the behaviour of a system in which involuntary unemployment in the strict sense is possible.

V

In emphasising our point of departure from the classical system, we must not overlook an important point of agreement. For we shall maintain the first postulate as heretofore, subject only to the same qualifications as in the classical theory; and we must pause, for a moment, to consider what this involves.

It means that, with a given organisation, equipment and technique, real wages and the volume of output (and hence of employment) are uniquely correlated, so that, in general, an increase in employment can only occur to the accompaniment of a decline in the rate of real wages. Thus I am not disputing this vital fact which the classical economists have (rightly) asserted as indefeasible. In a given state of organisation, equipment and technique, the real wage earned by a unit of labour has a unique (inverse) correlation with the volume of employment. Thus if employment increases, then, in the short period, the reward per unit of labour in terms of wage-goods must, in general, decline and profits increase. This is simply the obverse of the familiar proposition that industry is normally working subject to decreasing returns in the short period during which equipment etc. is assumed to be constant; so that the marginal product in the wage-good industries (which governs real wages) neces-[p.18]sarily diminishes as employment is increased. So long, indeed, as this proposition holds, any means of increasing employment must lead at the same time to a diminution of the marginal product and hence of the rate of wages measured in terms of this product.

But when we have thrown over the second postulate, a decline in employment, although necessarily associated with labour's receiving a wage equal in value to a larger quantity of wage-goods, is not necessarily due to labour's demanding a larger quantity of wage-goods; and a willingness on the part of labour to accept lower money-wages is not necessarily a remedy for unemployment. The theory of wages in relation to employment, to which we are here leading up, cannot be fully elucidated, however, until chapter 19 and its Appendix have been reached.

VI

From the time of Say and Ricardo the classical economists have taught that supply creates its own demand;¾meaning by this in some significant, but not clearly defined, sense that the whole of the costs of production must necessarily be spent in the aggregate, directly or indirectly, on purchasing the product.

In J.S. Mill's Principles of Political Economy the doctrine is expressly set forth:

What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the productions of other people consist of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as supply; everybody would be able to buy twice as much, because every one would have twice as much to offer in exchange.

As a corollary of the same doctrine, it has been supposed that any individual act of abstaining from consumption necessarily leads to, and amounts to the same thing as, causing the labour and commodities thus released from supplying consumption to be invested in the production of capital wealth. The following passage from Marshall's Pure Theory of Domestic Values illustrates the traditional approach:

The whole of a man's income is expended in the purchase of services and of commodities. It is indeed commonly said that a man spends some portion of his income and saves another. But it is a familiar economic axiom that a man purchases labour and commodities with that portion of his income which he saves just as much as he does with that he is said to spend. He is said to spend when he seeks to obtain present enjoyment from the services and commodities which he purchases. He is said to save when he causes the labour and the commodities which he purchases to be devoted to the production of wealth from which he expects to derive the means of enjoyment in the future.

It is true that it would not be easy to quote comparable passages from Marshall's later work or from Edgeworth or Professor Pigou. The doctrine is never stated to-day in this crude form. Nevertheless it still underlies the whole classical theory, which would collapse without it. Contemporary economists, who might hesitate to agree with Mill, do not hesitate to accept conclusions which require Mill's doctrine as their premiss. The conviction, which runs, for example, through almost all Professor Pigou's work, that money makes no real difference except frictionally and that the theory of production and employment can be [p.20] worked out (like Mill's) as being based on "real" exchanges with money introduced perfunctorily in a later chapter, is the modern version of the classical tradition. Contemporary thought is still deeply steeped in the notion that if people do not spend their money in one way they will spend it in another. Post-war economists seldom, indeed, succeed in maintaining this standpoint consistently; for their thought to-day is too much permeated with the contrary tendency and with facts of experience too obviously inconsistent with their former view. But they have not drawn sufficiently far-reaching consequences; and have not revised their fundamental theory.

In the first instance, these conclusions may have been applied to the kind of economy in which we actually live by false analogy from some kind of non-exchange Robinson Crusoe economy, in which the income which individuals consume or retain as a result of their productive activity is, actually and exclusively, the output in specie of that activity. But, apart from this, the conclusion that the costs of output are always covered in the aggregate by the sale-proceeds resulting from demand, has great plausibility, because it is difficult to distinguish it from another, similar-looking proposition which is indubitable, namely that the income derived in the aggregate by all the elements in the community concerned in a productive activity necessarily has a value exactly equal to the value of the output.

Similarly it is natural to suppose that the act of [p.21]an individual, by which he enriches himself without apparently taking anything from anyone else, must also enrich the community as a whole; so that (as in the passage just quoted from Marshall) an act of individual saving inevitably leads to a parallel act of investment. For, once more, it is indubitable that the sum of the net increments of the wealth of individuals must be exactly equal to the aggregate net increment of the wealth of the community.

Those who think in this way are deceived, nevertheless, by an optical illusion, which makes two essentially different activities appear to be the same. They are fallaciously supposing that there is a nexus which unites decisions to abstain from present consumption with decisions to provide for future consumption; whereas the motives which determine the latter are not linked in any simple way with the motives which determine the former.

It is, then, the assumption of equality between the demand price of output as a whole and its supply price which is to be regarded as the classical theory's "axiom of parallels". Granted this, all the rest follows¾the social advantages of private and national thrift, the traditional attitude towards the rate of interest, the classical theory of unemployment, the quantity theory of money, the unqualified advantages of laissez-faire in respect of foreign trade and much else which we shall have to question.

VII

At different points in this chapter we have made the classical theory to depend in succession on the assumptions:

(1) that the real wage is equal to the marginal disutility of the existing employment;

(2) that there is no such thing as involuntary unemployment in the strict sense;

(3) that supply creates its own demand in the sense that the aggregate demand price is equal to the aggregate supply price for all levels of output and employment.

These three assumptions, however, all amount to the same thing in the sense that they all stand and fall together, any one of them logically involving the other two.

The Theory Of Consumer Choice

Learning Outcomes

"How does a consumer decide what to buy?",

"What are the trade-offs faced by him while making such decisions?",

"How do the decisions change with change in factors like price, incomes, interest rates?". concepts

affordability and budget constraint,

Indifference curves and how do they depict consumer preferences,

the impact of changes in income and price on the consumer's choice,

Income and Substitution Effects.

Introduction

The theory of demand has its foundations in the theory of consumer choice and this in turn relies on the assumption that the consumer is rational, he is equipped with the knowledge regarding his income, commodities available and their prices, to make a decision as to what to buy. Trade-offs faced by the consumers while making a choice, assume an important role in the theory of consumer choice.

important questions that a consumer encounters in his day to day life.

A) Amount to be spent on different commodities, given the income and the price, amount of time to be devoted to leisure and work,

B) whether to consume more in the present or to save more for the future are a few

The Budget Constraint

A consumer would prefer having greater quantity or better quality of the goods he consumes, however, his income acts as a limit on the amount of money he can spend on consumption of those goods. It is important to understand this constraint.

simple example, let's study the case of a consumer who consumes only two commodities: Burger and Milkshake. Suppose that the consumer earns a monthly income of Rs.1000, the price of a burger is Rs.20 and that of a glass of milkshake is Rs.10. Table No. 1 lists several

combinations of milkshake and burger that the consumer can choose from given his income and prices of the two goods.

Table 1: Combinations of Burger and Milkshake that the consumer can afford to consume				
Glasses of Milkshake	Number of Burgers	Spending on Milkshake	Spending on Burger	Total Spending
0	50	0	1000	1000
10	45	100	900	1000
20	40	200	800	1000
30	35	300	700	1000
40	30	400	600	1000
50	25	500	500	1000
60	20	600	400	1000
70	15	700	300	1000
80	10	800	200	1000
90	5	900	100	1000
100	0	1000	0	1000

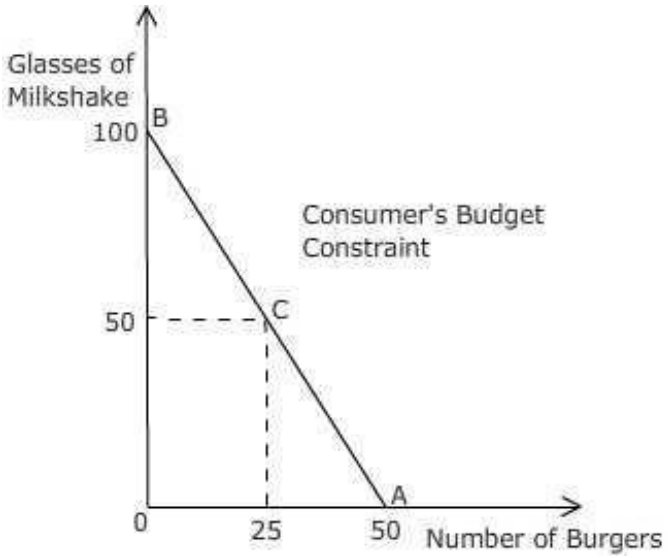


Figure 1: Consumer's Budget Constraint

The first row in table 1 shows that if all the income is spent on burgers, the consumer will be able to consume 50 burgers but no milkshake, however if he spends the entire income on milkshakes, he will be able to consume 100 glasses of milkshake but no burgers. Figure 1 depicts consumer's budget constraint. The vertical axis plots glasses of milkshake while

the horizontal axis plots number of burgers. Point A corresponds to the case where the consumer spends all his income on burgers while at point B he consumes 100 glasses of milkshake but no burgers. At point C consumer spends equal amount of income on burger and milkshake. The downward sloping curve BCA shows the trade-off, the consumer faces in consuming burger and milkshake, given income and prices. Consuming more of burgers leaves less money with the consumer to buy milkshakes. Hence, as the consumption of one commodity rises, the consumption of the other commodity has to fall, if the income and prices of the commodities are kept fixed.

Slope of the Budget Constraint

Budget constraint's slope measures the rate at which the consumer can trade one good for the other. Slope between any two points is calculated as the ratio of change in the vertical distance to the change in the horizontal distance.

(when the points C and A in figure 1 are considered, the vertical distance is 50 glasses of milkshake and the horizontal distance is 25 burgers, so the slope is 2 glasses of milkshake per burger).

The slope of the budget constraint is the same as the ratio of the prices of the two commodities. Since the price of a burger is Rs.20 and the price of a glass of milkshake is Rs.10, the opportunity cost of a burger is 2 glasses of milkshake. The budget constraint's slope of 2 is the trade-off that market offers the consumers. The consumer can trade 2 glasses of milkshake for a burger in the market. Since the budget constraint is downward sloping, the slope is a negative number.

Consumer Preferences and Indifference Curves

Like the budget constraint, consumer preferences are also an important part of the theory of consumer choice.

In the example of burgers and milkshake, it is the consumer preferences that help the consumer to choose from different combinations of these two goods.

To show the consumer preferences graphically, we often use indifference curves.

An indifference curve is the locus of several bundles of consumption that give the consumer an equal level of satisfaction.

Figure 2 shows indifference curves for the consumer who consumes burgers and milkshake. Points A, B and C on the indifference curve *I*1 show various combinations of burgers and milkshake that make the consumer equally happy. Moving from point A to B, the consumption of milkshake increases while that of burger, falls.

Same is the case when the consumer moves from B to C. The slope of the indifference curve is termed as the marginal rate of substitution which equals the rate at which the consumer is ready to substitute one good for the other. In this case the marginal rate of substitution is the measure of the number of glasses of milkshake that need to be given to the consumer for a unit reduction in consumption of burger.

Indifference curve *I*2, shows greater level of satisfaction relative to the indifference curve *I*1.

Explanation;

An indifference map gives a complete ranking of the consumer preferences, a consumption bundle on a higher indifference curve will give a greater level of satisfaction to the consumer relative to the consumption bundle on the lower indifference curves. If the points A and B lie on the same indifference curve, the consumer is indifferent between the combinations A and B and if A lies on an indifference curve higher than the indifference curve on which B lies, the consumer prefers consumption bundle A to B.

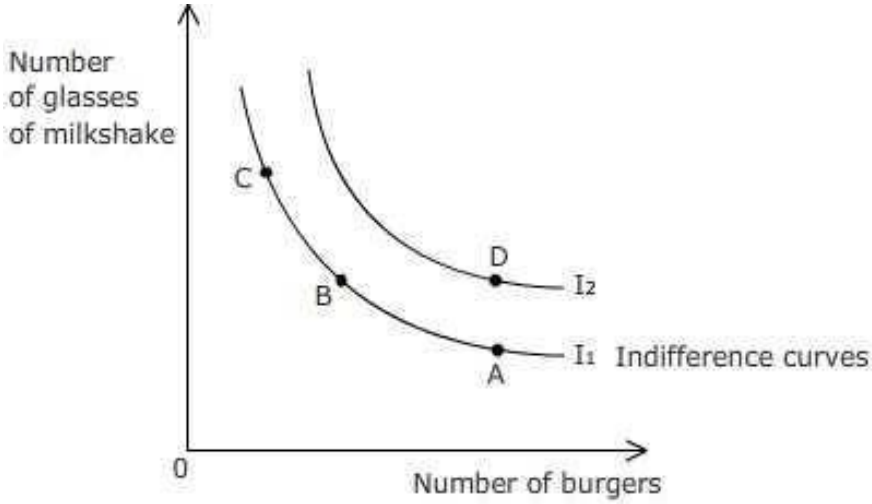


Figure 2: Consumer's Preferences Represented by Indifference Curves

Indifference Curves: Properties

Important properties of Indifference curves:

1.) Higher indifference curves carry a greater level of satisfaction compared to the lower ones:

The preference of the consumers for greater quantities gets exhibited in the indifference curve approach also. Higher indifference curves depict bundles with larger quantities of goods relative to the lower ones and the consumer prefers higher indifference curves to the lower ones.

2.) Indifference curves slope downwards:

In the case where a consumer likes both the goods, when the quantity of one good is raised, the quantity of the other good has to fall for the consumer to stay at the same level of satisfaction. This is what makes the indifference curves slope downwards.

3.) Indifference curves do not intersect: This property can be best illustrated through a graph. Look at figure 3, suppose points A and B lie on the same indifference curve, also point B and C lie on the same indifference curve. This implies that the consumer is equally satisfied at points A and B and the same applies to points B and C as well. This would imply that the consumer is indifferent between points A and C, which is not possible because point C has greater amount of both the goods. We reach a contradiction, indifference curves cannot cross.

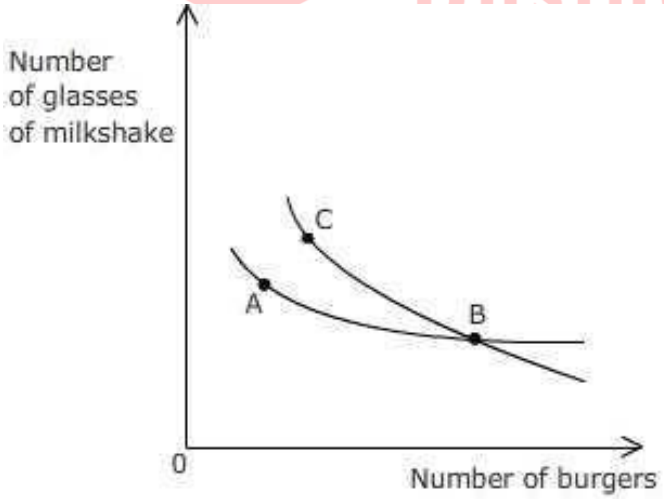


Figure 3: Indifference Curves Cannot Intersect

4.) Indifference curves are bowed inwards:

The slope of an indifference curve is equal to the marginal rate of substitution which depends on the amount of the two goods that the consumer is consuming presently. People are willing to give more of that commodity which they possess in greater quantity and are less willing to give up on the one which is held in meagre amounts. If the consumer has a lot of glasses of milkshake and small number of burgers, he will be willing to give up more number of glasses of milkshakes for every single unit of increase in the number of burgers. However as he continues to have more and more burgers, the number of glasses of milkshakes that he gives up for every burger will reduce. This explains why indifference curves are bowed inwards.

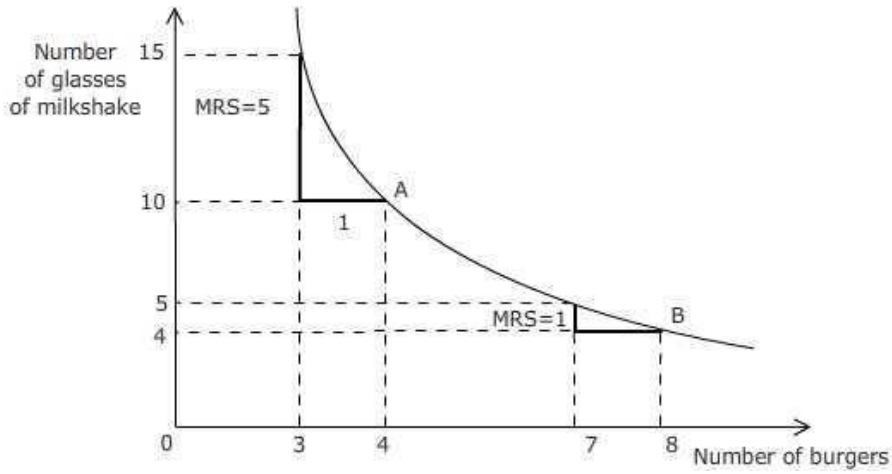


Figure 4: Indifference Curves are Bowed Inwards

Types of Indifference Curves and their shapes

Different kind of preferences can be shown by different types of indifference curves:

1.) Perfect Substitutes:

perfect substitutes are shown by straight line indifference curves, the slope along these straight lines stays constant which means that the rate at which one good can be exchanged for the other is constant. For instance a pack of 20 black paperclips can be perfectly substituted for a pack of 20 green paper clips for a person who does not have any color preference.

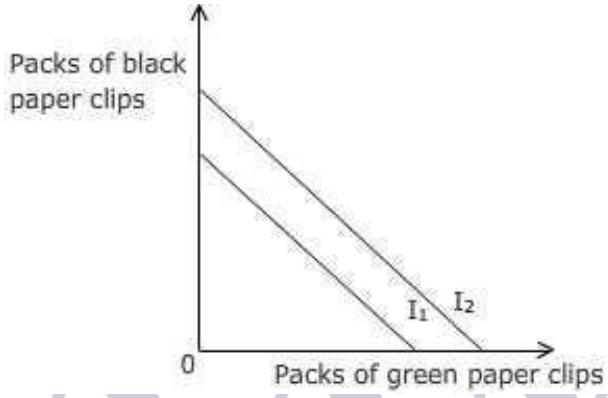


Figure 5: Perfect Substitutes

2.) Perfect Complements: When the two goods are perfect complements, the indifference curves to represent such preferences are L-shaped or right angled. A good example of perfect complements is pair of shoes. A bundle of 5 left shoes and 7 right shoes yields 5 pair of shoes.

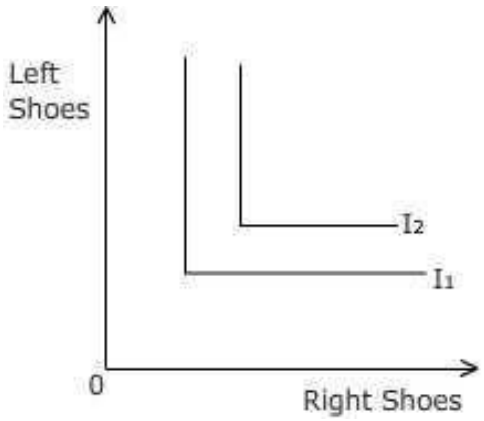


Figure 6: Perfect Complements

3.) Good with zero utility: In case the consumer gets 0 satisfaction out of one good, he will consume the other good which gives him positive utility and would not be willing to sacrifice any amount of the other good for the one that offers no satisfaction. example egg cannot offer any satisfaction to a vegetarian.

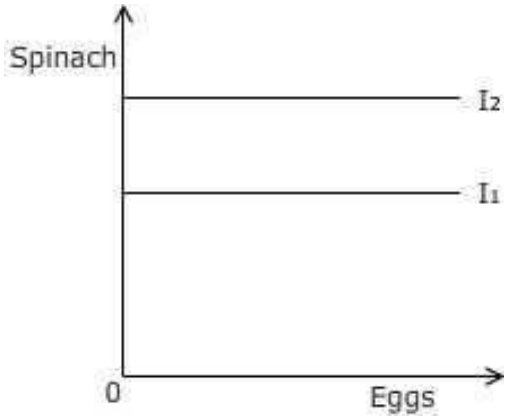


Figure 7: Good with Zero Utility

4.) A Necessity: There are certain commodities that are absolute necessity, there might be a minimum quantity of such goods which is necessary for living. The indifference curve in such a case becomes steeper as the consumption of the absolute necessity falls towards the minimum quantity for sustenance.

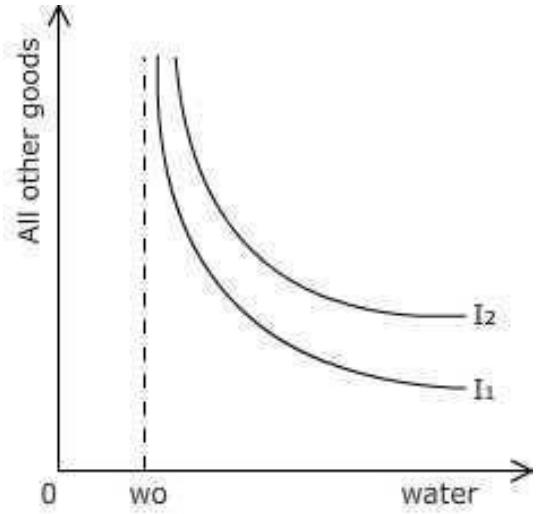


Figure 8: A Necessity

5.) Good that offers negative utility beyond a particular level of consumption: Beyond a particular point of consumption, if a consumer consumes or is forced to consume more of a particular good, he would start getting negative utilities out of further consumption. In such a case the indifference curve becomes positively sloped beyond that point of consumption. If the extra units can be disposed off without incurring any costs the indifference curves will become horizontal.

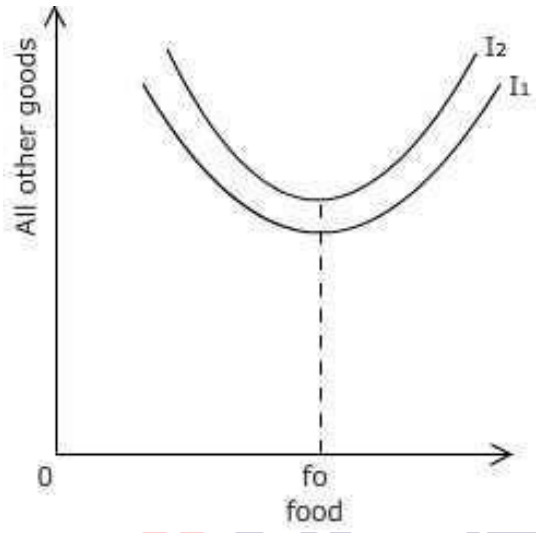


Figure 9: Good that Offers Negative Utility Beyond a Particular Level of Consumption 6.) A good that is not consumed: When a consumer in an equilibrium condition does not

consume any amount of one good, it is called a corner solution. In this case the indifference curve cuts the axis of the good which is not consumed. The slope of the indifference curve is flatter than the budget line.

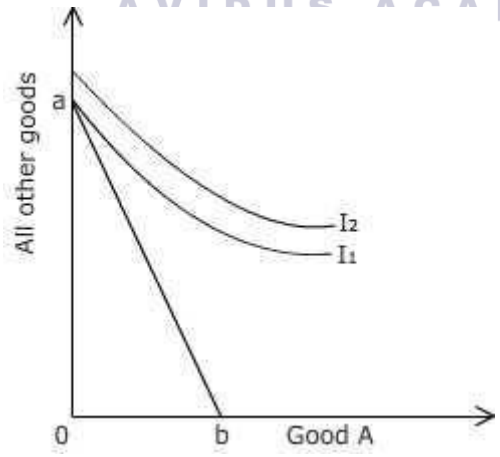


Figure 10: A Good that is not Consumed

Optimization involves two important components:

first being the consumer's budget constraint and the second, consumer's preferences. The consumer's optimum can be explained graphically.

The optimum is reached when the budget constraint is tangential to the indifference curve i.e. point C. At point B, the consumer is at a lower indifference curve, however given the budget constraint the consumer can afford to move to a higher level of satisfaction. Point A is not affordable for the consumer.

At the optimum, the slope of the indifference curve is equal to the slope of the budget constraint the marginal rate of substitution is the same as the relative prices. At this point the market valuation of the goods is equal to the value that consumers place on two goods.

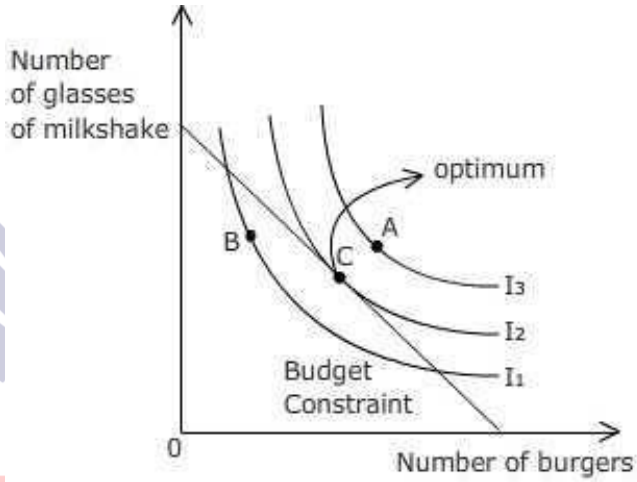
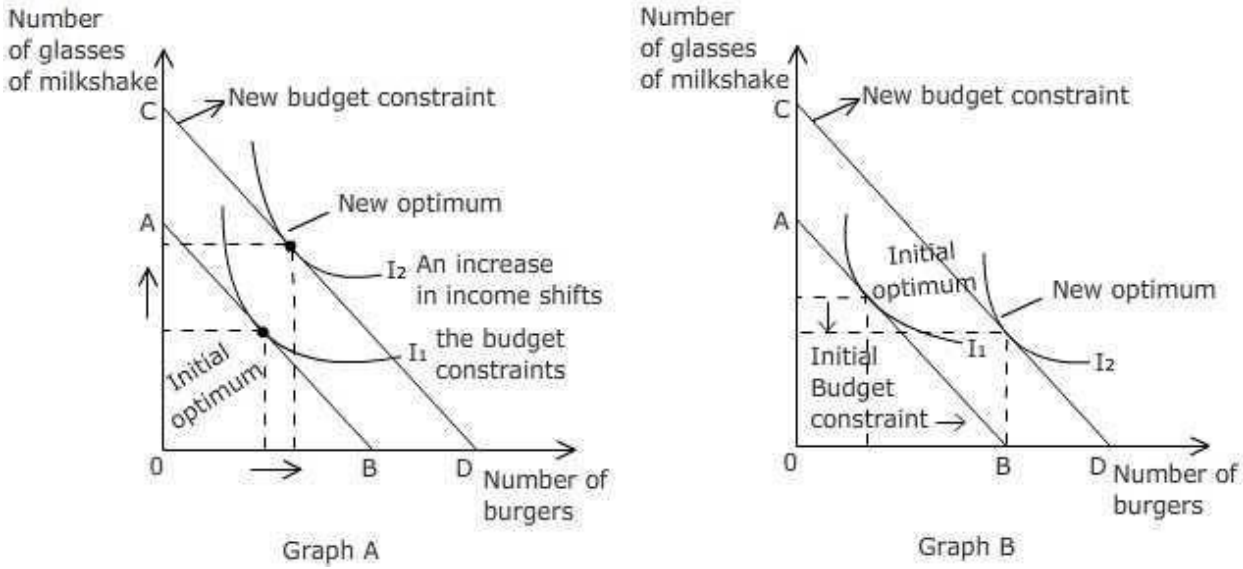


Figure 11: Consumer's Optimum

Changes in income and consumer's choices

A change in income has important effects on the consumer's choice. In case, the income of the consumer changes, since there is no effect on the price of the two goods, the slope of the budget constraint doesn't change. However, due to a change in the income, the budget constraint will shift outward or inward parallely, depending on whether there is a rise or a fall in the income. On the new budget constraint, the consumer can afford to reach a higher indifference curve with a better consumption bundle. Depending on the consumer preferences, the consumer can consume at any point on the new budget constraint where the indifference curve is tangential to it. If the consumption of a good rises with a rise in the income, it is called a normal good. However, if the consumer decreases his consumption of a good as the income rises, the good is said to be an inferior good. We can illustrate this graphically. Graph A in figure 12 shows that as the income rises the consumer raises his consumption of both milkshakes and burgers, so both these goods are normal. However in graph B, the consumption of burgers rises while that of milkshakes falls, depicting that milkshake is an inferior good.

Figure 12: Changes in Income and Consumer's Choices



Changes in price and consumer choices

Now we consider the impact of a change in price. Suppose the price of a burger falls from Rs.20 to Rs.10. The price of a glass of milkshake and income of the consumer stays the same. So the slope of the budget constraint goes down from 2 milkshake for a burger to 1 milkshake for a burger, suggesting that the budget constraint pivots and becomes relatively flatter. If the consumer spends all his money on burgers he will be able to consume 100 burgers. The new budget constraint is AD now. The new point of consumption again depends on the consumer preferences. As the figure 13 shows, at the new optimum, the consumer is having more of burgers and less of milkshake.

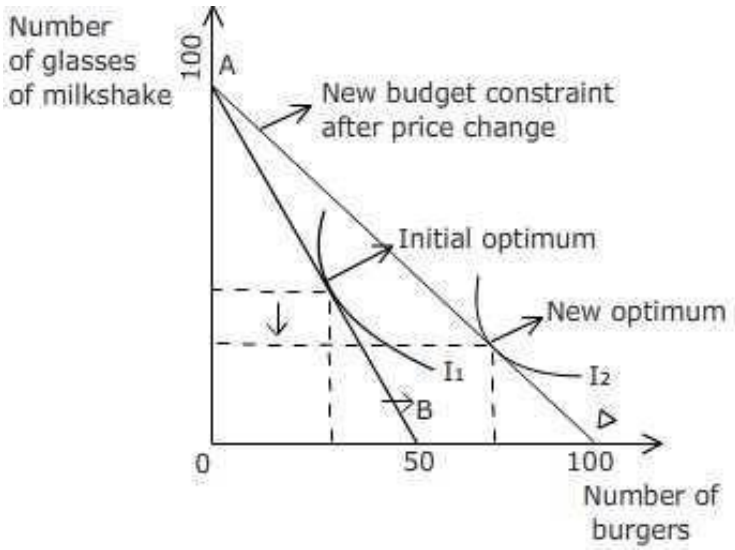


Figure 13: Changes in Price and Consumer Choices

come and Substitution effects

The price effect can be segregated into income and substitution effect. If after the price change an adjustment is made, such that the consumer is left with the level of income that leaves him with the same level of satisfaction (original indifference curve) as before the price change but the consumer faces new relative prices, then the consumer's response in terms of quantity demanded is termed as substitution effect.

In the figure 14, graph A we can see that as the price of burger falls the consumer moves from point A to point C. This change can be broken down to two important steps. In the graph that illustrates the case of a fall in the price of a burger, when the consumer moves from point A to point B which is on the same indifference curve as point A, he faces new set of relative prices, this bit is termed as substitution effect. Once the consumer shifts to the new indifference curve at point C, he still faces the new set of relative prices (as at point B), this bit is called the income effect. The substitution effect therefore is shown by rotating the budget constraint around the original fixed indifference curve while the income effect is shown by a parallel shift in the budget constraint. Movement from point A to point B is only about a change in the relative prices, there is no change in the level of satisfaction. On the other hand, the movement from point B to point C involves a change in the level of satisfaction and no change in the relative prices.

The substitution effect always works in the same direction, which means that if the relative price of a commodity falls more of that commodity is consumed. However, income effect can work in any direction:

In case the good is normal, any increase in the real income due to a fall in price will lead to an increase in the consumption of that good. The income effect and substitution effect both work in the same direction. In such a case the demand curve is negatively sloping.

If on the other hand the good is of inferior nature: less of a good is consumed when the real income rises due to the price rise. The substitution effect works in the same direction suggesting that the quantity consumed of the commodity should rise when its relative price falls.

If the substitution effect outweighs the negative income effect such that the quantity demanded increases when the relative price of the good falls, it can be defined as a case of inferior good even though the demand curve has a negative slope.

GIFFEN GOOD.

if the negative income effect outweighs the substitution effect, one reaches a positively sloped demand curve. This is the case of a giffen good. The giffen goods are inferior goods and the negative income effect in their case is strong enough to out power the substitution effect. Diagram C

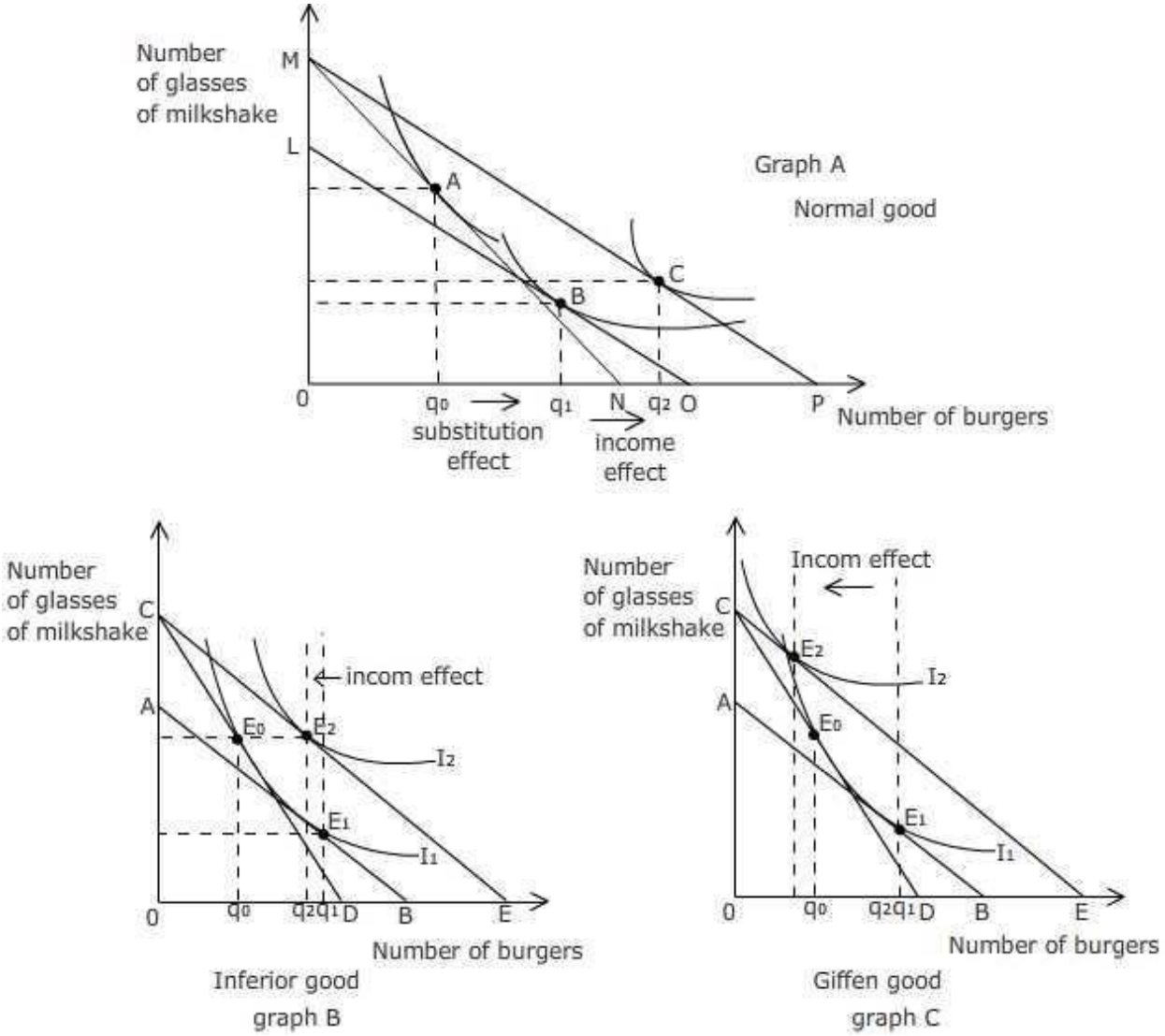


Figure 14: Income and Substitution Effects

Equivalent and Compensating Variation

Two very important concepts attached with the income effect of a price change are equivalent variation and compensating variation.

Equivalent Variation: it is equivalent to giving some money income to the consumer instead of a price change, such that he becomes as satisfied as he is after the price change. This can be shown graphically by shifting the original budget constraint in a parallel manner such that it touches the new indifference curve after the price change.

Compensating Variation: it is the amount of income that needs to be taken away from a consumer when the price of a good falls to make him return to a level of satisfaction at which he was before the price change i.e. the original indifference curve. In the graph this magnitude can be shown by the vertical distance OL.

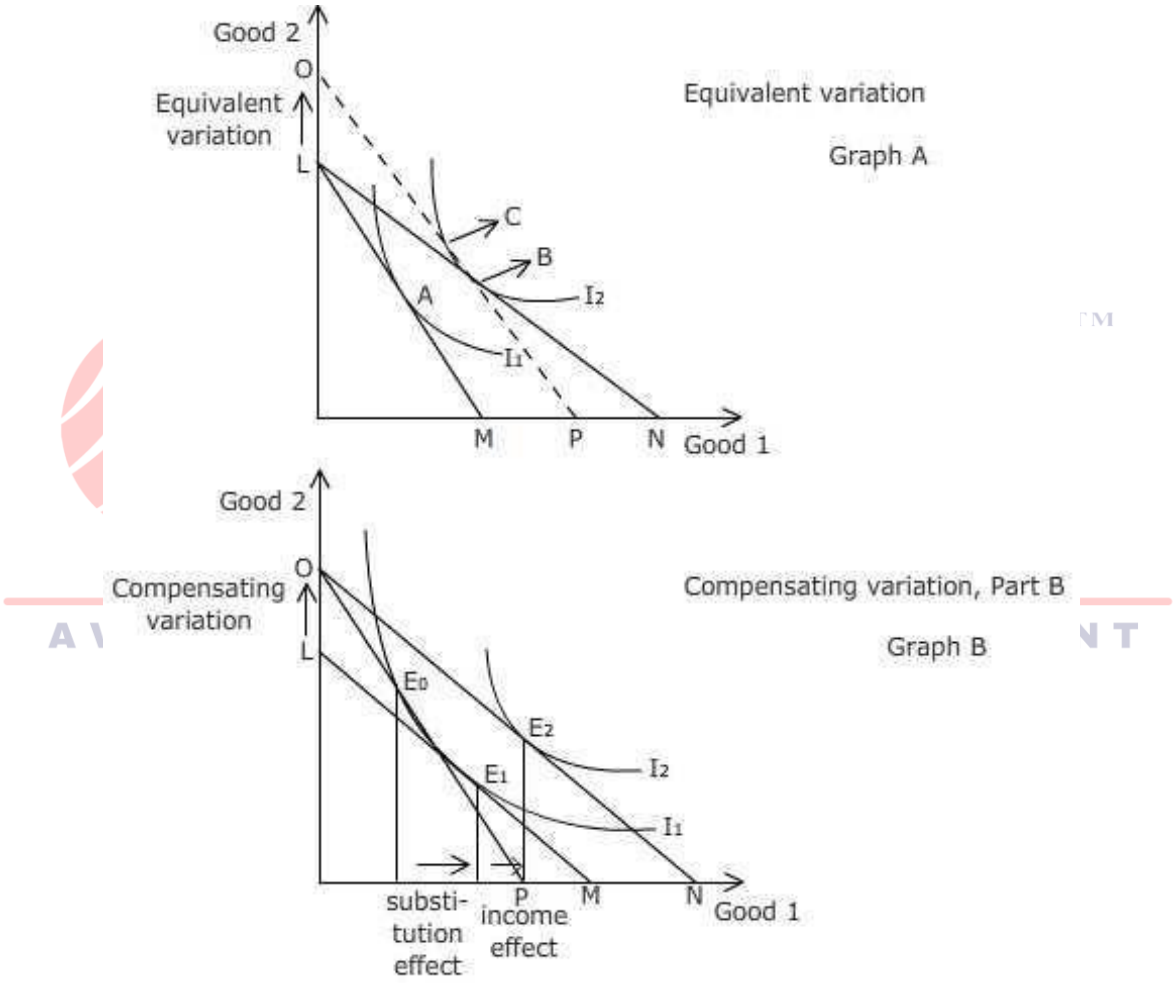


Figure 15: Equivalent and Compensating Variation

Demand Curve: Derivation

A demand curve can be seen as a locus of various optimum consumption points that a consumer chooses. Suppose when the price of burger falls from Rs.20 to Rs10 the consumer shifts from point A where he is consuming 10 burgers and 80 glasses of milkshake to point B where he consumer 50

burgers and 50 glasses of milkshakes. Now, we get two points on the demand curve for burger. Figure 16 shows the consumer's optimum and the demand curve for burger.

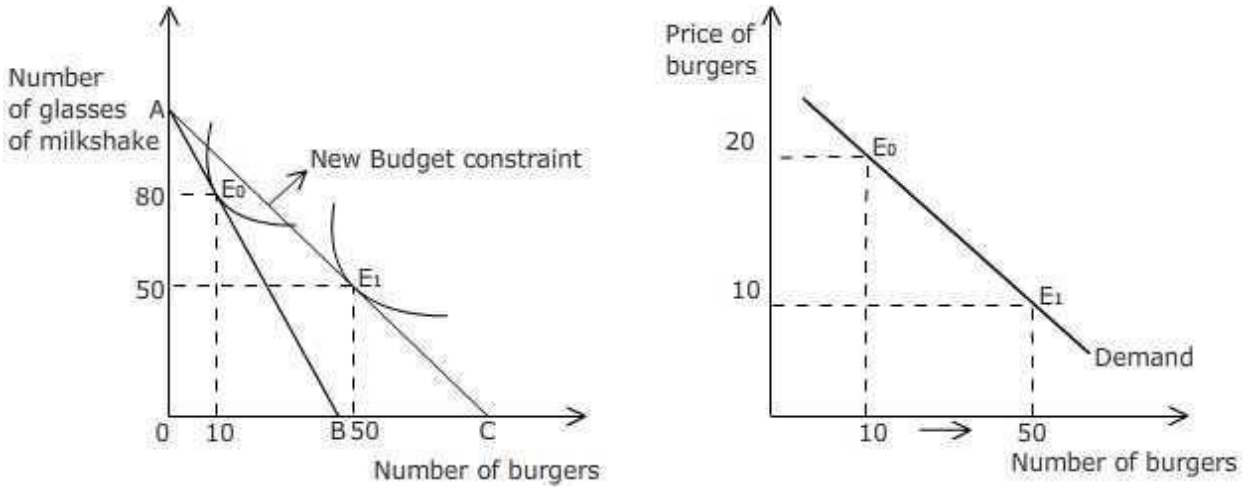


Figure 16: Derivation of Demand Curve

Applications of the theory of consumer choice

The theory of consumer choice has many important applications and we will discuss a few in this section of the lesson.

Slope of the demand curve: Case of Giffen Goods

The law of demand says that as the price of the good rises the quantity demanded of it falls, this is shown by a regular downward sloping demand curve. However, there are cases where the law of demand gets violated. In the case of giffen goods, the demand curve is an upward sloping one. Let's take the example of a consumer in china who consumes rice and chicken. As the graph shows the consumer was consuming at point C initially. Now, there is a rise in the price of rice, the relevant budget constraint is DA. The consumer consumes at the new point E, where he has more of rice and less of chicken. This happens because rice is a giffen good for a consumer in china. As the price of rice rises, the consumer gets poor in a relative sense. The income effect says that the consumer should buy more of rice and less of chicken, on the other hand the substitution effect would direct him to buy less of rice and more of chicken. Since, the income effect outweighs the substitution effect the, consumer ends up buying more of rice and less of chicken.

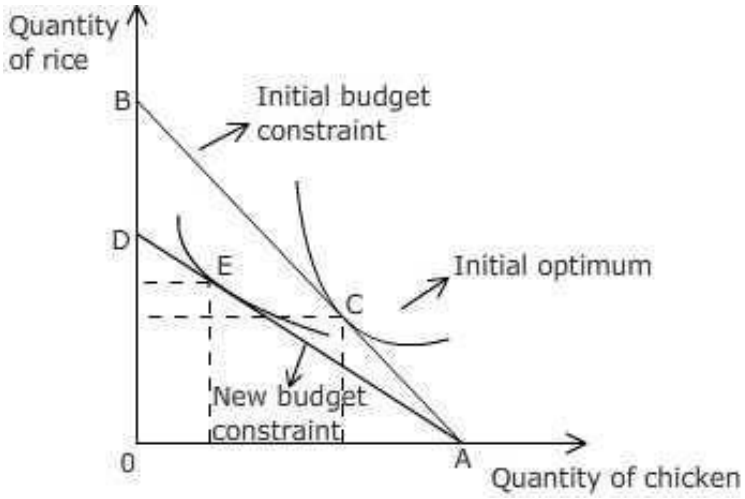


Figure 17: Case of a Giffen Good

Giffen Goods: Rice and Wheat in China

The notion of giffen goods was first introduced by Alfred Marshall in his book Principles of Economics in the year 1895. The idea of giffen goods can be attributed to Robert Giffen, who pointed out how a rise in the price of bread draws down the income of poor families. The marginal utility of money rises for these families in such a manner that rather than buying more of other foods they end up consuming more of bread, which is still relatively the cheapest compared to the other foods.

Though in reality, giffen goods are rare to find, Jensen and Miller found evidence of giffen behavior. In their study, they present data from field experiment, wherein they have tried to gauge the response of the poor households in China to changes in the prices of staple food items. Evidence has been found for giffen behavior in the case of rice and wheat when there prices were subsidized.

Wages and Labor Supply

The theory of consumer choice can also be used to determine the labor supply decisions i.e. how to decide how much time should be allocated to work and leisure. Let's take the example of Subhash who works at the ice cream parlor. Subhash is awake for 120 hours in a week. He can spend this time in leisure or he can work and earn a salary of Rs.100 per hour of work. For every hour of work Subhash can have get consumption worth Rs.100. One hour of leisure means Subhash loses out on this consumption. The opportunity cost of one hour of leisure is Rs.100 worth of consumption. If he works for 120 hours in a week, he earns Rs.12000 but enjoys no leisure and if he doesn't work at all, he earns nothing and doesn't consume anything but gets 120 hours of leisure. As shown in the graph the consumer can make an optimal choice consisting of work and leisure hours.

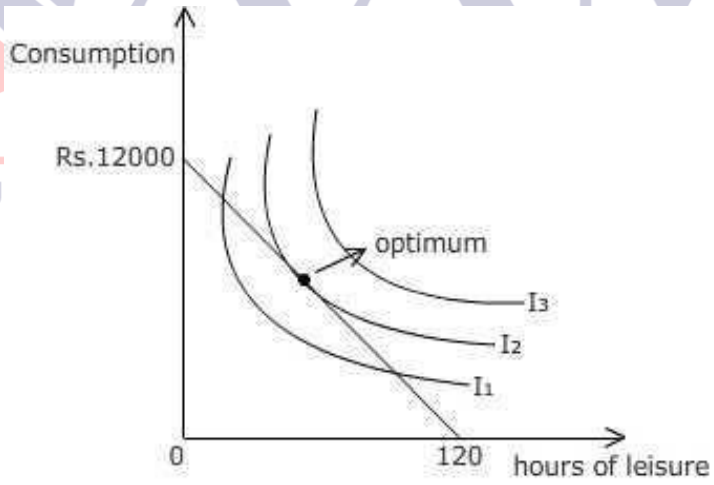


Figure 18: Subhash's Work-Leisure Decision

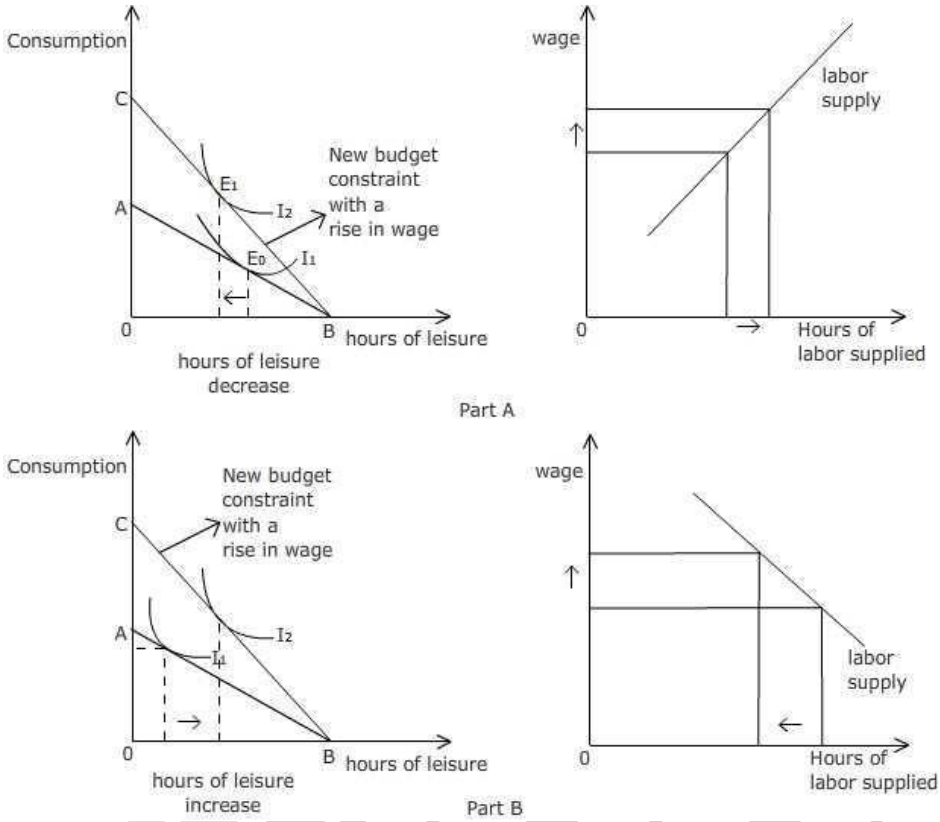
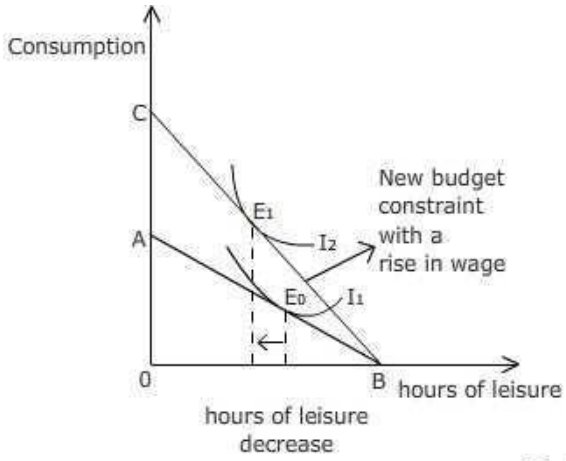
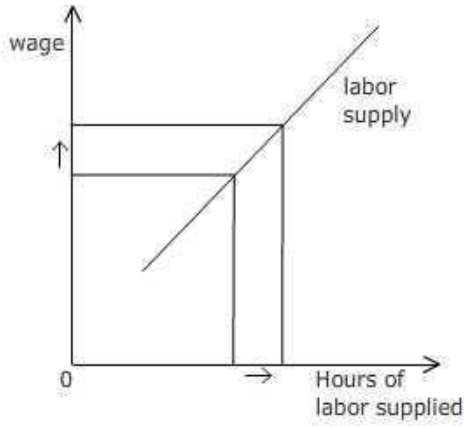


Figure 19: Income and Substitution Effects : Labor Supply Curve

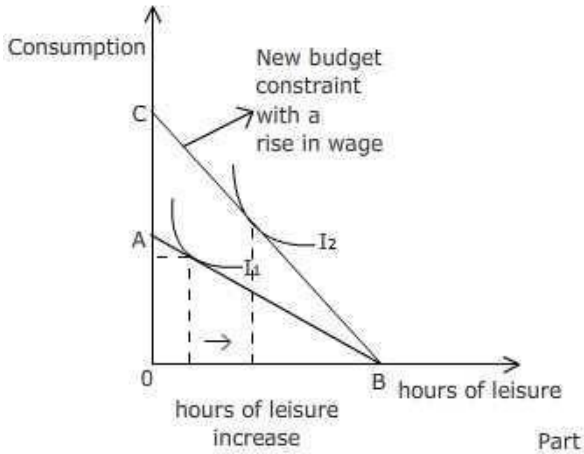
Interest rates and household savings

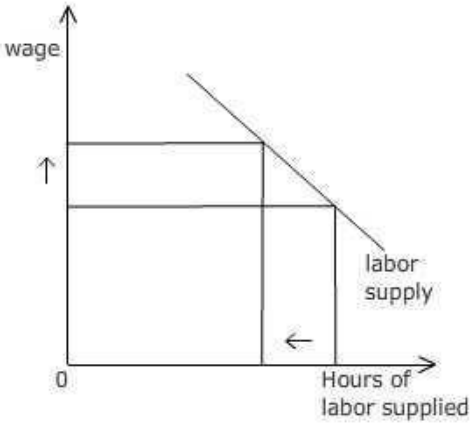
Savings of a household depend on the interest rate. A consumer's lifetime can be divided into two periods, the first is the young age where he works and earns and the second is the old age when he retires. Suppose Samir, the consumer, earns Rs.100000 in his young age which he can use for present consumption and saving. In the old age Samir will live on the savings that he makes in the young age. If the interest rate is 10 percent, for every rupee saved in the young age, Samir gets to enjoy consumption worth Rs.1.10 in old age. Samir has to find an optimal combination of consumption in the young age and consumption in the old age, which has been shown in the figure. If he consumes all of his income today, he will be able to enjoy Rs.100000 worth of consumption but he will starve in his old age. On the other hand, if he consumes nothing in the present he will be able to enjoy consumption worth Rs.110000 in his old age.





Part A





Part B

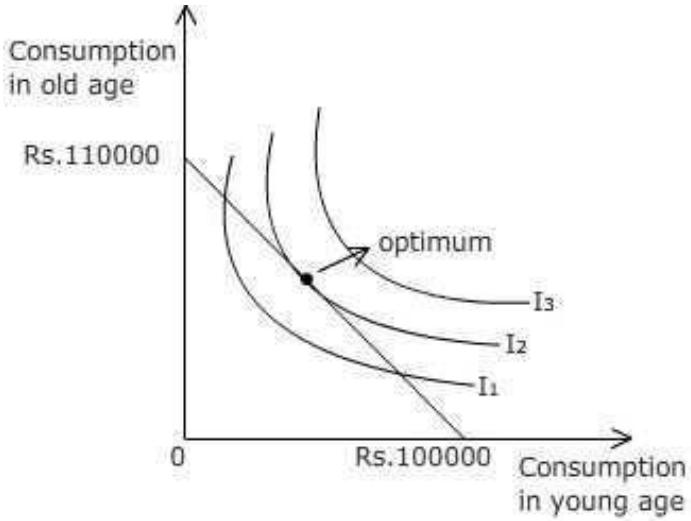


Figure 20: Interest Rates and Household Saving

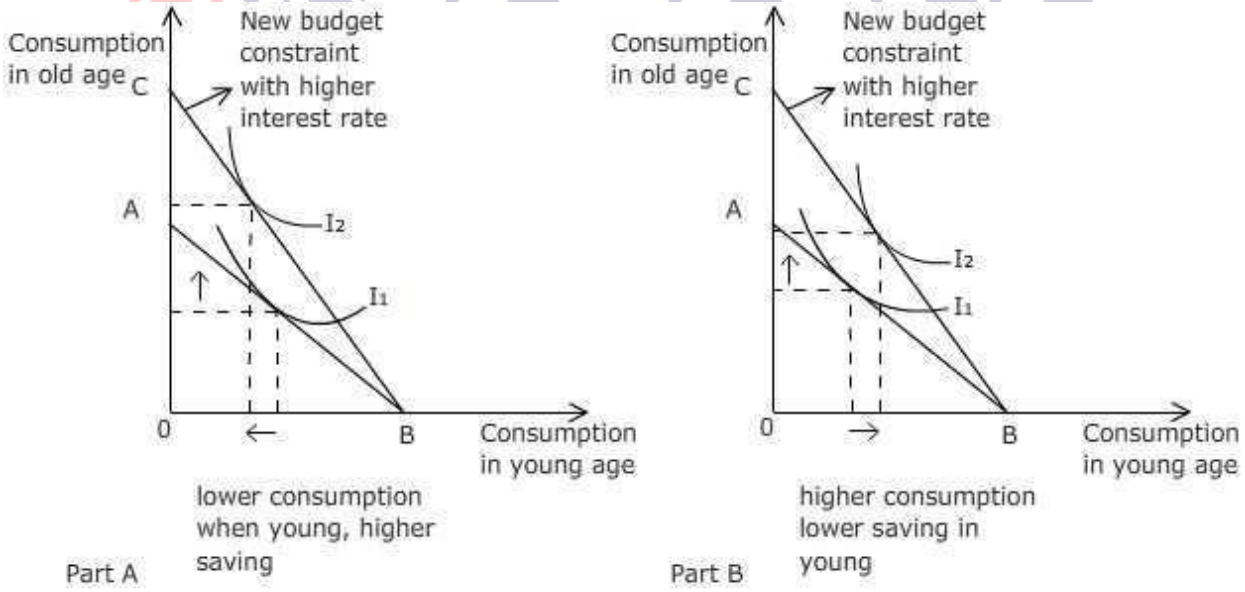


Figure 21: Effect of Increase in the Interest Rate

Conclusion

The Theory of Consumer Choice helps us understand the important factors that contribute to decision making at the level of a consumer. Decision to consume different quantities of different goods, allocation of time to work and leisure, inter-temporal choices, types of preferences are explained with the help of consumer choice theory. Indifference curves, budget constraint and tools of optimization together form the core of consumer theory. Not that in reality every consumer goes about carrying out these optimization exercises, but every consumer knows that his choice is limited by his budget. Given the constraint of income the consumer has to reach the best possible combination of goods for which he has a preference.

Demand

Demand want ‘Demand is a widely used term, and in common is considered synonymous with terms like ‘want’or Inor 'desire'. In economics, demand has a definite meaning which is different from ordinary use. In this analyze this chapter, we will explain what demand from the consumer’s point of view is and analyze demand from the firm perspective.

Demand aDemand for a commodity in a market depends on the size of the market. Demand for commodity ability commodity entails the desire to acquire the product, willingness to pay for it along with the abilityto to pay for the same.

Law of Demand

The law of demand is one of the vital laws of economic theory. According to the law of demand, other if other things being equal, if the price of a commodity falls, the quantity demanded will rise and if the being the price of a commodity rises, its quantity demanded declines. Thus other things being constant, constant, there is an inverse relationship between the price and demand of commodities.

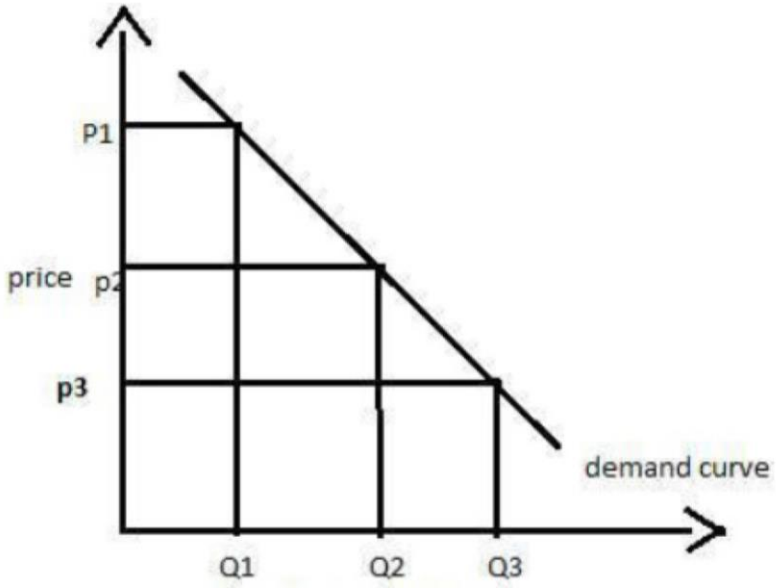
Things price which are assumed to be constant are income of consumers, taste and preference, price of of related commodities, etc., which may influence the demand. If these factors undergo change, then this law of demand may not hold good.

Definition of Law of Demand

According the According to Prof. Alfred Marshall “The greater the amount to be sold, the smaller must be the price illustration price at which it is offered in order that it may find purchase. Let’s have a look at an illustration to being to further understand the price and demand relationship assuming all other factors being constant −

quantity on quantity demanded increases to 20 units. Thus quantity demanded by the consumer goes on increasing increasing until the price is lowest i.e. 6 per unit where the demand is 80 units.

The above demand schedule helps in depicting the inverse relationship between the price and quantity the quantity demanded. We can also refer the graph below to have more clear understanding of the same −



We can see from the above graph, the demand curve is sloping downwards. It can be clearly seen that when the price of the commodity rises from P3 to P2, the quantity demanded comes down Q3 to Q2.

Theory of Consumer Behavior

The more the demand for a commodity depends on the utility of the consumer. If a consumer gets more satisfaction or utility from a particular commodity, he would pay a higher price too for the same and vice - versa.

In economics, all human motives, desires, and wishes are called wants. Wants may arise due to any cause. Since the resources are limited, we have to choose between urgent wants and not so so urgent wants. In economics wants could be classified into following three categories −

Necessities

wants − Necessities are those wants which are essential for living. The wants without clothing without which humans cannot do anything are necessities. For example, food, clothing and and shelter.

Comforts

are − Comforts are the commodities which are not essential for our living but are required for a happy living. For example, buying a car, air travel.

Luxuries

not − Luxuries are those wants which are surplus and costly. They are not essential for our living but add efficiency to our lifestyle. For example, spending on designer designer clothes, fine wines, antique furniture, luxury chocolates, business air travel.

Marginal Utility Analysis

Utility

It is a term referring to the total satisfaction received from consuming a good or service. It differs after differs from each individual and helps to show the satisfaction of the consumer after consumption of consumption of a commodity. In economics, utility is a measure of preferences over some set of goods goods and services.

Marginal Utility

benefit is formulated by Alfred Marshall, a British economist. It is the additional benefit/ commodity/ utility derived from the consumption of an extra unit of a commodity.

Cardinal Measurability Concept

This theory assumes that utility is a cardinal concept which means it is a measurable or quantifiable his quantifiable concept. This theory is quite helpful as it helps an individual to express his satisfaction \ in numbers by comparing different commodities.

For example

of − If an individual derives utility equals to 5 units from the consumption of 1 unit of commodity conveniently commodity X and 15 units from the consumption of 1 unit of commodity Y, he can conveniently explain which commodity satisfies him more.

Consistency

This constant This assumption is a bit unreal which says the marginal utility of money remains constant throughout measured throughout when the individual spending on a particular commodity. Marginal utility is measured with with the following formula –

MUMU

= TU− TU_1

Where, MU Where, MU− Marginal utility of Nth unit.

TUTU− Total analysis of n units

TUTU− Total utility of n − 1 units.

Indifference Curve Analysis

A very well accepted approach of explaining consumer's demand is indifference curve analysis. As an As we all know that satisfaction of a human being cannot be measured in terms of money, so an

approach curve approach which could be based on consumer preferences was found out as Indifference curve analysis.

Indifference curve analysis is based on the following few assumptions −

It is assumed that the consumer is consistent in his consumption pattern. That means if he he prefers a combination A to B and then B to C then he must prefer A to C for results.

Another preferences Another assumption is that the consumer is capable enough of ranking the preferences according to his satisfaction level.

It is also assumed that the consumer is rational and has full knowledge about the economic economic environment.

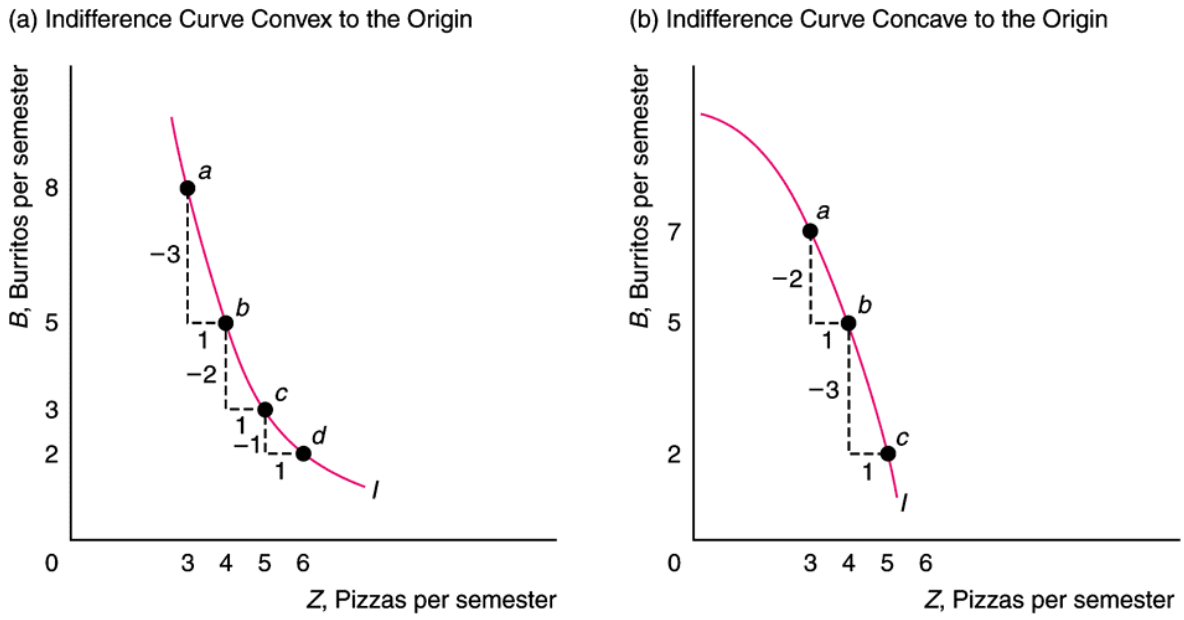
An provide An indifference curve represents all those combinations of goods and services which provide same level of satisfaction to all the consumers. It means thus all the combinations provide same level level of satisfaction, the consumers can prefer them equally.

A toA higher indifference curve signifies a higher level of satisfaction, so a consumer tries to consume consumer consume as much as possible to achieve the desired level of indifference curve. The consumer to achieve it has to work under two constraints namely − he has to pay the required price for the goods goods and also has to face the problem of limited money income.

Nthnth nn 1n – 1

Consumer Choice

Willingness to Substitute Between Goods (Marginal Rate of Substitution)



Marginal Rate of Substitute

•Marginal rate of substitute (MRS) =

•= number of pizza one will get by giving up

•MRS= -3/1 = -3 = slope of the indifference curve, negative sign shows that one is willing to give up some of one good to get more of the other: downward indifference curve

Marginal rate of substitute in real research

The spatial distribution of marginal rate of substitution (MRS) of shared open space for lot size at the household level helps identify potential areas where a compact development policy emphasizing the substitution of shared open space for larger parcels may be effective. Individual household MRSs help define areas where households may be willing to forgo larger parcels for larger shared open space. For example, high density residential districts that permit a reasonable amount of residential development in the form of small and compact development and lot-size zoning that regulates lot size would work well in neighborhoods where households have higher MRS of shared open space for lot size.

Curvature of Indifference Curves

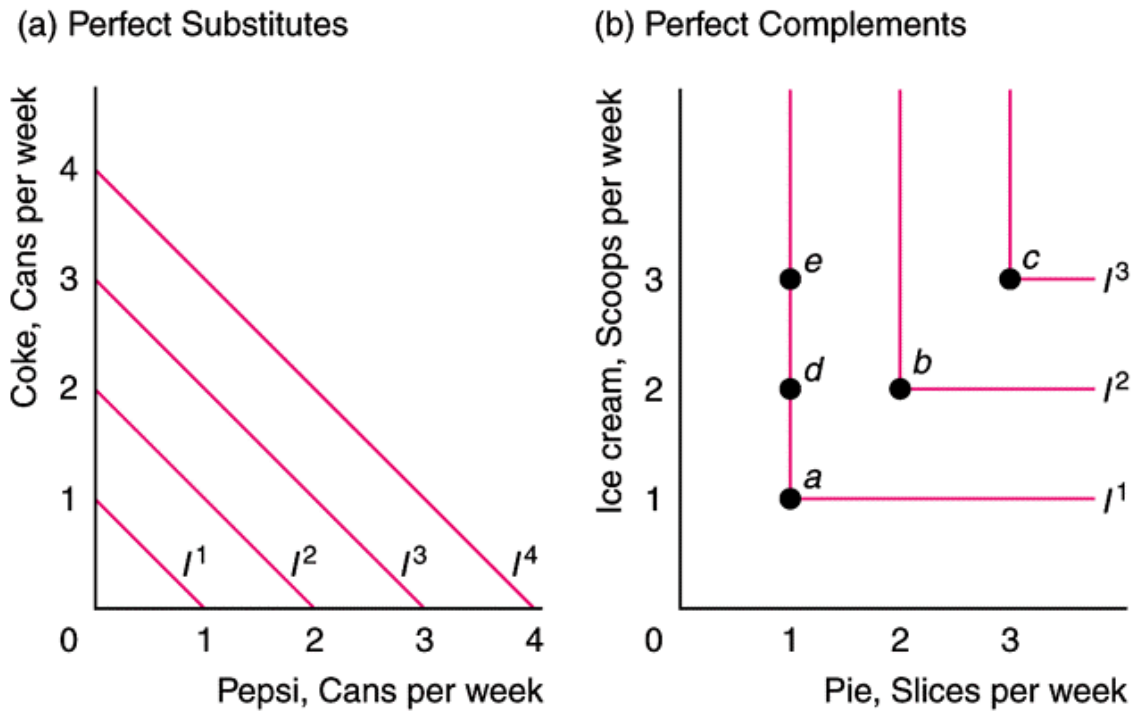
Convex to the origin: the middle of the curve be closer to the origin than if the indifference curve were a straight line

•Diminishing marginal rate of substitute (MRS): When people have a lot of one good, they are willing to give up a relatively large amount of it to get a good of which they have relatively little.

•MRS approaches zero as we move down and to the right along the indifference curve (flatter).

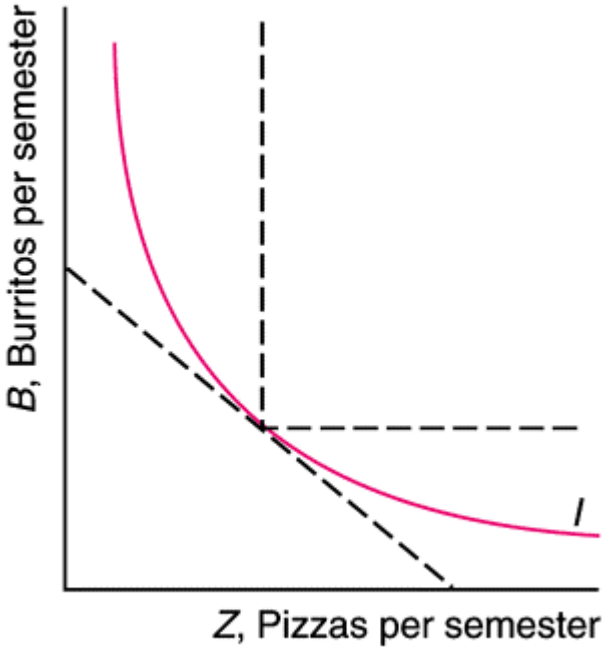
•Concave: One is willing to give up more burritos to get one more pizza, the fewer the burritos one has

Perfect Substitutes, Perfect Complements,



Imperfect Substitutes

(c) Imperfect Substitutes



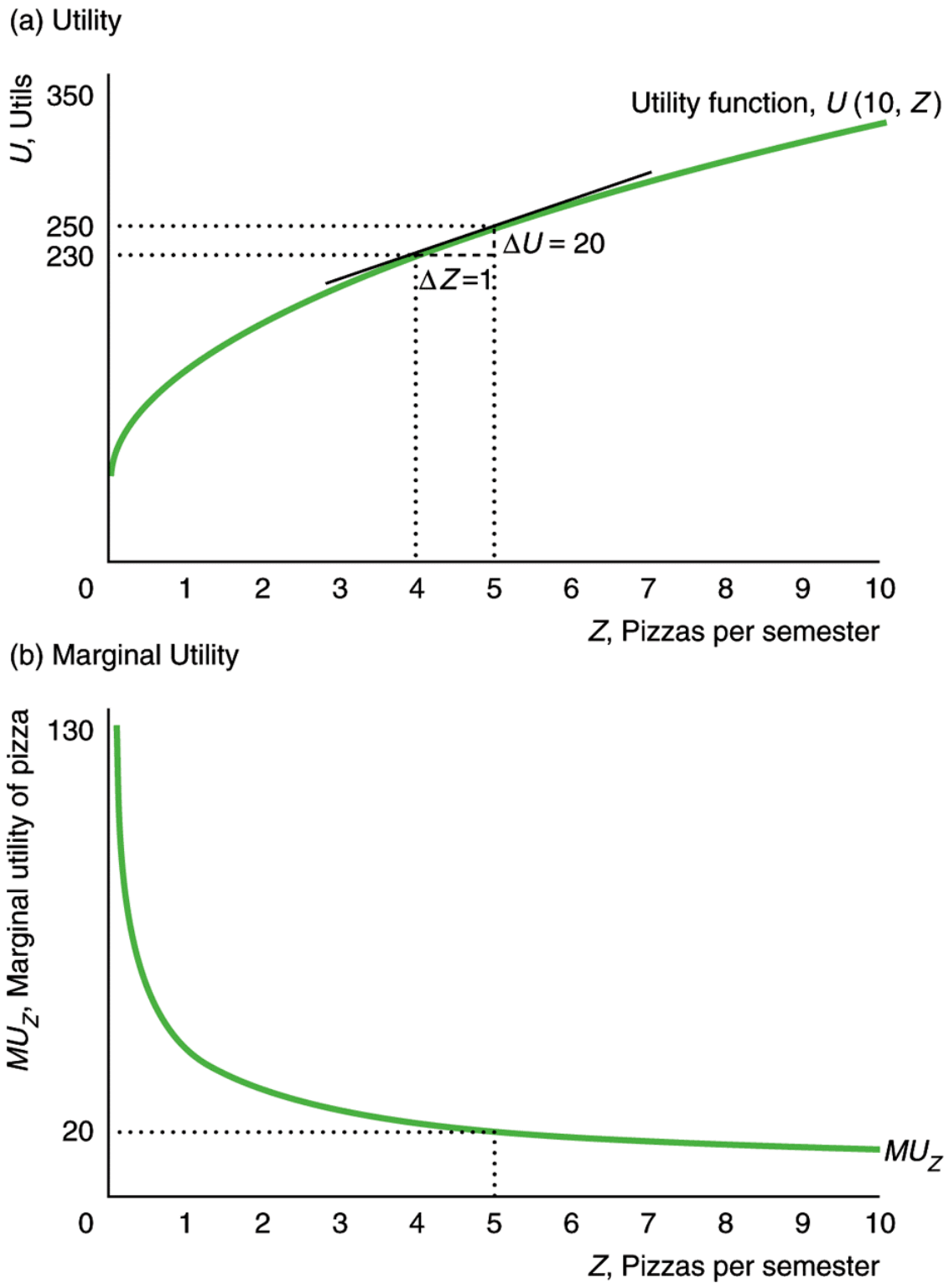
Ordinal Preferences

Utility is measure of pleasure ordinalrather than cardinal.

•Ordinal measure: Difference between grade A and B.

•Cardinal measure: Difference between $100 and $50.

Utility and Marginal Utility



Market System & Equilibrium

In particular In economics, a market refers to the collective activity of buyers and sellers for a particular product product or service.

The Economic Systems

Economic to Economic market system is a set of institutions for allocating resources and making choices for satisfy human wants. In a market system, the forces and interaction of supply and demand foreach each commodity determines what and how much to produce.

In maximizes In price system, the combination is based on least combination method. This method maximizes the cost the profit and reduces the cost. Thus firms using least combination method can lower the cost and make profit. Resources are allocated by planning. In a market economy, goods are allocated allocated according to the decisions of producers and consumers.

Pure Capitalism

which − Pure capitalism market economic system is a system in which individuals be individuals own productive resources and as it is the private ownership; they can be used used in any manner subject to the productive legal restrictions.

Communism

to − Communism is an economy in which workers are motivated to contribute The contribute to the economy. Government has most of the control in this system. The government decides what to produce, how much, and how to produce. This is an economic economic decision making through planned economy.

Mixed Economy

generated − Mixed economy is a system where most of the wealth is generated by by businesses and the government also plays an important role.

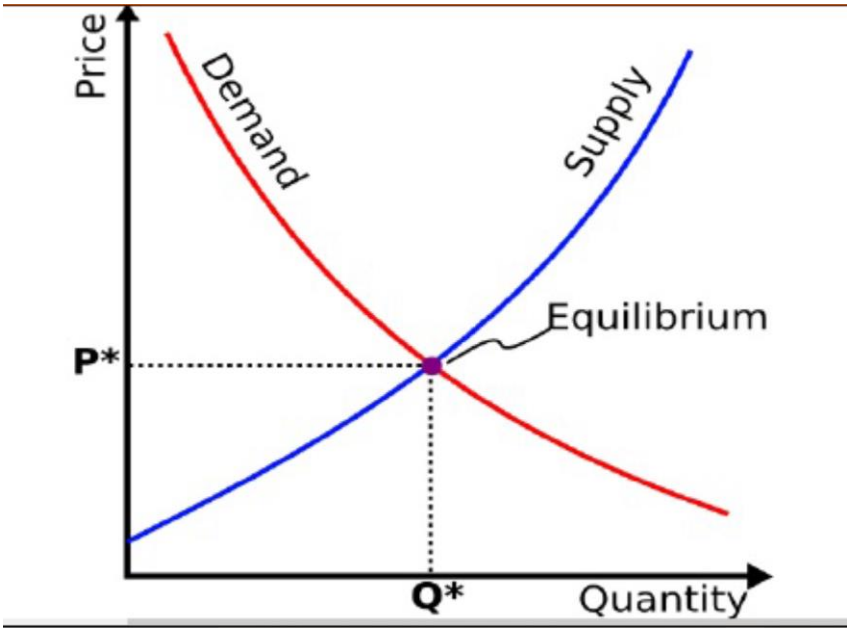
Demand and Supply Curves

The given The market demand curve indicates the maximum price that buyers will pay to purchase a given quantity quantity of the market product.

The willing The market supply curve indicates the minimum price that suppliers would accept to be willing to to provide a given supply of the market product.

In and In order to have buyers and sellers agree on the quantity that would be provided and purchased, andpurchased, the price needs to be a right level. The market equilibrium is the quantity and associated associated price at which there is concurrence between sellers and buyers.

Now let’s have a look at the typical supply and demand curve presentation.



From the above graphical presentation, we can clearly see the point at which the supply and demand demand curves intersect with each other which we call as Equilibrium point.

Market Equilibrium

Market equilibrium is determined at the intersection of the market demand and market supply. The price The price that equates the quantity demanded with the quantity supplied is the equilibrium price and amount that people are willing to buy and sellers are willing to offer at the equilibrium price level level is the equilibrium quantity.

A the A market situation in which the quantity demanded exceeds the quantity supplied shows the shortage market shortage of the market. A shortage occurs at a price below the equilibrium level. A market situation surplus situation in which the quantity supplied exceeds the quantity demanded, there exists the surplus of of the market. A surplus occurs at a price above the equilibrium level.

If a market is not at equilibrium, market forces try to move it equilibrium. Let's have a look – If the the market price is above the equilibrium value, there is an excess of supply in the market, which price which means there is more supply than demand. In this situation, sellers try to reduce the price of their good to clear their inventories. They also slow down their production. The lower price helps more people to buy, which reduces the supply further. This process further results in increase in demand and decrease in supply until the market price equals the equilibrium price.

If the market price is below the equilibrium value, then there is excess in demand. In this case, buyers trying buyers bid up the price of the goods. As the price goes up, some buyers tend to quit trying because on because they don't want to, or can't pay the higher price. Eventually, the upward pressure on price price and supply will stabilize at market equilibrium.

UNIT 2

4 Types of Market Structure

Pure/Perfect Competition

Large number of buyers and sellers

Identical product

Well informed buyers and sellers

Monopolistic Competition

Meets all condition of perfect competition except for identical products.

Product differentiation

Monopolistic competitors use nonprice competition

Advertising, giveaways, or other promotions

Oligopoly

A few very large sellers dominate the industry

Oligopolists act independently by lowering prices soon after the first seller announces the cut

Collusion: formally agree to set prices

Engage in price wars

Monopoly

Only one seller of a particular product

Few monopolies

Natural Monopoly - efficient production by a single supplier

Break-Even Analysis

One of the most common tools used in evaluating the economic feasibility of a new enterprise or product is the break-even analysis. The break-even point is the point at which revenue is exactly equal to costs.

At this point, no profit is made and no losses are incurred. The break-even point can be expressed in terms of unit sales or dollar sales. That is, the break-even units indicate the level of sales that are required to cover costs. Sales above that number result in profit and sales below that number result in a loss.

The break-even sales indicates the dollars of gross sales required to break-even. It is important to realize that a company will not necessarily produce a product just because it is expected to breakeven. Many times, a certain level of profitability or return on investment is desired.

If this objective cannot be reached, which may mean selling a substantial number of units above break-even, the product may not be produced. However, the break-even is an excellent tool to help quantify the level of production needed for a new business or a new product.

Break-even analysis is based on two types of costs: fixed costs and variable costs.

Fixed costs are overhead-type expenses that are constant and do not change as the level of output changes.

Variable expenses are not constant and do change with the level of output. Because of this, variable expenses are often stated on a per unit basis. Once the break-even point is met, assuming no change in selling price, fixed and variable cost, a profit in the amount of the difference in the selling price and the variable costs will be recognized.

One important aspect of break-even analysis is that it is normally not this simple. In many instances, the selling price, fixed costs or variable costs will not remain constant resulting in a change in the break-even.. And these changes will change the break-even. So, a break-even cannot be calculated only once. It should be calculated on a regular basis to reflect changes in costs and prices and in order to maintain profitability or make adjustments in the product line. 1

There are three basic pieces of information needed to evaluate a break-even point:

Average Per Unit Sales Price: _____

Average Per Unit Variable Cost: _____

Average Annual Fixed Costs: _____

The basic equation for determining the break-even units is:

Average Annual Fixed Cost ÷ (Average Per Unit Sales Price - Average Per Unit Variable Cost)

The basic equation for determining the break-even sales: Annual Fixed Cost ÷ 1 - (Average Per Unit Variable Cost ÷ Average Per Unit Sales Price)

Break-even analysis can be very helpful in the evaluation of a new venture. In most instances, success takes time. Many new enterprises and products actually operate at a loss (at a point below break-even) in the early stages of development. Knowing the price or volume necessary to break-even is critical to evaluating the time-frame in which losses are permissible.

The break-even is also an excellent benchmark by which a company's short-term goals can be measured/tracked. Break-even analysis mandates that costs be analyzed. It also keeps a focus on the connection between production and marketing.

Example:

A local livestock producer utilizes compost waste to develop an organic fertilizer product. The fertilizer is prepared for retail sale in 50 pound bags.

The retail sales price is $5.00 per bag.

The average variable cost per bag is $2.80 and average annual fixed costs are $60,000.

These three pieces of information are:

Average Per Unit Sales Price = $5.00 per bag Average Per Unit

Variable Cost = $2.80 per bag Average Annual Fixed Costs = $60,000.00

The above assumption can be utilized to calculate the number of bags that must be sold in order to break-even as well as the total dollar of sales needed to break-even.

Using the formulas explained earlier, the following calculations can be made:

Break-Even Units: $60,000.00 ÷ ($5.00 - $2.80) = 27,273 bags

Break-Even Sales: $60,000.00 ÷ 1 - ($2.80 ÷ $5.00) = $136,365

Therefore, no profits are made from the sale of this product until more than 27,273 bags are sold or more than $136,365 in gross sales is generated.

What is non-price competition?

Definition and meaning

Non-price competition refers to competition between companies that focuses on benefits, extra services, good workmanship, product quality – plus all other features and measures that do not involve altering prices. It contrasts with price competition, in which rivals try to gain market share by reducing their prices. Non-price competition is often adopted by the competing players in a sector in order to prevent a price war, which can lead to a damaging spiral of price cuts.

Non-price competition is a marketing strategy that typically includes promotional expenditures such as sales staff, sales promotions, special orders, free gifts, coupons, and advertising.

it means marketing a firm's brand and quality of products, rather than lowering prices. Most companies across the world are involved in either non-price competition, price competition, or both.

Non-price competition – oligopolies

Non-price competition is more common in markets where there is imperfect competition, such as those with very few competitors – oligopolies – maybe because it can give an impression of a very competitive market, when in fact the rivals are colluding to keep their prices high.

Non-price competition is an important strategy in marketplaces where sellers are offering their service as a product, such as AirBnB, Fiverr, oDesk, TaskRabbit, Mechanical Turk, etc. In these marketplaces,

suppliers tend to distinguish themselves in terms of customer satisfaction, speed of delivery, quality, etc.

According to ft.com/lexicon, the Financial Times' glossary of terms, non-price competition is:

"Competing not on the basis of price but by other means, such as the quality of the product, what is on offer, packaging, customer service, etc."

Non-price competition – two phases

There are typically two phases to a non-price competition strategy. The first implements new aspects of production or services, while the second lets consumers know about them.

non-price competition as follows: "Trying to win business from rivals other than by charging a lower price. Methods include advertising, slightly differentiating your product, improving its quality, or offering free gifts or discounts on subsequent purchases. Non-price competition is particularly common when there is an oligopoly, perhaps because it can give an impression of fierce rivalry while the firms are actually colluding to keep prices high."

For example, if a company reduces the packaging around a product, it will save on materials, weight and shelf-space. It may draw attention to a message on the packaging that says: "New packaging, same fantastic product!"

By changing the packaging, the product's price is not lowered, and neither is its quality or workmanship undermined.

Non-price competition – pros & cons

There are several advantages associated with this type of marketing campaign:

Better sales tactics, including social media posts, efficient forms of online advertising, and direct sales through the manufacturer.

Improved product quality.

Different presentation of products for varied demographics. For example, sales may increase if the same product is presented differently for men and women.

Superior brand perception. Brands provide guidance and clarity for choices made by firms, consumers, investors and other stakeholders.

Disadvantage:

The main drawback is that consumers are not likely to notice the changes straight away – which is not the case when prices are lowered..

Non-price competition – pharma companies

The pharmaceutical industry is full of brand name products and generics, which become available when the active ingredient's patent has expired.

Companies face strong pricing competition from businesses that manufacture generic equivalents of their brand-name medications.

However, in virtually every case, the brand-name owner avoids reacting with pricing strategies, and instead uses a non-price competition marketing approach.

of Johnson & Johnson. Even though the active ingredients and dosages of Tylenol are exactly the same as its generic equivalents, marketing the brand name's quality and superiority still works, and results in healthy profits.

Non-price competition – Example

McDonald's

McDonald's, the American hamburger and fast food restaurant giant, uses a wide range of both non-price and price competition. It claims to buy coffee beans that are 'fair trade' and have the 'Rainforest Alliance Group' seal of approval.

This is an effective way for McDonald's to boost sales because it does not have to alter the price of the cups of coffee it sells.

In nearly every McDonald's restaurant across the globe today, it offers free Wi-Fi. Through bulk-buying and negotiating a lower price for the purchase of several internet connections, the company has been able to increase sales without the need for the high costs involved with a major advertising campaign.

Pricing is the process of determining what a company will receive in exchange for its product or service. A business can use a variety of pricing strategies when selling a product or service. The price can be set to maximize profitability for each unit sold or from the market overall. It can be used to defend an existing market from new entrants, to increase market share within a market or to enter a new market. There is a need to follow certain guidelines in pricing of the new product. Following are the common pricing strategies − Pricing a New Product Most companies do not consider pricing strategies in a major way, on a day-today basis. The marketing of a new product poses a problem because new products have no past information. Fixing the first price of the product is a major decision. The future of the company depends on the soundness of the initial pricing decision of the product. In large multidivisional companies, top management needs to establish specific criteria for acceptance of new product ideas. The price fixed for the new product must have completed the advanced research and development, satisfy public criteria such as consumer safety and earn good profits. In pricing a new product, below mentioned two types of pricing can be selected − Skimming Price Skimming price is known as short period device for pricing. Here, companies tend to charge higher price in initial stages. Initial high helps to "Skim the Cream" of the market as the demand for new product is likely to be less price elastic in the early stages. Penetration Price Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing lowest price for the new product is charged. This helps in prompt sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution. Multiple Products As the name indicates multiple products signifies production of more than one product. The traditional theory of price determination assumes that a firm produces a single homogenous product. But firms in reality

usually produce more than one product and then there exists interrelationships between those products. Such products are joint products or multi–products. In joint products the inputs are common in the production process and in multi-products the inputs are independent but have common overhead expenses. Following are the pricing methods followed − Full Cost Pricing Method Full cost plus pricing is a price-setting method under which you add together the direct material cost, direct labor cost, selling and administrative cost, and overhead costs for a product and add to it a markup percentage in order to derive the price of the product. The pricing formula is − Pricing formula = Total production costs − Selling and administration costs − Markup / Number of units expected to sell This method is most commonly used in situations where products and services are provided based on the specific requirements of the customer. Thus, there is reduced competitive pressure and no standardized product being provided. The method may also be used to set long-term prices that are sufficiently high to ensure a profit after all costs have been incurred. Marginal Cost Pricing Method The practice of setting the price of a product to equal the extra cost of producing an extra unit of output is called marginal pricing in economics. By this policy, a producer charges for each product unit sold, only the addition to total cost resulting from materials and direct labor. Businesses often set prices close to marginal cost during periods of poor sales. For example, an item has a marginal cost of 2.00andanormalsellingpriceis3.00, the firm selling the item might wish to lower the price to $2.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all. Transfer Pricing Transfer Pricing relates to international transactions performed between related parties and covers all sorts of transactions. The most common being distributorship, R&D, marketing, manufacturing, loans, management fees, and IP licensing. All intercompany transactions must be regulated in accordance with applicable law and comply with the "arm's length" principle which requires holding an updated transfer pricing study and an intercompany agreement based upon the study. Some corporations perform their intercompany transactions based upon previously issued studies or an ill advice they have received, to work at a "cost plus X%". This is not sufficient, such a decision has to be supported in terms of methodology and the amount of overhead by a proper transfer pricing study and it has to be updated each financial year. Dual Pricing In simple words, different prices offered for the same product in different markets is dual pricing. Different prices for same product are basically known as dual pricing. The objective of dual pricing is to enter different markets or a new market with one product offering lower prices in foreign county. There are industry specific laws or norms which are needed to be followed for dual pricing. Dual pricing strategy does not involve arbitrage. It is quite commonly followed in developing countries where local citizens are offered the same products at a lower price for which foreigners are paid more. Airline Industry could be considered as a prime example of Dual Pricing. Companies offer lower prices if tickets are booked well in advance. The demand of this category of customers is elastic and varies inversely with price. As the time passes the flight fares start increasing to get high prices from the customers whose demands are inelastic. This is how companies charge different fare for the same flight tickets. The differentiating factor here is the time of booking and not nationality. Price Effect Price effect is the change in demand in accordance to the change in price, other things remaining constant. Other things include − Taste and preference of the consumer, income of the consumer, price of other goods which are assumed to be constant. Following is the formula for price effect − Price Effect = Proportionate change in quantity demanded of X / Proportionate change in price of X Price effect is the summation of two effects, substitution effect and income effect Price effect = Substitution effect − Income effect Substitution

Effect In this effect the consumer is compelled to choose a product that is less expensive so that his satisfaction is maximized, as the normal income of the consumer is fixed. It can be explained with the below examples − Consumers will buy less expensive foods such as vegetables over meat. Consumers could buy less amount of meat to keep expenses in control. Income Effect Change in demand of goods based on the change in consumer's discretionary income. Income effect comprises of two types of commodities or products − Normal goods − If there is a price fall, demand increases as real Pricing is the process of determining what a company will receive in exchange for its product or service. A business can use a variety of pricing strategies when selling a product or service. The price can be set to maximize profitability for each unit sold or from the market overall. It can be used to defend an existing market from new entrants, to increase market share within a market or to enter a new market. There is a need to follow certain guidelines in pricing of the new product. Following are the common pricing strategies − Pricing a New Product Most companies do not consider pricing strategies in a major way, on a day-today basis. The marketing of a new product poses a problem because new products have no past information. Fixing the first price of the product is a major decision. The future of the company depends on the soundness of the initial pricing decision of the product. In large multidivisional companies, top management needs to establish specific criteria for acceptance of new product ideas. The price fixed for the new product must have completed the advanced research and development, satisfy public criteria such as consumer safety and earn good profits. In pricing a new product, below mentioned two types of pricing can be selected − Skimming Price Skimming price is known as short period device for pricing. Here, companies tend to charge higher price in initial stages. Initial high helps to "Skim the Cream" of the market as the demand for new product is likely to be less price elastic in the early stages. Penetration Price Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing lowest price for the new product is charged. This helps in prompt sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution. Multiple Products As the name indicates multiple products signifies production of more than one product. The traditional theory of price determination assumes that a firm produces a single homogenous product. But firms in reality usually produce more than one product and then there exists interrelationships between those products. Such products are joint products or multi–products. In joint products the inputs are common in the production process and in multi-products the inputs are independent but have common overhead expenses. Following are the pricing methods followed − Full Cost Pricing Method Full cost plus pricing is a price-setting method under which you add together the direct material cost, direct labor cost, selling and administrative cost, and overhead costs for a product and add to it a markup percentage in order to derive the price of the product. The pricing formula is − Pricing formula = Total production costs − Selling and administration costs − Markup / Number of units expected to sell This method is most commonly used in situations where products and services are provided based on the specific requirements of the customer. Thus, there is reduced competitive pressure and no standardized product being provided. The method may also be used to set long-term prices that are sufficiently high to ensure a profit after all costs have been incurred. Marginal Cost Pricing Method The practice of setting the price of a product to equal the extra cost of producing an extra unit of output is called marginal pricing in economics. By this policy, a producer charges for each product unit sold, only the addition to total cost resulting from materials and direct labor. Businesses often set prices close to marginal cost during periods of poor sales. For example, an item has a marginal cost of 2.00andanormalsellingpriceis3.00,

the firm selling the item might wish to lower the price to $2.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all. Transfer Pricing Transfer Pricing relates to international transactions performed between related parties and covers all sorts of transactions. The most common being distributorship, R&D, marketing, manufacturing, loans, management fees, and IP licensing. All intercompany transactions must be regulated in accordance with applicable law and comply with the "arm's length" principle which requires holding an updated transfer pricing study and an intercompany agreement based upon the study. Some corporations perform their intercompany transactions based upon previously issued studies or an ill advice they have received, to work at a “cost plus X%”. This is not sufficient, such a decision has to be supported in terms of methodology and the amount of overhead by a proper transfer pricing study and it has to be updated each financial year. Dual Pricing In simple words, different prices offered for the same product in different markets is dual pricing. Different prices for same product are basically known as dual pricing. The objective of dual pricing is to enter different markets or a new market with one product offering lower prices in foreign county. There are industry specific laws or norms which are needed to be followed for dual pricing. Dual pricing strategy does not involve arbitrage. It is quite commonly followed in developing countries where local citizens are offered the same products at a lower price for which foreigners are paid more. Airline Industry could be considered as a prime example of Dual Pricing. Companies offer lower prices if tickets are booked well in advance. The demand of this category of customers is elastic and varies inversely with price. As the time passes the flight fares start increasing to get high prices from the customers whose demands are inelastic. This is how companies charge different fare for the same flight tickets. The differentiating factor here is the time of booking and not nationality. Price Effect Price effect is the change in demand in accordance to the change in price, other things remaining constant. Other things include − Taste and preference of the consumer, income of the consumer, price of other goods which are assumed to be constant. Following is the formula for price effect − Price Effect = Proportionate change in quantity demanded of X / Proportionate change in price of X Price effect is the summation of two effects, substitution effect and income effect Price effect = Substitution effect − Income effect Substitution Effect In this effect the consumer is compelled to choose a product that is less expensive so that his satisfaction is maximized, as the normal income of the consumer is fixed. It can be explained with the below examples − Consumers will buy less expensive foods such as vegetables over meat. Consumers could buy less amount of meat to keep expenses in control. Income Effect Change in demand of goods based on the change in consumer’s discretionary income. Income effect comprises of two types of commodities or products − Normal goods − If there is a price fall, demand increases as real Breakeven Analysis

Breakeven analysis is performed to determine the value of a variable of a project that makes

two elements equal, e.g. sales volume that will equate revenues and costs.

Single Project

The analysis is based on the relationship:

Profit = revenue – total cost

= R – TC

At breakeven, there is no profit or loss, hence,

revenue = total cost

or, R = TC

Note: It is to be noted that +ve sign is used for both the revenue and the costs. If we are to use –ve sign for costs and +ve sign for revenue, then the above relationships become:

Profit = R + TC and R + TC = 0 at breakeven.

With revenue and costs given in terms of a decision variable, the solution yields the breakeven quantity for the decision variable.

Costs, which may be linear or non-linear, usually include two components:

Fixed costs (FC) – Includes costs such as buildings, insurance, fixed overhead, equipment capital recovery, etc. These costs are essentially constant for all values of the decision variable.

Variable costs (VC) – Includes costs such as direct labour, materials, contractors, marketing, advertisement, etc. These costs change linearly or non-linearly with the decision variable, e.g. production level, workforce size, etc. For the analysis to be followed here, the variation will generally be assumed to be linear.

Then, total cost, TC = FC + VC

Revenue also changes with the decision variable. Again, for the analysis, the variation will generally be assumed to be linear.

The following diagram illustrates the basics of the breakeven analysis.

Revenue, R

Revenue Total Cost, TC

or

Cost VC

FC

QBE, Breakeven quantity

Production, Q units/year

It can be seen that we have profit if the production level is above the breakeven quantity and

loss if it is below.

Examples:

1. The fixed costs at Company X are $1 million annually. The main product has revenue of $8.90 per unit and $4.50 variable cost. (a) Determine the breakeven quantity per year, and (b) Annual profit if 200000 units are sold.

Let QBE be the breakeven quantity.

8.9QBE = 1,000,000 + 4.5QBE

QBE = 1,000,000/(8.90-4.50) = 227,272 units

(b) Profit = R – TC

= 8.90Q – 1,000,000 - 4.5Q

At 200,000 units: Profit = 8.90(200,000) – 1,000,000 - 4.50(200,000)

= $-120,000 (loss)

2. A product currently sells for $12 per unit. The variable costs are $4 per unit, and 10,000 units are sold annually and a profit of $30,000 is realized per year. A new design will increase the variable costs by %20 and Fixed Costs by %10 but sales will increase to 12,000 units per year. (a) At what selling price do we break even, and (b) If the selling price is to be kept same ($12/unit) what will the annual profit be?

Profit = revenue – costs

30000 = 10000(12) – [10000(4) + FC] FC = fixed costs

FC = 50000

(a) New variable cost = $4(1.2) = $4.8 per unit.

New fixed costs = 50000(1.1) = $55000

Let x = breakeven selling price per unit, then

12000x = 55000 + 12000(4.8)

or, x = $9.38/unit

(b) Profit = 12000(12) – 12000(4.8) - 55000

= $31400

3. A defense contractor has been able to summarize its total annual fixed costs as $100,000

and the total variable cost per unit of production as $33. (a) If only 5000 units is all that is expected to sell to the government this year what should the per unit selling price be to make a %25 profit this year? (b) If foreign sales of 3000 units per year is to be added to the 5000 units government contract above and a %25 profit is acceptable for this contractor again, what could be the new selling price per unit?

a) Total costs = 100000 + 5000(33)

= 265000

% profit = 100(revenue – cost)/cost

Therefore, 25 = 100(revenue – 265000)/265000

or, revenue = 265000(1.25) = 331250

Selling price = 331250/5000

= $66.25 / unit.

b) Total cost = 100000 + 8000(33) = 364000

Revenue for 25% profit = 364000(1.25) = 455000

New selling price = 455000/8000

= $56.875 per unit.

4. Suppose a firm is considering manufacturing a new product and the following data have been provided:

Sales price $12.50 per unit

Equipment cost $200 000

Overhead cost $50 000 per year

Operating and maintenance cost $25 per operating hour

Production time 0.1 hours per unit

Planning period 5 years

MARR 15%

Assuming a zero salvage value for all equipment at the end of five years, determine the number of unit to be produced to break even.

Let X = number of units to be provided per year to break even.

AWC = -200000.(A/P,15%,5) – 50000 – (0.1)25X

= -109660 – 2.5X

Revenue: AWR = 12.5X

At breakeven, 12.5X – 109660 – 2.5X = 0

X = 10966 units per year.

Note: -ve sign for costs and +ve sign for revenue is used in the above solution.

5. An automobile company is planning to convert a plant from manufacturing economy cars to manufacturing sports cars. The initial cost for equipment conversion will be $200 million with a 20% salvage value anytime within a 5-year period. The cost of producing a car will be $21000, and it will be sold for $33000. The production capacity for the first year will be 4000 units. At an interest rate of 12% per year, by what uniform amount will production have to increase each year in order for the company to recover its investment in 3 years?

Let x = gradient increase per year.

Total costs = -200M(A/P,12%,3)+(0.20)(200M)(A/F,12%,3)-[4000+ x(A/G,12%,3)](21,000)

Revenue = [4000 + x(A/G,12%,3)](33,000)

At breakeven, revenue + costs* = 0, then * -ve sign for costs is used.

[4000 + x(A/G,12%,3)](33,000 – 21,000) = 200M(A/P,12%,3) - (0.20)(200M)(A/F,12%,3)

[4000 + x(0.9246)](12,000) = 200M(0.41635) - 40M(0.29635)

x = 2110 cars/year increase

6. Owners of a hotel chain are considering locating a new hotel in Karpaz. The complete cost of building a 150-room hotel (excluding furnishings) is $2million; the furnishings will cost $750 000 and will be replaced every 5 years for the same cost. Annual operating and maintenance cost for the facility is estimated to be $50 000. The average rate for a room is expected to be $15 per day. A 15-year planning period is used by the firm in evaluating new projects of this type; a terminal salvage value of 20% of the original building cost is anticipated; furnishings are estimated to have no salvage value at the end of each five-year replacement interval; land cost is not to be included. Determine the break-even value for the average number of rooms to be occupied daily based on a MARR of 10% (Assume the hotel will operate 365 days a year).

Annualizing Costs:

Building: AWB = -2M(A/P,10%,15) = -2M(0.13147) = -262940 / yr

Furnishings: AWF = [-750000 – 750000(P/F,10%,5) – 750000(P/F,10%,10)](A/P,10%,15)

= -197836.06 / yr

Salvage Value = (0.2)2M = 400000

AWS = 400000(A/F,10%,15) = 400000(0.03147) = 12588

Total Annual Cost, AWC = -262940 –197836 – 50000 + 12588 = -498188

Revenue = 15(365)X, where X is number of rooms occupied.

At break-even,

15(365)X – 498188 = 0

or X = 91 rooms per day on the average.

Two or more Alternatives

This is commonly applied to between alternatives that serve the same purpose. As a result, breakeven analysis is carried out between the costs of the alternatives. It involves the determination of a common variable between two or more alternatives. The procedure to follow for two alternatives is as follows:

• Define the common variable and its dimensional units.

• Use AW or PW analysis to express the total cost of each alternative as a function of the common variable. (Use AW values if lives are different).

• Equate the two relations and solve for the breakeven value of the variable.

• If the anticipated level is below the breakeven value, select the alternative with the higher variable cost (larger slope). If the level is above the breakeven point, select the alternative with the lower variable cost.

The same type of analysis can be performed for three or more alternatives. Then, compare the alternatives in pairs to find their respective breakeven points. The results are the ranges through which each alternative is more economical.

Examples:

7. A Textile company is evaluating the purchase of an automatic cloth-cutting machine. The machine will have a first cost of $22000, a life of 10 years, and a $500 salvage value. The annual maintenance cost of the machine is expected to be $2000 per year. The machine will require one operator at a total cost of $24 an hour. Approximately 1500 meters of material can be cut each hour with the machine.

Alternatively, if human labor is used, five workers , each earning $10 an hour , can cut 1000 meters per hour. If the company's MARR is %8 per year , and 180,000 meters of material is to be cut every year should the company buy the automatic machine or use human labor instead?

At how many meters cloth-cutting per year will the two alternatives breakeven?

Let x = meters of material to be cut

Automatic machine:

Total annual cost, AWA = -22000(A/P,8%,10) + 500(A/F,8%,10) – 2000 – (x/1500)(24)

= -5244.15 – x/62.5

Manual:

Total annual cost, AWM = -(x/1000)(5)(10) = -x/20

At breakeven, AWA = AWM

-5244.15 – x/62.5 = x/20

or, x = 154240 m

Therefore, at 180000 m, select the automatic machine. (we make profit if quantity is above

the breakeven).

8. Two types of pumps are available. Pump X costs $800 and has a life of 3 years. It also requires rebuilding after 2000 operating hours at a cost of $300. Pump Y costs $1900 and is expected to last 5 years. It also requires overhaul after 8000 hours of operation at a cost of $700. If the operating cost of each pump is $1 per hour, how many hours per year must the pump be required to justify the purchase of pump Y? (Interest rate = 10% per year).

Let x = hours per year

Since lives are different, it is best to use the AW values.

Annual cost of X: AWX = -800(A/P,10%,3) - (300/2000)x -1.0x

Annual cost of Y: AWY = -1,900(A/P,10%,5) - (700/8000)x - 1.0x

At breakeven, AWX = AWY,

-800(A/P,10%,3) - (300/2000)x -1.0x = -1,900(A/P,10%,5) - (700/8000)x - 1.0x

-800(0.40211) - 0.15x - 1.0x = -1,900(0.2638) - 0.0875x - 1.0x

0.0625x = 179.532

x = 2873 hours per year

9. Machine A has a fixed cost of $40000 per year and a variable cost of $60 per unit. Machine B has an unknown fixed cost, but with this process 200 units can be produced each month at a total variable cost of $2000. If the total costs of the two machines break even at a production rate of 2000 units per year, what is the fixed cost of machine B?

Let FCB = fixed cost for B.

Variable cost for B = 2000/200 = $10/unit

Total costs are equal at 2000 units per year. Then,

40,000 + 60(2000 units) = FCB + 10(2000 units)

FCB = $140,000 per year

10. The ABC Company is faced with three proposed methods for making one of their products. Method A involves the purchase of a machine for $5000. It will have a seven-year life, with a zero salvage value at that time. Using Method A involves additional costs of $0.20 per unit of product produced per year. Method B involves the purchase of a machine for

$10000. It will also have a seven-year life, with $2000 salvage value at that time. Using Method B involves additional costs of $0.15 per unit of product produced per year. Method C involves the purchase of a machine for $8000. It will have a $2000 salvage value when disposed of in seven years. Additional costs of $0.25 per unit of product per year arise when

Method C is used. An 8% interest rate is used by the ABC Company in evaluating investment alternatives. For what range of annual production volume values is each method preferred?

Let X = number of units per year

AWA = -5000.(A/P,8%,7) – 0.2X = -5000.(0.19207) – 0.2X

= -960.35 – 0.2X

AWB = -10000.(A/P,8%,7) + 2000.(A/F,8%,7) – 0.15X = -10000.(0.19207) +

2000.(0.11207) – 0.15X

= -1696.56 – 0.15X

AWC = -8000.(A/P,8%,7) + 2000.(A/F,8%,7) – 0.25X

= -1312.42 – 0.25X

A vs B: -960.35 – 0.2X = -1696.56 – 0.15X

XAB = 14724.2

B vs C: -1696.56 – 0.15X = -1312.42 – 0.25X

XBC = 3841.4

A vs C: No intersection for X > 0.

C A B

Total Cost

4000

X ≤ 14724, select A

X > 14724, select B 2000

X 3841 10000 14724 20000

Number of units per year

11. Three types of design proposals for a commercial one - storey building is to be evaluated details given below:

	STEEL	CONCRETE	BRICK
First cost	$72/ft2	$76/ft2	$81/ft2
Annual maintenance	$14000	$9000	$6000
Annual heating cost	$3/ft2	$3.4/ft2	$3.9/ft2
SV (%of first cost)	%80	%100	%110
Life (years)	20	20	20

For what range of building area (ft2) which type of design is the most suitable (cheapest) to select? Carry out breakeven analysis using an interest rate of %18 per year and plot your ranges to illustrate.

Let X = area in ft2

First cost of steel = 72x and its salvage value = (0.8)72x

Using AW values:

AWS = -(72x)(A/P,18%,20) + (0.8)(72x) – 14000 – 3x

= -13.45x + 0.393x – 14000 – 3x

= -16.057x – 14000

Similarly,

AWC = -(76x)(A/P,18%,20) + (1.0)(76x) – 9000 – 3.4x

= -17.082x – 9000

AWB = -(81x)(A/P,18%,20) + (1.1)(81x) – 6000 – 3.9x

= -18.423x – 6000

Breakevens:

Steel vs Concrete:

-16.057x – 14000 = -17.082x – 9000

x = 4878 ft2

Steel vs Brick:

-16.057x – 14000 = -18.423x – 6000

x = 3381 ft2

Concrete vs Brick:

-17.082x – 9000 = -18.423x – 6000

x = 2237 ft2

B 0 < x ≤ 2237 Select Brick

C 2237 < x ≤ 4878 Select Concrete

Total cost x > 4878 Select Steel

S

2237 3381 4878

Area, ft2

12. Three options are considered for an engine part:

A – complete in-house manufacturing, with initial equipment cost of $50 000, labor cost of

$26 000 per year, and material cost of $10 per engine part.

B – partial manufacture, (i.e. partially finished engine parts are purchased), with initial equipment cost of $35 000, labor cost of $10 000 per year, material cost of $3 per engine part, and an additional cost of $40 per the partially finished engine part.

C – purchase from outside at a cost of $120 per engine part.

Any equipment purchased will have a life of 6 years. If the MARR is 10% per year, determine the number of engine parts that must be manufactured to justify (a) complete in-house manufacture and (b) partial manufacture. (c) Plot the total cost lines for all three options, and state the ranges of engine parts for which each option will have the lowest cost.

Let x = number of engine parts per year.

Using AW values:

AWIN = -50000(A/P,10%,6) – 26000 – 10x

AWPM = -35000(A/P,10%,6) – 10000 – 3x – 40x

AWOUT = -120x

(a) Complete in-house manufacturing vs purchase from outside:

AWIN = AWOUT

or, -50,000(A/P,10%,6) - 26,000 - 10x = -120x

x = 341 parts per year

(b) Partial manufacture vs purchase from outside:

AWPM = AWOUT

-35,000(A/P,10%,6) - 10,000 - 3x - 40x = -120x

x = 234 parts per year

(c) Complete in-house vs partial manufacture

AWIN = AWPM

-50,000(A/P,10%,6) - 26,000 - 10x = -35,000(A/P,10%,6) - 10,000 - 3x - 40x

x = 589 parts per year from outside

Ranges for the lowest total cost are: partial

Total

0 < x ≤ □234 select purchase fro outside cost in-house

234 < x ≤ □589 select partial manufacture

589 < x select in-house manufacture

234 341 589

Number of engine parts)(72x) – 14000 – 3x = -13.45x + 0.393x – 14000 – 3x = -16.057x –

PRICING STRATEGIES

Pricing is the process of determining what a company will receive in exchange for its product or service. A business can use a variety of pricing strategies when selling a product or service. The price can be set to maximize profitability for each unit sold or from the market overall. It can be used to defend an existing market from new entrants, to increase market share within a market or to enter a new market.

There is a need to follow certain guidelines in pricing of the new product. Following are the common pricing strategies –

Pricing a New Product

Most companies do not consider pricing strategies in a major way, on a day-today basis. The marketing of a new product poses a problem because new products have no past information. Fixing the first price of the product is a major decision.

The future of the company depends on the soundness of the initial pricing decision of the product. In large multidivisional companies, top management needs to establish specific criteria for acceptance of new product ideas.

The price fixed for the new product must have completed the advanced research and development, satisfy public criteria such as consumer safety and earn good profits.

In pricing a new product, below mentioned two types of pricing can be selected –

Skimming Price

Skimming price is known as short period device for pricing. Here, companies tend to charge higher price in initial stages. Initial high helps to "Skim the Cream" of the market as the demand for new product is likely to be less price elastic in the early stages.

Penetration Price

Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing lowest price for the new product is charged. This helps in prompt sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution.

Multiple Products

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

Following are the pricing methods followed –

Full Cost Pricing Method

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

The pricing formula is –

Pricing formula = Total production costs − Selling and

administration costs − Mark-up / Number of units expected to sell

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

Marginal Cost Pricing Method

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

For example, an item has a marginal cost of 2.00andanormalsellingpriceis3.00, the firm selling the item might wish to lower the price to $2.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all.

Transfer Pricing

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

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

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

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

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

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

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

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

Price Effect

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

Following is the formula for price effect –

Price Effect = Proportionate change in quantity demanded of X / Proportionate change in price of X
Price effect is the summation of two effects,

substitution effect and income effect

Price effect = Substitution effect − Income effect

Substitution Effect

In this effect the consumer is compelled to choose a product that is less expensive so that his satisfaction is maximized, as the normal income of the consumer is fixed.

It can be explained with the below examples –

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

Income Effect

Change in demand of goods based on the change in consumer's discretionary income.

Income effect comprises of two types of commodities or products –

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

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

Theory of Profit

The following points highlight the top seven theories of profit. The theories are:

1. Rent Theory of Profit

2. Wage Theory of Profit

3. Risk Theory of Profit

4. The Dynamic Theory of Profit

5. Schumpeter's Innovation Theory

6. Uncertainty Bearing Theory of Profit

7. Marginal Productivity Theory of Profit.

Theory # 1. Rent Theory of Profit:

This theory was first propounded by the American Economist Walker. It is based on the ideas of Senior and J.S. Mill. According to Mill, "the extra gains which any producer obtains through superior talents for business or superior business arrangements are very much of a kind similar to rent. Walker says that "Profits are of the same genus as rent". His theory of profits states that profit is the rent of superior entrepreneur over marginal of less efficient entrepreneur.

According to these economists, there was a good deal of similarity between rent and profit. Rent was the reward for the use of land while a profit was the reward for the ability of the entrepreneur. Just as land differs from one another in fertility, entrepreneurs differ from one another in ability. Rent of superior land is determined by the difference in productivity of the marginal and super marginal land; similarly the profits of the marginal and super marginal entrepreneurs.

In short it is the intra-marginal lands that earn a surplus over marginal lands. So also intra marginal entrepreneurs earn a surplus over marginal entrepreneur. Just as there is the marginal land, there is the marginal entrepreneur. The marginal land yields no rent; so also marginal entrepreneur is a no profit entrepreneur.

The marginal entrepreneur sells his produce at cost price and gets no profit. He secures only the wages of management not profit. Thus profit does not enter into cost of production. Like rent, profit also does not enter into price. Profit is thus a surplus.

Criticism:

1. According to critics there cannot be perfect similarity between rent and profit. Rent is generally positive and in rare cases it may be zero. But rent can never be negative. When entrepreneur suffers losses profit can be negative.

2. The theory explains profit as the differential surplus rather than a reward for an entrepreneur.

3. Profit is not always the reward for business ability. Profit can be due to monopoly or it can arise due to favourable chance to the entrepreneur.

4. This theory maintains that there is no profit entrepreneur just as no rent land. But in practical life there is no such entrepreneur because whether the entrepreneur has ability or not be gets profit as his reward.

5. The system of joint stock enterprise has become more important in the modern economy. The manner in which dividends are distributed among the shareholders is not at all related to latter's ability. Both dull and intelligent shareholders enjoy the same dividends. In fact, the less able may secure more dividends if they possess more shares.

6. This theory assumes that profit does not enter into price. But this is unrealistic because profit as a part of the cost of production does enter into price.

7. Rent is a known and expected surplus. It is also a contractual payment. Profit is unknown.

8. Walker has analysed only surplus profit. But profit can be several other types.'

9. Walker failed to understand the true nature of profit. According to Walker, profit arose on account of the ability of the entrepreneur to undertake risk. Critics point out that profit is not the reward for undertaking risk but it is the reward for the avoidance of risk.

Theory # 2. Wage Theory of Profit:

This theory was propounded by Taussig, the American economist. According to this theory, profit is also a type of wage which is given to the entrepreneur for the services rendered by him. In the words of Taussig, "profit is the wage of the entrepreneur which accrues to him on account of his ability".

Just as a labourer receives wages for his services, the entrepreneur works hard gets profit for the part played by him in the production. The only difference is that while labourer renders physical services, entrepreneur puts in mental work. Thus an entrepreneur is not different from a doctor, lawyer, teacher, etc., who do mental work. Profit is thus a form of wage.

Criticism:

1. The main defect of this theory is that it does not make a distinction between wage and profit. Wages are fixed and certain, but profits are uncertain income.

2. The entrepreneurs undergo risk in production; but the labourer undertakes no such risk.

3. Entrepreneur bears the entire responsibility to organize the business, but labourer need not do so.

4. Profits tend to vary with price but wages do not vary so.

5. The labourer get his wages if he has put in the required amount of labour, but the entrepreneur may not get profit even if he works hard.

6. Profit may include chance gain while wages do not include such an element.

Theory # 3. Risk Theory of Profit:

This theory is associated with American economist Hawley. According to him profit is the reward for risk-taking in business. Risk-taking is supposed to be the most important function of an entrepreneur. Every production that is undertaken in anticipation of demand involves risk. According to Drucker there are four kinds of risk. They are replacement, obsolescence, risk proper and uncertainty.

The first two are calculated and therefore they are insured. But the other two are unknown and unforeseen risks. It is for bearing such risk profit is paid to entrepreneur. No entrepreneur will be willing to undertake risks if he gets only the normal return.

Therefore the reward for risk-taking must be higher than the actual value of the risk. If the entrepreneur does not receive the reward, he will not be prepared to undertake the risk. Thus higher the risk greater is the possibility of profit.

According to Hawley the entrepreneur can avoid certain risks for a fixed payment to the insurance company. But he cannot get rid of all risks by means of insurance. If he does so he is not an entrepreneur and would earn only wages of management and not profit.

Criticism:

1. Risk-taking is not the only entrepreneurial function which leads to emergence of profits. Profits are also due to the organizational and coordinating ability of the entrepreneur. It is also reward for innovation.

2. According to Carver profit is paid to an entrepreneur not for beaming the risk but for minimizing and avoiding risk.

3. This theory assumes that profit is proportional to risk undertaken by entrepreneurs. But this is not true in practical life because even entrepreneurs who do not take any risk are paid profit.

4. Knight says that it is not every risk that gives profit. It is unforeseen and non-insured risks that account for profit. According to Knight risks are of two types viz., foreseeable risk and unforeseeable risk. The risk of fire in a factory is a foreseeable risk and can be covered through insurance. The premium paid for the fire insurance can be included in the cost of production. The entrepreneur can foresee such a risk and insures it. An insurable risk in reality is no risk and profit cannot arise due to insurable risk.

5. There is little empirical evidence to prove that entrepreneurs earn more in risky enterprises. In a way all enterprises are risky, for an element of uncertainty is present in them and every entrepreneur aims at making large profits.

Theory # 4. The Dynamic Theory of Profit:

Prof. J.B. Clark propounded the dynamic theory of profit in the year 1900. To him profit is the difference between the price and the cost of production of the commodity. Profit is the result of progressive change in an organized society.

The progressive change is possible only in a dynamic state. According to Clark the whole economic society is divided into organized and unorganized society. The organized society is further divided into static and dynamic state. Only in dynamic state profit arises.

In a static state, the five generic changes such as the size of the population, technical knowledge, the amount of capital, method of production of the firms and the size of the industry and the wants of the people do not take place; everything is stagnant and there is no change at all. The element of time is non-existent and there is no uncertainty. The same economic features are repeated year after year.

Therefore, there is not risk of any kind to the entrepreneur. The price of the good will be equal to the cost of production. Hence profit does not arise at all. The entrepreneur would get wages for his labour and interest on his capital. If the price of the commodity is higher than the cost of production, competition would reduce the price again to the level of the cost of production so that profit is eliminated.

The presence of perfect competition makes the price equal to the cost of production which eliminates the super normal profit. Thus Knight observes, "Since costs and selling prices are always equal, there can be no profit beyond wages for the routine work of supervision".It is well known that the society has always been dynamic. Several changes are taking place in a dynamic society.

According to Clark five major changes are constantly taking place in a society. They are:

(1) Changes in the size of the population,

(2) Changes in the supply of capital,

(3) Changes in production techniques,

(4) Changes in the forms of industrial organisation, and

(5) Changes in human wants.

These dynamic changes affect the demand and supply of commodities which leads to emergence of profit. Sometimes individual firms may introduce dynamic changes. For example, a firm may improve its production technique, reduce its cost and thereby increase its profit. The typical dynamic change is an invention. This enables the entrepreneur to produce more and reduce costs, leading to emergence of profit.

Criticism:

1. It is wrong to say that there is no profit in static state because every entrepreneur is paid profit irrespective of the state of an economy.

2. This theory does not fully appreciate the nature of the entrepreneurial function. If there are no profits in a static state, it means there is no entrepreneur. But without an entrepreneur it is not possible to imagine how different factors of production would be employed.

3. Mere change in an economy would not give rise to profits if those changes are predictable. It is only the unpredictable, provision can be made for such changes and the expenditure can be included in the cost of production.

4. This theory assumes the existence of perfect competition and static state. But they are far from reality.

5. This theory states that profit arises because of dynamic changes. But Knight says that it is only unforeseen changes that give rise to profit.

6. This theory associates profit for imitating progressive changes in the economy. But in reality profit is paid to entrepreneur for other important functions like risk taking and uncertainty bearing.

7. According to Taussig, "dynamic theory has created unnecessary and artificial distinction between "profits" and wage of management".

Theory # 5. Schumpeter's Innovation Theory:

This theory was propounded by Schumpeter. This theory is more or less similar to that of Clark's theory. Instead of five changes mentioned by Clark, Schumpeter explains the change caused by innovations in the production process. According to this theory profit is the reward for innovations. He uses the term innovation in a sense wider than that of the changes mentioned by Clark.

Innovation refers to all those changes, in the production process with an objective of reducing the cost of commodity so as to create gap between the existing price of the commodity and its new cost. Innovation may take any shape like introduction of a new technique or a new plant, a change in the internal structure or organizational set up of the firm or change in the quality of raw material, a new form of energy, better method of salesmanship, etc.

Schumpeter makes a distinction between invention and innovation. Innovation is brought about mainly for reducing the cost of production and it is cost reducing agent. Profit is the reward for this strategic role, Innovations are not possible by all entrepreneurs. Only exceptional entrepreneurs can innovate. They are capable of tapping new resources, technical knowledge and reduce the cost of production. Thus the main motive for introducing innovation is the desire to earn profit. Profit is therefore the cause of innovation.

Profits are of temporary nature. The pioneer who innovates earns abnormal profit for a short period. Soon other entrepreneurs, "swarm in clusters", compete for profit in the same manner. The pioneer will make another innovation. In a dynamic world innovation in one field may induce other innovations in related fields.

The emergence of motor car industry may in turn stimulate new investments in the construction of highways, rubber, tyresm and petroleum products. Profits are thus causes and effects of innovation. The interest of profit leads entrepreneur to innovate and innovation leads to profit. Thus profit has a tendency to appear, disappear and reappear.

Profits are caused by innovation and disappear by imitation. Innovational profit is thus, never permanent, in the opinion of Schumpeter. Therefore it is different from other incomes, such as rent, wages and interest. These are regular and permanent incomes arising under all circumstances. Profit on the other hand is a temporary surplus resulting from innovation.

Prof. Schumpeter also explained his views on the functions of the entrepreneur. The entrepreneur organizes the business and combines the various factors of production. But this is not his real function and this will not yield him profit. The real function of the entrepreneur is to introduce innovations in business. It is innovations which yield him profit.

Criticisms:

1. This theory concentrates only on innovation, which is only one of the many functions of the entrepreneur and not the only factor.

2. This theory does not consider profit as the reward for risk-taking. According to Schumpeter it is the capitalist not the entrepreneur who undertakes risk.

3. This theory has ignored the importance of uncertainty bearing which is one of the factors that determines profit.

4. This theory attributes profit only to innovation ignoring other functions of entrepreneur.

5. Monopoly profits are permanent in nature while Schumpeter says that innovate profits occur temporarily.

6. This theory has presented a very narrow view of the function of the entrepreneur. He not only introduces innovation but he is equally responsible for proper organisation of the business. As such profit is not merely due to innovation. It is also due to organizational work performed by the entrepreneur. As it is well known, every entrepreneur does not innovate and yet he must earn profit if he is to stay in business.

7. It is an incomplete theory because it has failed to explain all the factors that influence profit.

Theory # 6. Uncertainty Bearing Theory of Profit:

This theory was propounded by an American economist Prof. Frank H. Knight. This theory, starts on the foundation of Hawley's risk bearing theory. Knight agrees with Hawley that profit is a reward for risk-taking. There are two types of risks viz. foreseeable risk and unforeseeable risk. According to Knight unforeseeable risk is called uncertainty beaming.

Knight, regards profit as the reward for bearing non-insurable risks and uncertainties. He distinguishes between insurable and non-insurable risks. Certain risks are measurable, the probability of their occurrence can be statistically calculated. The risks of fire, theft, flood and death by accident are insurable. These risks are borne by the insurance company.

The premium paid for insurance is included in the cost of production. According to Knight these foreseen risks are not genuine economic risks eligible for any remuneration of profit. In other words insurable risk does not give rise to profit.

According to Knight profit is due to non-insurable risk or unforeseeable risk.

Some of the non- insurable risks which arise in modern business are as follows:

(a) Competitive risk:

Some new firms enter into the market unexpectedly. The existing firms may have to face serious competition from them. This will inevitably lower down the profit of the firms.

(b) Technical risk:

This risk arises from the possibility of machinery becoming obsolete due to the discovery of new processes. The existing firm may not be in a position to adopt these changes into its organization, and hence suffer losses.

(c) Risk of government intervention:

The government, in course of time, interferes into the affairs of the industry such as price control, tax policy, import and export restrictions, etc., which might reduce the profits of the firm.

(d) Cyclical risk:

This risk emerges from business cycles. Due to business recession or depression, consumer's purchasing power is reduced, consequently demand for the product of the firm also falls.

(e) Risk of demand:

This is generated by a shift or change of demand in the market.

Prof. Knight calls these risks as 'uncertainties' and 'it is uncertainties in this sense which explains profit in the proper use of the term'. These risks cannot be foreseen and measured, they become non-insurable and the uncertainties have to be borne by the entrepreneur. According to this theory there is a direct relationship between profit and uncertainty bearing.

Greater the uncertainty bearing the higher the level of profit. Uncertainty beaming has become so important in business enterprise in modern days, it has come to be considered as a separate factor of production. Like other factors it has a supply price and entrepreneurs undertake uncertainty bearing in the expectation of earning certain level of profit. Profit is thus the reward for assuming uncertainty.

In the modern days production has to take place In advance of consumption. The producers have to face their rival producers and the future is uncertain and unknown. These are uncertainties. Some entrepreneurs are able to see it more clearly than others and therefore able to earn profit.

Criticism:

1. According to this theory, profit is the reward for uncertainty bearing. But critics point out that sometimes an entrepreneur earns no profit in spite of uncertainty bearing.

2. Uncertainty bearing is one of the determinants of profit and it is not the only determinant. Profit is also a reward for many other activities performed by entrepreneur like initiating, coordinating and bargaining, etc.

3. It is not possible to measure uncertainty in quantitative terms as depicted in this theory.

4. In modern business corporations ownership is separate from control. Decision-making is done by the salaried managers who control and organise the corporation. Ownership rests with the shareholders who ultimately bear uncertainties of business. Knight does not separate ownership and control and this theory becomes unrealistic.

5. Uncertainty bearing cannot be looked upon as a separate factor of production like land, labour or capital. It is a psychological concept which forms part of the real cost of production.

6. Monopoly firms earn much larger profits than competitive firms and they are not due to the presence of uncertainty. This theory throws no light on monopoly profit.

Knight's theory of profit is more elaborate than other theories, because it combines the conception of risk, of economic change and of the role of business ability.

Theory # 7. Marginal Productivity Theory of Profit:

The general theory of distribution is also applied to the factor, entrepreneur. According to Prof. Chapman, profits are equal to the marginal worth of the entrepreneur and are determined by the marginal productivity of the entrepreneur. When the marginal productivity is high, profits will be high.

Just as marginal revenue productivity of any factor represents the demand curve of a factor the marginal revenue productivity curve of entrepreneur is the demand curve of an entrepreneur. As more and more firms enter into the industry, the marginal revenue productivity (MRP) of entrepreneurship decreases. The slope of the MRP curve will be negative. The supply curve of entrepreneur will be perfectly elastic under perfect competition.

Criticism:

1. This theory is not a satisfactory theory of profit because it is very difficult to calculate the marginal productivity of entrepreneurship.

2. Like land, labour, or capital the marginal revenue productivity of entrepreneurship is a meaningless concept in the case of a firm because unlike other factors, there can be only one entrepreneur in a firm.

3. This theory is based on the homogeneity of entrepreneur, in an industry. Entrepreneurs differ in efficiency. It is therefore, not possible to have one marginal revenue productivity curve for all entrepreneurs. This theory thus fails to determine profit accurately.

4. This theory fails to explain why entrepreneurs sometimes earn windfall or chance gains and even monopoly profits.

5. It is one-sided theory which takes into account only the demand for entrepreneurs and neglects supply of entrepreneurs.

6. It is a static theory according to which all entrepreneurs earn only normal profits in the long- run. In the real world entrepreneurs earn more than normal profit due to its dynamic nature.

In conclusion it can be stated that there are essentially three kinds of profit theories which have been developed during last two centuries. The functional theory of profit regards profit as a reward for a factor of production. Secondly the rent theory of profit regards profit as a residual income or as excess of price over costs. The institutional theory emphasises unearned nature of profit as monopoly profit.

None of the theories is satisfactory. Each theory explains profit in terms of one function rather than in terms of all the functions. Economists are of the opinion that it is very difficult to state an adequate theory of profit

Cost & Breakeven Analysis

In managerial economics another area which is of great importance is cost of production. The cost important cost which a firm incurs in the process of production of its goods and services is an important variable of variable for decision making. Total cost together with total revenue determines the profit level of a business. In order to maximize profits a firm endeavors to increase its revenue and lower its costs

Cost Concepts

Costs between Costs play a very important role in managerial decisions especially when a selection between alternative of alternative courses of action is required. It helps in specifying various alternatives in terms of their quantitative values.

Following are various types of cost concepts −

Future Costs Future and Past Costs

Future is Future costs are those costs that are likely to be incurred in future periods. Since the future is uncertain, uncertain, these costs have to be estimated and cannot be expected to absolute correct figures. Future costs can be well planned, if the future costs are considered too high, management can either plan to reduce them or find out ways to meet them.

Management needs to estimate future costs for a various managerial uses where future cost are relevant of relevant such as appraisal, capital expenditure, introduction of new products, estimation of future profit and loss statement, cost control decisions, and expansion programs.

Past documented costs are actual costs which were incurred on the past and they are documented essentially costs essentially for record keeping activity. These costs can be observed and evaluated. Past costs can serve as the basis for projecting future cost but if they are regarded high, management can indulge in checks to find out the factors responsible without being able to do anything about reducing them.

Incremental and Sunk Costs

Incremental decision Incremental costs are defined as the change in overall costs that result from particular decision being are being made. Change in product line, change in output level, change in distribution channels are some variable some examples of incremental costs. Incremental costs may include both fixed and variable costs. Additional costs. In the short period, incremental cost will consist of variable cost—costs of additional labor, additional raw materials, power, fuel etc.

Sunk cost is the one which is not altered by a change in the level or nature of business activity. It will remain the same irrespective of activity level. Sunk costs are the expenditures that have been These been made in the past or must be paid in the future as a part of contractual agreement. These costs for costs are irrelevant for decision making as they do not vary with the changes contemplated for future f by the management.

Out-of-Pocket and Book Costs

“to“Out-of-pocket costs are those that involve immediate payments to outsiders as opposed to book book costs that do not require current cash expenditure"

Wages owner Wages and salaries paid to the employees are out-of-pocket costs while salary of the owner manager, manager, if not paid, is a book cost.

The interest cost of owner's own fund and depreciation cost are other examples of book cost. Book back Book costs can be converted into out-of-pocket costs by selling assets and leasing them back from from the buyer.

If a factor of production is owned, its cost is a book cost while if it is hired it is an out-of-pocketcost.cost.

Replacement and Historical Costs

Historical paid Historical cost of an asset states the cost of plant, equipment, and materials at the price paid originally if originally for them, while the replacement cost states the cost that the firm would have to incur it wants to replace or acquire the same asset now.

For example

if − If the price of bronze at the time of purchase in 1973 was Rs.18 per kg and if the the present price is Rs.21 per kg, the original cost Rs.18 is the historical cost while Rs.21 is the replacement replacement cost.

Explicit Costs and ImplicitCosts

Explicit costs are those expenses which are actually paid by the firm. These costs appear in the accounting records of the firm. On the other hand, implicit costs are theoretical costs in the sense sense that they go unrecognized by the accounting system.

Actual Costs and Opportunity Costs

Actual costs mean the actual expenditure incurred for producing a good or service. These costsare are the costs that are generally recorded in account books.

For example

− Actual wages paid, cost of materials purchased.

The opportunity The concept of opportunity cost is very important in modern economic analysis. The opportunity costs It costs are the return from the second best use of the firm's resources, which the firm forfeits. It avails its return from the best use of the resources.

For example,

same a farmer who is producing wheat can also produce potatoes with the same factors. Potatoes factors. Therefore, the opportunity cost of a ton of wheat is the amount of the output of potatoes which he gives up.

Direct Costs and Indirect Costs

There are some costs which can be directly attributed to the production of a unit for a given product. product. These costs are called direct costs.

Costs which cannot be separated and clearly attributed to individual units of production are classified as indirect costs.

Types of Costs

All main All the costs faced by companies/ business organizations can be categorized into two main types −

Fixed costs

Variable costs

Fixed costs

business are expenses that have to be paid by a company, independent of any business activity. Variable activity. It is one of the two components of the total cost of goods or service, along with variable cost.

Examples include rent, buildings, machinery, etc.

Variable costs

are corporate expenses that vary in direct proportion to the quantity of output. Unlike direct fixed costs, which remain constant regardless of output, variable costs are a direct function it of production volume, rising whenever production expands and falling whenever it contracts.

Examples directly Examples of common variable costs include raw materials, packaging, and labor directly involved in a company's manufacturing process.

Determinants Cost Determinants of Cost

The follows the general determinants of cost are as follows

Output level

Prices production Prices of factors of production

Productivities production Productivities of factors of production

Technology

Short-Run Cost-Output Relationship

Once the firm has invested resources into the factors such as capital, equipment, building, top management Thus management personnel, and other fixed assets, their amounts cannot be changed easily. Thus in desired in the short-run there are certain resources whose amount cannot be changed when the desired rate of output changes, those are called fixed factors.

There are other resources whose quantity used can be changed almost instantly with the output change the change and they are called variable factors. Since certain factors do not change with the change not change in output, the cost to the firm of these resources is also fixed, hence fixed cost does not vary unit vary with output. Thus, the larger the quantity produced, the lower will be the fixed cost per unit and marginal fixed cost will always be zero.

On the other hand, those factors whose quantity can be changed in the short-run is known as variable and variable cost. Thus, the total cost of a business is the sum of its total variable costs (TVC) and total fixed cost (TFC).

TC TVCTC = TFC + TVC

Long-Relationship Long-Run Cost-Output Relationship The factors The long-run is a period of time during which the firm can vary all its inputs. None of the factors is fixed and all can be varied to expand output.

It is a period of time sufficiently long to permit the changes in plant like − the capital equipment, machinery, land etc., in order to expand or contract output.

The given The long-run cost of production is the least possible cost of production of producing any given level is level of output when all inputs are variable including the size of the plant. In the long-run there is no fixed factor of production and hence there is no fixed cost.

If Q = f(L, K)

TC PKTC = L. PL + K. PK

Economies and Diseconomies of Scale

Economies of Scale

As the production increases, efficiency of production also increases. The advantages of largescale There scale production that result in lower unit costs are the reason for the economies of scale. There are two types of economies of scale −

Internal Economies of Scale

It company It refers to the advantages that arise as a result of the growth of the firm. When a company reduces Internal reduces costs and increases production, internal economies of scale are achieved. Internal economies of scale relate to lower unit costs.

External Scale External Economies of Scale

It normally It refers to the advantages firms can gain as a result of the growth of the industry. It is normally associated within associated with a particular area. External economies of scale occur outside of a firm and within an industry. Thus, when an industry's scope of operations expands due to the creation of a better that better transportation network, resulting in a decrease in cost for a company working within that industry, industry, external economies of scale are said to have been achieved.

Diseconomies of Scale

When the prediction of economic theory becomes true that the firm may become less efficient, when too when it becomes too large then this theory holds true. The additional costs of becoming too large average large are called diseconomies of scale. Diseconomies of scale result in rising long run average costs costs which are experienced when a firm expands beyond its optimum scale.

For Example

to − Larger firms often suffer poor communication because they find it difficult to maintain an effective flow of information between departments. Time lags in the flow of information information can also create problems in terms of response time to changing market condition.

Contribution and Breakeven Analysis

Break-in Break-even analysis is a very important aspect of business plan. It helps the business in determining the cost structure and the amount of sales to be done to earn profits.

It is usually included as a part of business plan to observe the profits and is enormously useful in in pricing and controlling cost. Break - Even Point =

Fixed Costs(Costs)(Unit Selling Price – Variable Costs)

Using the above formula, the business can determine how many units it needs to produce to reach break-even.

When a firm attains break even, the cost incurred gets covered. Beyond this point, every additional unit which would be sold would result in increasing profit. The increase in profit would be by the amount of unit contribution margin.

Unit contribution Margin =Sales Costs Sales Price - Variable Costs

Let’s have a look at the following key terms −

Fixed costs

− Costs that do not vary with output

Variable costs

− Costs that vary with the quantity produced or sold.

Total cost

− Fixed costs plus variable costs at level of output.

Profit

are − The difference between total revenue and total costs, when revenues are higher.

Loss

than − The difference between total revenue and total cost, when cost is higher than the revenue.

Breakeven chart

The Break-even analysis chart is a graphical representation of costs at various levels of activity.

With nor With this, business managers are able to ascertain the period when there is neither profit nor loss made for the organization. This is commonly known as "Break-even Point"

Pricing Strategies

Pricing or Pricing is the process of determining what a company will receive in exchange for its product or service. The service. A business can use a variety of pricing strategies when selling a product or service. The price can be set to maximize profitability for each unit sold or from the market overall. It can be used market used to defend an existing market from new entrants, to increase market share within a market or to enter a new market.

There is a need to follow certain guidelines in pricing of the new product. Following are the common pricing strategies −

Pricing a New Product

Most companies do not consider pricing strategies in a major way, on a day-today basis. The marketing of a new product poses a problem because new products have no past information. Fixing the first price of the product is a major decision. The future of the company depends on the soundness of the initial pricing decision of the product. In large multidivisional companies, top management needs to establish specific criteria for acceptance of new product ideas.

The price fixed for the new product must have completed the advanced research and development, satisfy public criteria such as consumer safety and earn good profits. In pricing a new product, below mentioned two types of pricing can be selected −

Skimming Price

Skimming price is known as short period device for pricing. Here, companies tend to charge higher price in initial stages. Initial high helps to “Skim the Cream” of the market as the demand for new product is likely to be less price elastic in the early stages.

Penetration Price

Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing lowest price for the new product is charged. This helps in prompt sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution.

Multiple Products

As the name indicates multiple products signifies production of more than one product. The

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

Full Cost Pricing Method

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

Pricing formula =

Total production costs − Selling and administration costs − Markup / Number of units expected to sell

This method is most commonly used in situations where products and services are provided based on the specific requirements of the customer. Thus, there is reduced competitive pressure and no standardized product being provided. The method may also be used to set long-term prices that are sufficiently high to ensure a profit after all costs have been incurred. Marginal Cost Pricing Method The practice of setting the price of a product to equal the extra cost of producing an extra unit of output is called marginal pricing in economics. By this policy, a producer charges for each product unit sold, only the addition to total cost resulting from materials and direct labor. Businesses often set prices close to marginal cost during periods of poor sales.

For example, an item has a marginal cost of 2.00andanormalsellingpriceis3.00, the firm selling the item might wish to lower the price to $2.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all.

Transfer Pricing

Transfer Pricing relates to international transactions performed between related parties and covers all sorts of transactions. The most common being distributorship, R&D, marketing, manufacturing, loans, management fees, and IP licensing.

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

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

Dual Pricing

In simple words, different prices offered for the same product in different markets is dual pricing. Different prices for same product are basically known as dual pricing. The objective of dual pricing

is to enter different markets or a new market with one product offering lower prices in foreign county. There are industry specific laws or norms which are needed to be followed for dual pricing. Dual pricing strategy does not involve arbitrage. It is quite commonly followed in developing countries where local citizens are offered the same products at a lower price for which foreigners are paid more. Airline Industry could be considered as a prime example of Dual Pricing. Companies offer lower prices

if tickets are booked well in advance. The demand of this category of customers is elastic and varies inversely with price.

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

Price Effect

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

Price Effect = Proportionate change in quantity demanded of X / Proportionate change in price of X

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

Price effect = Substitution effect − Income effect

Substitution Effect

In this effect the consumer is compelled to choose a product that is less expensive so that his satisfaction is maximized, as the normal income of the consumer is fixed. It can be explained with the below examples − Consumers will buy less expensive foods such as vegetables over meat. Consumers could buy less amount of meat to keep expenses in control.

Income Effect

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

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

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

UNIT 3

National Income: Definition, Concepts and Methods of Measuring National Income!

Introduction:

National income is an uncertain term which is used interchangeably with national dividend, national output and national expenditure. On this basis, national income has been defined in a number of ways. In common parlance, national income means the total value of goods and services produced annually in a country.

In other words, the total amount of income accruing to a country from economic activities in a year's time is known as national income. It includes payments made to all resources in the form of wages, interest, rent and profits.

Contents:

Definitions of National Income

Concepts of National Income

Methods of Measuring National Income

Difficulties or Limitations in Measuring National Income

Importance of National Income Analysis

Inter-Relationship among different concept of National Income

1. Definitions of National Income:

The definitions of national income can be grouped into two classes: One, the traditional definitions advanced by Marshall, Pigou and Fisher; and two, modern definitions.

The Marshallian Definition:

According to Marshall: "The labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial including services of all kinds. This is the true net annual income or revenue of the country or national dividend." In this definition, the word 'net' refers to deductions from the gross national income in respect of depreciation and wearing out of machines. And to this, must be added income from abroad.

1. Definitions of National Income:

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National Income: Definition, Concepts and Methods of Measuring National Income

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The Pigouvian Definition:

A.C. Pigou has in his definition of national income included that income which can be measured in terms of money. In the words of Pigou, "National income is that part of objective income of the community, including of course income derived from abroad which can be measured in money."

This definition is better than the Marshallian definition. It has proved to be more practical also. While calculating the national income now-a- days, estimates are prepared in accordance with the two criteria laid down in this definition.

First, avoiding double counting, the goods and services which can be measured in money are included in national income. Second, income received on account of investment in foreign countries is included in national income.

Fisher's Definition:

Fisher adopted 'consumption' as the criterion of national income whereas Marshall and Pigou regarded it to be production. According to Fisher, "The National dividend or income consists solely of services as received by ultimate consumers, whether from their material or from the human environments. Thus, a piano, or an overcoat made for me this year is not a part of this year's income, but an addition to the capital. Only the services rendered to me during this year by these things are income."

Fisher's definition is considered to be better than that of Marshall or Pigou, because Fisher's definition provides an adequate concept of economic welfare which is dependent on consumption and consumption represents our standard of living.

It's Defects:

But from the practical point of view, this definition is less useful, because there are certain difficulties in measuring the goods and services in terms of money. First, it is more difficult to estimate the money value of net consumption than that of net production.

In one country there are several individuals who consume a particular good and that too at different places and, therefore, it is very difficult to estimate their total consumption in terms of money. Second, certain consumption goods are durable and last for many years.

If we consider the example of piano or overcoat, as given by Fisher, only the services rendered for use during one year by them will be included in income. If an overcoat costs Rs. 100 and lasts for ten years, Fisher will take into account only Rs. 100 as national income during one year, whereas Marshall and Pigou will include Rs. 100 in the national income for the year, when it is made.

Besides, it cannot be said with certainty that the overcoat will last only for ten years. It may last longer or for a shorter period. Third, the durable goods generally keep changing hands leading to a change in their ownership and value too.

It, therefore, becomes difficult to measure in money the service-value of these goods from the point of view of consumption. For instance, the owner of a Maruti car sells it at a price higher than its real price and the purchaser after using it for a number of years further sells it at its actual price.

Now the question is as to which of its price, whether actual or black market one, should we take into account, and afterwards when it is transferred from one person to another, which of its value according to its average age should be included in national income?

But the definitions advanced by Marshall, Pigou and Fisher are not altogether flawless. However, the Marshallian and Pigovian definitions tell us of the reasons influencing economic welfare, whereas Fisher's definition helps us compare economic welfare in different years.

Modern Definitions:

From the modern point of view, Simon Kuznets has defined national income as "the net output of commodities and services flowing during the year from the country's productive system in the hands of the ultimate consumers."

On the other hand, in one of the reports of United Nations, national income has been defined on the basis of the systems of estimating national income, as net national product, as addition to the shares of different factors, and as net national expenditure in a country in a year's time. In practice, while estimating national income, any of these three definitions may be adopted, because the same national income would be derived, if different items were correctly included in the estimate.

2. Concepts of National Income:

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There are a number of concepts pertaining to national income and methods of measurement relating to them.

(A) Gross Domestic Product (GDP):

GDP is the total value of goods and services produced within the country during a year. This is calculated at market prices and is known as GDP at market prices. Dernberg defines GDP at market price as "the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year."

There are three different ways to measure GDP:

Product Method, Income Method and Expenditure Method.

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These three methods of calculating GDP yield the same result because National Product = National Income = National Expenditure.

1. The Product Method:

In this method, the value of all goods and services produced in different industries during the year is added up. This is also known as the value added method to GDP or GDP at factor cost by industry of origin. The following items are included in India in this: agriculture and allied services; mining; manufacturing, construction, electricity, gas and water supply; transport, communication and trade; banking and insurance, real estates and ownership of dwellings and business services; and public administration and defense and other services (or government services). In other words, it is the sum of gross value added.

2. The Income Method:

The people of a country who produce GDP during a year receive incomes from their work. Thus GDP by income method is the sum of all factor incomes: Wages and Salaries (compensation of employees) + Rent + Interest + Profit.

3. Expenditure Method:

This method focuses on goods and services produced within the country during one year.

GDP by expenditure method includes:

(1) Consumer expenditure on services and durable and non-durable goods (C),

(2) Investment in fixed capital such as residential and non-residential building, machinery, and inventories (I),

(3) Government expenditure on final goods and services (G),

(4) Export of goods and services produced by the people of country (X),

(5) Less imports (M). That part of consumption, investment and government expenditure which is spent on imports is subtracted from GDP. Similarly, any imported component, such as raw materials, which is used in the manufacture of export goods, is also excluded.

Thus GDP by expenditure method at market prices = C+ I + G + (X – M), where (X-M) is net export which can be positive or negative.

(B) GDP at Factor Cost:

GDP at factor cost is the sum of net value added by all producers within the country. Since the net value added gets distributed as income to the owners of factors of production, GDP is the sum of domestic factor incomes and fixed capital consumption (or depreciation).

Thus GDP at Factor Cost = Net value added + Depreciation.

GDP at factor cost includes:

(i) Compensation of employees i.e., wages, salaries, etc.

(ii) Operating surplus which is the business profit of both incorporated and unincorporated firms. [Operating Surplus = Gross Value Added at Factor Cost—Compensation of Employees—Depreciation]

(iii) Mixed Income of Self- employed.

Conceptually, GDP at factor cost and GDP at market price must be identical/This is because the factor cost (payments to factors) of producing goods must equal the final value of goods and services at market prices. However, the market value of goods and services is different from the earnings of the factors of production.

In GDP at market price are included indirect taxes and are excluded subsidies by the government. Therefore, in order to arrive at GDP at factor cost, indirect taxes are subtracted and subsidies are added to GDP at market price.

Thus, GDP at Factor Cost = GDP at Market Price – Indirect Taxes + Subsidies.

(C) Net Domestic Product (NDP):

NDP is the value of net output of the economy during the year. Some of the country's capital equipment wears out or becomes obsolete each year during the production process. The value of this capital consumption is some percentage of gross investment which is deducted from GDP. Thus Net Domestic Product = GDP at Factor Cost – Depreciation.

(D) Nominal and Real GDP:

When GDP is measured on the basis of current price, it is called GDP at current prices or nominal GDP. On the other hand, when GDP is calculated on the basis of fixed prices in some year, it is called GDP at constant prices or real GDP.

Nominal GDP is the value of goods and services produced in a year and measured in terms of rupees (money) at current (market) prices. In comparing one year with another, we are faced with the problem that the rupee is not a stable measure of purchasing power. GDP may rise a great deal in a year, not because the economy has been growing rapidly but because of rise in prices (or inflation).

On the contrary, GDP may increase as a result of fall in prices in a year but actually it may be less as compared to the last year. In both 5 cases, GDP does not show the real state of the economy. To rectify the underestimation and overestimation of GDP, we need a measure that adjusts for rising and falling prices.

This can be done by measuring GDP at constant prices which is called real GDP. To find out the real GDP, a base year is chosen when the general price level is normal, i.e., it is neither too high nor too low. The prices are set to 100 (or 1) in the base year.

Now the general price level of the year for which real GDP is to be calculated is related to the base year on the basis of the following formula which is called the deflator index:

$$\text{Real } GDP = \frac{\text{GDP for the Current Year}}{} \times \frac{\text{Base Year (=100)}}{\text{Current Year Index}}$$

Suppose 1990-91 is the base year and GDP for 1999-2000 is Rs. 6, 00,000 crores and the price index for this year is 300.

Thus, Real GDP for 1999-2000 = Rs. 6, 00,000 x 100/300 = Rs. 2, 00,000 crores

(E) GDP Deflator:

GDP deflator is an index of price changes of goods and services included in GDP. It is a price index which is calculated by dividing the nominal GDP in a given year by the real GDP for the same year and multiplying it by 100. Thus,

$$GDP \text{ Deflator} = \frac{\text{Nominal (or Current Prices) } GDP}{\text{Real (or Constant Prices) } GDP} \times 100$$

$$\text{For example, GDP Deflator in 1997-98} = \frac{1426.7\text{th. crores}}{1049.2\text{th. crores at}} \times 100$$
$$= 135.9$$

It shows that at constant prices (1993-94), GDP in 1997-98 increased by 135.9% due to inflation (or rise in prices) from Rs. 1049.2 thousand crores in 1993-94 to Rs. 1426.7 thousand crores in 1997-98.

(F) Gross National Product (GNP):

GNP is the total measure of the flow of goods and services at market value resulting from current production during a year in a country, including net income from abroad.

GNP includes four types of final goods and services:

(1) Consumers' goods and services to satisfy the immediate wants of the people;

(2) Gross private domestic investment in capital goods consisting of fixed capital formation, residential construction and inventories of finished and unfinished goods;

(3) Goods and services produced by the government; and

(4) Net exports of goods and services, i.e., the difference between value of exports and imports of goods and services, known as net income from abroad.

In this concept of GNP, there are certain factors that have to be taken into consideration: First, GNP is the measure of money, in which all kinds of goods and services produced in a country during one year are measured in terms of money at current prices and then added together.

But in this manner, due to an increase or decrease in the prices, the GNP shows a rise or decline, which may not be real. To guard against erring on this account, a particular year (say for instance 1990-91) when prices be normal, is taken as the base year and the GNP is adjusted in accordance with the index number for that year. This will be known as GNP at 1990-91 prices or at constant prices.

Second, in estimating GNP of the economy, the market price of only the final products should be taken into account. Many of the products pass through a number of stages before they are ultimately purchased by consumers.

If those products were counted at every stage, they would be included many a time in the national product. Consequently, the GNP would increase too much. To avoid double counting, therefore, only the final products and not the intermediary goods should be taken into account.

Third, goods and services rendered free of charge are not included in the GNP, because it is not possible to have a correct estimate of their market price. For example, the bringing up of a child by the mother, imparting instructions to his son by a teacher, recitals to his friends by a musician, etc.

Fourth, the transactions which do not arise from the produce of current year or which do not contribute in any way to production are not included in the GNP. The sale and purchase of old goods, and of shares, bonds and assets of existing companies are not included in GNP because these do not make any addition to the national product, and the goods are simply transferred.

Fifth, the payments received under social security, e.g., unemployment insurance allowance, old age pension, and interest on public loans are also not included in GNP, because the recipients do not provide any service in lieu of them. But the depreciation of machines, plants and other capital goods is not deducted from GNP.

Sixth, the profits earned or losses incurred on account of changes in capital assets as a result of fluctuations in market prices are not included in the GNP if they are not responsible for current production or economic activity.

For example, if the price of a house or a piece of land increases due to inflation, the profit earned by selling it will not be a part of GNP. But if, during the current year, a portion of a house is constructed anew, the increase in the value of the house (after subtracting the cost of the newly constructed portion) will be included in the GNP. Similarly, variations in the value of assets, that can be ascertained beforehand and are insured against flood or fire, are not included in the GNP.

Last, the income earned through illegal activities is not included in the GNP. Although the goods sold in the black market are priced and fulfill the needs of the people, but as they are not useful from the social point of view, the income received from their sale and purchase is always excluded from the GNP.

There are two main reasons for this. One, it is not known whether these things were produced during the current year or the preceding years. Two, many of these goods are foreign made and smuggled and hence not included in the GNP.

Three Approaches to GNP:

After having studied the fundamental constituents of GNP, it is essential to know how it is estimated. Three approaches are employed for this purpose. One, the income method to GNP; two, the expenditure method to GNP and three, the value added method to GNP. Since gross income equals gross expenditure, GNP estimated by all these methods would be the same with appropriate adjustments.

1. Income Method to GNP:

The income method to GNP consists of the remuneration paid in terms of money to the factors of production annually in a country.

Thus GNP is the sum total of the following items:

(i) Wages and salaries:

Under this head are included all forms of wages and salaries earned through productive activities by workers and entrepreneurs. It includes all sums received or deposited during a year by way of all types of contributions like overtime, commission, provident fund, insurance, etc.

(ii) Rents:

Total rent includes the rents of land, shop, house, factory, etc. and the estimated rents of all such assets as are used by the owners themselves.

(iii) Interest:

Under interest comes the income by way of interest received by the individual of a country from different sources. To this is added, the estimated interest on that private capital which is invested and not borrowed by the businessman in his personal business. But the interest received on governmental loans has to be excluded, because it is a mere transfer of national income.

(iv) Dividends:

Dividends earned by the shareholders from companies are included in the GNP.

(v) Undistributed corporate profits:

Profits which are not distributed by companies and are retained by them are included in the GNP.

(vi) Mixed incomes:

These include profits of unincorporated business, self-employed persons and partnerships. They form part of GNP.

(vii) Direct taxes:

Taxes levied on individuals, corporations and other businesses are included in the GNP.

(viii) Indirect taxes:

The government levies a number of indirect taxes, like excise duties and sales tax.

These taxes are included in the price of commodities. But revenue from these goes to the government treasury and not to the factors of production. Therefore, the income due to such taxes is added to the GNP.

(ix) Depreciation:

Every corporation makes allowance for expenditure on wearing out and depreciation of machines, plants and other capital equipment. Since this sum also is not a part of the income received by the factors of production, it is, therefore, also included in the GNP.

(x) Net income earned from abroad:

This is the difference between the value of exports of goods and services and the value of imports of goods and services. If this difference is positive, it is added to the GNP and if it is negative, it is deducted from the GNP.

Thus GNP according to the Income Method = Wages and Salaries + Rents + Interest + Dividends + Undistributed Corporate Profits + Mixed Income + Direct Taxes + Indirect Taxes + Depreciation + Net Income from abroad.

2. Expenditure Method to GNP:

From the expenditure view point, GNP is the sum total of expenditure incurred on goods and services during one year in a country.

It includes the following items:

(i) Private consumption expenditure:

It includes all types of expenditure on personal consumption by the individuals of a country. It comprises expenses on durable goods like watch, bicycle, radio, etc., expenditure on single-used consumers' goods like milk, bread, ghee, clothes, etc., as also the expenditure incurred on services of all kinds like fees for school, doctor, lawyer and transport. All these are taken as final goods.

(ii) Gross domestic private investment:

Under this comes the expenditure incurred by private enterprise on new investment and on replacement of old capital. It includes expenditure on house construction, factory- buildings, and all types of machinery, plants and capital equipment.

In particular, the increase or decrease in inventory is added to or subtracted from it. The inventory includes produced but unsold manufactured and semi-manufactured goods during the year and the stocks of raw materials, which have to be accounted for in GNP. It does not take into account the financial exchange of shares and stocks because their sale and purchase is not real investment. But depreciation is added.

(iii) Net foreign investment:

It means the difference between exports and imports or export surplus. Every country exports to or imports from certain foreign countries. The imported goods are not produced within the country and hence cannot be included in national income, but the exported goods are manufactured within the country. Therefore, the difference of value between exports (X) and imports (M), whether positive or negative, is included in the GNP.

(iv) Government expenditure on goods and services:

The expenditure incurred by the government on goods and services is a part of the GNP. Central, state or local governments spend a lot on their employees, police and army. To run the offices, the governments have also to spend on contingencies which include paper, pen, pencil and various types of stationery, cloth, furniture, cars, etc.

It also includes the expenditure on government enterprises. But expenditure on transfer payments is not added, because these payments are not made in exchange for goods and services produced during the current year.

Thus GNP according to the Expenditure Method=Private Consumption Expenditure (C) + Gross Domestic Private Investment (I) + Net Foreign Investment (X-M) + Government Expenditure on Goods and Services (G) = C+ I + (X-M) + G.

As already pointed out above, GNP estimated by either the income or the expenditure method would work out to be the same, if all the items are correctly calculated.

3. Value Added Method to GNP:

Another method of measuring GNP is by value added. In calculating GNP, the money value of final goods and services produced at current prices during a year is taken into account. This is one of the ways to avoid double counting. But it is difficult to distinguish properly between a final product and an intermediate product.

For instance, raw materials, semi-finished products, fuels and services, etc. are sold as inputs by one industry to the other. They may be final goods for one industry and intermediate for others. So, to avoid duplication, the value of intermediate products used in manufacturing final products must be subtracted from the value of total output of each industry in the economy.

Thus, the difference between the value of material outputs and inputs at each stage of production is called the value added. If all such differences are added up for all industries in the economy, we arrive at the GNP by value added. GNP by value added = Gross value added + net income from abroad. Its calculation is shown in Tables 1, 2 and 3.

Table 1 is constructed on the supposition that the entire economy for purposes of total production consists of three sectors. They are agriculture, manufacturing, and others, consisting of the tertiary sector.

Out of the value of total output of each sector is deducted the value of its intermediate purchases (or primary inputs) to arrive at the value added for the entire economy. Thus the value of total output of the entire economy as per Table 1, is Rs. 155 crores and the value of its primary inputs comes to Rs. 80 crores. Thus the GDP by value added is Rs. 75 crores (Rs. 155 minus Rs. 80 crores).

TABLE 1 : GDP BY VALUE ADDED

(Rs. crores)

Industry	Total Output	Intermediate Purchases	Value Added
(1)	(2)	(3)	(4) = (2-3)
1. Agriculture	30	10	20
2. Manufacturing	70	45	25
3. Others	55	25	30
Total	155	80	75

The total value added equals the value of gross domestic product of the economy. Out of this value added, the major portion goes in the form wages and salaries, rent, interest and profits, a small portion

goes to the government as indirect taxes and the remaining amount is meant for depreciation. This is shown in Table 3.

Thus we find that the total gross value added of an economy equals the value of its gross domestic product. If depreciation is deducted from the gross value added, we have net value added which comes to Rs. 67 crores (Rs. 75 minus Rs. 8 crores).

This is nothing but net domestic product at market prices. Again, if indirect taxes (Rs. 7 crores) are deducted from the net domestic product of Rs. 67 crores, we get Rs. 60 crores as the net value added at factor cost which is equivalent to net domestic product at factor cost. This is illustrated in Table 2.

TABLE 2
VALUE ADDED AT FACTOR COST

		(Rs. Crores)
1.	Market Value of output	155
2.	*Less:* cost of intermediate Goods	80
3.	Gross value added	75
4.	*Less*: depreciation	8
5.	Net value added or domestic product at market prices	67
6.	*Less*: indirect taxes	7
7.	Net value added at factor cost	60

Net value added at factor cost is equal to the net domestic product at factor cost, as given by the total of items 1 to 4 of Table 2 (Rs. 45+3+4+8 crores=Rs. 60 crores). By adding indirect taxes (Rs 7 crores) and depreciation (Rs 8 crores), we get gross value added or GDP which comes to Rs 75 crores.

If we add net income received from abroad to the gross value added, this gives -us, gross national income. Suppose net income from abroad is Rs. 5 crores. Then the gross national income is Rs. 80 crores (Rs. 75 crores + Rs. 5 crores) as shown in Table 3.

TABLE 3 : GROSS DOMESTIC PRODUCT

		(Rs Crores)
1.	Wages and salaries	45
2.	Income from rent	3
3.	Net interest	4
4.	Profits of companies	8
	Net Value Added or NDP	60
5.	Indirect taxes	+7
6.	Depreciation	+8
	Gross Value Added or GDP	75
7.	Net income from abroad	+5
	Gross National Income	80

It's Importance:

The value added method for measuring national income is more realistic than the product and income methods because it avoids the problem of double counting by excluding the value of intermediate products. Thus this method establishes the importance of intermediate products in the national economy. Second, by studying the national income accounts relating to value added, the contribution of each production sector to the value of the GNP can be found out.

For instance, it can tell us whether agriculture is contributing more or the share of manufacturing is falling, or of the tertiary sector is increasing in the current year as compared to some previous years. Third, this method is highly useful because "it provides a means of checking the GNP estimates obtained by summing the various types of commodity purchases."

It's Difficulties:

However, difficulties arise in the calculation of value added in the case of certain public services like police, military, health, education, etc. which cannot be estimated accurately in money terms. Similarly, it is difficult to estimate the contribution made to value added by profits earned on irrigation and power projects.

(G) GNP at Market Prices:

When we multiply the total output produced in one year by their market prices prevalent during that year in a country, we get the Gross National Product at market prices. Thus GNP at market prices means the gross value of final goods and services produced annually in a country plus net income from abroad. It includes the gross value of output of all items from (1) to (4) mentioned under GNP. GNP at Market Prices = GDP at Market Prices + Net Income from Abroad.

(H) GNP at Factor Cost:

GNP at factor cost is the sum of the money value of the income produced by and accruing to the various factors of production in one year in a country. It includes all items mentioned above under income method to GNP less indirect taxes.

GNP at market prices always includes indirect taxes levied by the government on goods which raise their prices. But GNP at factor cost is the income which the factors of production receive in return for their services alone. It is the cost of production.

Thus GNP at market prices is always higher than GNP at factor cost. Therefore, in order to arrive at GNP at factor cost, we deduct indirect taxes from GNP at market prices. Again, it often happens that the cost of production of a commodity to the producer is higher than a price of a similar commodity in the market.

In order to protect such producers, the government helps them by granting monetary help in the form of a subsidy equal to the difference between the market price and the cost of production of the commodity. As a result, the price of the commodity to the producer is reduced and equals the market price of similar commodity.

For example if the market price of rice is Rs. 3 per kg but it costs the producers in certain areas Rs. 3.50. The government gives a subsidy of 50 paisa per kg to them in order to meet their cost of production. Thus in order to arrive at GNP at factor cost, subsidies are added to GNP at market prices.

GNP at Factor Cost = GNP at Market Prices – Indirect Taxes + Subsidies.

(I) Net National Product (NNP):

NNP includes the value of total output of consumption goods and investment goods. But the process of production uses up a certain amount of fixed capital. Some fixed equipment wears out, its other components are damaged or destroyed, and still others are rendered obsolete through technological changes.

All this process is termed depreciation or capital consumption allowance. In order to arrive at NNP, we deduct depreciation from GNP. The word 'net' refers to the exclusion of that part of total output which represents depreciation. So NNP = GNP—Depreciation.

(J) NNP at Market Prices:

Net National Product at market prices is the net value of final goods and services evaluated at market prices in the course of one year in a country. If we deduct depreciation from GNP at market prices, we get NNP at market prices. So NNP at Market Prices = GNP at Market Prices—Depreciation.

(K) NNP at Factor Cost:

Net National Product at factor cost is the net output evaluated at factor prices. It includes income earned by factors of production through participation in the production process such as wages and salaries, rents, profits, etc. It is also called National Income. This measure differs from NNP at market prices in that indirect taxes are deducted and subsidies are added to NNP at market prices in order to arrive at NNP at factor cost. Thus

NNP at Factor Cost = NNP at Market Prices – Indirect taxes+ Subsidies

= GNP at Market Prices – Depreciation – Indirect taxes + Subsidies.

= National Income.

Normally, NNP at market prices is higher than NNP at factor cost because indirect taxes exceed government subsidies. However, NNP at market prices can be less than NNP at factor cost when government subsidies exceed indirect taxes.

(L) Domestic Income:

Income generated (or earned) by factors of production within the country from its own resources is called domestic income or domestic product.

Domestic income includes:

(i) Wages and salaries, (ii) rents, including imputed house rents, (iii) interest, (iv) dividends, (v) undistributed corporate profits, including surpluses of public undertakings, (vi) mixed incomes

consisting of profits of unincorporated firms, self- employed persons, partnerships, etc., and (vii) direct taxes.

Since domestic income does not include income earned from abroad, it can also be shown as: Domestic Income = National Income-Net income earned from abroad. Thus the difference between domestic income f and national income is the net income earned from abroad. If we add net income from abroad to domestic income, we get national income, i.e., National Income = Domestic Income + Net income earned from abroad.

But the net national income earned from abroad may be positive or negative. If exports exceed import, net income earned from abroad is positive. In this case, national income is greater than domestic income. On the other hand, when imports exceed exports, net income earned from abroad is negative and domestic income is greater than national income.

(M) Private Income:

Private income is income obtained by private individuals from any source, productive or otherwise, and the retained income of corporations. It can be arrived at from NNP at Factor Cost by making certain additions and deductions.

The additions include transfer payments such as pensions, unemployment allowances, sickness and other social security benefits, gifts and remittances from abroad, windfall gains from lotteries or from horse racing, and interest on public debt. The deductions include income from government departments as well as surpluses from public undertakings, and employees' contribution to social security schemes like provident funds, life insurance, etc.

Thus Private Income = National Income (or NNP at Factor Cost) + Transfer Payments + Interest on Public Debt — Social Security — Profits and Surpluses of Public Undertakings.

(N) Personal Income:

Personal income is the total income received by the individuals of a country from all sources before payment of direct taxes in one year. Personal income is never equal to the national income, because the former includes the transfer payments whereas they are not included in national income.

Personal income is derived from national income by deducting undistributed corporate profits, profit taxes, and employees' contributions to social security schemes. These three components are excluded from national income because they do reach individuals.

But business and government transfer payments, and transfer payments from abroad in the form of gifts and remittances, windfall gains, and interest on public debt which are a source of income for individuals are added to national income. Thus Personal Income = National Income – Undistributed Corporate Profits – Profit Taxes – Social Security Contribution + Transfer Payments + Interest on Public Debt.

Personal income differs from private income in that it is less than the latter because it excludes undistributed corporate profits.

Thus Personal Income = Private Income – Undistributed Corporate Profits – Profit Taxes.

(O) Disposable Income:

Disposable income or personal disposable income means the actual income which can be spent on consumption by individuals and families. The whole of the personal income cannot be spent on consumption, because it is the income that accrues before direct taxes have actually been paid. Therefore, in order to obtain disposable income, direct taxes are deducted from personal income. Thus Disposable Income=Personal Income – Direct Taxes.

But the whole of disposable income is not spent on consumption and a part of it is saved. Therefore, disposable income is divided into consumption expenditure and savings. Thus Disposable Income = Consumption Expenditure + Savings.

If disposable income is to be deduced from national income, we deduct indirect taxes plus subsidies, direct taxes on personal and on business, social security payments, undistributed corporate profits or business savings from it and add transfer payments and net income from abroad to it.

Thus Disposable Income = National Income – Business Savings – Indirect Taxes + Subsidies – Direct Taxes on Persons – Direct Taxes on Business – Social Security Payments + Transfer Payments + Net Income from abroad.

(P) Real Income:

Real income is national income expressed in terms of a general level of prices of a particular year taken as base. National income is the value of goods and services produced as expressed in terms of money at current prices. But it does not indicate the real state of the economy.

It is possible that the net national product of goods and services this year might have been less than that of the last year, but owing to an increase in prices, NNP might be higher this year. On the contrary, it is also possible that NNP might have increased but the price level might have fallen, as a result national income would appear to be less than that of the last year. In both the situations, the national income does not depict the real state of the country. To rectify such a mistake, the concept of real income has been evolved.

In order to find out the real income of a country, a particular year is taken as the base year when the general price level is neither too high nor too low and the price level for that year is assumed to be 100. Now the general level of prices of the given year for which the national income (real) is to be determined is assessed in accordance with the prices of the base year. For this purpose the following formula is employed.

Real NNP = NNP for the Current Year x Base Year Index (=100) / Current Year Index

Suppose 1990-91 is the base year and the national income for 1999-2000 is Rs. 20,000 crores and the index number for this year is 250. Hence, Real National Income for 1999-2000 will be = 20000 x 100/250 = Rs. 8000 crores. This is also known as national income at constant prices.

(Q) Per Capita Income:

The average income of the people of a country in a particular year is called Per Capita Income for that year. This concept also refers to the measurement of income at current prices and at constant prices. For instance, in order to find out the per capita income for 2001, at current prices, the national income of a country is divided by the population of the country in that year.

$$\text{Per Capita Income for 2001} = \frac{\textit{National income for 2001}}{\textit{Population in 2001}}$$

Similarly, for the purpose of arriving at the Real Per Capita Income, this very formula is used.

$$\text{Real Per Capita Income for 2001} = \frac{\textit{Real national income for 2001}}{\textit{Population in 2001}}$$

This concept enables us to know the average income and the standard of living of the people. But it is not very reliable, because in every country due to unequal distribution of national income, a major portion of it goes to the richer sections of the society and thus income received by the common man is lower than the per capita income.

3. Methods of Measuring National Income:

There are four methods of measuring national income. Which method is to be used depends on the availability of data in a country and the purpose in hand.

(1) Product Method:

According to this method, the total value of final goods and services produced in a country during a year is calculated at market prices. To find out the GNP, the data of all productive activities, such as agricultural products, wood received from forests, minerals received from mines, commodities produced by industries, the contributions to production made by transport, communications, insurance companies, lawyers, doctors, teachers, etc. are collected and assessed at market prices. Only the final goods and services are included and the intermediary goods and services are left out.

(2) Income Method:

According to this method, the net income payments received by all citizens of a country in a particular year are added up, i.e., net incomes that accrue to all factors of production by way of net rents, net wages, net interest and net profits are all added together but incomes received in the form of transfer payments are not included in it. The data pertaining to income are obtained from different sources, for instance, from income tax department in respect of high income groups and in case of workers from their wage bills.

(3) Expenditure Method:

According to this method, the total expenditure incurred by the society in a particular year is added together and includes personal consumption expenditure, net domestic investment, government expenditure on goods and services, and net foreign investment. This concept is based on the assumption that national income equals national expenditure.

(4) Value Added Method:

Another method of measuring national income is the value added by industries. The difference between the value of material outputs and inputs at each stage of production is the value added. If all such differences are added up for all industries in the economy, we arrive at the gross domestic product.

4. Difficulties or Limitations in Measuring National Income:

There are many conceptual and statistical problems involved in measuring national income by the income method, product method, and expenditure method.

We discuss them separately in the light of the three methods:

(A) Problems in Income Method:

The following problems arise in the computation of National Income by income method:

1. Owner-occupied Houses:

A person who rents a house to another earns rental income, but if he occupies the house himself, will the services of the house-owner be included in national income. The services of the owner-occupied house are included in national income as if the owner sells to himself as a tenant its services.

For the purpose of national income accounts, the amount of imputed rent is estimated as the sum for which the owner-occupied house could have been rented. The imputed net rent is calculated as that portion of the amount that would have accrued to the house-owner after deducting all expenses.

2. Self-employed Persons:

Another problem arises with regard to the income of self-employed persons. In their case, it is very difficult to find out the different inputs provided by the owner himself. He might be contributing his capital, land, labour and his abilities in the business. But it is not possible to estimate the value of each factor input to production. So he gets a mixed income consisting of interest, rent, wage and profits for his factor services. This is included in national income.

3. Goods meant for Self-consumption:

In under-developed countries like India, farmers keep a large portion of food and other goods produced on the farm for self-consumption. The problem is whether that part of the produce which is not sold in the market can be included in national income or not. If the farmer were to sell his entire produce in the market, he will have to buy what he needs for self-consumption out of his money income. If, instead he keeps some produce for his self-consumption, it has money value which must be included in national income.

4. Wages and Salaries paid in Kind:

Another problem arises with regard to wages and salaries paid in kind to the employees in the form of free food, lodging, dress and other amenities. Payments in kind by employers are included in national

income. This is because the employees would have received money income equal to the value of free food, lodging, etc. from the employer and spent the same in paying for food, lodging, etc.

(B) Problems in Product Method:

The following problems arise in the computation of national income by product method:

1. Services of Housewives:

The estimation of the unpaid services of the housewife in the national income presents a serious difficulty. A housewife renders a number of useful services like preparation of meals, serving, tailoring, mending, washing, cleaning, bringing up children, etc.

She is not paid for them and her services are not including in national income. Such services performed by paid servants are included in national income. The national income is, therefore, underestimated by excluding the services of a housewife.

The reason for the exclusion of her services from national income is that the love and affection of a housewife in performing her domestic work cannot be measured in monetary terms. That is why when the owner of a firm marries his lady secretary, her services are not included in national income when she stops working as a secretary and becomes a housewife.

When a teacher teaches his own children, his work is also not included in national income. Similarly, there are a number of goods and services which are difficult to be assessed in money terms for the reason stated above, such as painting, singing, dancing, etc. as hobbies.

2. Intermediate and Final Goods:

The greatest difficulty in estimating national income by product method is the failure to distinguish properly between intermediate and final goods. There is always the possibility of including a good or service more than once, whereas only final goods are included in national income estimates. This leads to the problem of double counting which leads to the overestimation of national income.

3. Second-hand Goods and Assets:

Another problem arises with regard to the sale and purchase of second-hand goods and assets. We find that old scooters, cars, houses, machinery, etc. are transacted daily in the country. But they are not included in national income because they were counted in the national product in the year they were manufactured.

If they are included every time they are bought and sold, national income would increase many times. Similarly, the sale and purchase of old stocks, shares, and bonds of companies are not included in national income because they were included in national income when the companies were started for the first time. Now they are simply financial transactions and represent claims.

But the commission or fees charged by the brokers in the repurchase and resale of old shares, bonds, houses, cars or scooters, etc. are included in national income. For these are the payments they receive for their productive services during the year.

4. Illegal Activities:

Income earned through illegal activities like gambling, smuggling, illicit extraction of wine, etc. is not included in national income. Such activities have value and satisfy the wants of the people but they are not considered productive from the point of view of society. But in countries like Nepal and Monaco where gambling is legalised, it is included in national income. Similarly, horse-racing is a legal activity in England and is included in national income.

5. Consumers' Service:

There are a number of persons in society who render services to consumers but they do not produce anything tangible. They are the actors, dancers, doctors, singers, teachers, musicians, lawyers, barbers, etc. The problem arises about the inclusion of their services in national income since they do not produce tangible commodities. But as they satisfy human wants and receive payments for their services, their services are included as final goods in estimating national income.

6. Capital Gains:

The problem also arises with regard to capital gains. Capital gains arise when a capital asset such as a house, some other property, stocks or shares, etc. is sold at higher price than was paid for it at the time of purchase. Capital gains are excluded from national income because these do not arise from current economic activities. Similarly, capital losses are not taken into account while estimating national income.

7. Inventory Changes:

All inventory changes (or changes in stocks) whether positive or negative are included in national income. The procedure is to take changes in physical units of inventories for the year valued at average current prices paid for them.

The value of changes in inventories may be positive or negative which is added or subtracted from the current production of the firm. Remember, it is the change in inventories and not total inventories for the year that are taken into account in national income estimates.

8. Depreciation:

Depreciation is deducted from GNP in order to arrive at NNP. Thus depreciation lowers the national income. But the problem is of estimating the current depreciated value of, say, a machine, whose expected life is supposed to be thirty years. Firms calculate the depreciation value on the original cost of machines for their expected life. This does not solve the problem because the prices of machines change almost every year.

9. Price Changes:

National income by product method is measured by the value of final goods and services at current market prices. But prices do not remain stable. They rise or fall. When the price level rises, the national income also rises, though the national production might have fallen.

On the contrary, with the fall in the price level, the national income also falls, though the national production might have increased. So price changes do not adequately measure national income. To solve this problem, economists calculate the real national income at a constant price level by the consumer price index.

(C) Problems in Expenditure Method:

The following problems arise in the calculation of national income by expenditure method:

(1) Government Services:

In calculating national income by, expenditure method, the problem of estimating government services arises. Government provides a number of services, such as police and military services, administrative and legal services. Should expenditure on government services be included in national income?

If they are final goods, then only they would be included in national income. On the other hand, if they are used as intermediate goods, meant for further production, they would not be included in national income. There are many divergent views on this issue.

One view is that if police, military, legal and administrative services protect the lives, property and liberty of the people, they are treated as final goods and hence form part of national income. If they help in the smooth functioning of the production process by maintaining peace and security, then they are like intermediate goods that do not enter into national income.

In reality, it is not possible to make a clear demarcation as to which service protects the people and which protects the productive process. Therefore, all such services are regarded as final goods and are included in national income.

(2) Transfer Payments:

There arises the problem of including transfer payments in national income. Government makes payments in the form of pensions, unemployment allowance, subsidies, interest on national debt, etc. These are government expenditures but they are not included in national income because they are paid without adding anything to the production process during the current year.

For instance, pensions and unemployment allowances are paid to individuals by the government without doing any productive work during the year. Subsidies tend to lower the market price of the commodities. Interest on national or public debt is also considered a transfer payment because it is paid by the government to individuals and firms on their past savings without any productive work.

(3) Durable-use Consumers' Goods:

Durable-use consumers' goods also pose a problem. Such durable-use consumers' goods as scooters, cars, fans, TVs, furniture's, etc. are bought in one year but they are used for a number of years. Should they be included under investment expenditure or consumption expenditure in national income estimates? The expenditure on them is regarded as final consumption expenditure because it is not possible to measure their used up value for the subsequent years.

But there is one exception. The expenditure on a new house is regarded as investment expenditure and not consumption expenditure. This is because the rental income or the imputed rent which the house-owner gets is for making investment on the new house. However, expenditure on a car by a household is consumption expenditure. But if he spends the amount for using it as a taxi, it is investment expenditure.

(4) Public Expenditure:

Government spends on police, military, administrative and legal services, parks, street lighting, irrigation, museums, education, public health, roads, canals, buildings, etc. The problem is to find out which expenditure is consumption expenditure and which investment expenditure is.

Expenses on education, museums, public health, police, parks, street lighting, civil and judicial administration are consumption expenditure. Expenses on roads, canals, buildings, etc. are investment expenditure. But expenses on defence equipment are treated as consumption expenditure because they are consumed during a war as they are destroyed or become obsolete. However, all such expenses including the salaries of armed personnel are included in national income.

5. Importance of National Income Analysis:

The national income data have the following importance:

1. For the Economy:

National income data are of great importance for the economy of a country. These days the national income data are regarded as accounts of the economy, which are known as social accounts. These refer to net national income and net national expenditure, which ultimately equal each other.

Social accounts tell us how the aggregates of a nation's income, output and product result from the income of different individuals, products of industries and transactions of international trade. Their main constituents are inter-related and each particular account can be used to verify the correctness of any other account.

2. National Policies:

National income data form the basis of national policies such as employment policy, because these figures enable us to know the direction in which the industrial output, investment and savings, etc. change, and proper measures can be adopted to bring the economy to the right path.

3. Economic Planning:

In the present age of planning, the national data are of great importance. For economic planning, it is essential that the data pertaining to a country's gross income, output, saving and consumption from different sources should be available. Without these, planning is not possible.

4. Economic Models:

The economists propound short-run as well as long-run economic models or long-run investment models in which the national income data are very widely used.

5. Research:

The national income data are also made use of by the research scholars of economics. They make use of the various data of the country's input, output, income, saving, consumption, investment, employment, etc., which are obtained from social accounts.

6. Per Capita Income:

National income data are significant for a country's per capita income which reflects the economic welfare of the country. The higher the per capita income, the higher the economic welfare of the country.

7. Distribution of Income:

National income statistics enable us to know about the distribution of income in the country. From the data pertaining to wages, rent, interest and profits, we learn of the disparities in the incomes of different sections of the society. Similarly, the regional distribution of income is revealed.

It is only on the basis of these that the government can adopt measures to remove the inequalities in income distribution and to restore regional equilibrium. With a view to removing these personal and regional disequibria, the decisions to levy more taxes and increase public expenditure also rest on national income statistics.

6. Inter-Relationship among different concept of National Income

The inter-relationship among the various concept of national income can be shown in the form of equations as under:

he inter-relationship among the various concept of national income can be shown in the form of equations as under:

1.	Gross National Product (GNP)	=	Gross National Expenditure (GNE)
2.	Gross Domestic Product (GDP)	=	GNP – Net Income from abroad.
3.	GNP at Market Prices	=	GNP at Factor Cost + Indirect Taxes – Subsidies
4.	NNP at Market Prices	=	GNP at Market Prices – Depreciation or Capital Consumption Allowance
5.	Net Domestic Product (NDP) at Market Prices	=	NNP at Market Prices – Net Factor Income from abroad
6.	NNP at Factor Cost or National Income or National Product	=	NNP at Market Prices – Indirect Taxes + Subsidies
7.	NDP at Factor Cost or Domestic Income or Domestic Product	=	National Income – Net Factor Income from abroad
8.	Private Income	=	NNP at Factor Cost + Government and Business Transfer Payments + Current Transfers from abroad in the form of Gifts and Remittances + Windfall Gains + Net Factor Income from abroad + Interest on Public Debt and Consumer Interest – Social Security Contribution – Income from Government Departments and property – Profits and Surpluses of Public Corporations (or Undertakings) Or = Income from Domestic Product accruing to Private Sector + Interest on Public Dept + Net Factor Income from abroad + Transfer Payments + Current Transfers from the rest of the world (or abroad)
9.	Income from Domestic Product accruing to Private Sector		NDP at Factor Cost – Income from = Domestic Product accruing to Government Departments – Saving of Non-Departmental Enterprises.
10.	Personal Income	=	Private Income – Saving of Private Corporate Sector (or Undistributed Corporate Profits) – Corporation Tax (or Profit Taxes)
11.	Personal Disposable Income or Disposable Income	=	Personal Income – Direct Taxes paid by Households (or Direct Personal Taxes) and Miscellaneous Fees, Fines, etc. Or = NDP at Factor Cost + Transfer Payments + Net Factor Income from abroad – Corporation Tax – Undistributed Corporate Profits – Social Security Payments – Direct Personal Taxes Or = National Income at Factor Cost + Transfer Payments + Net Income from abroad – Corporate Tax – undistributed Corporate Profits – Social Security payments – Direct Personal Taxes – Indirect Taxes + Subsidies.

Business decisions like resource allocation, size and number of plant, amount of input and output, investments, etc. are all dependent on the macroeconomic variables. Business firms must be up-to-date with the recent changes and fluctuations that occur in the economy

Business Cycle: Definition, Characteristics and Phases

1. Definition of Business Cycle:

A capitalistic economy experiences fluctuations in the level of economic activity. And fluctuations in economic activity mean fluctuations in macroeconomic variables.

At times, consumption, investment, employment, output, etc., rise and at other times these macroeconomic variables fall.

Such fluctuations in macroeconomic variables are known as business cycles. A capitalistic economy exhibits alternating periods of prosperity or boom and depression. Such movements are similar to wave-like movements or see saw movements. Thus, the cyclical fluctuations are rather regular and steady but not random.

Since GNP is the comprehensive measure of the overall economic activity, we refer to business cycles as the short term cyclical movements in GNP. In the words of Keynes : "A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages, alternating with periods of bad trade characterised by falling prices and high unemployment percentages."

In brief, a business cycle is the periodic but irregular up-and-down movements in economic activity. Since their timing changes rather unpredictably, business cycles are not regular or repeating cycles like the phases of the moon.

2. Characteristics of Business Cycles:

Following are the main features of trade cycles:

(i) Industrialised capitalistic economies witness cyclical movements in economic activities. A

(ii) It exhibits a wave-like movement having a regularity and recognised patterns. That is to say, it is repetitive in character.

(iii) Almost all sectors of the economy are affected by the cyclical movements. Most of the sectors move together in the same direction. During prosperity, most of the sectors or industries experience an increase in output and during recession they experience a fall in output.

(iv) Not all the industries are affected uniformly. Some are hit badly during depression while others are not affected seriously.

Investment goods industries fluctuate more than the consumer goods industries. Further, industries producing consumer durable goods generally experience greater fluctuations than sectors producing nondurable goods. Further, fluctuations in the service sector are insignificant in comparison with both capital goods and consumer goods industries.

(v) One also observes the tendency for consumer goods output to lead investment goods output in the cycle. During recovery, increase in output of consumer goods usually precedes that of investment goods. Thus, the recovery of consumer goods industries from recessionary tendencies is quicker than that of investment goods industries.

(vi) Just as outputs move together in the same direction, so do the prices of various goods and services, though prices lag behind output. Fluctuations in the prices of agricultural products are more marked than those of prices of manufactured articles.

(vii) Profits tend to be highly variable and pro-cyclical. Usually, profits decline in recession and rise in boom. On the other hand, wages are more or less sticky though they tend to rise during boom.

(viii) Trade cycles are 'international' in character in the sense that fluctuations in one country get transmitted to other countries. This is because, in this age of globalisation, dependence of one country on other countries is great.

(ix) Periodicity of a trade cycle is not uniform, though fluctuations are something in the range of five to ten years from peak to peak. Every cycle exhibits similarities in its nature and direction though no two cycles are exactly the same. In the words of Samuelson: "No two business cycles are quite the same. Yet they have much in common. Though not identical twins, they are recognisable as belonging to the same family."

(x) Every cycle has four distinct phases: (a) depression, (b) revival, (c) prosperity or boom, and (d) recession.

3. Phases of a Business Cycle:

A typical business cycle has two phases expansion phase or upswing or peak and contraction phase or downswing or trough. The upswing or expansion phase exhibits a more rapid growth of GNP than the long run trend growth rate. At some point, GNP reaches its upper turning point and the downswing of the cycle begins. In the contraction phase, GNP declines.

At some time, GNP reaches its lower turning point and expansion begins. Starting from a lower turning point, a cycle experiences the phase of recovery and after some time it reaches the upper turning point the peak. But, continuous prosperity can never occur and the process of downhill starts. In this contraction phase, a cycle exhibits first a recession and then finally reaches the bottom—the depression.

Thus, a trade cycle has four phases:

(i) depression,

(ii) revival,

(iii) boom, and

(iv) recession.

These phases of a trade cycle are illustrated in Fig. 2.7. In this figure, the secular growth path or trend growth rate of GNP has been labelled as EG. Now we briefly describe the essential characteristics of these phases of an idealised cycle

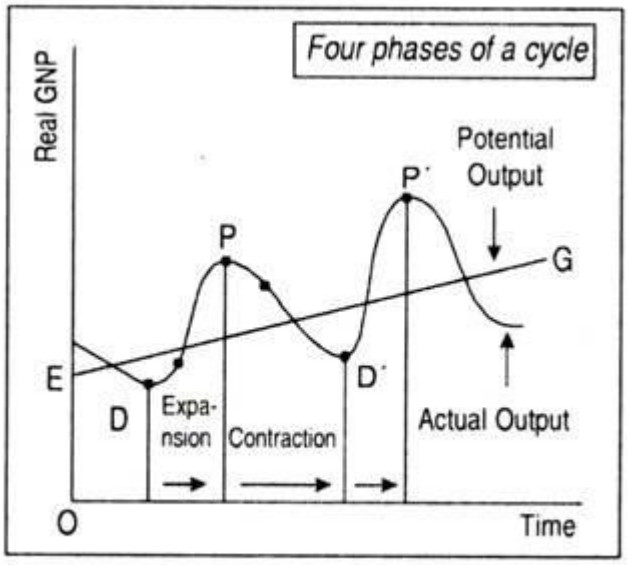

Fig. 2.7: Idealised Cycle

1. Depression or Trough:

The depression or trough is the bottom of a cycle where economic activity remains at a highly low level. Income, employment, output, price level, etc. go down. A depression is generally characterised by high unemployment of labour and capital and a low level of consumer demand in relation to the economy's capacity to produce. This deficiency in demand forces firms to cut back production and lay-off workers.

Thus, there develops a substantial amount of unused productive capacity in the economy. Even by lowering down the interest rates, financial institutions do not find enough borrowers. Profits may even become negative. Firms become hesitant in making fresh investments. Thus, an air of pessimism engulfs the entire economy and the economy lands into the phase of depression. However, the seeds of recovery of the economy lie dormant in this phase.

2. Recovery:

Since trough is not a permanent phenomenon, a capitalistic economy experiences expansion and, therefore, the process of recovery starts.

During depression some machines wear out completely and ultimately become useless. For their survival, businessmen replace old and worn-out machinery. Thus, spending spree starts, of course, hesitantly. This gives an optimistic signal to the economy. Industries begin to rise and expectations tend to become more favourable. Pessimism that once prevailed in the economy now makes room for optimism. Investment becomes no longer risky. Additional and fresh investment leads to a rise in production.

Increased production leads to an increase in demand for inputs. Employment of more labour and capital causes GNP to rise. Further, low interest rates charged by banks in the early years of recovery phase act as an incentive to producers to borrow money. Thus, investment rises. Now plants get utilised in a better way. General price level starts rising. The recovery phase, however, gets gradually cumulative and income, employment, profit, price, etc., start increasing.

3. Prosperity:

Once the forces of revival get strengthened the level of economic activity tends to reach the highest point—the peak. A peak is the top .of a cycle. The peak is characterised by an allround optimism in the economy—income, employment, output, and price level tend to rise. Meanwhile, a rise in aggregate demand and cost leads to a rise in both investment and price level. But once the economy reaches the level of full employment, additional investment will not cause GNP to rise.

On the other hand, demand, price level, and cost of production will rise. During prosperity, existing capacity of plants is overutilised. Labour and raw material shortages develop. Scarcity of resources leads to rising cost. Aggregate demand now outstrips aggregate supply. Businessmen now come to learn that they have overstepped the limit. High optimism now gives birth to pessimism. This ultimately slows down the economic expansion and paves the way for contraction.

4. Recession:

Like depression, prosperity or pea, can never be long-lasting. Actually speaking, the bubble of prosperity gradually dies down. A recession begins when the economy reaches a peak of activity and ends when the economy reaches its trough or depression. Between trough and peak, the economy grows or expands. A recession is a significant decline in economic activity spread across the economy lasting more then a few months, normally visible in production, employment, real income and other indications.

During this phase, the demand of firms and households for goods and services start to fall. No new industries are set up. Sometimes, existing industries are wound up. Unsold goods pile up because of low household demand. Profits of business firms dwindle. Output and employment levels are reduced. Eventually, this contracting economy hits the slump again. A recession that is deep and long-lasting is called a depression and, thus, the whole process restarts.

The four-phased trade cycle has the following attributes:

(i) Depression lasts longer than prosperity,

(ii) The process of revival starts gradually,

(iii) Prosperity phase is characterised by extreme activity in the business world,

(iv) The phase of prosperity comes to an end abruptly.

The period of a cycle, i.e., the length of time required for the completion of one complete cycle, is measured from peak to peak (P to P') and from trough to trough (from D to D'). The shortest of the cycle is called 'seasonal cycle'.

Business Process Re-Engineering - Meaning, its Need and Technology

Hammer and Champy's concept of Business Process Re-Engineering depends on harnessing technology to optimize processes as its main driver. To understand why technology is imperative for BPR, let's first review what BPR does.

What is BPR ?

"BPR is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed." Instead of starting with an activity flowchart, corporations are advised to start with a clean slate. They are then told to look into why they perform the tasks the way they do. A Process Engineer will look at the activities to be performed and how they can be engineered to invest minimum resources and get maximum returns.

To illustrate the point, let us consider the example of Apple iPod. Apple rethought the way music ought to be made available to the consumers. The changes it brought were:

Radical: While all other music labels were selling music via brick and mortar stores, Apple developed its iTunes software to sell music digitally. (Napster had made digital music available through a P2P platform earlier, but was sued by music labels for copyright violation)

Fundamental: Apple sold single tracks as opposed to whole albums being sold at brick and mortar shops.

Apple just kept in mind the end need of the consumer and reconsidered whether conventions were required.

Why Re-Engineering the Corporation ?

Business process re-engineering is required in two cases:

The organization has discovered some breakthrough methodology which will revolutionize its processes to give it more productivity and efficiency and therefore the entire process needs to be changes.

The organization has failed to keep up to date with the changing technologies. Since it did not continuously innovate, it is now faced with a "change or die" situation and business process re-engineering which helps integrate latest best practices into the processes are the only way to save the business.

How to Re-Engineer the Corporation ?

Information Availability: To fundamentally redesign a process, one must know the details involved. Details from internal and external sources must be captured and provided to the relevant people in the

required time duration. This helps them to identify the bottlenecks and work around better ways of reaching the desired end.

Information Sharing: A BPR project is usually facilitated by a cross functional team. Most of the times, teams are spread across different geographic locations. Information needs to be successfully shared amongst various people to ensure the reengineering goes as planned and without hiccups.

Technology as the Solution: The new processes that are developed as a result of BPR initiatives deploy the latest technology to achieve the desired end results. Usually it is e-Commerce, automation or another technology driven solution that is implemented.

Business Process Re-engineering has become a very important buzzword in the BPM lexicon. Many corporations who were late in realizing the power and importance of BPM have to undergo re-engineering initiatives to ensure that they are still relevant to the marketplace. Re-engineering initiatives are however expensive and may require certain downtime. This is the reason they are resented by many corporations.

BPM - Tacit Knowledge and Skills

The way tacit knowledge functions and the way IT functions make it inherently incompatible. They are two fundamentally different techniques. One relies on gut feel and intuition whereas other relies on explicit detail, logic and rationality.

To further understand why tacit knowledge is difficult to implement using IT, let's look at the details:

The Way IT Functions: IT is nothing but efficient and fast storage and transfer of information. However to store anything in a computer as well as to get it to analyse, the instructions have to be comprehensive and explicit. In case they are not, the program starts behaving in unexpected ways and is said to have a "bug". Computers function only on explicit detail once the method for their analysis has been clearly specified.

The Way Tacit Knowledge Functions: Tacit knowledge on the other hand refers to knowledge gained by an individual through education and experience that they are not explicitly aware of.

Consider the case of a manager, who can recognise the motivation of people and can speak to them in a way that makes the worker feel that his/her goals are being achieved along with achievement of organization goals. The manager inherently knows what kind of person he is speaking to. But if you ask them to document what makes them come to the conclusion, they will not be able to. Neither can they draw an exhaustive list of the types of people that are possible to come across. In fact, no one can draw out such a list!

Incompatibility: Now, this makes the incompatibility quite clear. One relies on detail, the other does not have any detail. It is like a black box. But organizations cannot continue to turn a blind eye to tacit knowledge. In many cases, it is this tacit knowledge that is providing them with the competitive edge. This is why the whole domain of knowledge management across organizations have come into picture. Companies are losing billions of dollars annually for the failure to effectively harness knowledge and make it a part of organizational knowledge.

The Solution: The solution that knowledge management has proposed is to have trained individuals who will shadow the personnel with tacit knowledge. They will interview them and observe them in action. They will they draw out a detailed mental map of the way these personnel perform tasks. This can then be used by IT. The bottom line is that tacit knowledge will be converted to explicit knowledge before it is used by IT.

The Problem with the Solution: The problems with this are manifold:

Firstly the entire solution depends on the expertise of the mind mapping individual. If he is not skilful enough (and we have no way to verify), the whole exercise becomes futile. This is against the basic principles of being process driven as opposed to being people driven.

Secondly there are cases where personnel deliberately withhold information and expertise. They then use such information and expertise to gain bargaining power in the organization. How can such knowledge be made explicit when attempts will be made to withhold it ?

These and many more questions need answering. Although IT has achieved a lot, it is still very much incapable of dealing with tacit knowledge. Significant research is required in this field to create a breakthrough solution

Business decisions like resource allocation, size and number of plant, amount of input and output, investments, etc. are all dependent on the macroeconomic variables. Business firms must be up-to-date with the recent changes and fluctuations that occur in the economy

Business Cycle: Definition, Characteristics and Phases

1. Definition of Business Cycle:

A capitalistic economy experiences fluctuations in the level of economic activity. And fluctuations in economic activity mean fluctuations in macroeconomic variables.

At times, consumption, investment, employment, output, etc., rise and at other times these macroeconomic variables fall.

Such fluctuations in macroeconomic variables are known as business cycles. A capitalistic economy exhibits alternating periods of prosperity or boom and depression. Such movements are similar to wave-like movements or see saw movements. Thus, the cyclical fluctuations are rather regular and steady but not random.

Since GNP is the comprehensive measure of the overall economic activity, we refer to business cycles as the short term cyclical movements in GNP. In the words of Keynes : “A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages, alternating with periods of bad trade characterised by falling prices and high unemployment percentages.”

In brief, a business cycle is the periodic but irregular up-and-down movements in economic activity. Since their timing changes rather unpredictably, business cycles are not regular or repeating cycles like the phases of the moon.

2. Characteristics of Business Cycles:

Following are the main features of trade cycles:

(i) Industrialised capitalistic economies witness cyclical movements in economic activities. A

(ii) It exhibits a wave-like movement having a regularity and recognised patterns. That is to say, it is repetitive in character.

(iii) Almost all sectors of the economy are affected by the cyclical movements. Most of the sectors move together in the same direction. During prosperity, most of the sectors or industries experience an increase in output and during recession they experience a fall in output.

(iv) Not all the industries are affected uniformly. Some are hit badly during depression while others are not affected seriously.

Investment goods industries fluctuate more than the consumer goods industries. Further, industries producing consumer durable goods generally experience greater fluctuations than sectors producing nondurable goods. Further, fluctuations in the service sector are insignificant in comparison with both capital goods and consumer goods industries.

(v) One also observes the tendency for consumer goods output to lead investment goods output in the cycle. During recovery, increase in output of consumer goods usually precedes that of investment goods. Thus, the recovery of consumer goods industries from recessionary tendencies is quicker than that of investment goods industries.

(vi) Just as outputs move together in the same direction, so do the prices of various goods and services, though prices lag behind output. Fluctuations in the prices of agricultural products are more marked than those of prices of manufactured articles.

(vii) Profits tend to be highly variable and pro-cyclical. Usually, profits decline in recession and rise in boom. On the other hand, wages are more or less sticky though they tend to rise during boom.

(viii) Trade cycles are ‘international’ in character in the sense that fluctuations in one country get transmitted to other countries. This is because, in this age of globalisation, dependence of one country on other countries is great.

(ix) Periodicity of a trade cycle is not uniform, though fluctuations are something in the range of five to ten years from peak to peak. Every cycle exhibits similarities in its nature and direction though no two cycles are exactly the same. In the words of Samuelson: “No two business cycles are quite the same. Yet they have much in common. Though not identical twins, they are recognisable as belonging to the same family.”

(x) Every cycle has four distinct phases: (a) depression, (b) revival, (c) prosperity or boom, and (d) recession.

3. Phases of a Business Cycle:

A typical business cycle has two phases expansion phase or upswing or peak and contraction phase or downswing or trough. The upswing or expansion phase exhibits a more rapid growth of GNP than the long run trend growth rate. At some point, GNP reaches its upper turning point and the downswing of the cycle begins. In the contraction phase, GNP declines.

At some time, GNP reaches its lower turning point and expansion begins. Starting from a lower turning point, a cycle experiences the phase of recovery and after some time it reaches the upper turning point the peak. But, continuous prosperity can never occur and the process of downhill starts. In this contraction phase, a cycle exhibits first a recession and then finally reaches the bottom—the depression.

Thus, a trade cycle has four phases:

(i) depression,

(ii) revival,

(iii) boom, and

(iv) recession.

These phases of a trade cycle are illustrated in Fig. 2.7. In this figure, the secular growth path or trend growth rate of GNP has been labelled as EG. Now we briefly describe the essential characteristics of these phases of an idealised cycle

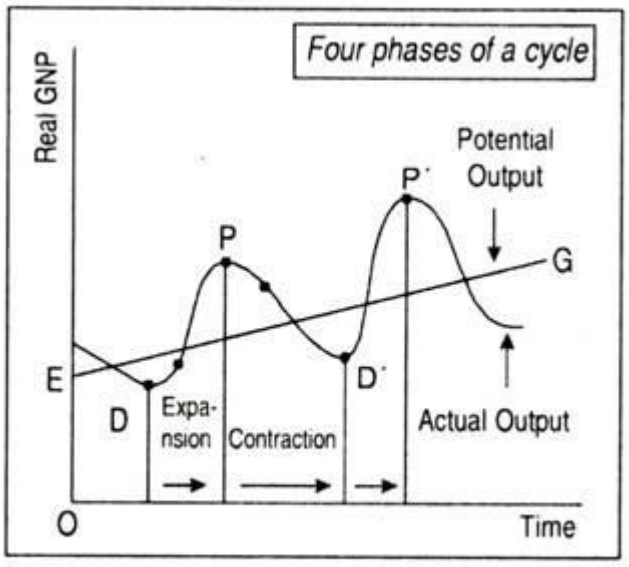

Fig. 2.7: Idealised Cycle

1. Depression or Trough:

The depression or trough is the bottom of a cycle where economic activity remains at a highly low level. Income, employment, output, price level, etc. go down. A depression is generally characterised by high unemployment of labour and capital and a low level of consumer demand in relation to the

economy's capacity to produce. This deficiency in demand forces firms to cut back production and lay-off workers.

Thus, there develops a substantial amount of unused productive capacity in the economy. Even by lowering down the interest rates, financial institutions do not find enough borrowers. Profits may even become negative. Firms become hesitant in making fresh investments. Thus, an air of pessimism engulfs the entire economy and the economy lands into the phase of depression. However, the seeds of recovery of the economy lie dormant in this phase.

2. Recovery:

Since trough is not a permanent phenomenon, a capitalistic economy experiences expansion and, therefore, the process of recovery starts.

During depression some machines wear out completely and ultimately become useless. For their survival, businessmen replace old and worn-out machinery. Thus, spending spree starts, of course, hesitantly. This gives an optimistic signal to the economy. Industries begin to rise and expectations tend to become more favourable. Pessimism that once prevailed in the economy now makes room for optimism. Investment becomes no longer risky. Additional and fresh investment leads to a rise in production.

Increased production leads to an increase in demand for inputs. Employment of more labour and capital causes GNP to rise. Further, low interest rates charged by banks in the early years of recovery phase act as an incentive to producers to borrow money. Thus, investment rises. Now plants get utilised in a better way. General price level starts rising. The recovery phase, however, gets gradually cumulative and income, employment, profit, price, etc., start increasing.

3. Prosperity:

Once the forces of revival get strengthened the level of economic activity tends to reach the highest point—the peak. A peak is the top .of a cycle. The peak is characterised by an allround optimism in the economy—income, employment, output, and price level tend to rise. Meanwhile, a rise in aggregate demand and cost leads to a rise in both investment and price level. But once the economy reaches the level of full employment, additional investment will not cause GNP to rise.

On the other hand, demand, price level, and cost of production will rise. During prosperity, existing capacity of plants is overutilised. Labour and raw material shortages develop. Scarcity of resources leads to rising cost. Aggregate demand now outstrips aggregate supply. Businessmen now come to learn that they have overstepped the limit. High optimism now gives birth to pessimism. This ultimately slows down the economic expansion and paves the way for contraction.

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6 MAJOR MACRO-ECONOMIC ISSUES

The following points highlight the six major macro-economic issues. The issues are: 1. Employment and Unemployment 2. Inflation 3. The Trade Cycle 4. Stagflation 5. Economic Growth 6. The Exchange Rate and the Balance of Payments.

Issue # 1. Employment and Unemployment:

Unemployment refers to involuntary idleness of resources including manpower. If this problem exists, society's actual output (or GNP) will be less than its potential output. So one of the objectives of Government policy is to ensure full employment which implies absence of involuntary unemployment of any type.

Issue # 2. Inflation:

It refers to a situation of constantly rising prices of commodities and factors of production. The opposite situation is known as deflation. During inflation some people gain and most people lose. So there is a change in the pattern of income distribution. Therefore, one of the objectives of government policy is to ensure price level stability which implies the absence of inflation and deflation.

Issue # 3. The Trade Cycle:

It refers to periodic fluctuations in the levels of economic or business activities, i.e., the tendency for output (GNP) and employment to fluctuate over time in a recurring sequence of ups and downs. The periods of good trade alternate with periods of bad trade, or, boom periods of high output and high employment alternate with slump periods of low output and low employment.

In boom periods, employment is low but the rate of inflation is high. In periods of depression (or recession) unemployment is high and the rate of inflation is moderate. In macroeconomics we study the causes of business cycles and suggest remedial measures.

Issue # 4. Stagflation:

Most modern mixed economics suffer from the disease of stagflation which implies the co-existence of inflation and unemployment in a stagnant economy. The trade-off between inflation and unemployment is perhaps the most complex macroeconomic issue of the day. Every country in the world is now struggling hard to fight the disease of stagflation.

Issue # 5. Economic Growth:

In spite of short-term fluctuations of output that are associated with the trade cycle, the long-term trend of total output has been upward in most industrially advanced country. The trend in the nation's total output over the long period is known as economic growth.

It refers to an expansion of society's production capacity such as bringing new land under cultivation or setting up new factories. Growth is measured by the annual rate of increase of per capita income and is illustrated by a rightward shift of the production possibility curve.

There are three major sources of growth, viz.,:

(1) The growth of the labour force,

(2) Capital formation and

(3) Technological progress.

A country seeks to achieve economic growth mainly for improving the standards of living of its people. If the rate of economic growth exceeds the rate of population growth, there is likely to be an improvement in the standard of living for the average person.

Issue # 6. The Exchange Rate and the Balance of Payments:

The balance of payments is a systematic record of all economic transactions between the members of the home country and the rest of the world in an accounting year. These transactions are largely, if not entirely, influenced by the exchange rate. It is the rate at which a country's economy is exchanged for another currency (or gold).

The trend in the value of the rupee in terms of two major currencies of the world, viz., the U.S. dollar and British pound, has been downward in the last two decades. Economists are always eager to discover the cause and consequences of such changes.

India's economic reforms began in 1991 when a newly elected Congress government, facing an exceptionally severe balance of payments crisis, embarked on a programme of short term stabilisation combined with a longer term programme of comprehensive structural reforms. Rethinking on economic policy had begun earlier in the mid-eighties by when the limitations of a development strategy based on import substitution, public sector dominance and pervasive government control over

the private sector had become evident, but the policy response at the time was limited to liberalising particular aspects of the control system without changing the system itself in any fundamental way.

.1. Economic Performance under the Reforms

To evaluate the impact of the reforms on the performance of the economy it is useful to distinguish between two periods. The first period is the three years 1991-92 to 1993-94 which were years of crisis management, when the primary objective of policy was to stabilise the economy. The next four years 1994-95 to 1997-98 constitute the post-stabilisation period, when the focus of policy was on the longer term objective of putting the economy on a higher growth path. Since objectives in the two periods were different, performance in each period must be evaluated in terms of objectives of the period. The major parameters of macro-economic performance the two periods are summarised in Table 1.

a] Crisis Management : 1991-92 to 1993-94

India's performance in stabilising the economy was commendable by any standards. The extent of the achievement can be appreciated only if we recall the severity of the crisis. The surge in oil prices triggered by the Gulf War in 1990 imposed a severe strain on a balance of payments already made fragile by several years of large fiscal deficits and increasing external debt. Coming at a time of internal political instability, the balance of payments problem quickly ballooned into a crisis of confidence which intensified in 1991 even though oil prices quickly returned to normal levels. There was a flight of capital in the form of withdrawal of non-resident deposits from the banking system and an unwillingness of international banks to extend new loans. Foreign exchange reserves dropped to $1.2 billion in June 1991, barely sufficient for two weeks of imports and a default on external payments appeared imminent. The shortage of foreign exchange forced tightening of import restrictions which in turn led to a fall in industrial output. In November 1991, the Government entered into a stand-by arrangement under which the IMF would provide $ __2.3 billion over a two year period and there was a definite expectation on both sides that the stand-by arrangement may need to be followed by recourse to the ESAF facility because adjustment was expected to take longer than two years.

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2. POLICY CHANGES UNDER THE Macro Economic Balance and the Fiscal Deficit REFORMS

18. The gradualist pace of India's reform has at times made the reforms appear halting and even confused at a given point in time, but even a gradualist process can bring about a significant cumulative change over seven years. The focus of this section is to assess the cumulative change actually brought about in some of the important areas of policy reform.

a] Reducing the Fiscal Deficit

High fiscal deficits in the 1980s were one of the root causes of the crisis of 1991 and reducing the fiscal deficit was therefore a critical macro-economic objective a key objective not only of India's reforms. This was particularly important in the initial years, when the country was subject to the discipline of an IMF programme in which fiscal deficit reduction was a key component. Ialso over the medium term as an instrument for t was also important in the medium term as a means of reducing real rates of interest in the economy and creating conditions in which private investment would expand rapidly.

The inability to reduce the fiscal deficit in line with expectations is one of the most disappointing aspects of India's reforms. The scope for reducing the deficit in future depends upon the scope for reducing expenditures or increasing revenues as a percentage of GDP.

a. The scope for reducing expenditure

It is tempting to conclude that further reduction in expenditure as a percentage of GDP should be attempted to reduce fiscal deficits in future. However, the scope for reducing expenditure should not be overstated. Apart from expenditure in the social sectors, there is also a need for larger expenditure in certain types of economic infrastructure, especially in rural areas, which may not be commercially viable and can only be financed through the Budget.

b. The need for buoyant tax revenues

A reduction in the As shown in Table 5, tax revenues flowing into the Central Budget actually declined as a percentage of GDP in the first three years of the reforms. The declining trend was reversed after 1993-94 but even so, tax revenues in 1997-98 as a percentage of GDP were about 0.5 percentage points below the pre-reform level whereas they should have been 1.5 percentage points higher.

3. Structural Reforms

India's efforts at structural reforms covered the familiar gamut of decontrol of private investment, opening up the economy to foreign trade and foreign investment, financial sector reforms, etc. This familiar package of market oriented reforms was supplemented by efforts to strengthen various anti-poverty programmes reflecting a widely shared perception that liberalisation by itself would not provide an adequate flow of benefits to the poorest sections of the population at least in the short run. In this section we evaluate the extent of change actually implemented in the critical areas of structural reform, indicating the degree of consensus on each of these issues across the political spectrum

b] Opening the Economy to Foreign Trade

Opening the economy to trade and foreign investment was an important objective of the reforms aimed at reaping the potential benefits from greater integration with the world economy. Spokesmen for Indian industry initially voiced strong support for both domestic liberalisation and external liberalisation, especially liberalisation of access to imports of components and capital goods.

i] Dismantling Quantitative Restrictions

India's trade policy regime before the reforms was heavily dependent upon the use of quantitative restrictions (QRs) in the form of import licenses, more than almost any other developing country. Imports of finished consumer goods were simply not allowed and even inputs into production such as raw materials, components and capital goods were subject to restrictions through import licensing.

ii] Reducing Tariffs

India's trade policy before import duties before the reforms was characterised by import tariffs which were among the highest in the world. Rates with duty rates above 200% were being fairly common. Significant progress has been made in reducing tariff rates since then. The maximum tariff rate was brought down in a series of steps to 45% in 1997-98 (Table 7). Tariff rates below the maximum have also been lowered over the years, bringing the import weighted average tariff rate for all products down from 87% in 1990-91 to 30% in 1998-99.

iii] Exchange Rate Flexibility

The removal of QRs and reduction in tariff levels described above would not have been possible but for parallel changes in exchange rate policy. The rupee was devalued in July 1991 by 24% as part of the initial stabilisation programme, and a dual exchange rate was introduced in March 1992. The dual exchange rate was unified shortly thereafter in March 1993 and the unified rate was allowed to float.

c] Policy towards Foreign Investment

The reforms involved a radical re-orientation of foreign investment policy with foreign investment being actively sought not only as a preferred means of financing balance of payments deficits compared with external borrowing, but also because it provides access to closely held technology and to global marketing linkages. Both foreign direct investment (FDI) and portfolio flows have been encouraged in the post-reform period with good positive results in both cases.

d] Reducing Price Controls

Reduction, if not elimination, of price controls is a familiar component of market oriented reforms everywhere and this was the case in India also. Price control was abolished at an early stage of the reforms in some key industries, viz., iron and steel, coal, phosphatic and potassic fertilisers, newsprint, naphtha, lubricating oils and molasses

i] Decontrol of Hydrocarbon Prices

The petroleum sector in India was fully state owned at the start of the reforms with the State also controlling imports of crude oil and production. Prices were determined by a complex Administered

Price Mechanism (APM) under which domestic producers of crude and natural gas were paid controlled prices which were much lower than world market prices.

i] Control over Electricity Prices

Pricing of electricity is subject to regulatory control in most countries but the way it has operated in India is seriously flawed. Electricity prices charged to consumers are fixed by State Governments and have been set very low for certain categories of consumers such as households and agricultural users and this is one of the major reasons for the poor financial condition of the State Electricity Boards (SEBs

iii] Price Controls on Nitrogenous Fertiliser

Nitrogenous fertiliser is another important industry where prices continue to be fully controlled. Fertiliser factories are paid a cost based plant specific producer price, and the government fixes a low consumer price for farmers. The difference between producer and consumer prices is met by a budgetary subsidy which amounts to about 0.7% of GDP

e] Labour Market Controls

An important area untouched by reforms thus far is the labour market. India's labour laws, which apply to all industrial units employing more than 100 persons, make it difficult for firms to either shed excess labour or to close down unviable units.

g] Private Investment in Infrastructure

It was recognised early in the reforms that a faster growing economy would need major investments in infrastructure and these investments could not be financed solely in the public sector. Private investment to supplement the public sector efforts was seen as the solution and new policies were announced to encourage private investment (including foreign investment) in power generation, telecommunications services, ports and roads. There has been some success in this area but the results thus far have fallen considerably short of expectations.

h] Reforming the Financial System

Reforms in the financial system are critical for the success of sStructural reforms if only because the latter aim at reallocating real resources in the economy and this process needs to be supported lubricated by an efficient financial system.

ii] Capital Market Reforms

8Parallel with reforms in banking iMajor changes have taken place in the capital market in the past seven years. In 1991 India's capital market did not have a statutory regulatory framework. The Securities and Exchange Board of India (SEBI), was given statutory powers in 1992 and has since laid down a structure of regulations governing various participants in the capital markets, including rules for insider trading, take-overs, management of mutual funds, etc.

-92 but it rebounded to a near normal 5.3% in 1992-93, and then accelerated to 6.2% in 1993-94.

A common concern about macro-economic stabilisation programmes is that they may hurt the poorer sections of the population because of temporary reductions in employment resulting from demand restraining policies, or even permanent loss of employment in certain areas because of structural change. This aspect of performance in the stabilisation period has been examined in detail by Tendulkar (1997). Tendulkar's estimates (Table 2) indicate that the incidence of both rural and urban poverty declined more or less steadily through the 1980s but this trend was briefly reversed in the early years of the reforms. Restricting the analysis to estimates of poverty based on consumption data for a full twelve month period, we can compare 1990-91 (July-June) with 1992 (January-December) and this comparison shows an increase in poverty in both urban and rural areas in the first two years of the reforms. However, this deterioration in the poverty indicators was reversed in 1993-94 (July-June). In the case of urban poverty the reversal was complete and the incidence of poverty in 1993-94 was actually lower than in 1990-91 but in the case of rural poverty it was marginally higher.

Tendulkar addresses the issue of whether the increase in poverty was in any sense caused by the reforms and also the related issue of whether it could have been avoided by following a different set of policies. He explains the increase in poverty in 1992, especially in rural areas, in terms of the decline in foodgrain production in 1991-92 which lowered rural incomes generally and the associated increase in food prices which lowered the real consumption levels of the poor in both urban and rural areas. According to Tendulkar, the increase in food prices was primarily the result of the fall in foodgrain production which had nothing to do with the reforms though it was perhaps exacerbated by the effect of the devaluation of the rupee in 1991, which increased the import parity price, and therefore also the domestic market price, of foodgrains.

It is difficult to determine whether the increase in poverty could have been avoided by a different mix of policy. One can postulate a counterfactual situation where this is attempted by expanding the scale of income generating poverty alleviation programmes, which would have raised incomes of the poor, or by expanding the supply of subsidised foodgrains through the Public Distribution System to moderate the rise in foodgrain prices for these years. However, both options would have required additional budgetary expenditures which would have been difficult to finance given the severe fiscal constraints affecting the economy at the time. Expanding supplies through the PDS would also have required additional imports of foodgrains to supplement domestic availability and this would have required additional foreign exchange, which was in short supply. All these considerations suggest that the measured increase in poverty in the first two years of the reforms was largely due to exogenous factors and was probably unavoidable given the severe constraints on policy at the time. In any case it is important to note that the deterioration was short-lived and was almost completely reversed by 1993-94.

b] Post-Stabilisation Period 1994-95 to 1997-98

The aim of policy in the post-stabilisation period was to achieve a sustainable acceleration in growth and here too the results were impressive. GDP grew at an average rate of 7.5% in the three years 1994-95 to 1996-97, before slowing down to 5.1% in 1997-98. The slow-down in 1997-98 is a matter for concern - and we will return to this issue later in this paper - but it is important to note that despite the

slowdown the average growth rate in the four years 1994-95 to 1997-98 was 6.9%, significantly higher than the growth rate of 5.6% achieved in the 1980s. Four years is not a long enough period to claim that the economy has been firmly put on a sustainable 7% growth path, but there is little doubt that growth in the post-reform period was faster than in the pre-reform years. It was also faster than targeted. The growth rate achieved in the Eighth Plan period 1992-93 to 1996-97 was 6.8%, exceeding the Plan target of 6.5%.

India's growth in the post-reform period also compares favourably with the performance of other developing countries. As shown in Table 3, India's post-reforms growth rate was higher than the growth of all developing countries taken together. Comparing India with the twelve largest developing countries, we find that China, Indonesia, Malaysia, Thailand and Chile grew faster than India in the post-reform period while India grew faster than the other seven.

An encouraging aspect of India's experience is the behaviour of investment in the post-reforms period. Latin American countries undertaking economic reforms in the 1980s experienced a sharp decline in public investment without a compensating acceleration in private investment with the result that the rate of investment in many of these countries declined significantly and stayed depressed for a long period. In India too, fiscal discipline did lead to a decline in public sector investment as a percentage of GDP in the post-reform period, but this was offset by an increase in private investment in both the corporate and the household sectors (Table 4). Total investment as a per cent of GDP therefore did not decline compared to the pre-reform period and by 1995-96 it had actually increased to levels higher than before the reforms. However, it is important to note that the rate of investment in the later years increased only modestly and the average rate of investment in the post-reforms period is only marginally higher than in the pre-reform years. The fact that GDP growth accelerated significantly after the reforms even though the investment rate was only marginally higher suggests that productivity growth was higher - precisely the outcome one would expect from efficiency oriented structural reforms.

Inadequate public investment in the post-reform period had an adverse impact on the economy in one respect. It led to serious under-investment in critical infrastructure sectors such as electric power generation, roads, railways and ports. The addition to power generation capacity in the public sector during the Eighth Plan was only a little over half the target and there were similar shortfalls in capacity creation in roads and ports. These shortfalls would not have mattered if capacity in the private sector had expanded, but this did not happen either. The end result was that total investment in infrastructure development was less than it should have been, leading to large infrastructure gaps These inadequacies did not come in the way of achieving higher economic growth in the post reform years because there was some slack in the system, but there can be no doubt that rapid growth will be difficult to sustain in future unless investment in infrastructure can be greatly expanded.

The high growth of the post-reform period was also accompanied by an improvement in the external payments position. The current account deficit has varied between 1% and 1.8% of GDP and foreign exchange reserves have been comfortable throughout. Exports grew strongly for three years after 1992-93, averaging 20% dollar growth per year between 1993-94 and 1995-96, but then slowed down sharply in 1996-97 and yet again in 1997-98 (Table 1). This deceleration in exports is in part a reflection of slower growth in world trade in 1996 and 1997 measured in US dollars but even so, it is a matter of

deep concern for the future. India's external debt indicators improved continuously in the post reforms period. The debt service ratio had reached a worrying level of 35.3% in 1990-91 but it declined to 18.3% in 1997-98 (Table 1). Other indicators such as the debt to GDP ratio, and the debt to exports ratio, also show substantial improvement.

Unfortunately, it is not possible to provide reliable answers No definitive answer can be given to the all important question of what happened to poverty in the post-stabilisation period since no poverty . The latest available estimate of poverty is for 1993is available after 1993-94. and the next available estimate will be for 1996-97. We know from past experience that there was no significant trend in poverty from the mid-fifties to the late seventies when per capita income grew at very low rates but this changed after the late 1970s as growth rates accelerated, leading to a steady though not dramatic decline in poverty. Projecting on thise basis, of this relationship the acceleration in growth after 1993-94 must have led to a resumption in the declining trend of poverty in the post stabilisation period but in the absence of survey data this is at best a plausible projection. Data on social indicators such as life expectancy and infant mortality, also provide some indication of the living standards of the poor and the information available is summarised in Table 1. T. As shown in Table 1hese indicators show continuing improvement in the post reform years which is consistent with the hypothesis of a continuing decline in poverty after 1993-94. However, these positive indicators notwithstanding, it remains trueThe weight of evidence therefore suggests that after a brief deterioration in poverty in the initial years which was quickly reversed, there was probably a resumption of the trend of steady improvement observed in the previous decade. that progress in reducing poverty in India is much less impressive than witnessed in East and South East Asia in the seventies and eighties. Replication of such success would provide a much more powerful constituency in favour of reforms then has been the case thus far. This calls for more rapid rates of growth than have been witnessed in India thus far, sustained over a longer period and also a stronger effort at improving social development through purposive government action.

focus The slowdown in GDP growth witnessed in 1997-98 is a worrying feature of the post-stabilisation period. As noted above, GDP the average rate of growth in the post-reforms period remains at a respectable level even after we include the slowdown. including the slower growth in 1997-98, but this raises the question it is certainly relevant to ask whether 1997-98 was a purely temporary downturn or whether it reflects the restraining impact of specific constraints which, if not tackled urgently, could force a return to a lower growth path. This issue is examined in Part 4.

brought down in a series of steps to 45% in 1997-98 (Table 7). Tariff rates below the maximum have also been lowered over the years, bringing the import weighted average tariff rate for all products down from 87% in 1990-91 to 30% in 1998-99.

iii] Exchange Rate Flexibility

The removal of QRs and reduction in tariff levels described above would not have been possible but for parallel changes in exchange rate policy. The rupee was devalued in July 1991 by 24% as part of the initial stabilisation programme, and a dual exchange rate was introduced in March 1992. The dual exchange rate was unified shortly thereafter in March 1993 and the unified rate was allowed to float.

c] Policy towards Foreign Investment

The reforms involved a radical re-orientation of foreign investment policy with foreign investment being actively sought not only as a preferred means of financing balance of payments deficits compared with external borrowing, but also because it provides access to closely held technology and to global marketing linkages. Both foreign direct investment (FDI) and portfolio flows have been encouraged in the post-reform period with good positive results in both cases.

d] Reducing Price Controls

Reduction, if not elimination, of price controls is a familiar component of market oriented reforms everywhere and this was the case in India also. Price control was abolished at an early stage of the reforms in some key industries, viz., iron and steel, coal, phosphatic and potassic fertilisers, newsprint, naphtha, lubricating oils and molasses .

i] Decontrol of Hydrocarbon Prices

The petroleum sector in India was fully state owned at the start of the reforms with the State also controlling imports of crude oil and production. Prices were determined by a complex Administered Price Mechanism (APM) under which domestic producers of crude and natural gas were paid controlled prices which were much lower than world market prices

ii] Control over Electricity Prices

Pricing of electricity is subject to regulatory control in most countries but the way it has operated in India is seriously flawed. Electricity prices charged to consumers are fixed by State Governments and have been set very low for certain categories of consumers such as households and agricultural users and this is one of the major reasons for the poor financial condition of the State Electricity Boards (SEBs).

iii] Price Controls on Nitrogenous Fertiliser

Nitrogenous fertiliser is another important industry where prices continue to be fully controlled. Fertiliser factories are paid a cost based plant specific producer price, and the government fixes a low consumer price for farmers.

if they are burdened with surplus labour. They would rather set up a new unit, even though

f] Public Sector Reforms

Despite suffering from all the familiar problems experienced by other developing countries with a large public sector, the approach to public sector reforms in India's approach to public sector reforms has been much more cautious than elsewhere that of other developing countries.

g] Private Investment in Infrastructure

It was recognised early in the reforms that a faster growing economy would need major investments in infrastructure and these investments could not be financed solely in the public sector. Private investment to supplement the public sector efforts was seen as the solution and new policies were announced to encourage private investment (including foreign investment) in power generation, telecommunications services, ports and roads.

ii] Capital Market Reforms

8Parallel with reforms in banking iMajor changes have taken place in the capital market in the past seven years. In 1991 India's capital market did not have a statutory regulatory framework. The Securities and Exchange Board of India (SEBI), was given statutory powers in 1992 and has since laid down a structure of regulations governing various participants in the capital markets, including rules for insider trading, take-overs, management of mutual funds, etc. These rules are now in operation and will need to be refined on the basis of experience. The stock exchanges, which were earlier dominated by brokers and lacked effective supervision, are now much better governed. The focus of the new regulations is to ensure investor protection through transparency and full disclosure.

iii] Insurance Sector Reforms

82 The missing element in India's financial sector reform thus far relates to insurance which remains industry by law a a public sector monopoly, a situation which exists in only three other countries, Cuba, North Korea and Myanmar.

i] Policies for Poverty Alleviation

The impact of the reforms on the poor has been a constant focus of the policy debate in India. Supporters claim that the reforms will help the poor by encouraging rapid and efficient growth, which in India's circumstances means labour using employment generating growth, and this is the only sustainable way of reducing poverty to any significant effect.

ConclusionsIndia's achievements in the past seven years as far as economic performance is concerned are clearly impressive. The recovery from the 1991 crisis was exceptionally swift and the post stabilisation period saw a significant acceleration in growth compared with the growth rate before the reforms. The rate of growth in the four years 1994-95 to 1997-98 averages 6.9 %. This amounts to growth in per capita GDP of over 5 percent per year. Poverty may have increased in the first two years after the crisis, but this was not because of the reforms and in any case, the deterioration was reversed by 1993-94. It is likely that Thereas economic growth accelerated in subsequent years, the incidence of poverty also resumed its earlier declining trend.

What is an economic policy?

An economic policy is the set of measures and decisions through which a government try to influence the direction of the economy of his country. It responds to a certain political-economic approach that the government wishes to implement, and is usually reflected in the budget National: the specific way in which a government invests its money.

Economic policies, thus, may be aimed at causing different effects in the productive and commercial circuit of a nation. A first classification would differentiate between the following types of economic policy:

Short or long term economic policies, depending on when you expect to obtain the desired effects: immediately or in the foreseeable future, respectively.

Short-term or structural economic policies, depending on whether they are, respectively, extraordinary measures designed to tackle a problem or a temporary situation, or if instead, they are permanent measures that are a constant part of the country's economy.

Economic stabilization or development policies, depending on whether your goal is to reach a level of economic stability, that is, overcome a crisis or perpetuate financial and commercial peace, or rather they pursue the growth of the economy and are therefore ambitious policies.

However, economic policies are taken by the executive powers of legislative of a sovereign government, depending on the parties and interests that are governing.

Finally, economic policy should not be confused with political economy.

Objectives of an economic policy

Economic policies can be very different from each other and have objectives other than short, medium or long term. In that sense, we can talk about, for example:

Protectionist policies. Those who seek to protect or favour some sector of the national economy, scrutinizing it from the free competition versus products from another country or another region.

Liberal policies. They aim to liberalize the economy, that is, reduce or restrict the factors involved in it, allowing the market to "self-regulate," that is, impose conditions on its own.

Welfare policies. Those who seek to improve the socioeconomic situation of the stocks most vulnerable in the country, through plans and assignments that allow them to alleviate their socioeconomic weakness.

In general, all economic policies have the task of benefiting the local economy, by solving problems, that is, the stimulation of certain economic behaviours and the inhibition of others. Of course, there is no consensus on how to achieve these goals, but there we are already entering the fields of political economy or economic philosophy.

Characteristics of an economic policy

Economic policies are characterized by:

They are implemented by the government of a country or by the group of governments of a region (when it obeys international agreements).

They consist of different types of measures (called instruments) that allow the State influence the functioning of the economy, stimulating some sectors and inhibiting others, as appropriate.

Its purpose is adapt the economic and productive circuit to the needs of the nation, thus contributing to the short, medium or long term with the improvement of quality of life in the same.

They usually obey at ideological, economic and political considerations of the party that controls the executive and / or legislative power.

Instruments of an economic policy

Economic policies can be implemented through various mechanisms, which have a specific effect on the economic and financial functioning of the country.

These instruments can broadly be fiscal (tax management), monetary (money issuance management), social (tax management) expenditure public), commercial (management of incentives or loans) or exchange (management of the international value of the currency).

For example:

Taxes and tariffs. The State may impose a surcharge on the price of products from other countries or from powerful sectors of the industry national, to increase its cost and discourage its purchase, thus artificially favouring competing sectors, for example, nationals. Likewise, the State can tariff the products that it considers harmful, discouraging its massive purchase, or it can exempt from taxes the industries that it wishes to stimulate, making them more profitable and encouraging the purchase of its products.

Issuance or monetary restriction. The State can increase or decrease the amount of cash that circulates in the country, to stimulate or discourage the consumption, which in turn has an impact on inflation and other aspects of the microeconomics.

Subsidies. The State can invest part of its budget in helping various Economic sectors, injecting capital to assume part of their expenses, thus relieving all the economic actors involved, especially those consumers, which enjoy a better price.

Exchange Controls. These are radical measures in which a State "freezes" the exchange rate within its currency with respect to those of other countries, artificially sustaining its price, assuming the difference in cost. This measure can serve as an emergency mechanism to curb currency leaks or encourage tourism and import, but they usually have a high cost of sustaining themselves in the long term.

Social helps. These are monies invested in sustaining the standard of living of the least economically favoured, whether through study grants, school plans feeding, social allowances, etc., all of which is paid from the state budget.

Importance of economic policies

The economic policy of the countries is one of the main factors that intervene in their economic and commercial performance. An assertive economic policy it gives the productive sectors the incentive and the necessary help to generate wealth and grow, thus regaining its independence and manufacturing more wealth, more work and more well-being.

On the contrary, a disastrous economic policy can cause the opposite, hindering the economic dynamics until it becomes unfeasible, which would have a huge cost in the quality of life of the inhabitants of that country.

Economic policy and political economy

We must not confuse these two terms, whose similarity can be misleading. Economic policy is the economic philosophy behind the measures that a government takes to control or drive the economy, even if it means trying not to influence or drive it as little as possible.

Instead, political economy is an academic discipline dedicated to the study of the productive circuit and its relationship with institutions policies, from a multiple or transdisciplinary perspective, leveraging the anthropology, sociology, history, right and Political Sciences.

Thus, professionals in the political economy study and understand the economic policies of the countries.

Introduction to Economic Fluctuations

Short-Run Fluctuations

We have discussed the behavior of an economy in the long run

In the short run, the economy fluctuates around its long-run path

We need to understand why these fluctuations happen …

… and what can be done to stabilize the economy—as far as possible—when fluctuations occur

Some facts about the business cycle

GDP growth averages 3 to 3.5 percent per year in the US over the long run

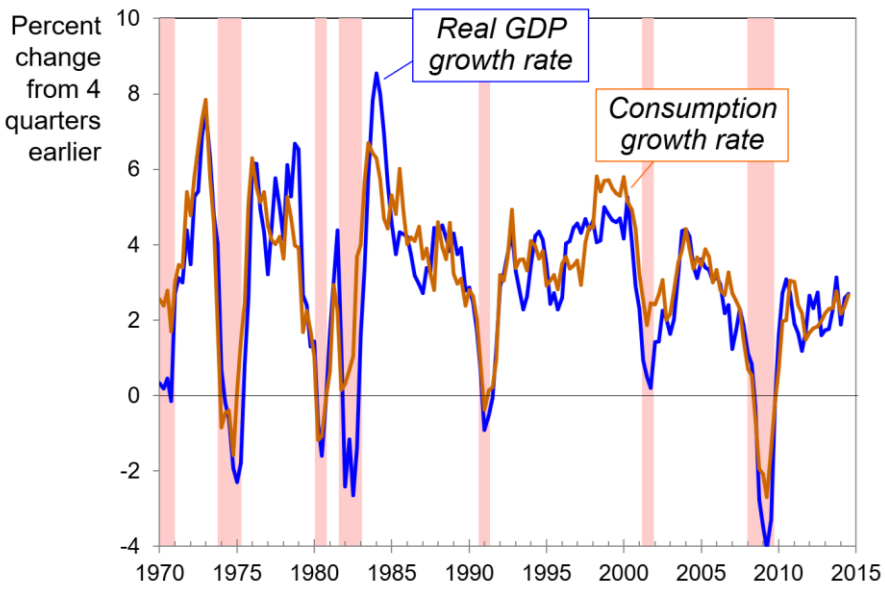
But there are large fluctuations in the short run.

Consumption and investment fluctuate with GDP, but consumption tends to be less volatile and investment more volatile than GDP.

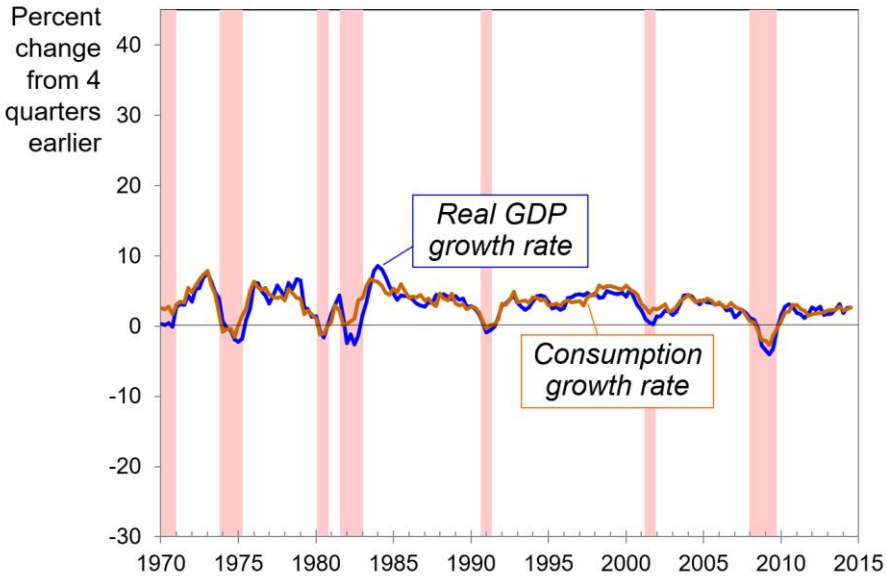
Unemployment rises during recessions and falls during expansions.

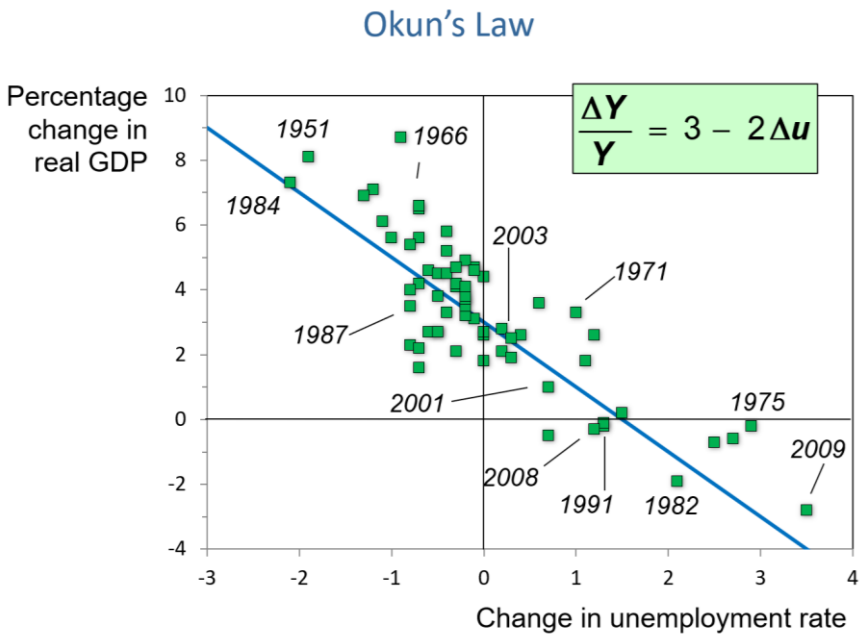
Okun's Law: there is a reliable negative relationship between the GDP growth rate and changes in the unemployment rate.

Growth rates of real GDP, consumption



Growth rates of real GDP, consumption, investment





Index of Leading Economic Indicators

Published monthly by the Conference Board.

Aims to forecast changes in economic activity
6-9 months into the future.

Used in planning by businesses and government, even though ILEI is not a perfect predictor.

Components of the ILEI

Average workweek in manufacturing

Initial weekly claims for unemployment insurance (–)

New orders for consumer goods and materials

New orders for nondefense capital goods

ISM new orders index

Building permits issued for private housing units

Index of stock prices

Leading Credit Index

Interest rate spread (yield on 10-year Treasury bonds minus the federal funds rate)

Index of consumer expectations

Time horizons in macroeconomics

Long run
Prices are flexible, respond to changes in supply or demand.

Short run
Many prices are “sticky” at a predetermined level.

Recap of classical macro theory

Output is determined by the supply side:

supplies of capital, labor

Technology

Y = F(K, L)

Changes in demand for goods and services
(C, I, G) only affect prices (r), not output.

Assumes complete flexibility of overall price level (P).

Applies to the long run.

When prices are sticky…

… output and employment also depend on demand,

And demand is affected by:

fiscal policy (G and T)

monetary policy (M)

other factors, like exogenous changes in
C or I

The role of price stickiness

When P is flexible, recessions would not occur

Under price and wage flexibility, if any recession did occur it would quickly be over …

… because unemployed workers would accept lower and lower wages, prices would drop, and customers would flock to the malls, thereby ending the recession

To explain why recessions do in fact occur, we therefore need to assume that prices are sticky or rigid

“Price Stickiness”

Price stickiness does not necessarily mean that the overall level of prices (P) is constant

All that price stickiness means is that P has stopped responding to the economic factors that you would expect to affect P

P may be increasing or decreasing, but in that case it would be doing so purely on momentum, and not because of some economic cause

The role of shocks

Price stickiness helps us explain why an economy that has fallen into a recession may continue in a recession

But price stickiness does not explain why the economy got into trouble in the first place

For that we need shocks that can explain why businesses may suddenly see there customers stop buying

The role of shocks

Consumption function: Co + Cy(Y – T)

Investment function: Io − Irr

Net exports function: NXo − NXεε

Fiscal policy (G and T)

Monetary policy (M)

Business costs (for example, costlier imported oil)

These shocks can throw an economy off its long-run path

Price stickiness then impedes a quick bounce back to the long-run path

Fiscal and Monetary Policy

We have seen that, in the long run, changes in G and T have no effect on Y

In the short run, G and T can affect Y

We have seen that, in the long run, changes in M affect only P and have no effect on Y

Recall “classical dichotomy” and “monetary neutrality” from chapter 4

In the short run, M cannot affect P, which is sticky, but it can affect Y

Therefore, G, T and M can be used to stabilize Y and other economic variables

Supply shocks

A supply shock alters production costs, affects the prices that firms charge. (also called price shocks)

Examples of adverse supply shocks:

Bad weather reduces crop yields, pushing up food prices.

Workers unionize, negotiate wage increases.

New environmental regulations require firms to reduce emissions. Firms charge higher prices to help cover the costs of compliance.

Favorable supply shocks lower costs and prices.

Inflation & ITS Control Measures

Inflation

In economics, inflation means rise in the general level of prices of goods and services over a period negative period of time in an economy. Inflation may affect the economy either in positive way or negative way

Causes of Inflation

The causes of inflation are as follows −

Inflation may occur sometimes due to excessive bank credit or currency depreciation.

It and It may be caused due to increase in demand in relation to supply of all types goods and services due to a rapid increase in population.

Inflation of Inflation also may be also be caused by a change in the value of production costs of goods

Export boom inflation also comes into existence when a considerable increase in exports may cause a shortage in the home country.

Inflation decisions Inflation is also caused by decrease in supplies, consumer confidence, and corporate decisions to to charge more.

Measures to Control Inflation

There are many ways of controlling inflation in an economy −

Monetary Measure

The most important method of controlling inflation is monetary policy of the Central Bank. Most central monetary central banks use high interest rates as a way to fight inflation. Following are the monetary measures used to control inflation −

Bank Rate Policy

The − Bank rate policy is the most common tool against inflation. The increase commercial increase in bank rate increases the cost of borrowings which reduces commercial banks borrowing from the central bank.

Cash Reserve Ratio

which − To control inflation, the central bank needs to raise CRR which helps in reducing the lending capacity of the commercial banks.

Open Market Operations

of − Open market operations mean the sale and purchase of government securities and bonds by the central bank.

Fiscal Policy

Fiscal measures are another important set of measures to control inflation which include taxation, control taxation, public borrowings, and government expenses. Some of the fiscal measures to control inflation are as follows −

Increase in savings

Increase in taxes

Surplus budgets

Wage and Price Controls

Wage and Wage and price controls help in controlling wages as the price increases. Price control and wage inflation wage control is a short term measure but is successful; since in long run, it controls inflation along along with rationing.

Impact of Inflation on Managerial Decision Making

Inflation few Inflation is of course the all too familiar problem of too much money (demand) chasing too few goods higher goods (supply), with the upshot of prices and expectations everywhere tending to rise higher and higher.

The Role of a Manager

In these circumstances, a business manager has to take appropriate decisions and measures based based on macro-economic uncertainties like inflation and the occasional recession.

A true test of a business manager lies in delivering profitability ie., the extent to which he increases increases revenues and also reduces costs even during economic uncertainties.

In with In the current scenario, they are supposed to get faster solutions to the problems of coping with soaring traditional soaring prices (for example) by understanding the process of how inflation distorts the traditional functions of money along with recommendations.

The Effect of Management

The bottom-line impact is that, Customers / clients reward efficient management with profits and tackle penalize inefficient management with losses. Hence, it is advisable to be well prepared to tackle these areas.

Inflation, Unemployment, and the Phillips Curve

Building the Phillips Curve

$$\pi = \pi^e - \beta(u - u^n) + v$$

The Phillips curve states that inflation depends on expected inflation…

the deviation of unemployment from the natural rate (cyclical unemployment)…

and supply shocks.

Building the Phillips Curve

The Phillips curve is derived from aggregate supply.

$$P = P^e + (1/\alpha)(Y - \bar{Y})$$

First we add an exogenous supply shock term to the right hand side.

$$P = P^e + (1/\alpha)(Y - \bar{Y}) + v$$

Then we subtract last year's price level P_{-1} from both sides.

$$P - P_{-1} = (P^e - P_{-1}) + (1/\alpha)(Y - \bar{Y}) + v$$

We can write inflation as $\pi=(P-P_{-1})$ and expected inflation as $\pi^e=(P^e-P_{-1})$.

$$\pi = \pi^e + (1/\alpha)(Y - \bar{Y}) + v$$

Recall Okun's law. Which states that deviation of output from its natural rate is inversely related to deviation of unemployment from its natural rate.

$$(1/\alpha)(Y - \bar{Y}) = -\beta(u - u^n)$$

By substituting we obtain the Phillips curve.

$$\pi = \pi^e - \beta(u - u^n) + v$$

Adaptive Expectations and Inflation Inertia

- **The Phillips curve shows the trade-off facing policy makers in terms of unemployment and inflation.**
- **To make the Phillips curve more useful we need to say what causes expected inflation.**

A simple and plausible assumption might be that people form expectations about future inflation based on recent inflation.

$$\pi^e = \pi_{-1}$$

In this case, we can write the Phillips curve as...

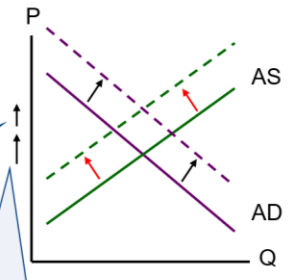
$$\pi = \pi_{-1} - \beta(u - u^n) + v$$

which states that inflation depends on past inflation, cyclical unemployment, and a supply shock.

The first term in the Phillips curve implies that inflation has inertia and that inflation keeps going unless something acts to stop it. In essence we have inflation because we expect it and we expect it because we have it.

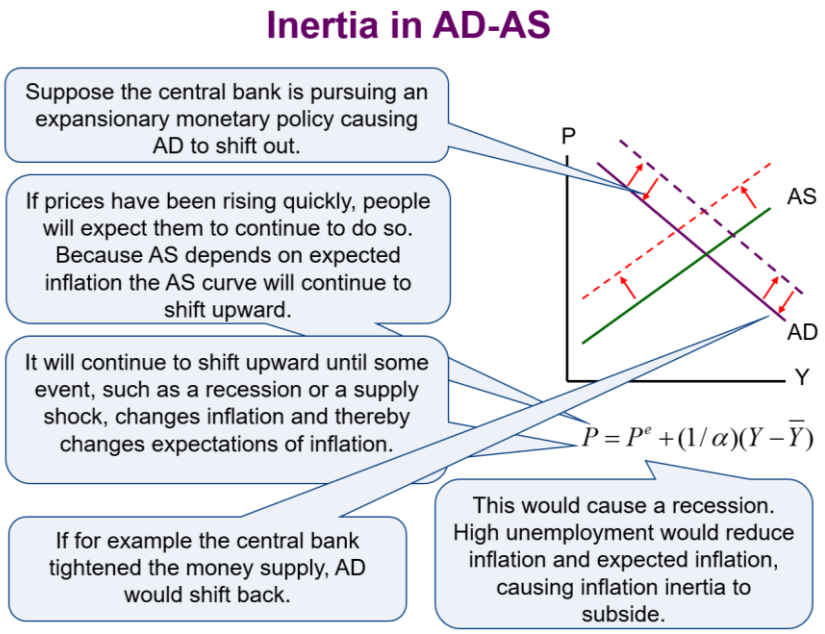
Inertia in AD-AS

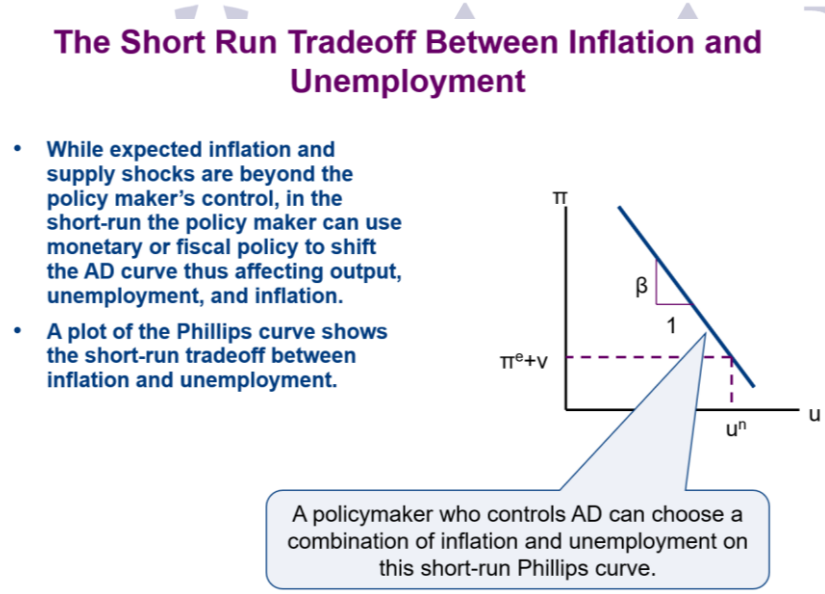
- **In the AD-AS framework inflation inertia is characterized by persistent upward shifts of both AD and AS.**



Most often the upward shifting aggregate demand curve is caused by persistent growth in the money supply.

Aggregate supply shifts up because of expected inflation.





Modern Theories of Economic Growth

Definition of Economic Growth

Economic growth refers to an increase in the goods and services produced by an economy over a domestica particular period of time. It is measured as a percentage increase in real gross domestic product and product which is GDP adjusted to inflation. GDP is the market value for all the final goods and services produced in an economy.

The Classical Approach

Adam focused Adam Smith laid emphasis on increasing returns as a source of economic growth. He focused on foreign trade to widen the market and raise productivity of trading countries. Trade enables a country produced country to buy goods from abroad at a lower cost as compared to which they can be produced in in the home country.

In through modern growth theory, Lucas has strongly emphasized the role of increasing returns through direct Indirect foreign investment which encourages learning by doing through knowledge capital. In Southeast rates Southeast Asia, the newly industrialized countries (NICs) have achieved very high growth rates in in the last two decades.

The Neoclassical Approach

The neoclassical approach to economic growth has been divided into two sections −

The first section is the competitive model of Walrasian equilibrium where markets play a very allocation very crucial role in allocating the resources effectively. To secure the optimal allocation of type of inputs and outputs, markets for labor, finance and capital have been used. This type of competitive paradigm was used by Solow to develop a growth model.

The second section of the neoclassical model assumes that technology is given. The used the interpretation that technology in the production function is superficial. The point not point is that R&D investment and human capital through learning by doing were not explicitly explicitly recognized.

The growth The neoclassical growth model developed by Solow fails to explain the fact of actual growth behavior. Approaches behavior. This failure is caused due to the model's prediction that per capita output approaches term steady state path along which it grows at a rate that is given. This means that the long-term rate and rate of national growth is determined outside the model and is independent of preferences and most aspects of the production function and policy measures.

The Modern Approach

The emerging modern approach to market comprises of several features. The new economy emerging today information today is spreading all over the world. It is a revolution in knowledge capital and information explosion. explosion. Following are the important key elements −

Innovation theory by Schumpeter, inter firm and inter industry diffusion of knowledge.

Increasing efficiency of the telecommunications and micro-computer industry.

Global expansion of trade through modern externalities and networks.

Modern theory of economic growth focuses mainly on two channels of inducing growth through expenses knowledge expenses spent on research and development on the core component of knowledge innovations. Is innovations. First channel is the impact on the available goods and services and the other one is the impact on the stock of knowledge phenomena.

Multiplier Analysis

Definition of Multiplier

It is the ratio of the change in national Income due to change in investment.

Understanding the definition

• In economics, the multiplier effect refers to the idea that an initial spending rise can lead to even greater increase in national income. In other words, an initial change in aggregate demand can cause a further change in aggregate output for the economy.

• Investment multiplier is simply the multiplier effect of an injection of investment into an economy. In general, a multiplier shows how a sum injected into an economy travels and generates more output.

Multiplier

It must be noted that the extent of the multiplier effect is dependent upon the marginal propensity to consume . Also that the multiplier can work in reverse as well, so an initial fall in spending can trigger further falls in aggregate output.

Preliminary terms

Consumption function: It is a mathematical expression of the relationship between

aggregate consumption expenditure (C) and aggregate disposable income (Y) expressed as

C= f(Y).

C accounts for the largest proportion of the aggregate demand in an economy and plays a crucial role in the determination of NI.

Consumption function

C = a + bY

C= Aggregate consumption expenditure

Y= total disposable Income

a = autonomous consumption. This is the level of consumption that would take place even if

income was zero. If an individual's income fell to zero some of his existing spending could be

sustained by using savings. Consumption function

b =marginal propensity to consume (mpc). This is the change in consumption divided by the

change in income. Simply, it is the percentage of each additional rupee earned that will be

spent.

Mpc = $\Delta C / \Delta Y = b$

Investment Multiplier

• Multiplier (m) = $\Delta Y/\Delta I = 1/ 1-b$

This relationship can be arrived at by understanding the shift in the aggregate

demand function. As the demand curve shifts upward due to additional investment ΔI, the real income of the economy also increases by ΔY

Assumptions of Multiplier Effect

• The marginal propensity to consume remains constant throughout as the income increases.

• There is a net increase in investment over the preceding year.

• There is no any "time-lag" between the increase in investment and the resultant increment in income.

• Excess capacity exists in the consumer good Industries

Shift in Aggregate demand and

Multiplier

• In the two-sector model, a change in aggregate demand is caused by a change in consumption expenditure or in business investment or in both.

• Consumption expenditure is however more stable function of income.

• A change is assumed in the aggregate demand function due to a change in the business investment. (graphical explanation)

Importance of Multiplier effect

• To explain the cumulative upward and downward swings of trade cycles that occur in a free enterprise capitalist economy.

• Its importance lies in the fiscal policy to be pursued by the Government to get out of the

depression and achieve the full state of employment and also in the foreign trade

policies

In a Two Sector Model

The role of Multiplier Effect in two sector model is limited to:

a) Assessment of the overall possible increase in the National Income due to "one shot"

increase in investment or due to a "single injection" investment

b) To explain the Economic Growth of the country.

The Multiplier Equation derivation

We know the value of national output equals aggregate spending. Thus we have, Y = C+I

Let us now suppose that investment increases by ΔI.

This will result in an increase in aggregate consumption expenditure and real national income.

Hence, any change in income Y is always equal to

(ΔY) = ΔC + ΔI. By substituting the values of C, we get the final output as

multiplier = 1 / 1- MPC.

Working of Multiplier process

• Suppose an economy is in equilibrium and autonomous business investment increases by Rs 100 million.

• Due to this effect the total output increases by Rs 100million. Further it also means an additional income of Rs 100million has been generated in the form of wages, interest and profits. This makes the first round of income generation.

• Assuming MPC =0.8; total expenditure on consumer goods= (100million) X (0.8) =Rs 80million This expenditure generates income worth Rs 80million in second round.

Static Multiplier

• Static Multiplier is also known by names viz. comparative static multiplier', 'simultaneous multiplier', 'logical multiplier', 'timeless multiplier', 'lagless multiplier'.

• It implies that change in investment causes in income instantaneously.

• It means that there is no time lag between the change in investment and change in income. The moment a Rupee is spent on investment project, society's income increases by a multiple of Re 1.

K=1/1-MPC

Dynamic Multiplier

The change in the income as a result of change in investment is not instantaneous. There is a gradual process by which income changes as a result of change in investment. The process of change in income involves a time-lag.

Dynamic Multiplier

• Since Multiplier process works through the process of income generation and consumption ,the time lag involved is the gap

between the change in income and the change in consumption at different stages.

The Dynamic Multiplier is essentially stage by stage computation of the change in income resulting from the change in investment till the full effect of the multiplier is realised.

Limitations

1) Rate of multiplier dependent on rate of MPC i.e. lower MPC rate implies lower rate of

multiplier and vice versa. This may not be a practical situation for developing and underdeveloped countries.

2) The process assumes no leakages in the consumption out of new income which is not

practical since part of the additional income may be spent on:

Payment of Past Debts

• Purchase of Existing Wealth

• Import of goods and services etc.

This means no new demand for consumer goods is generated here.

3. Non-availability of consumer goods and services in line with the actual demand.

4. Full employment situation means no additional real income.

National Measurement National Income & Measurement

Definition of National Income

The total net value of all goods and services produced within a nation over a specified period of time, residents time, representing the sum of wages, profits, rents, interest, and pension payments to residents of the nation.

Measures Income Measures of National Income

For aggregate For the purpose of measurement and analysis, national income can be viewed as an aggregate of is of various component flows. The most comprehensive measure of aggregate income which is widely known is Gross National Product at market prices.

Gross Concept Gross and Net Concept

Gross emphasizes that no allowance for capital consumption has been made or that depreciation has depreciation has yet to be deducted. Net indicates that provision for capital consumption has already been made or that depreciation has already been deducted.

National and Domestic Concepts

The term national denotes that the aggregate under consideration represents the total income which production which accrues to the normal residents of a country due to their participation in world production during the current year.

It is also possible to measure the value of the total output or income originating within the specified resulting specified geographical boundary of a country known as domestic territory. The resulting measure measure is called "domestic product".

Market Costs Market Prices and Factor Costs

The valuation of the national product at market prices indicates the total amount actually paid bythe total the final buyers while the valuation of national product at factor cost is a measure of the total amount amount earned by the factors of production for their contribution to the final output.

GNP at market price = GNP at factor cost + indirect taxes - Subsidies.

NNP Subsidies NNP at market price = NNP at factor cost + indirect taxes - Subsidies

Gross National Product and Gross Domestic Product

For some purposes we need to find the total income generated from production within the territorial that territorial boundaries of an economy irrespective of whether it belongs to the inhabitants of that nation nation or not. Such an income is known as Gross Domestic Product (GDP) and found as –

GDP Abroad GDP = GNP - Nnet Factor Income From Abroad

Net Paid Net Factor Income from Abroad = Factor Income Received From Abroad - Factor Income Paid Abroad

Net National Product

The NNP is an alternative and closely related measure of the national income. It differs from GNP GNP in only one respect. GNP is the sum of final products. It includes consumption of goods, gross investment, government expenditures on goods and services, and net exports.

GNP Depreciation GNP = NNP − Depreciation

NNP includes net private investment while GNP includes gross private domestic investment.

Personal Income

Personal income is calculated by subtracting from national income those types of incomes which currently which are earned but not received and adding those types which are received but not currently earned.

Personal Transfer Personal Income = NNP at Factor Cost − Undistributed Profits − Corporate Taxes + Transfer Payments

Disposable Income

Disposable income is the total income that actually remains with individuals to dispose off as they they wish. It differs from personal income by the amount of direct taxes paid by individuals.

Disposable taxes Disposable Income = Personal Income − Personal taxes

Value Added

The concept of value added is a useful device to find out the exact amount that is added at each stage the stage of production to the value of the final product. Value added can be defined as the difference incurred difference between the value of output produced by that firm and the total expenditure incurred by by it on the materials and intermediate products purchased from other business firms.

Methods of Measuring National Income

Let's have a look at the following ways of measuring national income −

Product Approach

In product approach, national income is measured as a flow of goods and services. Value of money for all final goods and services is produced in an economy during a year. Final goods are those our those goods which are directly consumed and not used in further production process. In our economy to economy product approach benefits various sectors like forestry, agriculture, mining etc to estimate estimate gross and net value.

Income Approach

In income approach, national income is measured as a flow of factor incomes. Income received by isby basic factors like labor, capital, land and entrepreneurship are summed up. This approach is also also called as income distributed approach.

Expenditure Approach

This method is known as the final product method. In this method, national income is measure das areas a flow of expenditure incurred by the society in a particular year. The expenditures are classified government classified as personal consumption expenditure, net domestic investment, government expenditure expenditure on goods and services and net foreign investment.

These three approaches to the measurement of national income yield identical results. They provide three alternative methods of measuring essentially the same magnitude.

National Income Determination

Factors Determining the National Income

According to Keynes there are two major factors that determine the national income of an economy economy −

Aggregate Supply

Aggregate total Aggregate supply comprises of consumer goods as well as producer goods. It is defined as total value goods value of goods and services produced and supplied at a particular point of time. When goods and services produced at a particular point of time is multiplied by the respective prices of goods and services, it helps us in getting the total value of the national output. The formula for determining determining the aggregate national income is follows −

Aggregate Income = Consumption(C) + Saving (S)

Few factor prices such as wages, rents are rigid in the short run. When demand in an economy increases, the increases, firms also tend to increase production to some extent. However, along with the production, also production, some factor prices and the amount of inputs needed to increase production also increase.

Aggregate Demand

Aggregate time, Aggregate demand is the effective aggregate expenditure of an economy in a particular time period. Demand period. It is the effective demand which is equal to the actual expenditure. Aggregate demand involves for involves concepts namely aggregate demand for consumer goods and aggregate demand for capital goods. Aggregate demand can be represented by the following formula –

AD IAD = C + I

As per Keynes theory of nation income, investment (I) remains constant throughout, while consumption (C) keeps changing, and thus consumption is the major determinant of income.

MEASUREMENT OF NATIONAL INCOME IN INDIA

DEFINITION OF NATIONAL INCOME

National income is the final outcome of all economic activities of a nation valued in terms of money. National income is the most important macroeconomic variable and determinant of the business level and environment of a country. The level of national income determines the level of aggregate demand for goods and services.

national income is the money value of the end result of all economic

activities of the nation. Economic activities generate a large number of goods and services, and make net addition to the national stock of capital.

MEASURES OF NATIONAL INCOME

1. Gross National Product (GNP):-

The GNP is defined as the value of all final goods and services produced during a specific period, usually one year, plus incomes earned abroad by the nationals minus incomes earned locally by the foreigners.

GNP = GNI. The difference between the two is only of procedural nature. While GNP is estimated on the basis of product-flows, the GNI is estimated on the basis of money income flows, (i.e., wages, profits, rent, interest, etc.).

2. Gross Domestic Product (GDP):-

The Gross Domestic Product (GDP) is defined as the market value of all final goods and services produced in the domestic economy during a period of one year.

Plus incomes earned abroad by the nationals.

3. Net National Product (NNP):-

1. NNP is defined as GNP less depreciation, i.e., NNP = GNP – Depreciation.

2. Depreciation is that part of total productive assets which is used to replace the capital worn out in the process of creating.

GNP the process of producing goods and services (including capital goods), a part of total stock of capital is used up . Depreciation' is the term used to denote the worn out or used up capital. An estimated value of depreciation is deducted from the GNP to arrive at NNP.

The national income of a country can be measured by three alternative methods: -
(i) Product Method

(ii) Income Method

(iii) Expenditure Method.

1. Product Method:

In this method, national income is measured as a flow of goods and services. We calculate money value of all final goods and services produced in an economy during a year. Final goods here refer to those goods which are directly consumed and not used in further production process.

The money value is calculated at market prices so sum-total is the GDP at market prices. GDP at market price can be converted into by methods discussed earlier

2. Income Method:-

Under this method, national income is measured as a flow of factor incomes. There are generally four factors of production labour, capital, land and entrepreneurship. Labour gets wages and salaries, capital gets interest, land gets rent and entrepreneurship gets profit as their remuneration.

Besides, there are some self-employed persons who employ their own labour and capital such as doctors, advocates, CAs, etc. Their income is called mixed income. The sum-total of all these factor incomes is called NDP at factor costs.

3. Expenditure Method:

In this method, national income is measured as a flow of expenditure. GDP is sum-total of private consumption expenditure. Government consumption expenditure, gross capital formation (Government and private) and net exports (Export-Import).

National Income: Some Accounting Relationships

(a) Accounting Identities at Market Price

GNP ≡ GNI (Gross National Income)

GDP ≡ GNP less Net Income from Abroad

NNP ≡ GNP less Depreciation

NDP (Net Domestic Product) ≡ NNP less net income from abroad

(b) Some Accounting Identities at Factor Cost

GNP at factor cost ≡ GNP at market price less net indirect taxes.

Concept and Measurement

NNP at factor cost ≡ NNP at market price less net indirect taxes

NDP at factor cost ≡ NNP at market price less net income from abroad

NDP at factor cost ≡ NDP at market price less net indirect taxes

NDP at factor cost ≡ GDP at market price less Depreciation

Treatment of Net Income from Abroad:-

In the process, some nations get net income through foreign

trade while some lose their income to foreigners. The net earnings or loss in foreign trade affects the national income. In measuring the national income, the net concept and Measurement result of external transactions are adjusted to the total. Net incomes from abroad are added to, and net losses to the foreigners are deducted from the total national income arrived at through any of the above three methods.

MEASUREMENT OF NATIONAL INCOME IN INDIA:-

1. In India, a systematic measurement of national income was first attempted in 1949.

Earlier, many attempts were made by some individuals and institutions.

2. India's national income was made by Dadabhai Naoroji in 1867–68.

3. In 1949, A National Income Committee (NIC) was appointed with P.C. Mahalanobis as its Chairman, and D.R. Gadgil and V.K.R.V. Rao as members. The NIC not only highlighted the limitations of the statistical system of that time but also suggested ways and means to improve data

collection systems. On the recommendation of the Committee, the Directorate of National Sample Survey was set up to collect additional data required for estimating national income

Methodology used in India:-

Currently, net output and factor income methods are used by the CSO to estimate the national income of the country. The output method is used for agriculture and manufacturing sectors, i.e., the commodity producing sectors. For these sectors, the value added method is adopted. Income method is used for the service sectors including trade, commerce, transport and government services. In its conventional series of national income statistics from 1950-51 to 1966-67, the CSO had categorized the income in 13 sectors. But, in the revised series, it had adopted the following 15 break-ups of the national economy for estimating the national income;

(i) Agriculture (ii)Forestry and logging (iii) Fishing
(iv)Mining and quarrying (v) Large-scale manufacturing

(vi) Small-scale manufacturing
(vii) Construction

(viii) Electricity, gas and water supply
(ix) Transport and communication (xii) Real estate and dwellings;
(xiii) Public Administration and Defense
(xiv) Other services
(xv) External transactions.
The national income is estimated at both constant and current prices.

National income is the market value of all final goods and services produced in a

country over a period of time, generally one year. In general, there are three important measures of national income, viz.,

(i) GNP,

(ii) GDP, and

(iii) NNP.

In measuring GNP, income earned abroad by the nationals is added and income earned

by foreigners in the country is subtracted from national income estimates; on the

contrary, a reverse process is used in estimating GDP.

NNP is defined as GNP–Depreciation. Depreciation equals the loss of national capital in the process of production. There are three methods of measuring national income:
(i) Value-added method,

(ii) factor-income method

(iii) expenditure method.

The choice of method depends on the availability of data required for estimating national income. Often two or all the three methods are combined to estimate national.

income In India, an organization called CSO estimates the national income. It uses net output and factor

The Labor Market: Basic Concepts

The unemployment rate is the ratio of the number of people unemployed to the total number of people in the labor force.

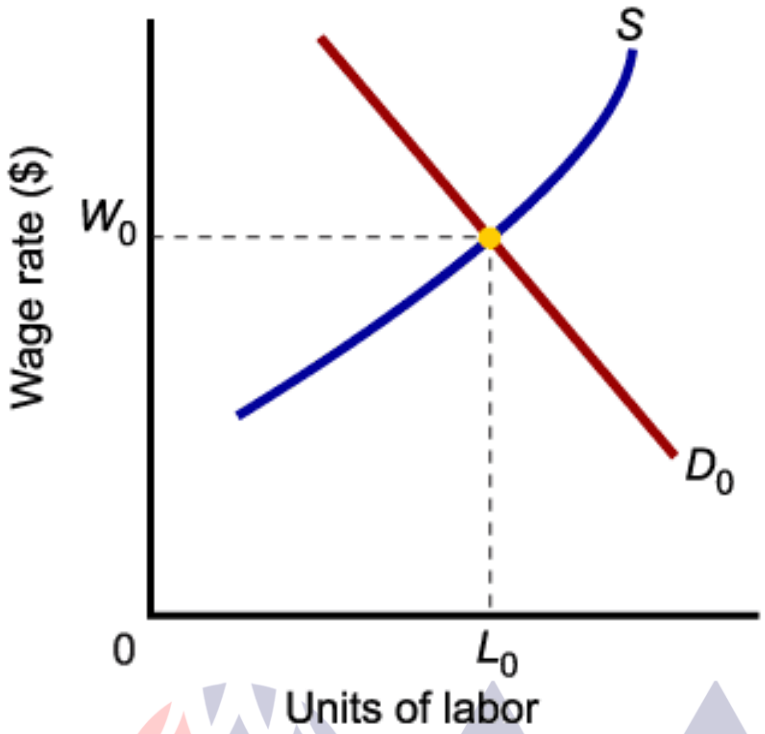
Frictional unemployment is the portion of unemployment that is due to the normal working of the labor market; used to denote short-run job/skill matching problems.

Structural unemployment is the portion of unemployment that is due to changes in the structure of the economy that result in a significant loss of jobs in certain industries.

Cyclical unemployment is the increase in unemployment that occurs during recessions and depressions. Employment tends to fall when aggregate output falls and rise when aggregate output rises.

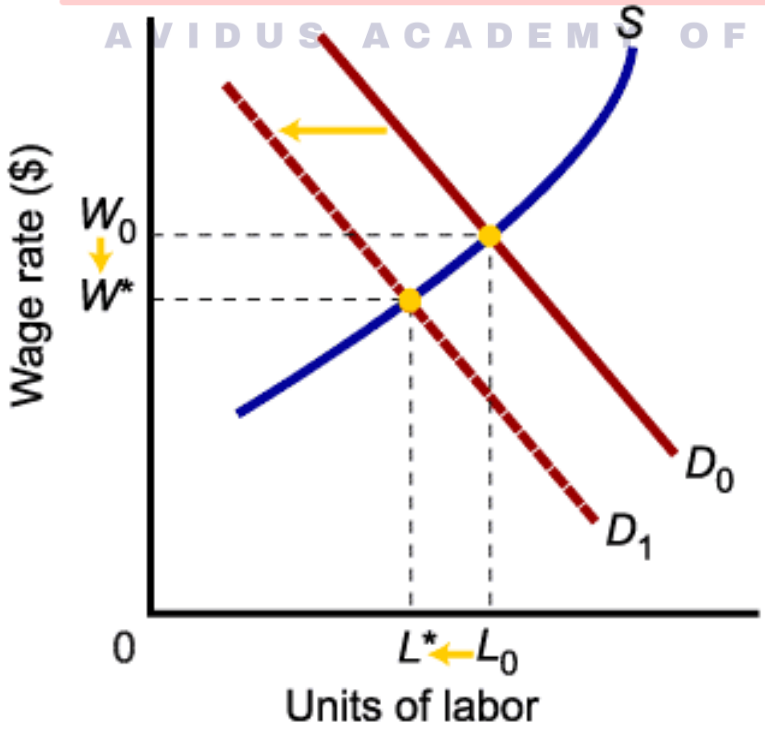
The Classical View of the Labor Market

The view of classical economists was that if the quantity of labor demanded and the quantity of labor supplied are brought into equilibrium by rising and falling wage rates, there should be no persistent unemployment above the frictional and structural amount.



The labor supply curve illustrates the amount of labor that households want to supply at the particular wage rate.

The labor demand curve illustrates the amount of labor that firms want to employ at the particular wage rate.



Classical economists believe that the labor market always clears.

If labor demand decreases, the equilibrium wage will fall. Everyone who wants a job at W* will have one. There is always full employment in this sense.

The Classical Labor Market and the Aggregate Supply Curve

The classical idea that wages adjust to clear the labor market is consistent with the view that wages respond quickly to price changes.

This means that the AS curve is vertical. Therefore, monetary and fiscal policy cannot affect the level of output and employment in the economy.

The Unemployment Rate and the Classical View

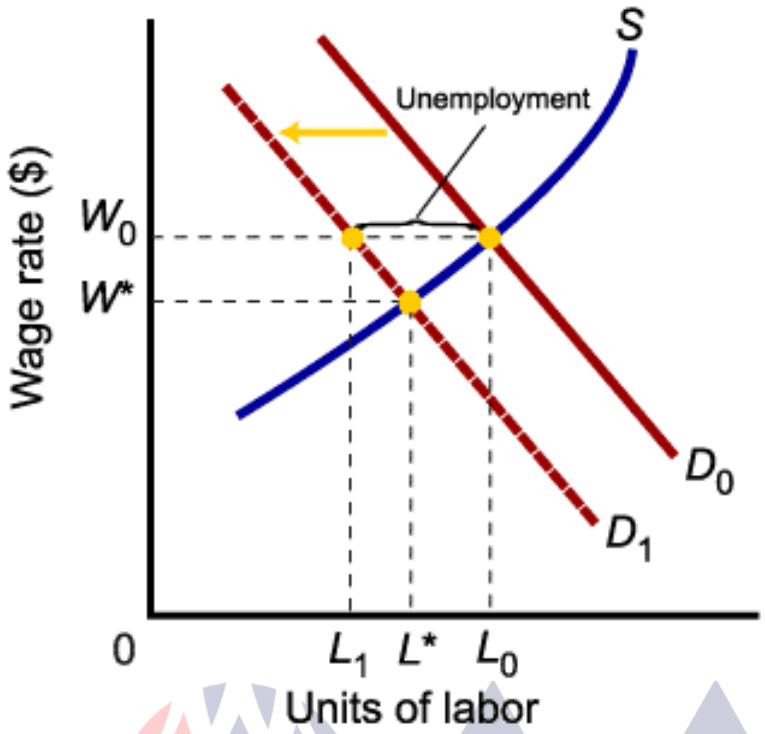
The unemployment rate as measured by the government is not necessarily an accurate indicator of whether the labor market is working properly.

The unemployment rate may sometimes seem high even though the labor market is working well.

The fact that people are willing to work at a wage higher than the current wage does not mean that the labor market is not working.

Explaining the Existence
of Unemployment

The term sticky wages refers to the downward rigidity of wages as an explanation for the existence of unemployment.



If wages "stick" at W0 rather than fall to the new equilibrium wage of W* following a shift of demand, the result will be unemployment equal to L0 – L1.

Explaining the Existence of Unemployment

One explanation for downwardly sticky wages is that firms enter into social, or implicit, contracts. These contracts are unspoken agreements between workers and firms that firms will not cut wages.

The relative-wage explanation of unemployment holds that workers are concerned about their wages relative to the wages of other workers in other firms and industries. They may be unwilling to accept wage cuts unless they know other workers are receiving similar cuts.

Explicit contracts are employment contracts that stipulate workers' wages, usually for a period of one to three years. Wages set in this way do not fluctuate with economic conditions.

Cost of living adjustments (COLAs) are contract provisions that tie wages to changes in the cost of living. The greater the inflation rate, the more wages are raised.

The efficiency wage theory is an explanation for unemployment that holds that the productivity of workers increases with the wage rate. If this is so, firms may have an incentive to pay wages above the market-clearing rate.

If firms have imperfect information, they may simply set wages wrong—wages that do not clear the labor market.

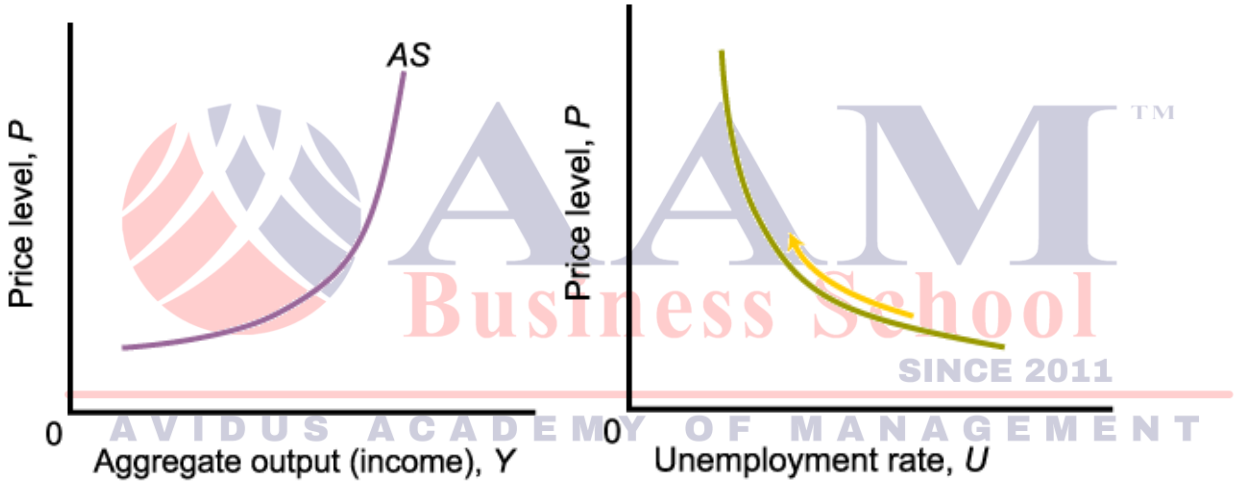
Minimum wage laws set a floor for wage rates, and explain at least a fraction of unemployment.

The Short-Run Relationship Between the Unemployment Rate and Inflation

The unemployment rate (U) and aggregate output (income) (Y) are negatively related.

The relationship between Y and the price level (P) is positive, as depicted by the AS curve.

The relationship between U and P is negative. As U declines in response to the economy moving closer and closer to capacity output, the overall price level rises more and more.



Full Employment

What Is Full Employment?

Full employment is an economic situation in which all available labor resources are being used in the most efficient way possible. Full employment embodies the highest amount of skilled and unskilled labor that can be employed within an economy at any given time.

True full employment is an ideal—and probably unachievable—situation in which anyone who is willing and able to work can find a job, and unemployment is zero. It is a theoretical goal for economic policymakers to aim for rather than an actually observed state of the economy. In practical terms, economists can define various levels of full employment that are associated with low but non-zero rates of unemployment.

KEY TAKEAWAYS

Full employment is when all available labor resources are being used in the most efficient way possible.

Full employment embodies the highest amount of skilled and unskilled labor that can be employed within an economy at any given time.

Economists define various types of full employment based on their theories as targets for economic policy.

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Full Employment

Understanding Full Employment

Full employment is seen as the ideal employment rate within an economy at which no workers are involuntarily unemployed. Full employment of labor is one component of an economy that is operating at its full productive potential and producing at a point along its production possibilities frontier. If there is any unemployment, then the economy is not producing at full potential, and some improvement in economic efficiency may be possible. However, because it may not be practically possible to eliminate all unemployment from all sources, full employment may not actually be attainable.

Types of Unemployment

Unemployment can result from cyclical, structural, frictional, or institutional causes. Policymakers can focus on reducing the underlying causes of each of these types of unemployment, but in doing so they may face trade-offs against other policy goals.

Structural

The desire to encourage technological progress can cause structural unemployment. For example, when workers find themselves obsolete due to the automation of factories or the use of artificial intelligence.

Institutional

Institutional unemployment arises from institutional policies that affect the economy. These can include governmental programs promoting social equity and offering generous safety net benefits, and labor market phenomena, such as unionization and discriminatory hiring.

Frictional

Some unemployment may be unavoidable by policymakers entirely, such as frictional unemployment, which is caused by workers voluntarily changing jobs or first entering the workforce. Searching for a new job, recruiting new employees, and matching the right worker to the right job are all a part of it.

Cyclical

Cyclical unemployment is the fluctuating type of unemployment that rises and falls within the normal course of the business cycle. This unemployment rises when an economy is in a recession and falls

when an economy is growing. Therefore, for an economy to be at full employment, it cannot be in a recession that's causing cyclical unemployment.

For the most part, macroeconomic policymakers focus on reducing cyclical unemployment to move the economy toward full employment, but in this case they may face trade-offs against rising inflation or the risk of distorting other sectors of the economy.

Cyclical unemployment, which is driven by changes in economic cycles, should not be confused with "seasonal unemployment," where there are changes in the workforce that predictably occur throughout the year, For example, jobs in the retail sector typically decrease after the traditional run-up to the holiday shopping season ends after New Year's. Unemployment rises when people hired for the holidays are no longer needed to meet demand.

The Phillips curve posits that full employment inevitably results in higher inflation, which in turn leads to increasing unemployment.

The Phillips Curve

In terms of cyclical unemployment, many macroeconomic theories present full employment as a goal that, once attained, often results in an inflationary period. The link between inflation and unemployment is a prominent part of the Monetarist and Keynesian theories. This inflation is a result of workers having more disposable income, which would drive prices upward, according to the concept of the Phillips curve.

This poses a potential problem for economic policymakers, such as the U.S. Federal Reserve, that have a dual mandate to achieve and maintain both stable prices and full employment.1 If there is, in fact, a trade-off between employment and inflation, per the Phillips curve, then simultaneous full employment and price stability may not be possible.

The Austrian School

On the other hand, some economists also argue against the overzealous pursuit of full employment, especially via over-expansion of money and credit through monetary policy. Economists of the Austrian School believe that this will result in damaging distortions to the financial and manufacturing sectors of the economy. This might even result in more unemployment in the long run by precipitating a subsequent recession as real resource constraints come into conflict with artificially increased demand for various types of capital goods and complementary labor.

Types of Full Employment

Due to the difficulty, and questionable desirability, of achieving true full employment, economists have developed other, more pragmatic goals for economic policy.

First, the natural rate of unemployment represents only the amount of unemployment due to structural and frictional factors in labor markets. The natural rate serves as an achievable approximation of full

employment while accepting that technological change and the normal transaction costs of labor markets will always mean some modest unemployment at any given point in time.

Second, the non-accelerating inflation rate of unemployment (NAIRU) represents the rate of unemployment that is consistent with a low, stable rate of price inflation. The NAIRU is useful as a policy target for economic policymakers who operate under a dual mandate to balance full employment and stable prices. It is not full employment, but it is the closest the economy can be to full employment without excessive upward pressure on prices from increasing wages. Note that the NAIRU only makes sense conceptually and as a policy target if and when there is indeed a stable trade-off between unemployment and inflation (the Phillips curve).

What is Unemployment?

Unemployment is a term referring to individuals who are employable and seeking a job but are unable to find a job. Furthermore, it is those people in the workforce or pool of people who are available for work that does not have an appropriate job. Usually measured by the unemployment rate, which is dividing the number of unemployed people by the total number of people in the workforce, unemployment serves as one of the indicators of an economy's status.

Looking deeper into unemployment

The term "unemployment" can be tricky and often confusing, but it certainly includes people who are waiting to return to a job after being discharged. However, it does not anymore encompass individuals who have stopped looking for a job in the past four weeks due to various reasons such as leaving work to pursue higher education, retirement, disability, and personal issues. Even people who are not actively seeking a job anywhere but actually want to find one are not considered unemployed.

Interestingly, people who have not looked for a job in the past four weeks but have been actively seeking one in the last 12 months are put into a category called the "marginally attached to the labor force." Within this category is another category called "discouraged workers," which refers to people who have lost all their hope of finding a job.

The too many details and exclusions mentioned above make a lot of people believe that unemployment is vague and that the rate does not fully represent the actual number of people who are unemployed. So, it is a good idea to also look at the term "employment," which the Bureau of Labor Statistics (BLS) describes as individuals aged 16 and above who have recently put hours into work in the past week, paid or otherwise, because of self-employment.

Types of unemployment

There are basically four types of unemployment: (1) demand deficient, (2) frictional, (3) structural, and (4) voluntary unemployment.

#1 Demand deficient unemployment

This is the biggest cause of unemployment that happens especially during a recession. When there is a reduction in the demand for the company's products or services, they will most likely cut back on their

production, making it unnecessary to retain a wide workforce within the organization. In effect, workers are laid off.

#2 Frictional unemployment

Frictional unemployment refers to workers who are in between jobs. An example is a worker who recently quit or was fired and is looking for a job in an economy that is not experiencing a recession. It is not an unhealthy thing because it is usually caused by workers looking for a job that is most suitable to their skills.

#3 Structural unemployment

Structural unemployment happens when the skills set of a worker does not match the skills demands of the jobs available or if the worker cannot reach the geographical location of a job. An example is a teaching job that requires relocation to China, but the worker cannot secure a work visa due to certain visa restrictions. It can also happen when there is a technological change in the organization, such as workflow automation.

#4 Voluntary unemployment

Voluntary unemployment happens when a worker decides to leave a job because it is no longer financially fulfilling. An example is a worker whose take-home pay is less than his or her cost of living.

Causes of unemployment

Unemployment is caused by various reasons that come from both the demand side, or employer, and the supply side, or the worker.

From the demand side, it may be caused by high interest rates, global recession, and financial crisis. From the supply side, frictional unemployment and structural employment play a great role.

Effects

The impact of unemployment can be felt by both the workers and the national economy and can create a ripple effect.

Unemployment causes workers to suffer financial difficulties that may lead to emotional destruction. When it happens, consumer spending, which is one of an economy's key drivers of growth, goes down, leading to a recession or even a depression when left unaddressed.

Unemployment results in lowered purchasing power, which, in turn, causes lowered profits for businesses and leads to budget cuts and workforce reductions. It creates a cycle that goes on and on and on. Everyone loses in the end.

Long-term unemployment vs. Short-term unemployment

Unemployment that lasts longer than 27 weeks even if the individual has sought employment in the last four weeks is called long-term unemployment. Its effects are far worse than short-term unemployment for obvious reasons, and the following are noted as some of its effects.

A huge 56% of the long-term unemployed reported a decrease in their income.

It seems that financial problems are not the only effects of long-term unemployment as 46% of those in such a state reported experiencing strained family relationships. The figure is relatively higher than the 39% percent who weren't unemployed for as long.

Another 43% of the long-term unemployed reported a significant effect on their ability to achieve their career goals.

Sadly, long-term unemployment led to 38% of these individuals to lose their self-respect and 24% to seek professional help.

summary

Unemployment is a serious social and economic issue that results in a tremendous impact on everything but is often overlooked. A stronger system of assessing unemployment should be put in place in order to determine its causes and how to address it better.

Under employment

Underemployment is similar in that the people are not counted on the unemployment rolls, but different in the reason. These are people who can't find a job in their chosen field, or at their chosen salary, and so they accept. Yes, "Disguised unemployment" is sometimes called "hidden unemployment".

What is the difference between unemployment and underemployed?

Underemployment is different from unemployment in that the person is in fact, working, just not as much as they'd like or to the full extent of their abilities, skills, or education. A worker may be considered underemployed if they hold a part-time job instead of a full-time one

UNIT IV

The budget process in India, \

like in most other countries, comprises four distinct phases.

Budget formulation: the preparation of estimates of expenditure and receipts for the ensuing financial year;

Budget enactment: approval of the proposed Budget by the Legislature through the enactment of Finance Bill and Appropriation Bill;

Budget execution: enforcement of the provisions in the Finance Act and Appropriation Act by the government—collection of receipts and making disbursements for various services as approved by the Legislature; and

Legislative review of budget implementation: audits of government's financial operations on behalf of the Legislature.

Process starts August-September

In the Union government, there is a budget division in the department of economic affairs under the Ministry of Finance. This division starts the process of formulation of the next financial year's Union budget in the months of August–September every year.

To start the process, the budget division issues an annual budget circular around the last week of August or the first fortnight of September every year. This annual budget circular contains detailed instructions for the Union government ministries/departments relating to the form and content of the statement of budget estimates to be prepared by them.

Estimates, revised estimates and actuals

It must be noted that the ministries are required to provide three different kinds of figures relating to their expenditures and receipts during this process of budget preparation. These are: budget estimates, revised estimates and actuals. Let us consider, for instance, the case of budget preparation in the second half of the calendar year 2011. The Union government would prepare the budget for 2012-13 during the time period of September 2011 to February 2012. In this case, the approval of Parliament would be sought for the estimated receipts/expenditures for 2012-13, which would be called budget estimates.

At the same time, the Union government, in its budget for 2012-13, would also present revised estimates for the ongoing financial year 2011-12. We may note here that the government would not seek approval from Parliament of revised estimates of 2011-12; but, these revised estimates would allow the government to reallocate its funds among various ministries based on the implementation of the budget for 2011-12 during the first six months of financial year 2011-12.

Finally, ministries would also be reporting their actual receipts and expenditures for the previous financial year 2010-11. Hence, the Union budget for 2012-13 would consist of budget estimates for 2012-13, revised estimates for 2011-12, and actual expenditures and receipts of 2010-11.

Planning Commission's role

The ministries would provide budget estimates for plan expenditure for budget estimates for the next financial year, only after they have discussed their respective plan schemes with the Central Planning Commission. The Planning Commission depends on the finance ministry to first arrive at the size of the gross budgetary support, which would be provided in the budget for the next annual plan of the Union government. In principle, the size of each annual plan should be derived from the approved size of the overall Five-Year Plan (12th Five-Year Plan, 2012-13 to 2016-17, in the present instance). However, in practice, the size of the gross budgetary support for an annual plan also depends on the expected availability of funds with the finance ministry for the next financial year.

Call to reduce deficit

In the past few years, the finance ministry has been vociferously arguing for reduction of fiscal deficit and revenue deficit of the Union government, citing the targets set by the Fiscal Responsibility and Budget Management Act and its rules. Hence, presently, the aspirations of the Planning Commission and Union government ministries with regard to spending face the legal hurdle of this Act, which has made it mandatory for the Union government to show the revenue deficit as nil (total revenue expenditure not exceeding total revenue receipts by even a single rupee) and the fiscal deficit as less than 3 per cent of GDP. This means new borrowing of the government in a financial year cannot exceed 3 per cent of the country's GDP for that year.

Final stages

Also, during the final stage of budget preparation, the revenue-earning ministries of the Union government provide the estimates for their revenue receipts in the current fiscal year (revised estimates) and next fiscal year (budget estimates) to the finance ministry. Subsequently, usually in the month of January, more attention is paid to finalisation of the estimated receipts. With an idea about the total requirement of resources to meet expenditures in the next fiscal year, the finance ministry focuses on the revenue receipts for the next fiscal.

In the final stage of budget preparation, the finance minister examines the budget proposals prepared by the ministry and makes changes in them, if required. The finance minister consults the prime minister, and also briefs the Union Cabinet, about the budget at this stage. If there is any conflict between any ministry and the finance ministry with regard to the budget, the matter is supposed to be resolved by the Cabinet.

In the final stage, the budget division in the finance ministry consolidates all figures to be presented in the budget and prepares the final budget documents. The National Informatics Centre (NIC) helps the budget division in the process of consolidation of the budget data, which has been fully computerised. At the end of this process, the finance minister takes the permission of the president of India for presenting the Union budget to Parliament.

As per the Constitution, the Union budget is to be presented in the Lok Sabha on such a day as the president may direct. By convention, Union budget has been presented in Lok Sabha by the finance minister on the last working day of the month of February every year.

The finance minister, by convention, makes a speech while introducing the budget. The annual financial statement is laid on the table of Rajya Sabha only after the finance minister concludes his budget speech in Lok Sabha. The budget documents are made available to the members of Parliament after the finance bill has been introduced in Lok Sabha, and the House has been adjourned for the day.

It may be noted that the budget process in India lacks transparency in one aspect: while enactment of the Budget by the legislature and the review of its implementation are reasonably transparent, the process of budget preparation by the government is carried out behind closed doors.

Essay # 1. Introduction to Regional Rural Banks of India:

Rural banking institutions are playing a very important role for all-round development of rural areas of the country. In order to support the rural banking sector in recent years, Regional Rural Banks have been set up all over the country with the objective of meeting the credit needs of the most under privileged sections of the society.

These Regional Rural Banks (RRBs) have been receiving a high degree of importance and attention in the rural credit system.

Considering the gross absence of banking facilities in the rural areas of the country, the Reserve Bank of India in consultation with the Central Government, State Governments and some major nationalized sponsored banks had set up some Regional Rural Banks in the late 1970s with a view to elevate the economic status of the rural poor as well as to inculcate a habit of saving among the rural masses.

As per the recommendations of the Working Group on Rural Banks, the regional rural banks were established in 1975 for supplementing the commercial banks and co-operatives in supplying rural credit. The main objective of regional rural banks in India is to advance credit and other facilities, especially to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs in order to develop agriculture, trade, commerce, industry and other usual productive activities in different rural areas of the country.

At the initial stage, five regional rural banks were established on October 2, 1975 at Gorakhpur and Moradabad in Uttar Pradesh, Jaipur in Rajasthan, Bhiwani in Haryana and Malda in West Bengal under the sponsorship of State Bank of India, the Syndicate Bank, United Commercial Bank, Punjab National Bank and United Bank of India respectively.

All these five RRBs have an authorised capital of Rs 1 crore and paid-up capital of Rs 25 lakh. The share capital of RRB is subscribed in the following manner—as the Central Government—50 per cent, the State Government concerned—15 per cent and the sponsoring commercial bank—35 per cent.

The regional rural banks are maintaining its special charter it their of operation is very much limited to a definite region, grant direct loan to rural people at concessional rates and receive subsidies and concessions from the Reserve Bank and the sponsoring bank.

The concessions granted by the Reserve Bank of India are:

(a) Allowing RRBs to maintain cash reserve ratio at 3 per cent and statutory liquidity ratio at 25 per cent; and

(b) Providing refinance facilities to RRBs through NABARD.

Essay # 2. Progress of Regional Rural Banks in India:

In the mean time, the regional rural banks have extended their network throughout the country to a considerable extent. Initially, there were 196 regional rural banks operating in 28 states with nearly 14,700 branches. Till June 1996, these RRBs have been lending annually nearly Rs 1500 crore to the rural people and more than 90 per cent of the loan has been advanced to weaker sections.

As on September, 1990, the RRBs had advanced jointly to the tune of Rs 3,560 crore in the form of short-term crop loans, term loans for agricultural activities, for rural artisans, cottage and village industries, retail trade, self-employment projects and consumption loans etc.

Among all the states, Uttar Pradesh is the state where larger number of RRB branches has already been opened. Recently, after amalgamation, the number of RRBs has been reduced to 92.

During the last 30 years, RRBs have been participating actively in various programmes designed for providing credit assistance to identified beneficiaries included under the new 20 Point Programme, IRDP and other programmes designed for scheduled castes and tribes. RRBs are also advancing loans to weaker sections and physically handicapped persons under differential rate of industrial (DIR) schemes.

At the end of June 2014, there were 92 amalgamated RRBs, covering 518 districts of the country with a network of 18,291 branches. Out of all these branches of RRBs, 4,042 are the rural branches as on June 30, 2014 which constitute about 21.4 per cent of the total branches of RRBs.

The loans and advances stood at Rs 7,852.7 crore as at the end of September 1996. Again, Rs 15,423 crore were mobilised as deposits by RRBs at the end of September 1996. Consequent upon the permission of the Reserve Bank of India to determine their own lending rate with effect from 26 August 1996, most of the RRBs have been charging interest rates on their loans varying between 13.5 to 19.5 per cent per annum.

In recent years, under the softer interest regime, interest rates on loans advanced by RRBs have also declined considerably. Again, total amount of credit advanced to the agriculture by the RRBs increased considerably from Rs 6,069.79 crore in 2002-03 to Rs 43,968 crore in 2010-11.

As on March 31, 2002 total outstanding deposits of RRBs stood at Rs 44,327.81 crore and total outstanding advances stood at Rs 18,586.97 crore. Out of the 196 RRBs, 170 RRBs are making profit in recent years after introducing measures under banking reforms. Chalapathi Rao Committee on Regional Rural Banks has also recommended privatisation of profit making RRBs in a phased manner.

In order to make Financial Inclusion Plan of the government effective and to expand the penetration of banking network in unbanked and under-banked rural areas, regional rural banks (RRBs) also worked out its branch expansion plan for 2011-12 and 2012-13 with 10 per cent increase over the previous year.

Accordingly, RRBs could open 913 branches in 2011-12 against its target of opening 1247 branches. This figure compares favorably with that of opening of 521 branches in 2010-11 and 299 branches in 2009-10. For 2012-13, a target of opening 1845 new branches has also been set.

Essay # 3. Evaluation of Regional Rural Banks:

Regional Rural Banks have made commendable progress in advancing various types of loan to the weaker and under privileged section of the rural society. As per our recent RBI report, "The RRBs have fared well in achieving the objective of providing access to weaker sections of the society to institutional credit but the recovery position on the whole is not satisfactory."

The working of RRBs was evaluated by the Narasimham Committee on the Financial System. Although RRBs were set up in order to provide a low cost alternative to the operation of commercial bank branches, particularly in the rural areas but the functioning of RRBs was not up to the mark.

The Committee mentioned three basic problems of RRBs:

(a) RRBs have a low earning capacity due to so many restrictions placed on the business undertaken by these banks;

(b) With the recent award of a tribunal the wages and salary scales of RRBs would be similar to that of commercial banks and thus the very idea of low cost alternative to the operation of commercial bank has been nullified; and

(c) The very area of operations of RRBs is also being utilised by the sponsoring banks by running their own rural branches leading to certain anomalies like duplication of services and expenditures on control and administration.

Thus the Narasimham Committee is of the opinion that the viability of RRBs should be improved without sacrificing the basic objective. The Government should also try to evolve a rural banking structure and base of RRBs with adequate financial strength and management and organisational skills of the commercial banks.

But there are some inherent factors which are very much responsible for this non-viable nature of RRBs. These include:

(i) RRBs can set up its branches mostly in unbalanced and under-banked areas;

(ii) The lending operations of RRBs are very much confined to target group composed of small borrowers of rural and semi-urban areas; and

(iii) The rate of interest charged by RRBs on their loan are comparatively lower.

The Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAF1CARD) has also indicated the same above mentioned reasons responsible for growing non-viability of RRBs.

Essay # 4. Functional Superiority of Regional Rural Banks:

Regional Rural Banks have also established functional superiority over other commercial banks of the country. This superiority of RRBs has been brought out by the share of deposits contributed by these branch offices of RRBs in different states. The share of deposits of these branches of RRBs in December, 1991 in a state like Uttar Pradesh was 25.7 per cent in comparison to that of only 12.4 per cent for other Scheduled Commercial Banks.

This achievement is noteworthy if we consider that the number of branches of RRBs (1,193) was even lower than that of other scheduled commercial banks (1,361). Moreover, the share of deposits of RRBs in Haryana was also higher than other scheduled commercial banks which had comparatively double the number of branches.

Another important matter that has also been noticed is that most of the branches of RRBs are opened in unbanked centres and thus the deposits mobilised by them are fresh deposits and are not diverted from the deposits per branch of RRBs established before 1980 is uniformly higher in almost all the states of the country. In respect of credit operations, RRBs were successful in identifying the target groups and also in meeting their credit requirements.

Essay # 5. Unsatisfactory Performance of Regional Rural Banks:

The Regional Rural Banks (RRBs) have been experiencing an unsatisfactory performance since last few years. Therefore, the RRBs have now become a serious problem for the Indian Banking sector. They are now far from fulfilling purpose for which they were set up some two decades ago.

These RRBs have been incurring heavy losses year after year. In 1990-91, the RRBs incurred a total loss of Rs 92.87 crore, followed by Rs 258.66 crore during 1991-92. In 1993-94, 173 out of the country's 196 RRBs incurred losses to the tune of Rs 310 crore.

As per the latest data available with the National Bank for Agriculture and Rural Development (NABARD), the total accumulated losses of all Regional Rural Banks, operating in the country are estimated at Rs 2,176 crore as on 31st March, 1996.

It is, therefore, not surprising that these banks, established for the purpose of providing an impetus to rural growth have dismally failed to boost agro-based rural economy. One of the major contributory factors responsible for the mounting losses suffered by the RRBs has been very high overheads; in which a sizeable component is salaries. Employees of RRBs earlier received lower scales of salaries compared to their counterparts in the scheduled nationalized banks.

However, in 1990, with implementation of the National Industrial Tribunal (NIT) Award in case of the employees of the RRBs, the structure of their emoluments was brought at par with that of the staff of the scheduled commercial banks.

The NIT award has enhanced the salary-allowance bill of RRBs by 35 per cent during the last three years, apart from increase in its other concomitant expenditure. Moreover, it also placed on the banks shoulder an arrear burden of Rs 225 crore.

While the annual wage liability of the RRBs has increased substantially, their income was declining rapidly on account of inadequate loan recoveries and scanty profits. Only 23 of the 196 RRBs were making a profit and the rest were all running losses. The aggregate level of loss at the end of March 1994 was Rs 906 crore.

Over the last three years, the credit-deposit ratio of RRBs had also declined from 85.6 in 1989-90 to as low as 68.7 in 1991-92. Further, the increasing number of defaulters has hampered the recycling of cash. In 1992, the loan over dues stood at Rs 1,314 crore.

Due to the constant efforts, at recapitalizing RRBs, at the end of March, 2000, 158 RRBs are posting operating profits. Out of these, 48 RRBs have been able to wipe out their accumulated losses. In view of the importance of RRBs in rural financing, the government has decided to continue with this programme of strengthening the RRBs in the coming years.

Essay # 6. Restructuring of Regional Rural Banks:

The present situation is forcing the bank to initiate corrective measures to put them back in stream. The government of India has undertaken restructuring of the RRBs. Towards that end their issue capital has been raised from Rs 25 lakh to Rs one crore in the case of 140 banks and Rs 50 lakh in the remaining cases. A provision of Rs 5 crore for the purpose was made by the government during 1993-94.

The issue capital of the RRBs is shared by the Central Government, all the state governments and various sponsoring banks. At the end of March, 1992 the total credit support extended to the banks amounted to Rs 4090.86 crore. As on the same date the banks had mobilised Rs 5868 crore from 345 lakh accounts.During. 1991-92, the RRBs disbursed only Rs 1,107 crore among 23 lakh rural people drawn from the weaker sections of the society.

To revitalize the banks a sum of Rs 402 crore was released in 1991-92 by the state owned National Bank for Agriculture and Rural Development (NABARD). The weak condition of RRBs has been reflected from the fact that many have completely wiped out their equity and reserves and in some, the losses are even eating into deposits.

This is an unsustainable situation and long term structural measures are necessary if these banks are to be rehabilitated.

Attributing high establishment and operational cost, low level of business and restricted area of operation as the main causes for the loss, the RBI had initiated certain measures to enable RRBs to diversify their operations.

In line with the government's focused strategy for improving the viability of the Regional Rural Banks in the country as many as 136 RRBs have been provided financial support to the tune of Rs 573 crore for their comprehensive revamping. By according priority to revival of viable RRBs instead of tackling the problem in a generalized manner, it is expected to bring down considerably the losses of RRBs and make them stand on their own feet.

The RRBs have been advised to prepare bank specific development action plans to enable them to adopt a systematic approach for their turn around. Besides, the RRBs have been permitted by the RBI to deploy a part of their surplus non-statutory liquidity Ratio fund in the credit portfolio of their sponsor banks.

The RBI has fully deregulated the interest rates that can be charged to the ultimate borrowers by the RRBs. Now there is even a move to merge all the 92 RRBs to form a National Rural Bank of India, for which NABARD would contribute 76 per cent of the equity.

Essay # 7. Recapitalisation of Regional Rural Banks to Improve their CRAR:

RRBs have been playing an important role in credit delivery in rural areas. In order to bring the capital to risk-weighted assets ratio (CRAR) or RRBs up to at least 9 per cent, Dr. K.C. Chakraborty Committee inter alia recommended recapitalization support to the extent of Rs 2,200 crore to 40 RRBs in 21 states.

In pursuant to the recommendation of the committee, recapitalization amount is to be shared by the stakeholders in proportion to their shareholding in RRBs, i.e., 50 per cent by central government, 15 per cent by concerned state government, and 35, per cent by the concerned sponsor banks.

Accordingly, the central government share works out to Rs 1,100 crore. The recapitalisation process, which started in 2010-11 was to be completed by 2011-12. Although the central government released about Rs 468.9 crore during 2010-11 and 2011-12 to 21 RRBs, but the process to recapitalisation could not be completed in 2011-12 as all the related state governments could not release their share towards recapitalisation.

Therefore, the recapitalisation scheme has been extended up to March 2014. In the mean time, the budget for 2012-13 has made provision for Rs 200 crore for this purpose and the same was released in time. Thus till 31st December 2012, a total sum of Rs 668.9 crore had been released by the government to 27 RRBs for its recapitalisation.

Essay # 8. Suggestions to Raise the Degree of Viability of Regional Rural Banks:

In order to raise the degree of viability of regional rural banks, some suggestions may be advanced in the following manner:

1. As suggested by CRAFICARD, the areas of operation of a RRB branch never offer sufficient potential for business and thus to attain viability this branches may cover the neighbouring districts. But the chances of extending this area of operation are very remote due to the introduction of the programme of Service Area Approach.

2. Within the service area, the RRBs must be allowed to finance the project of non-target groups after meeting the credit needs of target groups. Although CRAFICARD and Kelkar Committee did not favour the idea of RRBs financing non-target groups but recommended to lend to those public bodies established for the benefit and welfare of weaker sections.

3. In order to increase the resource base, the RRBs may be permitted to open their branches in the semi-urban and urban areas having larger business potential. Such branches will help the RRBs to mobilise the much needed resources required to meet rural obligations.

4. In order to diversify their deposit base, RRBs may be permitted to tap NRI deposits in those areas when they have such potential.

5. District administration should help the RRBs to recover the overdue loan amounts as the present recovery percentage remains as low as 23 per cent.

Essay # 9. Reforms of Regional Rural Banks:

In line with the reform of the banking system, Expert Groups were constituted to examine the major issue concerning managerial and financial restructuring of Regional Rural Banks (RRBs) to devise future course of action in their further reorganization, and to study the role which could be assigned to self-help groups and NGOs in improving the rural credit delivery system.

To ensure that the restructuring of RRBs is sustained and durable, prudential norms were introduced, in 1996 along the lines of those for commercial banks. RRBs will be required to adopt new income recognition norms and exposure limits for borrowers. Provisioning norms were introduced from the year 1996-97.

Essay # 10. Consolidation of Regional Rural Banks:

The Government has taken the initiative of consolidating Regional Rural Banks (RRBs) sponsored by the same bank within a state. This would widen the sphere and area of banks' operation and strengthen their functioning with a view to increase the flow of credit in the rural areas.

In terms of Section 23 of the Regional Rural Banks Act, 1976, the sponsor bank NABARD and the State Governments concerned have already given their concurrence for the proposed amalgamation of 14 RRBs.

Thus the process of merger in 196 RRBs, spread over 14,496 branches in 518 districts in India has quietly begun. A host of PSBs have taken a decision to merge some of their RRBs on a state-wise basis. The Government took systematic merger plan of RRBs on state-wise basis and one RRB started to function in each state province on 31st August, 2005 and as a result, the number of Regional Rural Banks (RRBs) had reduced to 92 from 196 due to amalgamation of RRBs sponsored by the same bank in a state.

The number of loss making RRBs reduced to 15 in 2006-07 from 22 in 2005-06. Of these seven have registered profit during the first half of 2007-08 and the remaining four posted profit by the end of 2007-08. The performance of RRBs has improved considerably as the percentage of their gross NPAs and net NPAs has reduced.

The net Worth of RRBs as a whole increased to Rs 4,545.86 crore as on March 31, 2007 from Rs 3,466.25 crore as on March 31, 2005.

Essay # 11. Amalgamation of Regional Rural Banks:

In order to improve the condition of RRBs and also to minimise overhead expenses and also to optimize the use of technology in RRBs, the government has initiated amalgamation of geographically contiguous RRBs in a State.

As a result of this step, the capital base and area of operation of amalgamated RRBs will be enhanced in order to serve their area better with absorption of technology and improved management. Till 1 January 2013, 22 RRBs had already been amalgamated into 9 RRBs.

FINANCIAL INSTITUTIONS OF INDIA (List)

NABARD (National Bank for Agriculture andural Development)

Established: NABARD was established on 12th July 1982 on the recommendation of CRAFICARD committee which is also known as the Sivaraman Comittee.
Headquarter: Mumbai, Maharashtra.
Chairman: Harsh Kumar Bhanwala.

Biggest Rural Development Bank

Established on 12 July 1982 on recommendation of Shivaraman committee to implement NABARD act 1981

AIM To uplift Rural India & rural non-farm sector.

NABARD acts as regulator for co-operative banks &RRB's (Regional Rural Banks).

Primary Function:

NABARD is the apex organisation related to financing in the agricultural sector.

It looks after matters concerned with policy, planning and operations in rural areas in India.

Rural Infrastructure Development Fund (RIDF) is operated by NABARD.

Provides refinance to lending institutions in rural areas.

Helps SHG (Self Help Group) & poor people in rural areas.

Runs programme for agricultural & rural development. Recommends about licensing for RRBs, Co-operative banks to RBI

SIDBI (Small Industries Development Bank of India)

Established: Small Industries Development Bank of India (SIDBI in short) was established on 2nd April 1990 under the Small Industries Development Bank of India Act 1989 as a subsidiary of Industrial Development Bank of India.
Headquarter: Lucknow, Uttar Pradesh.
Chairman: Dr. Kshatrapati Shivaji.

Primary Function:

SIDBI refinances loan & advances provided by the existing lending institution to small-scale units.

SIDBI is an independent financial institution which provides help for the growth and development of micro, small and medium-scale enterprises (MSME's).

The second fund is a debt fund called SIDBI make in India loan for enterprises (SMILE), which was announced in the Union budget (2015) in February. The fund will provide short-term loans and loans in the nature of quasi-equity of MSMEs to meet debt-to-equity norms and pursue growth.

IRDAI (Insurance Regulatory and Development Authority of India)

Established: IRDDAI was set up in the year 1999 by the Insurance Regulatory and Development Authority Act, 1999, which was passed by the Government of India.
Headquarter: Hyderabad, Telengana.
Chairman: T.S. Vijayan.
Primary Function:

The IRDAI is an autonomous, statutory agency tasked with regulating and promoting the insurance and re-insurance industries in India.

EXIM BANK (Export Import Bank)

Established: EXIM Bank was established on January 1, 1982 for the purpose of financing, facilitating and promoting foreign trade of India.
Headquarter: Mumbai, Maharashtra.
Chairman: Yaduvendra Mathur.
Primary Function:

The Export-Import (EXIM) Bank of India is the principal financial institution in India for coordinating the working of institutions engaged in financing export and import trade.

NHB (National Housing Bank)

Established: The bank started its operations from July 1988. National Housing Bank was established under section 6 of National Housing Bank Act (1987).
Headquarter: New Delhi
Chairman: Sriram Kalyanaraman.
Primary Function:

The National Housing Bank (NHB), the apex institution of housing finance in India, was set up as wholly owned subsidiary of the Reserve Bank of India.

ECGC (Export Credit Guarantee Corporation of India)

Established: ECGC Ltd. was established on 30 July, 1957 to strengthen the export promotion by covering the risk of exporting on credit.
Headquarter: Mumbai, Maharashtra.
Chairman: Geetha Muralidhar
Primary Function:

Export Credit Guarantee Corporation of India. This organisation provides risk as well as insurance cover to the Indian exporters.

SEBI (Securities and Exchange Board of India)

Established: SEBI was first set up as a non-statutory body in April 1988, to regulate the working of the stock exchange. Later it was made an autonomous body on 12 April 1992 via SEBI Act 1992. 1st chairman of SEBI is Dr S.A. Dave [12 April 1988-23 Aug 1990]
Headquarter: Mumbai, Maharashtra.
Chairman: Upendra Kumar Sinha.

Objective: Protects the interest of investors and to promote the development of stock exchange & regulate the activities of stock market.

As per the SEBI regulations, the level of risk will be depicted by the colour code boxes for Mutual Funds:

Blue: Principal at low risk

Yellow: Principal at medium risk

Brown: Principal at high risk.

This regulation came into effect on 1 July 2013 post which all the fund houses have labelled their funds can be the basis of the risk levels.

SEBI has launched a centralised web based system to redress complaints by SCORES.

Primary Function:

SEBI is the security market regulator in India.

IRDAI (Insurance Regulatory and Development Authority of India)

Established: IRDDAI was set up in the year 1999 by the Insurance Regulatory and Development Authority Act, 1999, which was passed by the Government of India.
Headquarter: Hyderabad, Telengana.
Chairman: T.S. Vijayan.

It is an autonomous apex statutory body to control & develop insurance agency in India. IRDA is a national agency of GOI.

Passed by Government of India under IRDA Act 1999 on the recommendation of Malhotra Committee.

It was incorporated as statutory body in April 2000

IRDA act 1999, amended in 2002 to incorporate some emerging requirements

Objective To protect the interest of policyholder, to regulate, promote & ensure orderly growth of the insurance industry & for matters connected there with or incidental there to.

Primary Function:

The IRDAI is an autonomous, statutory agency tasked with regulating and promoting the insurance and re-insurance industries in India.

EXIM BANK (Export Import Bank)

Established: EXIM Bank was established on January 1, 1982 for the purpose of financing, facilitating and promoting foreign trade of India.
Headquarter: Mumbai, Maharashtra.
Chairman: Yaduvendra Mathur.

It was established in 1982 under EXIM Bank of India Act 1981.

The bank lays special emphasis on extension of Lines of Credit (LOCs) to overseas entities, national govts., regional financial institution and Commercial Banks.

The bank extends Buyers credit & suppliers credit to finance and promote country's exports. To promote hi-tech exports from India, the bank has a lending programme to finance Research & Development (R & D) activities of export-oriented companies.

The authorised capital of the EXIM bank is Rs. 200 crore & paid up capital is Rs. 100 crore, wholly subscribed by the central government.

Primary Function:

The Export-Import (EXIM) Bank of India is the principal financial institution in India for coordinating the working of institutions engaged in financing export and import trade.

To tap domestic & foreign markets for resources. undertaking development & financial activities in export sector (export & import).

ECGC (Export Credit Guarantee Corporation of India)

Established: ECGC Ltd. was established on 30 July, 1957 to strengthen the export promotion by covering the risk of exporting on credit.
Headquarter: Mumbai, Maharashtra.
Chairman: Geetha Muralidhar

It is a company wholly owned by Government of India.

ECGC provide insurance cover in respect of risks in export trade. ECGC Ltd. provides export credit insurance support to Indian export and is controlled by the Ministry of Commerce.

ECGC Ltd. is the 7 largest credit insurer of the world in terms of courage of national exports.

Primary Function:

Export Credit Guarantee Corporation of India. This organisation provides risk as well as insurance cover to the Indian exporters.

NPCI (National Payments Corporation of India)

Headquarter: Mumbai
Head: Chairman - Sh. Balachandran
MD &CEO: A.P. Hota

NPCI was incorporated in Dec 2008 & the certificate of commencement of business was issued in April 2009.

NPCI was set up with the guidance & support of RBI& IBA (Indian Bank's Association).

NPCI has successfully completed the major project of developing a domestic card payment network-Rupay.

Presently, there are 10 crore promoter banks (SBI, PNB, BOB, BOI, Canara Bank, Union Bank of India, ICICI, HDFC, Citi Bank & HSBC).

NPCI is umbrella organisation for all retail payments systems in India. It introduced UPI, USSD, BHIM App, Bharat QR CODE, IMPS, National Financial Switch, CTS, BBPS, Rupay, NACH, AEPS.

Features of NPCI Model

AEPS (Aadhar Enabled Payment System):

It is a new payment service offered by the NPCI to banks, financial institutions using "Aadhar" number and online UIDAI authentication through their respective business correspondent service centres. RBI has approved the pilot of AEPS.

IMPS (Immediate Payment System):

It is an over the mobile 24×7 interbank electronic payment mechanism that enables customers to use mobile instruments, internet banking & ATMs as channels for accessing their bank accounts and placing interbank fund transfers in a secured manner

Requisites:

1. MMID:

Mobile Money Identifier is a7 digit code issued by bank to their customers. This number is mandatory for the beneficiary of funds if he wants to enter into a transaction

2. IFSC:

Indian Financial System Code is a code which is a kind of identity for a specific bank.

NFS (National Financial Switch):

It was initiated by Institute of Development & Research in Banking Technology and handed over to NPCI in 2009. NFS consists of a national switch to facilitate connectivity between banks switcher & their ATM's and interbank payment gateway for authentication and routing the payment details of various e-commerce transactions. NFS is India's largest ATM connecting facility. The main purpose of NFS initially was to include rural and co-operative banks under its umbrella.

Rupay:

Rupay is the Indian domestic card payment network being set up by NPCI on the behalf of banks in India

DICGC (Deposit Insurance and Credit Guarantee Corporation)

Established: Under DICGC act 1961 on 15 July 1978.
Subsidiary of RBI
Head office: Mumbai
Chairman: N.S. Vishwanathan
1. DICGC insures all bank deposits as saving, fixed, current, recurring etc except following deposits:

Deposits of foreign Government.

Deposits of state/central government

Interbank Deposits

Deposit of state land development banks with state cooperative banks

Any amount due on account and Any amount exempted by RBI approval deposit received outside India

2. DICGC insures upto maximum Rs.100,000 for both principal & interest held by a customer as on date of scheme merger/reconstruction or cancellation of bank's license come into force (in case of multiple a/e still maximum insured amount is Rs. 1 lakh).

All commercial banks, branches of foreign banks functioning in India, RRBs, local area bank co-operative banks are insured by DICGC.

GIC (General Insurance Corporation)

Founded: 22 Nov 1972 under the companies act 1956
Headquarter: Mumbai
Chairman: Alice-(-Vaidyan
GIC of India (GICRe) is the sole reinsurance company in the Indian insurance market.
NOTE: GICRe becomes Ist reinsurer to open office at India's Ist international Financial Service Centre (IFSC) at Gujarat International Finance Tec-city (Gift city).

LIC (Lite Insurance Corporation of India)

Headquarter: Mumbai
Chairman: Vijay Kumar Sharma

The company was founded in 1956 under Life Insurance of India act on 19 June 1956. LIC is an Indian state owned insurance group and investment company head quarter in Mumbai. It is the largest insurance company in India.

LIC offers a variety of Insurance products to its customers such as insurance plans, unit linked plans, special plans and group schemes

LIC's slogan yogakshemam vahamyaha is in Sanskrit language which translate in English as "your welfare is our responsibility". The slogan can be seen in the Logo, written in devanagri script.

AICIL (Agriculture Insurance Company of India Limited)

Started from 1 April 2003
Founded: 20 Dec. 2002 under Indian companies act 1956
Headquarter: New Delhi, India
Key people: Sh. Joesph Plappallil (MD & Chairman)

Slogan: Sampann Bharat ki Pehchan, Beemit Phasal Khushaal Kisan.

AICIL was incorporated with an authorized capital of Rs. 1500 Cr. It offers yield-based and weather based crop insurance programs in almost 500 districts of India. It covers almost 20 million farmers, making it the biggest crop insurer in the world in number of farmers served. AICIL commenced business from 1st April 2003.

AICIL is under the administrative control of Ministry of Finance, GOI and under the operational supervision of Ministry of Agriculture, GOI, IRDA, Hyderabad (India) is the regulatory body governing AICIL.

UTI (Unit Trust of India)

Industry: Mutual fund Founded 1964
Headquarter: Mumbai
Chairman: Leo Puri
Slogan: Haq, Ek Behtar Zindagi Ka.

UTI is a financial organization in India, which was created by the UTI Act passed by the parliament of India on December 30, 1963 under the direction of Col. Akash Behl.

UTI was established with an initial capital of Rs. 5 crore, contributed by the RBI, LIC, SBI & its subsidiaries and scheduled banks & financial institutions

CDSL (Central Depository Services Limited)

Founded: Feb, 1998
Headquarter: Mumbai
Chairman: P.S. Reddy

It is the second Indian Central Securities Depository

CDSL holds securities either in certificated or uncertificated form, to enable book entry transfer of securities.

CDSL is mainly promoted by Bombay Stock Exchange Ltd. (BSE)

NSDL (National Securities DepositoryLimited)

Founded: 8 Nov 1996
Headquarter: Mumbai
Chairman: G.V. Nageswara Rao

It is the first & largest electronic securities depository of India.

It has established a national infrastructure using international standards that handles most of the securities held & settled in dematerialised form in the Indian capital market.

NSDL is promoted by:

IDBI (Industrial development bank of India Ltd.) – Largest development Bank of India.

UTI (Unit Trust of India) Largest mutual fund in India.

NSE (National Stock Exchange of India Ltd.) - Largest stock exchange in India.

Some of the prominent banks in the country have taken a stake in NSDL

NSDL also has a subsidiary company NSDL Database Management Ltd.

NSDL e-Governance, Infrastructure Limited (NSDL e-Govt):

NSDL e-Gov was originally set-up as a Depository in 1995. e-Governance solutions has helped governments to identify and clear bottlenecks, promote transparency, reduce service delivery cost & efficiently

NSDL e-Governance Infrastructure Ltd. and the pension fund Regulatory and Development Authority (PFRDA) have entered into an agreement relating to setting up of a Central Recordkeeping Agency (CRA) for the National Payment System (NPS). The NPS was introduced by Govt. of India for its new recruiters (except the Armed Forces) joining w.e.f. 1 Jan 2004.

NIBM (National Institute of Bank Management)

Established: 1969
Headquarter: Pune
Head: RBI Governor (Presently Urjit Patell)

NIBM is the RBI's fully owned subsidiary. It is an Indian Institution for research, training and consultancy in banking and finance. The campus is self-contained, with residential and educational facilities.

It is registered as a society under societies registration Act 1860. It was established in 1969 by the RBI in the consultation with GOI as an autonomous "Apex institute" for the Indian Banking System. It is governed by a board, chaired by the Governor of Reserve Bank of India. The institute generates more than 70% of its own operating budget the rest is funded by the banking industry.

Sh. K.L. Dhingra is the current director of the institute as on 2017

A major activity is the regular publication of the following two quarterly journals in English:

(i) Prajnan: Journal of social and management sciences : A leading referred quarterly journal (launched in 1972)

(ii) Vinimaya: Present conceptual & practical viewpoints of both bankers & management educationists (Launched in 1979)

Member Banks: In addition to RBI, its associate member banks are the SBI and several of its subsidiaries, 19 National Banks & two foreign banks HSBC & Bank of America

NBFC (Non-banking Financial Company)

It is a company registered under the companies act, 1956 with minimum net owned fund of Rs. 200 lakh engaged in the business of loans & advances, acquisition of shares/stocks/bonds/ debentures/securities issued by the government or local authority or other marketable securities like leasing, hire-purchase, insurance business, chit business.

NBFC can't accept demand deposits

NBFC can't land more than 25000 in cash against gold.

NBFC doesn't form part of the payment & settlement system and cannot issue cheques drawn on itself.

NBFC can commence or carry on business of a non-banking financial institution without obtaining a certificate of registration from RBI

NBFC with asset size of Rs. 500 crore are considered or more are considered systematically important NBFC.

NOFHC (Non-operating Financial Holding Company)

RBI wide notification released on 7-4-2014 has informed the concerned financial institution that non-operative financial holding companies (NOFHCs) will be a separate category of NBFCs.

Promoter groups will be permitted to set up a new bank only through a wholly owned NOFHO which will hold the banks as well as all other financial services companies regulated by RBI or other financial sector regulators.

NOFHC will be registered as non-deposit taking non-banking financial company (NBFC) with the Department of Non-Banking Supervision (DNBS) of the Reserve Bank.

CERSAI (Central Registry of Securitization Asset Reconstruction and Security Interest)

Founded: 11 March 2011
Headquarter: New Delhi
MD & CEO: Parveen Kumar Sharma
1st CEO & Registry R.V.Verma(Chairman of National Housing Bank)

CERSAI is a central online mortgage registry of India which maintains all central registry of mortgages in India. It was primarily created to check mortgage frauds in which people took multiple loans on same assets from different banks.

It was formed under (SARFAESI ACT-2002) and register under section 25 of companies act 1956.

This is a government company with shareholding of 51% by central government and selected public sector banks & National Housing Bank are also shareholders.

According to government directives, financial institutions must register a Banking and Economic Awareness mortgage within 30 days of its creation.

It aims to help potential buyers by providing them proper history of the Asset and Lenders can assess data to check whether the same asset has been mortgaged with any other financial institution.

CAPART (Council for Advancement of People's Action and Rural Technology)

Headquarter: New Delhi
Chairman: Madan Lal Meena
It is set up to address specific problems relating to development in the rural areas. CAPART is an autonomous body registered under the Societies Registration Act 1860 and is functioning under the aegis of the Ministry of Rural Development, GOI. Today, this agency is a major promoter of rural development in India.

Objectives of Capart:

To encourage, promote, assist voluntary action for the implementation of projects intending enhancement of rural prosperity and to make efforts in rural development with the help of new technology inputs.

To promote, plan, undertake, develop maintain and support projects/schemes aimed at all-round development and create employment opportunities in rural areas.

CAPART deals with public through Voluntary Organizations (VOs). It has been made mandatory for the VOs to register themselves on the National Portal (NGO-PS) and apply & track the status of their applications online

PFRDA (Pension Fund Regulatory Development Authority)

Chairman: Shri Hemant G Contractor

It was established by GOI on 23 Aug 2003. The Government has an executive order, mandate PFRDA to act as a regulator for the pension sector, PFRDA authorised by Ministry of Finance.

PFRDA promotes old age income security by establishing, developing and regulating pension funds and protects the interest of subscribers to scheme of pension funds. It is responsible for the appointment of various intermediate agencies such as CRA (Central record keeping agency).

EPFO (Employees Provident Fund Organisation)

Head office: New Delhi
Head: Shri Bandaru Dattatreya

It is a statutory body of GOI under the "Ministry of Labour & Employment". It administrates a compulsory contributory provident fund scheme, pension scheme and Insurance Scheme.

On 1 Oct 2014 PM "Narendra Modi" launched universal account number of employees covered by EPFO to enable PF number portability. The Employees provident fund & miscellaneous provision Act, 1952 come into effect on 4 March 1952. The board is chaired by Union Labour Minister of India (The chief executive of the EPFO). EPFO act is not applicable in Jammu & Kashmir.

BCSBI (Banking Codes and Standards Board of India)

Formed: 18 Feb 2006
Headquarter: Mumbai
Head: A.C. Mahajan
Members: 129
BCSBI is an independent banking industry Agency that protects consumers of banking services in India. It is an independent and autonomous body, registered as a separate society under the Societies Registration Act 1860 on Feb 18, 2006. SS Tarapore came up an idea to form a committee for the benefit of customers so that they can get better financial services.

DIDRBT (Institute for Development & Research in Banking Technology)

Established: 1996 by RBI
Headquarter: Hyderabad (India)
Head: A.S. Ramasastri
IDRBT is a banking research institute. RBI established IDRBT with the aim of providing the operational services support in information technology to banks and Financial Institutions

IDRBT is the only institute in India which exclusively focuses on Banking Technology

IDRBT is also an academic institution that offers a range of academic & research programmes, designed specifically to meet both the existing and emerging requirements of the Banking and Financial sector in India.

OECA (Export Credit Agency)

Head office: Mumbai
An export credit agency or investment insurance agency is a private or quasi-governmental institution that acts as an intermediary between national governments and exporters to issue export financing.

The financing can take the form of credits or credit insurance and guarantees or both, depending on the mandate the ECA has been given by its government.

EXIM Bank, ECGC (Export Credit Guarantee Corporation of India) are two export credit agencies of India.

Export credit agency of CHINA has the highest capital.

SHCIL (Stock Holding Corporation of India Ltd.)

Headquarter: Mumbai.
Established-1986

It is India's largest custodian and depository participant. SHCIL is known for its online trading portal with investors and traders. It also looks after e-stamping system around India.

SHCIL has been appointed as point of presence (POP) by PFRDA for National Pension System (NPS). It offers full spectrum of NPS services and facilities to all citizens. SHCIL is only Central Record Keeping Agency (CRA) appointed by the government of India.

NICL (National Insurance Company Limited)

Headoffice: Kolkata
Founded: 1906
Head- K Sanath Kumar
NICL is the oldest insurance company of India which deals in non-life insurance business. It is 2nd largest non-life insurer as measured by gross direct written premiums (GDWP). NICL is wholly owned by govt. of India.

Top 9 Functions of Central Bank

Issue of Currency:

Banker to Government:

Banker’s Bank and Supervisor:

Controller of Credit and Money Supply:

Exchange Control:

Lender of Last Resort:

Custodian of Foreign Exchange or Balances:

Clearing House Function:

Collection and Publication of Data:

A central bank has been defined in terms of its functions. According to Vera Smith, "The primary definition of central banking is a banking system in which a single bank has either complete control or a residuary monopoly of note issue." W.A. Shaw defines a central bank as a bank which control credit. To Hawtrey, a central bank is that which is the lender of the last resort. According to A.C.L. Day, a central bank is "to help control and stabilise the monetary and banking system."

According to Sayers, the central bank "is the organ of government that undertakes the major financial operations of the government and by its conduct of these operations and by other means, influences the behaviour of financial institutions so as to support the economic policy of the Government." Sayers refers only to the nature of the central bank as the government's bank. All these definitions are narrow because they refer only to one particular function of a central bank.

On the other hand, Samuelson's definition is wide. According to him, a central bank "is a bank of bankers. Its duty is to control the monetary base…. and through control of this 'high-powered money' to control the community's supply of money." But the broadest definition has been given by De Kock.

In his words, a central bank is "a bank which constitutes the apex of the monetary and banking structure of its country and which performs as best as it can in the national economic interest, the following functions:

(i) The regulation of currency in accordance with the requirements of business and the general public for which purpose it is granted either the sole right of note issue or at leaspartial monopoly thereof,

(ii) The performance of general banking and agency for the state,

(iii) The custody of the cash reserves of the commercial banks,

(iv) The custody and management of the nation's reserves of international currency,

(v) The granting of accommodation in the form of re-discounts and collateral advances to commercial banks, bill brokers and dealers, or other financial institutions and the general acceptance of the responsibility of lender of the last resort,

(vi) The settlement of clearance balances between the banks,

(vii) The control of credit in accordance with the needs of business and with a view to carrying out the broad monetary policy adopted by the state." De Kock's definition is too long to be called a definition. For, a definition must be brief.

Functions of Central Bank:

A central bank performs the following functions, as given by De Kock and accepted by the majority of economists:

1. Regulator of currency:

The central bank is the bank of issue. It has the monopoly of note issue. Notes issued by it circulate as legal tender money. It has its issue department which issues notes and coins to commercial banks.

Coins are manufactured in the government mint but they are put into circulation through the central bank.

Central banks have been following different methods of note issue in different countries. The centred bank is required by law to keep a certain amount of gold and foreign securities against the issue of notes. In some countries, the amount of gold and foreign securities bears a fixed proportion, between 25 to 40 per cent of the total notes issued.

In other countries, a minimum fixed amount of gold and foreign currencies is required to be kept against note issue by the central bank. This system is operative in India whereby the Reserve Bank of India is required to keep Rs115crores in gold and Rs85crores in foreign securities. There is no limit to the issue of notes after keeping this minimum amount of Rs200crores in gold and foreign securities.

The monopoly of issuing notes vested in the central bank ensures uniformity in the notes issued which helps in facilitating exchange and trade within the country. It brings stability in the monetary system and creates confidence among the public.

The central bank can restrict or expand the supply of cash according to the requirements of the economy. Thus it provides elasticity to the monetary system. By having a monopoly of note issue, the central bank also controls the banking system by being the ultimate source of cash. Last but not the least, by entrusting the monopoly of note issue to the central bank, the government is able to earn profits from printing notes whose cost is very low as compared with their face value.

2. Banker, fiscal agent and adviser to the government:

Central banks everywhere act as bankers, fiscal agents and advisers to their respective governments. As banker to the government, the central bank keeps the deposits of the central and state governments and makes payments on behalf of governments. But it does not pay interest on governments deposits. It buys and sells foreign currencies on behalf of the government., It keeps the stock of gold of the government.

Thus it is the custodian of government money and wealth. As a fiscal agent, the central bank makes short-term loans to the government for a period not exceeding 90 days. It floats loans, pays interest on them, and finally repays them on behalf of the government. Thus it manages the entire public debt.

The central bank also advises the government on such economic and money matters as controlling inflation or deflation, devaluation or revaluation of the currency, deficit financing, balance of payments, etc. As pointed out by De Kock, “Central banks everywhere operate as bankers to the state not only because it may be more convenient and economical to the state, but also because of the intimate connection between public finance and monetary affairs.”

3. Custodian of cash reserves of commercial banks:

Commercial banks are required by law to keep reserves equal to a certain percentage of both time and demand deposits liabilities with the central banks. It is on the basis of these reserves that the central bank transfers funds from one bank to another to facilitate the clearing of cheques. Thus the central

bank acts as the custodian of the cash reserves of commercial banks and helps in facilitating their transactions.

There are many advantages of keeping the cash reserves of the commercial banks with the central bank, according to De Kock.

In the first place, the centralisation of cash reserves in the central bank is a source of great strength to the banking system of a country.

Secondly, centralised cash reserves can serve as the basis of a large and more elastic credit structure than if the same amount were scattered among the individual banks.

Thirdly, centralised cash reserves can be utilised fully and most effectively during periods of seasonal strains and in financial crises or emergencies.

Fourthly, by varying these cash reserves the central bank can control the credit creation by commercial banks. Lastly, the central bank can provide additional funds on a temporary and short term basis to commercial banks to overcome their financial difficulties.

4. Custody and management of foreign exchange reserves:

The central bank keeps and manages the foreign exchange reserves of the country. It is an official reservoir of gold and foreign currencies. It sells gold at fixed prices to the monetary authorities of other countries. It also buys and sells foreign currencies at international prices. Further, it fixes the exchange rates of the domestic currency in terms of foreign currencies.

It holds these rates within narrow limits in keeping with its obligations as a member of the International Monetary Fund and tries to bring stability in foreign exchange rates. Further, it manages exchange control operations by supplying foreign currencies to importers and persons visiting foreign countries on business, studies, etc. in keeping with the rules laid down by the government.

5. Lender of the last resort:

De Kock regards this function as a sine qua non of central banking. By granting accommodation in the form of re-discounts and collateral advances to commercial banks, bill brokers and dealers, or other financial institutions, the central bank acts as the lender of the last resort. The central bank lends to such institutions in order to help them in times of stress so as to save the financial structure of the country from collapse.

It acts as lender of the last resort through discount house on the basis of treasury bills, government securities and bonds at “the front door”. The other method is to give temporary accommodation to the commercial banks or discount houses directly through the “back door”.

The difference between the two methods is that lending at the front door is at the bank rate and in the second case at the market rate. Thus the central bank as lender of the last resort is a big source of cash and also influences prices and market rates,

6. Clearing house for transfer and settlement:

As bankers' bank, the central bank acts as a clearing house for transfer and settlement of mutual claims of commercial banks. Since the central bank holds reserves of commercial banks, it transfers funds from one bank to other banks to facilitate clearing of cheques.

This is done by making transfer entries in their accounts on the principle of book-keeping. To transfer and settle claims of one bank upon others, the central bank operates a separate department in big cities and trade centres. This department is known as the "clearing house" and it renders the service free to commercial banks.

When the central bank acts as a clearing agency, it is time-saving and convenient for the commercial banks to settle their claims at one place. It also economises the use of money. "It is not only a means of economising cash and capital but is also a means of testing at any time the degree of liquidity which the community is maintaining."

7. Controller of credit:

The most important function of the central bank is to control the credit creation power of commercial bank in order to control inflationary and deflationary pressures within this economy. For this purpose, it adopts quantitative methods and qualitative methods.

Quantitative methods aim at controlling the cost and quantity of credit by adopting bank rate policy, open market operations, and by variations in reserve ratios of commercial banks. Qualitative methods control the use and direction of credit. These involve selective credit controls and direct action. By adopting such methods, the central bank tries to influence and control credit creation by commercial banks in order to stabilise economic activity in the country.

Besides the above noted functions, the central banks in a number of developing countries have been entrusted with the responsibility of developing a strong banking system to meet the expanding requirements of agriculture, industry, trade and commerce. Accordingly, the central banks possess some additional powers of supervision and control over the commercial banks.

They are the issuing of licences; the regulation of branch expansion; to see that every bank maintains the minimum paid up capital and reserves as provided by law; inspecting or auditing the accounts of banks; to approve the appointment of chairmen and directors of such banks in accordance with the rules and qualifications; to control and recommend merger of weak banks in order to avoid their failures and to protect the interest of depositors; to recommend nationalisation of certain banks to the government in public interest; to publish periodical reports relating to different aspects of monetary and economic policies for the benefit of banks and the public; and to engage in research and train banking personnel etc.

3. Objectives of Credit Control by the Central Bank:

Credit control is the means to control the lending policy of commercial banks by the central bank.

The central bank controls credit to achieve the following objectives:

1. To stabilise the internal price level:

One of the objective of controlling credit is to stabilise the price level in the country. Frequent changes in prices adversely affect the economy. Inflationary or deflationary trends need to be prevented. This can be achieved by adopting a judicious policy of credit control.

2. To stabilise the rate of foreign exchange:

With the change in the internal prices level, exports and imports of the country are affected. When prices fall, exports increase and imports decline. Consequently, the demand for domestic currency increases in the foreign market and its exchange rate rises. On the contrary, a rise in domestic prices leads to a decline in exports and an increase in imports.

As a result, the demand for foreign currency increases and that of domestic currency falls, thereby lowering the exchange rate of the domestic currency. Since it is the volume of credit money that affects prices, the central bank can stabilise the rate of foreign exchange by controlling bank credit.

3. To protect the outflow of gold:

The central bank holds the gold reserves of the country in its vaults. Expansion of bank credit leads to rise in prices which reduce exports and increase imports, thereby creating an unfavourable balance of payments. This necessitates the export of gold to other countries. The central bank has to control credit in order to prevent such outflows of gold to other countries.

4. To control business cycles:

Business cycles are a common phenomenon of capitalist countries which lead to periodic fluctuations in production, employment and prices. They are characterised by alternating periods of prosperity and depression. During prosperity, there is large expansion in the volume of credit, and production, employment and prices rise.

During depression, credit contracts, and production, employment and prices fall. The central bank can counteract such cyclical fluctuations through contraction of bank credit during boom periods, and expansion of bank credit during depression.

5. To meet business needs:

According to Burgess, one of the important objectives of credit control is the "adjustment of the volume of credit to the volume of business." Credit is needed to meet the requirements of trade and industry. As business expands, larger quantity of credit is needed, and when business contracts less credit is needed. Therefore, it is the central bank which can meet the requirements of business by controlling credit.

6. To have growth with stability:

In recent years, the principal objective of credit control is to have growth with stability. The other objectives, such as price stability, foreign exchange rate stability, etc., are regarded as secondary. The aim of credit control is to help in achieving full employment and accelerated growth with stability in the economy without inflationary pressures and balance of payments deficits.

4. Essay on the Role of Central Bank in a Developing Economy:

The central bank in a developing economy performs both traditional and non-traditional functions. The principal traditional functions performed by it are the monopoly of note issue, banker to the government, bankers' bank, lender of the last resort, controller of credit and maintaining stable exchange rate. But all these functions are related to the foremost function of helping in the economic development of the country.

The central bank in a developing country aims at the promotion and maintenance of a rising level of production, employment and real income in the country. The central banks in the majority of underdeveloped countries have been given wide powers to promote the growth of such economies.

They, therefore, perform the following functions towards this end:

Creation and expansion of financial institutions:

One of the aims of a central bank in an underdeveloped country is to improve its currency and credit system. More banks and financial institutions are required to be set up to provide larger credit facilities and to divert voluntary savings into productive channels. Financial institutions are localised in big cities in underdeveloped countries and provide credit facilities to estates, plantations, big industrial and commercial houses.

In order to remedy this, the central bank should extend branch banking to rural areas to make credit available to peasants, small businessmen and traders. In underdeveloped countries, the commercial banks provide only short-term loans. Credit facilities in rural areas are mostly non-existent.

The only source is the village moneylender who charges exorbitant interest rates. The hold of the village moneylender in rural areas can be slackened if new institutional arrangements are made by the central bank in providing short-term, medium term and long-term credit at lower interest rates to the cultivators.

A network of co-operative credit societies with apex banks financed by the central bank can help solve the problem. Similarly, it can help the establishment of lead banks and through them regional rural banks for providing credit facilities to marginal farmers, landless agricultural workers and other weaker sections.

With the vast resources at its command, the central bank can also help in establishing industrial banks and financial corporations in order to finance large and small industries.

Proper adjustment between demand for and supply of money:

The central bank plays an important role in bringing about a proper adjustment between demand for and supply of money. An imbalance between the two is reflected in the price level. A shortage of

money supply will inhibit growth while an excess of it will lead to inflation. As the economy develops, the demand for money is likely to go up due to gradual monetization of the non-monetized sector and the increase in agricultural and industrial production and prices.

The demand for money for transactions and speculative motives will also rise. So the increase in money supply will have to be more than proportionate to the increase in the demand for money in order to avoid inflation. There is, however, the likelihood of increased money supply being used for speculative purposes, thereby inhibiting growth and causing inflation.

The central bank controls the uses of money and credit by an appropriate monetary policy. Thus in an underdeveloped economy, the central bank should control the supply of money in such a way that the price level is prevented from rising without affecting investment and production adversely.

A suitable interest rate policy:

In an underdeveloped country the interest rate structure stands at a very high level. There are also vast disparities between long-term and short-term interest rates and between interest rates in different sectors of the economy. The existence of high interest rates acts as an obstacle to the growth of both private and public investment, in an underdeveloped economy. A low interest rate is, therefore, essential for encouraging private investment in agriculture and industry.

Since in an underdeveloped country businessmen have little savings out of undistributed profits, they have to borrow from the banks or from the capital market for purposes of investment and they would borrow only if the interest rate is low.

A low interest rate policy is also essential for encouraging public investment. A low interest rate policy is a cheap money policy. It makes public borrowing cheap, keeps the cost of servicing public debt low, and thus helps in financing economic development.

In order to discourage the flow of resources into speculative borrowing and investment, the central bank should follow a policy of discriminatory interest rates, charging high rates for non-essential and unproductive loans and low rates for productive loans.

But this does not imply that savings are interest-elastic in an underdeveloped economy. Since the level of income is low in such economies, a high rate of interest is not likely to raise the propensity to save.

In the context of economic growth, as the economy develops, a progressive rise in the price level is inevitable. The value of money falls and the propensity to save declines further. Money conditions become tight and there is a tendency for the rate of interest to rise automatically. This would result in inflation. In such a situation any effort to control inflation by raising the rate of interest would be disastrous. A stable price level is, therefore, essential for the success of a low interest rate policy which can be maintained by following a judicious monetary policy by the central bank.

Debt management:

Debt management is one of the important functions of the central bank in an underdeveloped country. It should aim at proper timing and issuing of government bonds, stabilizing their prices and minimizing

the cost of servicing public debt. It is the central bank which undertakes the selling and buying of government bonds and making timely changes in the structure and composition of public debt.

In order to strengthen and stabilize the market for government bonds, the policy of low interest rates is essential. For, a low rate of interest raises the price of government bonds, thereby making them more attractive to the public and giving an impetus to the public borrowing programmes of the government.

The maintenance of structure of low interest rates is also called for minimizing the cost of servicing the national debt. Further, it encourages funding of debt by private firms. However, the success of debt management would depend upon the existence of well-developed money and capital markets in which wide range of securities exist both for short and long periods. It is the central bank which can help in the development of these markets.

Credit control:

Central Bank should also aim at controlling credit in order to influence the patterns of investment and production in a developing economy. Its main objective is to control inflationary pressures arising in the process of development. This requires the use of both quantitative and qualitative methods of credit control.

Open market operations are not successful in controlling inflation in underdeveloped countries because the bill market is small and undeveloped. Commercial banks keep an elastic cash-deposit ratio because the central bank's control over them is not complete. They are also reluctant to invest in government securities due to their relatively low interest rates.

Moreover, instead of investing in government securities, they prefer to keep their reserves in liquid form such as gold, foreign exchange and cash. Commercial banks are also not in the habit of rediscounting or borrowing from the central bank.

The bank rate policy is also not so effective in controlling credit in LDCs due to:

(a) The lack of bills of discount;

(b) The narrow size of the bill market;

(c) A large non-monetized sector where barter transactions take place;

(d) The existence of a large unorganised money market;

(e) The existence of indigenous banks which do not discount bills with the central banks; and

(f) The habit of commercial banks to keep large cash reserves.

The use of variable reserve ratio as method of credit control is more effective than open market operations and bank rate policy in LDCs. Since the market for securities is very small, open market operations are not successful. But a rise or fall in the reserve ratio by the central bank reduces or increases the cash available with the commercial banks without affecting adversely the prices of securities. Again, the commercial banks keep large cash reserves which cannot be reduced by a raise in the bank rate or sale of securities by the central bank.

But raising the cash-reserve ratio reduces liquidity with the banks. However, the use of variable reserve ratio has certain limitations in LDCs. First, the non-banking financial intermediaries do not keep deposits with the central bank so they are not affected by it. Second, banks which do not maintain excess liquidity are not affected than those who maintain it.

The qualitative credit control measures are, however, more effective than the quantitative measures in influencing the allocation of credit, and thereby the pattern of investment. In underdeveloped countries, there is a strong tendency to invest in gold, jewellery, inventories, real estate, etc., instead of in alternative productive channels available in agriculture, mining, plantations and industry.

The selective credit controls are more appropriate for controlling and limiting credit facilitates for such unproductive purposes. They are beneficial in controlling speculative activities in food grains and raw materials. They prove more useful in controlling 'sectional inflations' in the economy. They curtail the demand for imports by making it obligatory on importers to deposit in advance an amount equal to the value of foreign currency.

This has also the effect of reducing the reserves of the banks in so far as their deposits are transferred to the central banks in the process. The selective credit control measures may take the form of changing the margin requirements against certain types of collateral, the regulation of consumer credit and the rationing of credit.

Solving the balance of payments problem:

The central bank should also aim at preventing and solving the balance of payments problem in a developing economy. Such economies face serious balance of payments difficulties to fulfill the targets of development plans. An imbalance is created between imports and exports which continues to widen with development.

The central bank manages and controls the foreign exchange of the country and also acts as the technical adviser to the government on foreign exchange policy. It is the function of the central bank to avoid fluctuations in the foreign exchange rates and to maintain stability. It does so through exchange controls and variations in the bank rate. For instance, if the value of the national currency continues to fall, it may raise the bank rate and thus encourage the inflow of foreign currencies.

5 Need for Central Bank:

It is widely recognised that the central bank is a valuable and indispensable institution for the proper functioning of a modern economy. But, there is a difference of opinion regarding the necessity and usefulness of the central bank in economically backward countries having underdeveloped money markets.

Some people argue that the central bank is not necessary in such countries for various reasons: such as the absence of well-organised banking institutions over which the central bank exercises its supervision and control, the absence of short-term money markets and of well-developed bill markets to enable the central bank to perform the rediscounting operations properly, the fear of political pressure of the governments of these countries over the normal working of the central bank, and others. For all these

reasons it is argued that the central bank in the under-developed countries cannot execute its monetary policy and control-techniques properly and effectively.

But, the fact remains that the central bank is as indispensable in the underdeveloped countries as it is in the developed countries.

For this reason it is now established that every country, whether developed or underdevel-oped, must set up a central bank for the following reasons:

(a) Economic stability:

The central bank is indispensable for maintaining stability in the economy of a country. It can maintain both price and foreign exchange stability through the exercise of proper and effective control over the country's total money supply.

Such economic stability is as essential for underdeveloped countries as for developed ones, for promoting rapid economic growth. No other institutions except the central bank is competent enough to maintain this overall economic stability.

(b) Control over bank credit:

The central bank is necessary to exercise a judicious control over bank credit. As bank credit constitutes the most important component of the money supply, its supply is to be properly regulated in time for avoiding instability in the price-level and for regulating its supply in accordance with the country's requirements.

(c) Control and supervision over the activities of other banks:

The central bank of a country can develop the banking system by exercising proper control and supervision over the operations of other banks. In the absence of the central bank, it becomes a difficult task to bring about proper co-ordination among the banks and to develop these institutions along a sound line.

(d) Proper execution of the monetary policy:

The central bank is the leader of the money market of a country. Therefore, its existence is of utmost importance for pursuing the country's monetary (credit) policy.

(e) Special role of the central bank in a developing economy:

The central bank has a special role to play in a developing economy in promoting economic growth with stability, in providing special finance for agriculture, industry and other top priority sectors.

(f) Foreign exchange regulations and international dealings:

Every country, whether a developed or an underdeveloped one, must have a monetary institution like the central bank for foreign exchange regulations Sid for dealing with international institutions like the International Mone-tary Fund and the Bank for International Settlements. When the gold standard was in existence, it had some special importance.

(g) Control over the money supply:

The central bank is also necessary for the control over the money supply and for the regulation of the country s interest rates. For this reason the central bank enjoys the monopoly power regarding the issue of paper notes, and its rate of interest (i.e., the bank rate) acts as the pace-setter to other rates such as market rates of interest.

Conclusion:

The above description shows that every country, whether a developed or an underdeveloped one, must set up a Central Bank of its own.

THE INTERNATIONAL MONETARY SYSTEM [short notes]

The international monetary system refers to the system and rules that govern the use and exchange of money around the world and between countries.

There have been four phases/ stages in the evolution of the international monetary system:

Gold Standard (1875-1914)

Inter-war period (1915-1944)

Bretton Woods system (1945-1972)

Present International Monetary system (1972-present)

1) GOLD STANDARD

The gold standard is a monetary system in which each country fixed the value of its currency in terms of gold. The exchange rate is determined accordingly.

Let's say- 1 ounce of gold = 20 pounds (fixed by the UK) and 1 ounce of gold = 10 dollars (fixed by the US).

Hence, the dollar-pound exchange rate will be 20 pounds = 10 dollars or 1 pound = 0.5 dollars

The Gold standard created a fixed exchange rate system.

There was free convertibility between gold and national currencies.

Also, all national currencies had to be backed by gold. Therefore, the countries had to keep enough gold reserves to issue currency.

One advantage of the gold standard was that the Balance of payments (BOP) imbalances were corrected automatically.

Let's say- there are only two countries in the world – The UK and France. The UK runs a BOP deficit as it has imported more goods from France. France runs a BOP surplus.

This will obviously result in the transfer of money (gold) from the UK to France as payment for more imports.

The UK will have to reduce its money supply due to a decline in gold reserves. The reduction in the money supply will bring down prices in the UK.

The opposite will happen in France. Its prices will increase.

Now, the UK will be able to export cheaper goods to France. On the other hand, the imports from France will slow down. This will correct the BOP imbalances of both countries.

Another advantage was that the gold standard created a stable exchange rate system that was conducive to international trade.

2) INTER-WAR PERIOD

After the world war started in 1914, the gold standard was abandoned.

Countries began to depreciate their currencies to be able to export more. It was a period of fluctuating exchange rates and competitive devaluation.

3) BRETTON WOODS SYSTEM

In the early 1940s, the United States and the United Kingdom began discussions to rebuild the world economy after the destruction of two world wars. Their goal was to create a fixed exchange rate system without the gold standard.

The new international monetary system was established in 1944 in a conference organised by the United Nations in a town named Bretton Woods in New Hampshire (USA).

The conference is officially known as the United Nations Monetary and Financial Conference. It was attended by 44 countries.

India was represented in the Bretton-woods conference by Sir C.D. Deshmukh, the first Indian Governor of RBI.

[The conference also led to the creation of the International Monetary Fund (IMF), World Bank, and GATT. GATT is the predecessor of WTO. Read: WTO: Meaning, Origin etc.}

The Bretton-woods created a dollar-based fixed exchange rate system.

In the Bretton-woods system, only the US fixed the value of its currency to gold. (The initial peg was 35 dollars = 1 ounce of gold). All the other currencies were pegged to the US dollar instead. They were allowed to have a 1 % band around which their currencies could fluctuate.

The countries were also given the flexibility to devalue their currencies in case of an emergency.

It was similar to the gold standard and was described as a gold-exchange standard.

There were some differences. Only the US dollar was backed by gold. Other currencies did not have to maintain gold convertibility.

Also, this convertibility was limited. Only governments (not anyone who demanded it) could convert their US dollars into gold.

4) PRESENT INTERNATIONAL MONETARY SYSTEM

The Bretton Woods system collapsed in 1971. The United States had to stop the convertibility to gold due to high inflation and trade deficit in the economy.

Inflation led to an increase in the price of gold. Hence, the US could not maintain a fixed value of 35 dollars to 1 ounce of gold.

In 1973, the world moved to a flexible exchange rate system.

In 1976, the countries met in Jamaica to formalize the new system.

The floating exchange rate system means that the exchange rate of a currency is determined by the market forces of demand and supply.

INDIA'S MONETARY POLICY SYSTEM

Managed float.

India has managed floating exchange rate system. The exchange rate is determined by market forces. But, the RBI intervenes in the currency market to curb volatility.

II International Monetary Fund [short notes]

The International Monetary Fund is a 189-member organization that works to stabilize the global economy.1The IMF was created at the 1944 Bretton Woods conference. It sought to rebuild Europe after World War II. The Conference also set up a modified Gold Standard to help countries maintain the value of their currencies. The planners wanted to avoid the trade barriers and high-interest rates that helped cause the Great Depression.

Objectives

The IMF meets its goal by targeting three objectives:

It monitors global conditions and identifies risks among its member countries.

It advises its members on how to improve their economies.

It provides technical assistance and short-term loans to prevent financial crises. The IMF's goal is to prevent these disasters by guiding its members.

Survey Global Conditions: The IMF has the rare ability to look into and review the economies of all its member countries. As a result, it has its finger on the pulse of the global economy better than any other organization.

The IMF produces a wealth of analytical reports. It provides the World Economic Outlook, the Global Financial Stability Report, and the Fiscal Monitor each year. It also delves into regional and country-specific assessments. It uses this information to determine which countries need to improve their

policies. Hence, the IMF can identify which countries threaten global stability. The member countries have agreed to listen to the IMF's recommendations because they want to improve their economies and remove these threats.

Advise Member Countries: Since the Mexican peso crisis of 1994–95 and the Asian crisis of 1997–98, the IMF has taken a more active role to help countries prevent financial crises. It develops standards that its members should follow.

For example, members agree to provide adequate foreign exchange reserves in good times. That helps them increase spending to boost their economies during recessions. It reports on member countries' observance of these standards.

The IMF also issues member country reports that investors use to make well-informed decisions. That improves the functioning of financial markets. The IMF also encourages sustained growth and high living standards, which is the best way to reduce members' vulnerability to crises.

Provide Technical Assistance and Short-term Loans: The IMF provides loans to help its members tackle their balance of payments problems, stabilize their economies, and restore sustainable growth.

Because the Fund lends money, it's often confused with the World Bank. The World Bank lends money to developing countries for specific projects that will fight poverty. Unlike the World Bank and other development agencies, the IMF does not finance projects.

Traditionally, most IMF borrowers were developing countries. They had limited access to international capital markets due to their economic difficulties. An IMF loan signals that a country's economic policies are on the right track. That reassures investors and acts as a catalyst for attracting funds from other sources.

The IMF's Changing Role

The role of the IMF has increased since the onset of the 2008 global financial crisis. In fact, an IMF surveillance report warned about the economic crisis.8 World leaders soon regretted that they ignored it.

As a result, the IMF has been called upon more and more to provide global economic surveillance. It's in the best position to do so because it requires members to subject their economic policies to IMF scrutiny. They have also committed to policies that keep prices stable. For example, they agree to avoid manipulating exchange rates for an unfair competitive advantage.9

For example, the 2010 eurozone crisis prompted the IMF to provide short-term loans to bail out Greece. That was within the IMF's charter because it prevented a global economic crisis.10

IMF Structure

The IMF chief has been Managing Director Kristalina Georgieva since Sept. 25, 2019. The Managing Director is the chief of the IMF's 2,700 employees from 147 countries.11 She supervises four Deputy Managing Directors. She is Chair of the 24-member Executive Board.

The IMF Governance Structure begins with the IMF Governing Board which sets direction and policies. Its members are the finance ministers or central bank leaders of the member countries. They meet each year in conjunction with the World Bank. The International Monetary and Financial Committee meets twice a year. These committees review the international monetary system and make recommendations.

Members

Rather than listing all 189 members, it's easier to list the countries that are not members. The seven countries (out of a total of 196 countries) that are not IMF members are Cuba, East Timor, North Korea, Liechtenstein, Monaco, Taiwan, and Vatican City. The IMF has 11 members that are not sovereign countries: Anguilla, Aruba, Barbados, Cabo Verde, Curacao, Hong Kong, Macao, Montserrat, Netherlands Antilles, Saint Maarten, and Timor-Leste.

Members do not receive equal votes. Instead, they have voting shares based on a quota. The quota is based on their economic size. If they pay their quota, they receive the equivalent in voting shares. The Member Quotas and Voting Shares was updated in 2010.

International Monetary Systems

The international monetary system refers to the operating system of the financial environment, which consists of financial institutions, multinational corporations, and investors. The international monetary system provides the institutional framework for determining the rules and procedures for international payments, determination of exchange rates, and movement of capital.

The major stages of the evolution of the international monetary system can be categorized into the following stages.

The era of bimetallism

Before 1870, the international monetary system consisted of bimetallism, where both gold and silver coins were used as the international modes of payment. The exchange rates among currencies were determined by their gold or silver contents. Some countries were either on a gold or a silver standard.

Gold standard

The international gold standard prevailed from 1875 to 1914. In a gold standard system, gold alone is assured of unrestricted coinage. There was a two-way convertibility between gold and national currencies at a stable ratio. No restrictions were in place for the export and import of gold. The exchange rate between two currencies was determined by their gold content.

The gold standard ended in 1914 during World War I. Great Britain, France, Germany, and many other countries imposed embargoes on gold exports and suspended redemption of bank notes in gold.

The interwar period was between World War I and World War II (1915-1944). During this period the United States replaced Britain as the dominant financial power of the world. The United States returned to a gold standard in 1919. During the intermittent period, many countries followed a policy of

sterilization of gold by matching inflows and outflows of gold with changes in domestic money and credit.

Gold exchange standard

The Bretton Woods System was established after World War II and was in existence during the period 1945-1972. In 1944, representatives of 44 nations met at Bretton Woods, New Hampshire, and designed a new postwar international monetary system. This system advocated the adoption of an exchange standard that included both gold and foreign exchanges. Under this system, each country established a par value in relation to the US dollar, which was pegged to gold at $35 per ounce. Under this system, the reserve currency country would aim to run a balance of payments (BOPs) deficit to supply reserves. If such deficits turned out to be very large then the reserve currency itself would witness crisis. This condition was often coined the Triffin paradox. Eventually in the early 1970s, the gold exchange standard system collapsed because of these reasons. From 1950 onward, the United States started facing trade deficit problems. With development of the euro markets, there was a huge outflow of dollars. The US government took several dollar defense measures, including the imposition of the Interest Equalization Tax (IET) on US purchases of foreign stock to prevent the outflow of dollars. The international monetary fund created a new reserve asset called special drawing rights (SDRs) to ease the pressure on the dollar, which was the central reserve currency. Initially, the SDR were modeled to be the weighted average of 16 currencies of such countries whose shares in the world exports were more than 1%. In 1981, the SDR were restructured to constitute only five major currencies: the US dollar, German mark, Japanese yen, British pound, and French franc. The SDR were also being used as a denomination currency for international transactions. But the dollar-based gold exchange standard could not be sustained in the context of rising inflation and monetary expansion. In 1971 the Smithsonian Agreement signed by the Group of Ten major countries made changes to the gold exchange standard. The price of gold was raised to $38 per ounce. Other countries revalued their currency by up to 10%. The band for exchange rate fluctuation was increased to 2.25% from 1%. But the Smithsonian agreement also proved to be ineffective and the Bretton Woods System collapsed.

Flexible exchange rate regime

European and Japanese currencies became free-floating currencies in 1973. The flexible exchange rate regime was formally ratified in 1976 by IMF members through the Jamaica Agreement. The agreement stipulated that central banks of respective countries could intervene in the exchange markets to guard against unwarranted fluctuations. Gold was also officially abandoned as the international reserve asset. In 1985, the Plaza Accord envisaged the depreciation of the dollar against most major currencies to solve US trade deficit problems.

In general there are many flexible exchange rate systems. In a free-floating or independent-floating currency, the exchange rate is determined by the market, with foreign exchange intervention occurring only to prevent undue fluctuations. For example, Australia, the United Kingdom, Japan, and the United States have free-floating currencies. In a managed-floating system, the central monetary authority of countries influences the movement of the exchange rate through active intervention in the forex market with no preannounced path for the exchange rate. Examples include China, India, Russia, and Singapore. In a fixed-peg arrangement, the country pegs its currency at a fixed rate to a major currency

or to a basket of currencies. Many GCC countries such as UAE and Saudi Arabia have pegged their currencies to the US dollar.

policy implications [present study]

Any international monetary system based on a reserve asset that is simultaneously used as national currency, may be characterized by increasing indebtedness of the center country. The accumulation of reserves in developing countries is correlated with a larger current account balance, while this effect is absent in industrial countries.

This finding supports the mercantilist explanation for reserve accumulation. The global accumulation of reserves lowers the current account balance of the US, which is the major provider of reserve assets. Any additionally accumulated dollar of reserve assets lowers the US current account by 1 to 2 dollars. Private and official capital flows basically do not affect each other. If the US lost its reserve currency status, its current account balance relative to GDP would improve by 1 to 2 percentage points.

The stylized constellation between the US and emerging markets, with the latter financing the current account deficit of the former by their accumulation of reserves, has its precedent in history (see Meissner, 2010): During the 1920s, France accumulated British sterling, the reserve currency at that time, and contributed to a secular decrease of the British current account.

Our empirical approach has focused on the reserve currency status of the US. Using a historical data set, further research might extend this case study and examine the relationship between reserve currency status and current account balance for the period of sterling dominance before World War II.

While the lower current account balance is an equilibrium outcome, persistent deficits and a deteriorating net external asset position may undermine the confidence in the reserve currency in the long run. As a result, the reserve currency status endogenously increases the vulnerability to financial crises in the long run. with a decreasing US share in global economic activity and rising alternative reserve currencies this process might challenge the dollar's role in the long run. It has to be noted, however, that current account deficits in reserve currency countries might be less of concern than in other countries:

Under the present system without guaranteed gold conversion, one might argue that reserves are backed by US foreign assets or US GDP. The crisis zone is then characterized by foreign assets falling short of foreign liabilities. According to this definition, the dollar standard has been in a crisis zone since 1985. Alternatively, Farhi et al. (2011) argue that the confidence of the dollar standard is linked to the fiscal capacity of the US.

The finding that reserve currency status lowers the current account balance of the dominant center country, however, is not linked to the specific situation of the US being the reserve currency provider. The problem is a more fundamental one: It lies in the fact that a national currency is used as the global reserve currency. Therefore, shifting to another currency – with the Euro or Renminbi being viable choices – would not solve the underlying problem. While another country might provide a stable reserve currency in the short run, in the long run the Triffin dilemma strikes back: Any reserve currency, that provides the demanded assets in sufficient amounts to the rest of the world, is likely to face a deterioration in its current account and net foreign asset position.

International Monetary System?

Why do economies need money?

money is a unit of account that is used as a medium of exchange in transactions. Without money, individuals and businesses would have a harder time purchasing or selling what they need, want, or make. Money provides us with a universally accepted medium of exchange.

Before the current monetary system, people had to barter if they wanted to get something. That worked well if the two people each wanted what the other had. Even today, bartering exists.

In ancient Egypt and Mesopotamia, began to use a system based on the highly coveted coins of gold and silver, also known as bullion, which is the purest form of the precious metal. Bartering remained the most common form of exchange and trade.

Gold and silver coins gradually emerged in the use of trading, although the level of pure gold and silver content impacted the coins value. Only coins that consist of the pure precious metal are bullions; all other coins are referred to simply as coins. It is interesting to note that gold and silver lasted many centuries as the basis of economic measure and even into relatively recent history of the gold standard, which we'll cover in the next section.

After two thousand years bartering has long been replaced by a currency-based system. There have been evolutions in the past century alone on how globally the monetary system has evolved from using gold and silver to represent national wealth and economic exchange to the current system.

International monetary system refers to the system and rules that govern the use and exchange of money around the world and between countries. Each country has its own currency as money and the international monetary system governs the rules for valuing and exchanging these currencies.

Until the nineteenth century, the major global economies were regionally focused in Europe, the Americas, China, and India.

Pre–World War I

Ancient societies started using gold as a means of economic exchange. Gradually more countries adopted gold, usually in the form of coins or bullion, and this international monetary system became known as the gold standard. This system emerged gradually, without the structural process in more recent systems. The gold standard, in essence, created a fixed exchange rate system. An exchange rate is the price of one currency in terms of a second currency. In the gold standard system, each country sets the price of its currency to gold, specifically to one ounce of gold. A fixed exchange rate stabilizes the value of one currency vis-à-vis another and makes trade and investment easier.

Our modern monetary system has its roots in the early 1800s. The defeat of Napoleon in 1815, when France was beaten at the Battle of Waterloo, made Britain the strongest nation in the world, a position it held for about one hundred years. In Africa, British rule extended at one time from the Cape of Good Hope to Cairo. British dominance and influence also stretched to the Indian subcontinent, the Malaysian peninsula, Australia, New Zealand—which attracted British settlers—and Canada. Under the banner of the British government, British companies advanced globally and were the largest

companies in many of the colonies, controlling trade and commerce. Throughout history, strong countries, as measured mainly in terms of military might, were able to advance the interests of companies from their countries—a fact that has continued to modern times, as seen in the global prowess of American companies. Global firms in turn have always paid close attention to the political, military, and economic policies of their and other governments.

In 1821, the United Kingdom, the predominant global economy through the reaches of its colonial empire, adopted the gold standard and committed to fixing the value of the British pound. The major trading countries, including Russia, Austria-Hungary, Germany, France, and the United States, also followed and fixed the price of their currencies to an ounce of gold.

The United Kingdom officially set the price of its currency by agreeing to buy or sell an ounce of gold for the price of 4.247 pounds sterling. At that time, the United States agreed to buy or sell an ounce of gold for $20.67. This enabled the two currencies to be freely exchanged in terms of an ounce of gold. In essence,

£4.247 = 1 ounce of gold = $20.67.

The exchange rate between the US dollar and the British pound was $4.867 = £1.

The Advantages of the Gold Standard

1. The gold standard dramatically reduced the risk in exchange rates because it established fixed exchange rates between currencies. Any fluctuations were relatively small. This made it easier for global companies to manage costs and pricing. International trade grew throughout the world, although economists are not always in agreement as to whether the gold standard was an essential part of that trend.

2. The second advantage is that countries were forced to observe strict monetary policies. They could not just print money to combat economic downturns. One of the key features of the gold standard was that a currency had to actually have in reserve enough gold to convert all of its currency being held by anyone into gold. Therefore, the volume of paper currency could not exceed the gold reserves.

3. The third major advantage was that gold standard would help a country correct its trade imbalance. For example, if a country was importing more than it is exporting, (called a trade deficit), then under the gold standard the country had to pay for the imports with gold. The government of the country would have to reduce the amount of paper currency, because there could not be more currency in circulation than its gold reserves. With less money floating around, people would have less money to spend (thus causing a decrease in demand) and prices would also eventually decrease. As a result, with cheaper goods and services to offer, companies from the country could export more, changing the international trade balance gradually back to being in balance. For these three primary reasons, and as a result of the 2008 global financial crises, some modern economists are calling for the return of the gold standard or a similar system.

Collapse of the Gold Standard

If it was so good, what happened? The gold standard collapsed from the impact of World War I. During the war, nations on both sides had to finance their huge military expenses and did so by printing more paper currency. As the currency in circulation exceeded each country's gold reserves, many countries were forced to abandon the gold standard. In the 1920s, most countries, including the United Kingdom, the United States, Russia, and France, returned to the gold standard at the same price level, despite the political instability, high unemployment, and inflation that were spread throughout Europe.

However, the revival of the gold standard was short-lived due to the Great Depression, which began in the late 1920s. The Great Depression was a worldwide phenomenon. By 1928, Germany, Brazil, and the economies of Southeast Asia were depressed. By early 1929, the economies of Poland, Argentina, and Canada were contracting, and the United States economy followed in the middle of 1929. Some economists have suggested that the larger factor tying these countries together was the international gold standard, which they believe prolonged the Great Depression.

The gold standard limited the flexibility of the monetary policy of each country's central banks by limiting their ability to expand the money supply. Under the gold standard, countries could not expand their money supply beyond what was allowed by the gold reserves held in their vaults.

Too much money had been created during World War I to allow a return to the gold standard without either large currency devaluations or price deflations. In addition, the US gold stock had doubled to about 40 percent of the world's monetary gold. There simply was not enough monetary gold in the rest of the world to support the countries' currencies at the existing exchange rates.

By 1931, the United Kingdom had to officially abandon its commitment to maintain the value of the British pound. The currency was allowed to float, which meant that its value would increase or decrease based on demand and supply. The US dollar and the French franc were the next strongest currencies and nations sought to peg the value of their currencies to either the dollar or franc. However, in 1934, the United States devalued its currency from $20.67 per ounce of gold to $35 per ounce. With a cheaper US dollar, US firms were able to export more as the price of their goods and services were cheaper vis-à-vis other nations. Other countries devalued their currencies in retaliation of the lower US dollar. Many of these countries used arbitrary par values rather than a price relative to their gold reserves. Each country hoped to make its exports cheaper to other countries and reduce expensive imports. However, with so many countries simultaneously devaluing their currencies, the impact on prices was canceled out. Many countries also imposed tariffs and other trade restrictions in an effort to protect domestic industries and jobs. By 1939, the gold standard was dead; it was no longer an accurate indicator of a currency's real value.

Post–World War II

The demise of the gold standard and the rise of the Bretton Woods system pegged to the US dollar was also a changing reflection of global history and politics. The British Empire's influence was dwindling. In the early 1800s, with the strength of both their currency and trading might, the United Kingdom had expanded its empire. At the end of World War I, the British Empire spanned more than a quarter of the world; the general sentiment was that "the sun would never set on the British empire." British maps and globes of the time showed the empire's expanse proudly painted in red. However, shortly after World War II, many of the colonies fought for and achieved independence. By then, the United States

had clearly replaced the United Kingdom as the dominant global economic center and as the political and military superpower as well.

Bretton Woods

In the early 1940s, the United States and the United Kingdom began discussions to formulate a new international monetary system. John Maynard Keynes, a highly influential British economic thinker, and Harry Dexter White, a US Treasury official, paved the way to create a new monetary system. In July 1944, representatives from forty-four countries met in Bretton Woods, New Hampshire, to establish a new international monetary system.

The aim was to gain agreement among states about how to finance postwar reconstruction, stabilize exchange rates, foster trade, and prevent balance of payments .

The Bretton Woods Agreement created a new dollar-based monetary system, which incorporated some of the disciplinary advantages of the gold system while giving countries the flexibility they needed to manage temporary economic setbacks, which had led to the fall of the gold standard. The Bretton Woods Agreement lasted until 1971 and established several key features.

Fixed Exchange Rates

Fixed exchange rates are also sometimes called pegged rates.

One of the critical factors that led to the fall of the gold standard was that after the United Kingdom abandoned its commitment to maintaining the value of the British pound, countries sought to peg their currencies to the US dollar. With the strength of the US economy, the gold supply in the United States increased, while many countries had less gold in reserve than they did currency in circulation. The Bretton Woods system worked to fix this by tying the value of the US dollar to gold but also by tying all of the other countries to the US dollar rather than directly to gold. The par value of the US dollar was fixed at $35 to one ounce of gold. All other countries then set the value of their currencies to the US dollar. In reflection of the changing times, the British pound had undergone a substantial loss in value and by that point, its value was $2.40 to £1. Member countries had to maintain the value of their currencies within 1 percent of the fixed exchange rate. Lastly, the agreement established that only governments, rather than anyone who demanded it, could convert their US dollar holdings into gold—a major improvement over the gold standard. In fact, most businesspeople eventually ignored the technicality of pegging the US dollar to gold and simply utilized the actual exchange rates between countries (e.g., the pound to the dollar) as an economic measure for doing business.

National Flexibility

To enable countries to manage temporary but serious downturns, the Bretton Woods Agreement provided for a devaluation of a currency—more than 10 percent if needed. Countries could not use this tool to competitively manipulate imports and exports. Rather, the tool was intended to prevent the large-scale economic downturn that took place in the 1930s.

Creation of the International Monetary Fund and the World Bank

International Monetary Fund and the World Bank, survived the collapse of the Bretton Woods Agreement. In essence, the IMF's initial primary purpose was to help manage the fixed rate exchange system; it eventually evolved to help governments correct temporary trade imbalances (typically deficits) with loans. The World Bank's purpose was to help with post–World War II European reconstruction. Both institutions continue to serve these roles but have evolved into broader institutions that serve essential global purposes, even though the system that created them is long gone.

Collapse of Bretton Woods

Despite a fixed exchange rate based on the US dollar and more national flexibility, the Bretton Woods Agreement ran into challenges in the early 1970s. The US trade balance had turned to a deficit as Americans were importing more than they were exporting. Throughout the 1950s and 1960s, countries had substantially increased their holdings of US dollars, which was the only currency pegged to gold. By the late 1960s, many of these countries expressed concern that the US did not have enough gold reserves to exchange all of the US dollars in global circulation. This became known as the Triffin Paradox, named after the economist Robert Triffin, who identified this problem. He noted that the more dollars foreign countries held, the less faith they had in the ability of the US government to convert those dollars. Like banks, though, countries do not keep enough gold or cash on hand to honor all of their liabilities. They maintain a percentage, called a reserve. Bank reserve ratios are usually 10 percent or less. (The low reserve ratio has been blamed by many as a cause of the 2008 financial crisis.) Some countries state their reserve ratios openly, and most seek to actively manage their ratios daily with open-market monetary policies—that is, buying and selling government securities and other financial instruments, which indirectly controls the total money supply in circulation, which in turn impacts supply and demand for the currency.

The expense of the Vietnam War and an increase in domestic spending worsened the Triffin Paradox; the US government began to run huge budget deficits, which further weakened global confidence in the US dollar. When nations began demanding gold in exchange for their dollars, there was a huge global sell-off of the US dollar, resulting in the Nixon Shock in 1971.

The Nixon Shock was a series of economic decisions made by the US President Richard Nixon in 1971 that led to the demise of the Bretton Woods system. Without consulting the other member countries, on August 15, 1971, Nixon ended the free convertibility of the US dollar into gold and instituted price and wage freezes among other economic measures.

Later, the member countries reached the Smithsonian Agreement, which devalued the US dollar to $38 per ounce of gold, increased the value of other countries' currencies to the dollar, and increased the band within which a currency was allowed to float from 1 percent to 2.25 percent. This agreement still relied on the US dollar to be the strong reserve currency and the persistent concerns over the high inflation and trade deficits continued to weaken confidence in the system. Countries gradually dropped out of system—notably Germany, the United Kingdom, and Switzerland, all of which began to allow their currencies to float freely against the dollar. The Smithsonian Agreement was an insufficient response to the economic challenges; by 1973, the idea of fixed exchange rates was over.

Before moving on, recall that the major significance of the Bretton Woods Agreement was that it was the first formal institution that governed international monetary systems. By having a formal set of

rules, regulations, and guidelines for decision making, the Bretton Woods Agreement established a higher level of economic stability. International businesses benefited from the almost thirty years of stability in exchange rates. Bretton Woods established a standard for future monetary systems to improve on; countries today continue to explore how best to achieve this. Nothing has fully replaced Bretton Woods to this day, despite extensive efforts.

Post–Bretton Woods Systems and Subsequent Exchange Rate Efforts

When Bretton Woods was established, one of the original architects, Keynes, initially proposed creating an international currency called Bancor as the main currency for clearing. Americans had an alternative proposal for the creation of a central currency called unitas. the US dollar was the reserve currency. Reserve currency is a main currency that many countries and institutions hold as part of their foreign exchange reserves; are often international pricing currencies for world products and services. Examples of current reserve currencies are the US dollar, the euro, the British pound, the Swiss franc, and the Japanese yen.

The IMF responded to the challenges created by the oil price shocks of the 1970s by adapting its lending instruments. To help oil importers deal with anticipated current account deficits and inflation in the face of higher oil prices, it set up the first of two oil facilities.

After the collapse of Bretton Woods and the Smithsonian Agreement, several new efforts tried to replace the global system. The most noteworthy regional effort resulted in the European Monetary System (EMS) and the creation of a single currency, the euro. While there have been no completely effective efforts to replace Bretton Woods on a global level, there have been efforts that have provided ongoing exchange rate mechanisms.

Jamaica Agreement

In 1976, countries met to formalize a floating exchange rate system as the new international monetary system. The Jamaica Agreement also removed gold as the primary reserve asset of the IMF. Additionally, the purpose of the IMF was expanded to include lending money as a last resort to countries with balance-of-payment challenges.

The Gs Begin

In the early 1980s, the value of the US dollar increased, pushing up the prices of US exports and thereby increasing the trade deficit. To address the imbalances, five of the world's largest economies met in September 1985 to determine a solution. The five countries were Britain, France, Germany, Japan, and the United States; this group was known as G5. The 1985 agreement, called the Plaza Accord because it was held at the Plaza Hotel in New York City, focused on forcing down the value of the US dollar through collective efforts.

By February 1987, the markets had pushed the dollar value down, and some worried it was now valued too low. The G5 met again, but now as the Group of Seven, adding Italy and Canada—it became known as the G7. The Louvre Accord, so named for being agreed on in Paris, stabilized the dollar. The countries agreed to support the dollar at the current valuation. The G7 continued to meet regularly to address ongoing economic issues.

The G7 was expanded in 1999 to include twenty countries as a response to the financial crises of the late 1990s and the growing recognition that key emerging-market countries were not adequately included in the core of global economic discussions and governance. It was not until a decade later, though, that the G20 effectively replaced the G8, which was made up of the original G7 and Russia.

The G20 is likely to be the stronger forum for the foreseeable future, given the number of countries it includes and the amount of world trade it represents. "Together, member countries represent around 90 per cent of global gross national product, 80 per cent of world trade (including EU intra-trade) as well as two-thirds of the world's population.

Today's Exchange Rate System

While there is not an official replacement to the Bretton Woods system, there are provisions in place through the ongoing forum discussions of the G20. Today's system remains—in large part—a managed float system, with the US dollar and the euro jostling to be the premier global currency. For businesses that once quoted primarily in US dollars, pricing is now just as often noted in the euro as well.

Some smaller nations have chosen to voluntarily set exchange rates against the dollar while other countries have selected the euro. Usually a country makes the decision between the dollar and the euro by reviewing their largest trading partners. By choosing the euro or the dollar, countries seek currency stability and a reduction in inflation, among other various perceived benefits. Many countries in Latin America once dollarized to provide currency stability for their economy. Today, this is changing, as individual economies have strengthened and countries are now seeking to dedollarize.

The International Monetary Fund

The International Monetary Fund (IMF) was established in 1946 to "promote international monetary cooperation, exchange stability and orderly exchange arrangements; to foster economic growth and high levels of employment; and to provide temporary financial assistance to countries to help ease balance of payments adjustment." It carries out these functions through loans, monitoring, and technical assistance.

Since 1962, the IMF has provided emergency assistance to its 188 member countries after they were struck by natural disasters, and, in a great many cases, when affected by complex emergencies. The assistance provided by the IMF is designed to meet the country's immediate foreign-exchange financing needs, which often arise because earnings from exports fall while the need for imports increases (among other causes). IMF assistance also helps the affected countries avoid serious depletion of their external reserves.

In 1995, the IMF began to provide this type of emergency assistance to countries facing post-conflict scenarios in order to enable them to re-establish macroeconomic stability and to provide a foundation for recovery, namely in the form of long-term sustainable growth. This type of assistance is particularly important when a country must cover costs associated with an "urgent balance of payments need, but is unable to develop and implement a comprehensive economic program because its capacity has been damaged by a conflict, but where sufficient capacity for planning and policy implementation nevertheless exists" (IMF 2005). The IMF maintains that their support must be part of a comprehensive

international effort to address the aftermath of a conflict in order to be effective. Its emergency financing is provided to assist the affected country and to gather support from other sources.

It is not uncommon for a country to severely exhaust its monetary reserves in response to an emergency situation. In the event of a natural disaster, funding is directed toward local recovery efforts and any needed economic adjustments. The IMF lends assistance only if a stable governing body is in place that has the capacity for planning and policy implementation and can ensure the safety of IMF resources. After stability has been sufficiently restored, increased financial assistance is offered, which is used to develop the country in its post-emergency status.

When a country requests emergency assistance, it must submit a detailed plan for economic reconstruction that will not create trade restrictions or "intensify exchange." If the country is already working under an IMF loan, assistance may be in the form of a reorganization of the existing arrangement. It can also request emergency assistance under the Rapid Financing Instrument (RFI).

The Rapid Financing Instrument (RFI) is the vehicle that the IMF uses to meet disaster-impacted countries' financing needs. The RFI provides funding quickly and with few requirements in instances where it is determined that a disaster or emergency situation has resulted in urgent balance-of-payments needs. Emergencies need not be related to a natural or technological hazard—they can also be the result of rapid increases in the price of certain commodities or because of an economic crisis. Unlike other IMF assistance, there does not need to be a full-fledged financing program in place.

Prior to the creation of the RFI, the IMF used a number of separate programs to address emergency needs, including the Emergency Natural Disaster Assistance (ENDA) program and the Emergency Post-Conflict Assistance (EPCA) program. The 2011 creation of the RFI program combines all emergency needs. RFI financial assistance is provided in the form of outright purchases without the need for a full-fledged program or reviews. However, when a country does request assistance under RFI, they must cooperate with the IMF to make every effort to solve their balance-of-payment problems, and must explain the economic policies it proposes to follow to do so.

The IMF makes the RFI program available to all of its members, though oftentimes very poor countries are more likely to seek assistance under a different program called the Rapid Credit Facility (RCF), which provides similar assistance but has economic-based requirements that many wealthier countries cannot meet. Funds access under the RFI program is limited to 50 percent of a nation's quota per year and 100 percent of quota on a cumulative basis. Under the RCF program, the access limits are 50 percent of a nation's quota per year and 125 percent of quota on a cumulative basis. The level of access in each case depends on the country's balance-of-payments need. Financial assistance provided under the RFI is subject to many of the same financing terms that nations would see in other IMF programs, and the funds borrowed are ideally paid back within 39 to 60 months (IMF 2011).

In certain cases, as decided by the IMF and according to specific criteria, recipients of emergency funding may benefit from the IMF Poverty Reduction and Growth Facility (PRGF). The PRGF is the IMF's low-interest lending facility for low-income countries. PRGF-supported programs are underpinned by comprehensive country-owned poverty reduction strategies. Under this program, the interest rate on loans is subsidized to 0.5 percent per year, with the interest subsidies financed by grant contributions from bilateral donors. This program has been available for post-conflict emergencies

since 2000, but in January 2005, following the South Asia tsunami events, the IMF Executive Board agreed to provide a similar subsidization of emergency assistance for natural disasters upon request.

The government of a country devastated by disaster often requires technical assistance or policy advice because it has no experience or expertise in this situation. This is especially common in post-conflict situations, where a newly elected or appointed government has been established and officials are rebuilding from the ground up. The IMF offers technical assistance in these cases to aid these countries in building their capacity to implement macroeconomic policy. This can include tax and government expenditure capacity; the reorganization of fiscal, monetary, and exchange institutions; and guidance in the use of aid resources.

Top 8 Financial Institutions of India

Finance Corporation of India (IFCI)

Industrial Credit and Investment Corporation of India (ICICI)

State Financial Corporations (SFCs)

State Industrial Development Corporations (SIDC'S)

Industrial Development Bank of India (IDBI)

Industrial Investment Bank of India (IIBIL)

Unit Trust of India (UTI)

Small Industries Development Bank of India (SIDBI)

Financial Institution # 1. Industrial Finance Corporation of India (IFCI):

The Industrial Finance Corporation of India was established in 1948 under the IFC Act, 1948. The main objective of the corporation has been to provide medium and long-term credit to industrial concerns in India.

The objective of the corporation as laid down in the preamble of the IFC Act, 1948, are making medium and long-term credits more readily available to industrial concerns in India, particularly in circumstances where normal banking accommodation is inappropriate or recourse to capital issue methods is impracticable."

The financial assistance of the corporation is available to limited companies or co-operative societies registered in India and engaged or proposing to engage in:

(a) Manufacture, preservation or processing of goods

(b) The mining industry;

(c) The shipping business;

(d) The hotel industry; and

(e) The generation or distribution of electricity or any other form of power.

Initially the authorised capital of the corporation was Rs. 10 crore which was divided in equities of Rs. 5,000 each. Later on the authorised capital was increased to Rs. 20 crore. Since July 1, 1993 this corporation has been converted into a company and it has been given the status of a limited company with the name Industrial Finance Corporation of India Ltd. IFCI has got its registration under Companies Act, 1956.

Before July 1, 1993, general public was not permitted to hold shares of IFCI. Only Government of India, RBI, Scheduled Banks, Insurance Companies and Co-operative Societies were holding the shares of IFCI.

The financial resources of IFCI consist of paid-up capital, reserves, repayment of loans, market borrowings in the form of bonds/debentures, loans from Government of India, advances from the Industrial Development Bank of India and foreign currency loans.

Functions of IFCI:

The functions of the IFCI can be broadly classified into:

a. Financial Assistance, and

b. Promotional Activities.

a. Financial Assistance:

The IFCI is authorised to render financial assistance in one or more of the following forms:

(i) Granting loans or advances to or subscribing to debentures of industrial concerns repayable within 25 years. Also it can convert part of such loans or debentures into equity share capital at its option.

(ii) Underwriting the issue of industrial securities i.e., shares, bonds, or debentures to be disposed off within 7 years.

(iii) Subscribing directly to the shares and debentures of public limited companies.

(iv) Guaranteeing of loans raised by industrial concerns from scheduled banks or state cooperative banks.

(v) Guaranteeing of deferred payments for the purchase of capital goods from abroad or within India.

(vi) Acting as an agent of the Central Government or the World Bank in respect of loans sanctioned to the industrial concerns.

Financial assistance is available from IFCI for the following purposes:

(i) For the setting up of new industrial undertakings.

(ii) For expansion or diversification of the existing concerns.

(iii) For the modernisation and renovation of the existing concerns.

(iv) For meeting existing liabilities or working capital requirement of industrial concerns in exceptional cases.

IFCI provides financial assistance to eligible industrial concerns regardless of their size. However, now- a-days, it entertains applications from those industrial concerns whose project cost is above Rs. 2 crores because up to project cost of Rs. 2 crores various state level institutions (such as Financial Corporations, SIDCs and banks) are expected to meet the financial requirements of viable concerns.

While approving a loan application, IFCI gives due consideration to the feasibility of the project, its importance to the nation, development of the backward areas, social and economic viability, etc.

b. Promotional Activities:

The IFCI has been playing very important role as a financial institution in providing financial assistance to eligible industrial concerns. However, no less important is its promotional role whereby it has been creating industrial opportunities also. The corporation discovers the opportunities for promoting new enterprises.

It helps in developing small and medium scale entrepreneurs by providing them guidance through its specialised agencies in identification of projects, preparing project profiles, implementation of the projects, etc. It acts an instrument of accelerating the industrial growth and reducing regional industrial and income disparities.

Working of IFCI:

The cumulative financial assistance sanctioned by IFCI up to March, 2003 aggregated Rs. 45,426.7 crores against which disbursements amounted to Rs. 44,169.2 crores. During 2003-04, IFCI sanctioned and disbursed Rs. 1394.6 crore and Rs. 281.2 crore respectively.

However, no amount was sanctioned by IFCI during 2004-05 and disbursements also amounted to Rs. 91 crore only. The provisional disbursement for the year 2005-06 amounted to Rs. 187 crore only.

However, no amount was sanctioned by IFCI during 2004-05 and disbursements also amounted to Rs. 91 crores only. The disbursements for the year 2005-06 amounted to Rs. 187 crores only. The provisional figures of sanctions and disbursements for the year 2006-07 amounted to Rs. 1050 crores and Rs. 550 crores respectively.

The most of the assistance sanctioned by IFCI has gone to industries of national priority such as fertilizers, cement, power generation, paper, industrial machinery etc.

The corporation is giving a special consideration to the less developed areas and assistance to them has been stepped up. It has sanctioned nearly 49 per cent of its assistance for projects in backward districts.

The corporation has recently been participating in soft loan schemes under which loans on concessional rates are given to units in selected industries. Such assistance is given for modernisation, replacement and renovation of plant and equipment.

IFCI introduced a scheme for sick units also. The scheme was for the revival of sick units in the tiny and small scale sectors. Another scheme was framed for the self-employment of unemployed young persons. The corporation has diversified into merchant banking also. Financing of leasing and hire

purchase companies, hospitals, equipment leasing etc. were the other new activities of the corporation in the last few years.

Financial Institution # 2. Industrial Credit and Investment Corporation of India (ICICI):

The Industrial Credit and Investment Corporation of India (ICICI) were established in 1955 as a public limited company under the Indian Companies Act for developing medium and small industries of private sector.

Initially its equity capital was owned by companies, institutions and individuals but at present its equity capital is owned by public sector institutions like banks, LIC and GIC etc. It provides term loans in Indian and foreign currencies, underwrites issues of shares and debentures, makes direct subscription to these issues and guarantees payment of credit made by others.

Functions of ICICI:

The corporation has been established for the purpose of assisting industries in the private sector by undertaking the following functions:

(i) Assisting in the creation, expansion and modernisation of such enterprises.

(ii) Encouraging and promoting the participation of private capital, both internal and external.

(iii) Encouraging and promoting private ownership.

(iv) Expansion of investment market.

(v) Providing finance in the form of long or medium-term loans.

(vi) Underwriting issue of shares and debentures.

(vii) Making funds available for re-investment.

(viii) Furnishing managerial, technical and administrative services to Indian Industry.

(ix) To extend guarantee for deferred payments.

(x) To advance loans in foreign currency towards the cost of imported capital equipment.

The financial assistance sanctioned and disbursed by ICICI up to March 2002 amounted to Rs. 2,83,511 crore and Rs. 1,71,698 crore respectively. During 1998-99 alone it sanctioned Rs. 34,220 crore and disbursed Rs. 19,225 crore.

Loans sanctioned in foreign currency constitute important place in total sanctioned loans of the corporation. The assistance sanctioned and disbursed by ICICI during 2001-02 aggregated Rs. 35,589 crores and Rs. 25,050 crores respectively registering a growth of 36.2% and 20.9% respectively over the previous year.

Recently ICICI Ltd. (along with two its subsidiaries, ICICI Personal Finance Services Ltd., and ICICI Capital Services Ltd.,) has been merged with ICICI Bank Ltd., effective from May 3, 2002. The erstwhile DFI has thus ceased to exist.

Financial Institution # 3. State Financial Corporations (SFCs):

The State Financial Corporation Act was passed by the Government of India in 1951 with a view to provide financial assistance to small and medium scale industries which were beyond the scope of IFCI. According to this Act, a State Government is empowered to establish a financial corporation to operate within the State. At present, there are 18 such corporations functioning in the country.

These corporations are expected to be complementary to the Industrial Finance Corporation of India. While IFCI provides assistance only to large industrial concerns owned by public limited companies or co-operatives, the SFCs. render assistance to all kinds of industries, may be in the form of private limited companies, partnership firms or sole- trading concerns.

The capital structure of the State Financial Corporations has been left to be determined by State Government within the limits of Rs. 50 lakhs to Rs. 5 crores, 25 per cent of the capital can be subscribed by the public and the rest by the State Government, the Reserve Bank of India, insurance companies and other institutional investors in proportion to be determined by the State Government in consultation with the Reserve Bank of India.

Apart from share capital, the SFCs depend for financial resources on issue of bonds, borrowings from RBI, loans from State Government, refinancing of loans by IDBI, deposits from the public, repayment of loans and income from investments.

Functions:

The main function of the SFCs is to provide loans to small and medium scale industries engaged in the manufacture, preservation or processing of goods, mining, hotel industry, generation or distribution of power, transportation, fishing, assembling, repairing or packaging articles with the aid of power, etc.

State Financial Corporations are authorised to grant financial assistance in the following forms:

(i) Granting of loans or advances to industrial concerns repayable within a period not exceeding twenty years.

(ii) Subscribing to the debentures of industrial concerns repayable within a period not exceeding twenty years.

(iii) Guaranteeing loans raised by industrial concerns repayable within twenty years.

(iv) Underwriting the issue of stocks, shares, bonds or debentures by the industrial concerns subject to their being disposed off within seven years.

(v) Guaranteeing deferred payments due from any industrial concern in connection with purchase of capital goods in India.

(vi) Acting as an agent of the Central Government or State Government or the Industrial Finance Corporation of India in respect of any business with an industrial concern in respect of loans sanctioned to them.

Financial Institution # 4. State Industrial Development Corporations (SIDC'S):

In order to accelerate industrial development various states have set up Industrial Development Corporations. Andhra Pradesh and Bihar were the first states to set up such corporations in 1960. Most of the states have set up such institutions at present. At present there are 28 such SIDCs working in the country.

Many of these corporations are registered under Companies Act and two have been set up under the statutes of legislative bodies. These corporations are wholly owned by state governments.

SIDCs perform the following functions:

(i) Grant of financial assistance.

(ii) Provision of industrial sheds or plots.

(iii) Promotion and management of industrial concerns.

(iv) Promotional activities such as identification of project idea, selection and training of entrepreneur, provision of technical assistance during project implementation.

(v) Providing risk capital to entrepreneur by way of equity participation and seed capital assistance.

Financial Institution # 5. Industrial Development Bank of India (IDBI):

The Industrial Development Bank of India was established under the Industrial Development Bank of India Act, 1964 as a wholly owned subsidiary of the Reserve Bank of India. The ownership of IDBI has since been transferred to Central Government from February 16, 1976.

The main object of establishing IDBI was to set up an apex institution to co-ordinate the activities of other financial institutions and to act as a reservoir on which the other financial institutions can draw. IDBI provides direct financial assistance to industrial units also to bridge the gap between supply and demand of medium and long term finance.

As on March 31, 1997, the paid up capital of IDBI stood at Rs. 659.4 crore and reserve funds at Rs. 6554 crore. The bank is also authorised to raise its resources through borrowings from Government of India, Reserve Bank of India and other financial institutions.

On 31st March, 1997, the bank had borrowings of Rs. 23,802 crore by way of bonds and debentures, deposits of Rs. 3694 crore and borrowings of Rs. 10,364 crore from RBI, Government of India and other sources.

Functions:

The main functions of IDBI are as follows:

i. To co-ordinate the activities of other institutions providing term finance to industry and to act as an apex institution.

ii. To provide refinance to financial institutions granting medium and long-term loans to industry.

iii. To provide refinance to scheduled banks or co-operative banks.

iv. To provide refinance for export credits granted by banks and financial institutions.

v. To provide technical and administrative assistance for promotion, management or growth of industry.

vi. To undertake market surveys and techno-economic studies for the development of Industry.

vii. To grant direct loans and advances to industrial concerns,

IDBI is empowered to finance all types of industrial concerns engaged or proposed to be engaged in the manufacture, preservation or processing of goods, mining, hotel industry, fishing, shipping, transport, generation or distribution of power, etc.

The bank can also assist concerns engaged in the setting up of industrial estates or research and development of any process or product or in providing technical knowledge for the promotion of industries. Until recently IDBI also functioned as Export-Import Bank of the country.

viii. To render financial assistance to industrial concerns, IDBI operates various schemes of assistance, e.g., Direct Assistance Scheme. Soft Loans Scheme, Technical Development Fund Scheme, Refinance Industrial Loans Scheme, Bill Re-discounting Scheme, Seed Capital Assistance Scheme, Overseas Investment Finance Scheme, Development Assistance Fund, etc.

Since its inception in 1964, IDBI has extended its operations to various areas of industrial sector. It provides direct loans, refinances industrial loans, rediscounts bills, underwrites shares and debentures, directly subscribes to shares and debentures of companies of industrial units etc.

Aggregate assistance sanctioned by March 2003 amounted to Rs. 2,23,932 crore and disbursements amounted to Rs. 1,68,167 crore. Assistance sanctioned during 2004-05 amounted to Rs. 10,799 crore and disbursements amounted to Rs. 6,183 crore in 2004-05. The provisional figures for the year 2005-06 amounted to Rs. 27,442 crore and Rs. 12,984 crore respectively.

Financial Institution # 6. Industrial Investment Bank of India (IIBIL):

Industrial Reconstruction Bank of India (IRBI):

IRBI was established on March 20, 1985 under Indian Industrial Reconstruction Bank Act, 1984 as a result of reconstituting Indian Industrial Reconstruction Corporation. The basic aim of establishing IRBI was to revive sick and closed industrial units and to act as prime loan and reconstruction agency.

IRBI has been rechristened as Industrial Investment Bank of India Ltd. (IIBIL) with effect from March 27, 1997. The authorised capital of IIBIL is Rs. 1,000 crore and its head office is situated at Calcutta. Now it acts as an autonomous development finance institution like IFCI, ICICI and IDBI. During 1999-2000, IIBIL sanctioned and disbursed Rs. 2338.08 crore and Rs. 1439.58 crore respectively.

The figures for the year 2000-01 amounted to Rs. 2102.3 crore and Rs. 1709.8 crore respectively; and for the year 2001-02, sanctions amounted to Rs. 1320.7 crore against disbursements of Rs. 1070 crore. The provisional figures for the year 2002-03 amounted to Rs. 12.06.4 crore and Rs. 1091.9 crore and for the year 2003-04 sanctions amounted to Rs. 2,412 crore against disbursements of Rs. 2,252 crore.

Financial Institution # 7. Unit Trust of India (UTI):

The Unit Trust of India was established on February 1. 1964 under the Unit Trust of India Act, 1963 with the following objectives:

(i) To stimulate and pool the savings of the middle and low income groups.

(ii) To enable unit holders to share the benefits and prosperity of the rapidly growing industrialisation in the country.

(iii) To sell units among as many investors as possible.

(iv) To invest the money raised from the sale of units and its own capital in corporate and industrial securities.

(v) To pay dividend to the unit holders.

With the amendment of UTI Act in April, 1986, UTI is now allowed to grant term loans, rediscount bills, undertake equipment leasing and bill purchase financing, provide housing and construction finance, provide merchant banking and portfolio management services and set up overseas funds. UTI mobilises saving funds from public by selling its units in various schemes.

The mobilised sources are invested by the Trust in shares and debentures of various well established companies.

UTI distributes its net profit amongst its unit holders as dividend. Presently UTI is the largest investor in Indian share market. As on July 31, 2002 UTI's assets under management were valued at Rs. 47,787 crore. Financial assistance sanctioned and disbursed by UTI during 2000-01 stood at Rs. 6770 crore and Rs. 4600 crore respectively.

The head office of the UTI is situated at Mumbai and its regional offices are working at Mumbai, Calcutta, Chennai and New Delhi. 41 branches of UTI are working in various parts of the country. UTI has also established a private sector bank named UTI Bank Ltd.

Financial Institution # 8. Small Industries Development Bank of India (SIDBI):

The Small Industries Development Bank of India (SIDBI) was set up in 1990 under the SIDBI Act, 1990. The main objective of SIDBI has been to work as a principal financial institution for the promotion, financing and development of industries in the small-scale sector.

It is also expected to co-ordinate the functions of various financial institutions, such as, State Financial Corporations, State Small Industries Development Corporations. Scheduled Banks and State Co-operative Banks, etc. engaged in the financing, promotion and development of small-scale industries.

Resources:

The financial resources of SIDBI mainly comprise contribution from the Industrial Development Bank of India (IDBI) in the form of share capital and loans, funds from the Reserve Bank of India, loans from the Government of India and the market borrowings. The authorised capital of SIDBI is Rs. 250

crores which may be increased to Rs. 1000 crores. It is also free to obtain loans in foreign currency from foreign institutions.

Working:

The Small Industries Development Bank of India began its operations in April 1990 by taking over the activities of the IDBI relating to the small-scale industrial sector. Since, then it has been providing very useful service to the small-scale industries. The other specialised financial institutions were generally providing assistance only to the big industrial units and hence SIDBI has filled this gap very well.

Total financial assistance sanctioned and disbursed by SIDBI till the end of March, 1999 stood at Rs. 45,137 crore and Rs. 32,985 crore respectively. During 2001-02 sanctions and disbursements made by SIDBI were Rs. 9,014 crore and Rs. 5,197 crore respectively.

In pursuance of SIDBI (Amendment) Act, 2000, 51% of shareholding in SIDBI hither to subscribed and held by IDBI, have been transferred to select public sector banks, LIC, GIC and other institutions owned or controlled by the Central Government.

UNIT V

Balance of Payments (BOP)

The balance of payments (BOP) is a "consolidated account of the receipts and payments from and to other countries arising out of all economic transactions during the course of a year".

In the words of C. P. Kindleberger: "The balance of payments of a country is a systematic record of all economic transactions between the residents of the reporting and the residents of the foreign countries during a given period of time." 'residents' we mean individuals, firms and government.

Economic transactions --- A. individuals, firms and government. B..transactions of both visible goods (merchandise) and invisible goods (services), assets, gifts, etc. In other words, the BOP shows how money is spent abroad (i.e., payments) and how money is received domestically (i.e., receipts).

Thus, a BOP account records all payments and receipts arising out of all economic transactions. All payments are regarded as debits (outflow of money) and are recorded in the accounts with a negative sign and all receipts are regarded as credits (inflow or money) and are recorded-in the accounts with a positive sign.

The International Monetary Fund defines BOP as a "statistical statement that subsequently summarises, for a specific time period, the economic transactions of an economy with the rest of the world."

Components of BOP Accounts:

A. The Current Account:

The current account of BOP includes 1. all transaction arising from trade in currently produced goods and services, 2. from income accruing to capital by one country and 3. invested in another and from unilateral transfers— both private and official.

The current account is usually divided in three sub-divisions.1.The first of these is called visible account or merchandise account or trade in goods account. This account records imports and exports of physical goods. The balance of visible exports and visible imports is called balance of visible trade or balance of merchandise trade [i.e., items 1(a), and 2(a) of Table 6.1].

The second part of the account is called the invisibles account since it records all exports and imports of services. The balance of these transactions is called the balance of invisible trade. As these transactions are not recorded—in the customs office—unlike merchandise trade we call them invisible items.

It includes freights and fares of ships and planes, insurance and banking charges, foreign tours and education abroad, expenditures on foreign embassies, transactions out of interest and dividends on foreigners' investment and so on. Items 2(a) and 2(b) comprise services balance or balance of invisible trade.

Table 6.1 : The Schematic BOP
A. Current Account
1. Merchandise Trade
(a) Visible exports, (b) Visible imports.
2. Invisible Trade
(a) Invisible exports, (b) Invisible imports.
3. Other Flows
(a) Investment income, (b) Unrequited transfers.
B. Capital Account : (a) Long term capital transactions,
(b) Short term capital transactions.
C. Balancing Item
Net Errors and Omissions.
D. Official Reserve Account

The difference between merchandise trade and invisible trade (i.e., items 1 and 2) is known as the balance of trade.

There is another flow in the current account that consists of two items [3(a) and 3(b)]. Investment income consists of interest, profit and dividends on bonus and credits. Interest earned by a US resident from the TELCO share is one kind of investment income that represents a debit item here.

There may be a similar money inflow (credit item). Unrequited transfers include grants, gifts, pension, etc. These items are such that no reverse flow occurs. Or these are the items against which no quid pro quo is demanded. Residents of a country received these cost-free. Thus, unilateral transfers are one-way transactions. In other words, these items do not involve give and take unlike other items in the BOP account.

The first three items of the BOP account are included in the current account. The current account is said to be favourable/ unfavourable if receipts exceed /fall short of payments.

B. The Capital Account:

The capital account shows transactions relating to the international movement of ownership of financial assets. It refers to cross-border movements in foreign assets like shares, property or direct acquisitions of companies' bank loans, government securities, etc. In other words, capital account records export and import of capital from and to foreign countries.

The capital account is divided into two main subdivisions: a. short term and b.the long term movements of capital. A short- term capital is one which matures in one year or less, such as bank accounts.

Long term capital is one whose maturity period is longer than a year, such as long- term bonds or physical capital. Long term capital account is, again, of two categories: direct investment and portfolio investment. Direct investment refers to expenditure on fixed capital formation, while portfolio investment refers to the acquisition of financial assets like bonds, shares, etc. India's investment (if an

Indian acquires a new Coca- Cola plant in the USA) abroad represents an outflow of money. Similarly, if a foreigner acquires a new factory in India it will represent an inflow of funds.

Thus, through acquisition or sale and purchase of assets, capital movements take place. Investors then acquire controlling interests over the asset. Remember that exports and imports of equipment do not appear in the capital account. On the other hand, portfolio investment refers to changes in the holding of shares and bonds. Such investment is portfolio capital and the ownership of paper assets like shares does not ensure legal control over the firms.

CASE STUDY:[In this connection, the concepts of capital exports and capital imports require little elaboration. For instance, a US company purchases a firm operating in India. This sort of foreign investment is called capital import rather than capital export. India acquires foreign currency after selling the firm to a US company. As a result, India acquires purchasing power abroad. That is why this transaction is included in the credit side of India's BOP accounts. In the same way, if India invests in a foreign country, it is a payment and will be recorded on the debit side. This is called capital export. Thus, India earns foreign currency by exporting goods and services and by importing capital. Similarly, India releases foreign currency by importing visible and invisibles and exporting capital.]

C. Statistical Discrepancy Errors and Omissions:

The sum of A and B (Table 6.1) is called the basic balance. Since BOP always balances in theory, all debits must be offset by all credits, and vice versa. In practice, it rarely happens—particularly because statistics are incomplete as well as imperfect. That is why errors and omissions are considered so that the BOP accounts are kept in balance (Item C).

D. The Official Reserve Account:

The total of A, B, C, and D comprise the overall balance. The category of official reserve account covers the net amount of transactions by governments. This account covers purchases and sales of reserve assets (such as gold, convertible foreign exchange and special drawing rights) by the central monetary authority.

Now, we can summarise the BOP data:

Current account balance + Capital account balance + Reserve balance = Balance of Payments

(X – M) + (CI – CO) + FOREX = BOP

{Exports – Imports} + {Cap inflows-Cap outflows}+Forex = BOP

X is exports,

M is imports,

CI is capital inflows,

CO is capital outflows,

FOREX is foreign exchange reserve balance.

BOP Always Balances:

A nation's BOP is a summary statement of all economic transactions between the residents of a country and the rest of the world during a given period of time. A BOP account is divided into current account and capital account. Former is made up of trade in goods (i.e., visible) and trade in services (i.e., invisibles) and unrequited transfers. Latter account is made up of transactions in financial assets. These two accounts comprise BOP

A BOP account is prepared according to the principle of double-entry book keeping. This accounting procedure gives rise to two entries— a debit and a corresponding credit. Any transaction giving rise to a receipt from the rest of the world is a credit item in the BOP account. Any transaction giving rise to a payment to the rest of the world is a debit item.

The left hand side of the BOP account shows the receipts of the country. Such receipts of external purchasing power arise from the commodity export, from the sale of invisible services, from the receipts of gift and grants from foreign governments, international lending institutions and foreign individuals, from the borrowing of money from the foreigners or from repayment of loan by the foreigners.

The right hand side shows the payments made by the country on different items to the foreigners. It shows how the total of external purchasing power is used for acquiring imports of foreign goods and services as well as the purchase of foreign assets. This is the accounting procedure.

However, no country publishes BOP accounts in this format. the BOP figures are published in a single column with positive (credit) and negative (debit) signs. Since payments side of the account enumerates all the uses which are made up of the total foreign purchasing power acquired by this country in a given period, and since the receipts of the accounts enumerate all the sources from which foreign purchasing power is acquired by the same country in the same period, the two sides must balance. The entries in the account should, therefore, add up to zero.

why should they add up to zero? In practice, this is difficult to achieve where receipts equal payments. In reality, total receipts may diverge from total payments because of: (i) the difficulty of collecting accurate trade information; (ii) the difference in the timing between the two sides of the balance; and (iii) a change in the exchange rates, etc.

Because of such measurement problems, resource is made to 'balancing item' that intends to eliminate errors in measurement. The purpose of incorporating this item in the BOP account is to adjust the difference between the sums of the credit and the sums of the debit items in the BOP accounts so that they add up to zero by construction. Hence the proposition 'the BOP always balances'. It is a truism. It only suggests that the two sides of the accounts must always show the same total. It implies only an equality. In this book-keeping sense, BOP always balances.

Thus, by construction, BOP accounts do not matter. In fact, this is not so. The accounts have both economic and political implications. Mathematically, receipts equal payments but it need not balance in economic sense. This means that there cannot be disequilibrium in the BOP accounts.

A combined deficit in the current and capital accounts is the most unwanted macroeconomic goal of ,an economy. Again, a deficit in the current account is also undesirable. All these suggest that BOP is out of equilibrium. But can we know whether the BOP is in equilibrium or not? Tests are usually three in number: (i) movements in foreign exchange reserves including gold, (ii) increase in borrowing from abroad, and (iii) movements in foreign exchange rates of the country's currency in question.

Firstly, if foreign exchange reserves decline, a country's BOP is considered to be in disequilibrium or in deficit. If foreign exchange reserves are allowed to deplete rapidly it may shatter the confidence of people over the domestic currency. This may ultimately lead to a run on the bank.

Secondly, to cover the deficit a country may borrow from abroad. Thus, such borrowing occurs when imports exceed exports. This involves payment of interest on borrowed funds at a high rate of interest.:

Finally, the foreign exchange rate of a country's currency may tumble when it suffers from BOP disequilibrium. A fall in the exchange rate of a currency is a sign of BOP disequilibrium.

Thus, the above (mechanical) equality between receipts and payments should not be interpreted to mean that a country never suffers from the BOP problems and the international economic transactions of a country are always in equilibrium.

Implications of an Unbalance in the BOP:

Although a nation's BOP always balances in the accounting sense, it need not balance in an economic sense.

An unbalance in the BOP account has the following implications:

In the case of a deficit:

(i) Foreign exchange or foreign currency reserves decline,

(ii) Volume of international debt and its servicing mount up, and

(iii) The exchange rate experiences a downward pressure. It is, therefore, necessary to correct these imbalances.

BOP Adjustment Measures:

BOP adjustment measures are grouped into four:

(i) Protectionist measures by imposing customs duties and other restrictions, quotas on imports, etc., aim at restricting the flow of imports,

(ii) Demand management policies—these include restrictionary monetary and fiscal policies to control aggregate demand [C + I + G + (X – M)],

(iii) Supply-side policies—these policies aim at increasing the nation's output through greater productivity and other efficiency measures, and, finally,

(iv) exchange rate management policies— these policies may involve a fixed exchange rate, or a flexible exchange rate or a managed exchange rate system.

As a method of connecting disequilibrium in a nation's BOP account, we attach importance here to exchange rate management policy only.

Exchange Rate Management:

An exchange rate is the price at which one currency is converted into or exchanged for another currency. Exchange rate connects the price system of two countries since this (special) price shows he relationship between all domestic prices and ill foreign prices. Any change in the exchange rate between rupee and dollar will cause a change in the prices of all American goods for Indians and the prices of all Indian goods for the Americans. In the process, equilibrium in the BOP accounts will be restored.

Every government has to make international decisions of what type of exchange rate it wants to adopt. This means that government will have to decide how its own currency should be related to other currencies of the world. For instance, it may choose to fix the value of its currency to other currencies of the world so as to adjust its BOP difficulties, or it may choose to allow its currency to move free against other currencies of the world so as to adjust its BOP difficulties. This means that there are two important exchange rate systems—the fixed (or pegged) exchange rate, and the flexible (or fluctuating or floating) exchange rate.

These two exchange rates have been tried and tested in the past. Fixed exchange rate system had been tried by the IMF during 1947-1971 when this system was abandoned. After 1971, the world's exchange rate became a flexible one or a floating one. Truly speaking, the exchange rate that is being followed by the IMF now is known as the 'managed floating system', or the 'managed flexibility'.

(A) Fixed Exchange Rate:

A fixed exchange rate is an exchange rate that does not fluctuate or that changes within a pre-determined rate at infrequent intervals.

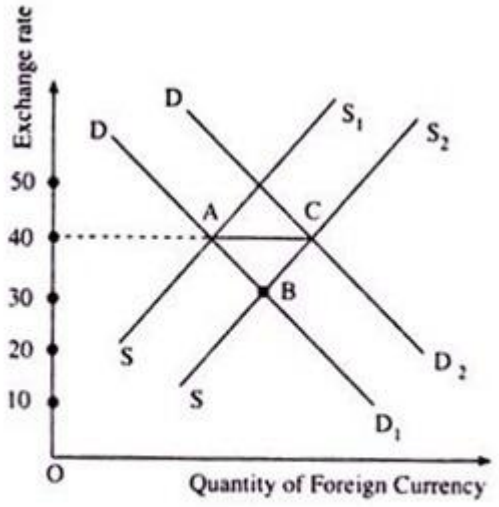


Fig. 6.9 : Fixed Exchange Rate Mechanism

Government or the central monetary authority intervenes in the foreign exchange market so that exchange rates are kept fixed at a stable rate. The rate at which the currency is fixed is called par value. This par value is allowed to move in a narrow range or 'band' of ± 1 per cent. If the sum of current and capital account is negative, there occurs an excess supply of domestic currency in the world markets. The government then intervenes using official foreign exchange reserves to purchase domestic currency.

Fixed or the pegged exchange rate can be explained graphically. Let us suppose that India's demand for US goods rises. This increased demand for imports causes an increase in the supply of domestic currency, rupee, in the exchange market to obtain US dollars. Let DD1 and SS1 be the demand and supply curves of dollar in Fig. 6.9. These two curves intersect at point A and the corresponding exchange rate is Rs. 40 = $1. Consequently, the supply curve shifts to SS2 that cuts the demand curve DD1 at point B.

This means a fall in the exchange rate. To prevent this exchange rate from falling, the Reserve Bank of India will demand more rupees in exchange for US dollars. This will restrict the excess supply of rupee and there will be an upward pressure in exchange rate. Demand curve will now shift to DD2. The end result is the restoration of the old exchange rate at point C.

Thus, it is clear that the maintenance of fixed exchange rate system requires that foreign exchange reserves are sufficiently available. Whenever a country experiences inadequate foreign currency reserves it won't be able to purchase domestic currency in sufficient quantities. Under the circumstances, the country will devalue its currency. Devaluation refers to an official reduction in the value of one currency in terms of another currency.

(B) Flexible Exchange Rate:

Under the flexible or floating exchange rate, the exchange rate is allowed to vary to international foreign exchange market influences. Thus, government does not intervene. Rather, it is the market forces that determine the exchange rate.

Automatic variations in exchange rates brings upon a change in market forces and these are the essence of freely fluctuating exchange rates. A deficit in the BOP account means an excess supply of the domestic currency in the world markets. As price declines, imbalances are removed. In other words, excess supply of domestic currency will automatically cause a fall in the exchange rate and BOP balance will be restored.

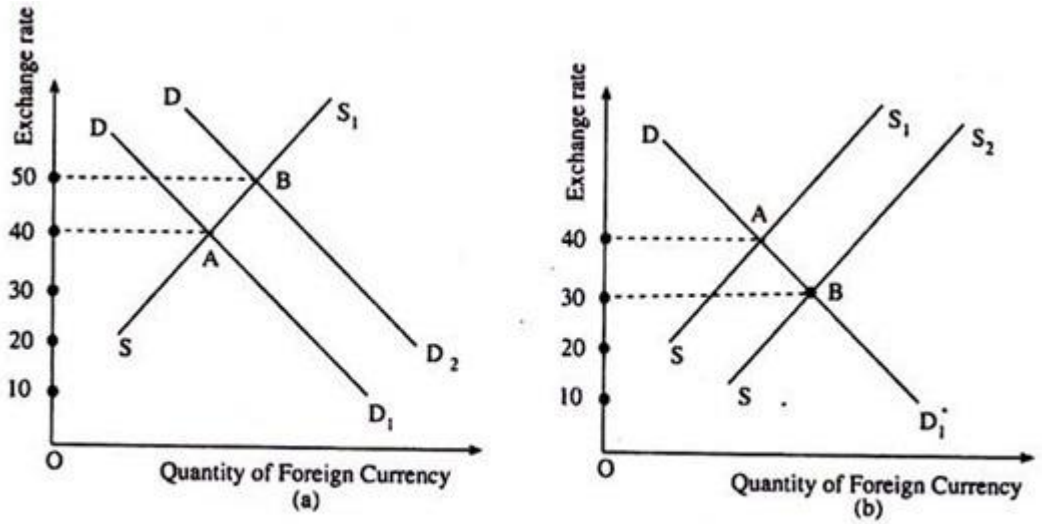


Fig. 6.10 : Flexible Exchange Rate Mechanism

Flexible exchange rate mechanism has been explained in Fig. 6.10 where DD1 and SS1 are the demand and supply curves. When Indians buy US goods, there arises supply of dollar and when US people buy Indian goods, there occurs demand for rupee. Initial exchange rate—Rs. 40 = $1—is determined by the intersection of DD1 and SS1 curves in both the Figs. 6.10(a) and 6.10(b).

An increase in demand for India's exportable means an increase in the demand for Indian rupee. Consequently, demand curve shifts to DD2 and the new exchange rate rises to Rs. 50 = $1. At this new exchange rate, dollar appreciates while rupee depreciates in value [Fig. 6.10(a)].

Fig. 6.10(b) shows that the initial exchange rate is Rs. 40 = $1. Supply curve shifts to SS2 in response to an increase in demand for the US goods. SS2 curve intersects the demand curve DD1 at point B and exchange rate drops to Rs. 30 = $1. This means that dollar depreciates while Indian rupee appreciates.

(C) Managed Exchange Rate:

Under this heading, floating exchange rates are 'managed' partially. That is to say, exchange rates are determined in the main by market forces, but the central bank intervenes to stabilise fluctuations in exchange rates so as to bring 'orderly' conditions in the market, or to maintain the desired exchange rate values.

Balance of Payments (Short notes)

The balance of payment is a comprehensive and systematic records of all economic transaction between normal residents of a country and rest of the world during an accounting year.

Accounts of Balance of Payments:

1. Current Account: The current account records export and import of goods and services and unilateral transfers.

2. Capital Account: It records of all such transactions between normal residents of a country and rest of the world which relates to sale and purchase of foreign assets and liabilities during an accounting year.

Components of Current Account	Components of Capital Account
1. Visible items (import and export of goods).	1. Foreign Direct investment.
2. Invisible items (import and export of services).	2. Loans.
3. Unilateral transfers.	3. Portfolio investment.
4.Income receipts and payments from and to abroad.	4. Banking capital transactions.
5. These are the transactions which do not affect the assets or liabilities position of the country.	5. These are the transactions which affect assets or liabilities position of the country.
6. It is a flow concept.	6.It is a stock concept.

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.

Autonomous items are those items of balance of payment which is related to such transaction as are determined by the motive of profit maximisation and not to maintain equilibrium in balance of payments. These items are recorded as a first items before calculating deficit or surplus in balance of payment a/c.

These items are generally called 'Above the Line items' in balance of payment.

Accommodating item refers to transactions that take place because of other activity in Balance of Payment. These transactions are meant to restore the Balance of Payment identity. These items are generally called 'Below the Line items'.

Deficit of Bop Account: When total inflows of foreign exchange on account of autonomous transactions are less than total outflows on account such transaction then there is a deficit in Bop.

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. In simple words, we can say that the price of one currency in terms of other currency is known as foreign exchange rate or exchange rate.

SYSTEM OF EXCHANGE RATE:

1. Fixed exchange rate

2. Flexible exchange rate.

In fixed exchange rate system, the rate of exchange is officially fixed or determined by Government or Monetary Authority of the country.

Merits of Fixed Exchange Rate

(i) Stability in exchange rate

(ii) Promotes capital movement and international trade.

(iii) No scope for speculation

(iv) It forces the govt. to keep inflation in check.

(v) Attracts foreign capital.

Demerits of Fixed Exchange Rate

(i) Need to hold foreign exchange reserves.

(ii) No automatic adjustment in the 'Balance of payments.'

(iii) It may result in undervaluation or overvaluation of currency.

(iv) It discourages the objective of having free markets.

In a system of flexible exchange rate (also known as floating exchange rates), the exchange rate is determined by the forces of market demand and supply of foreign exchange.

The demand of foreign exchange have the inverse relation with flexible exchange rate. If flexible exchange rate rise the demand of foreign exchange falls. Vice versa.

Sources of Demand for Foreign Exchange

(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 to abroad.

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

(f) To undertake foreign tours.

The supply of foreign exchange have the positive relation with foreign exchange rate. If foreign exchange rate rises the supply of foreign exchange also rises and vice versa.

Sources of Supply of Foreign Exchange

(i) Direct purchase by foreigners in domestic market.

(ii) Direct investment by foreigners in domestic market.

(iii) Remittances by non-residents living abroad.

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

(v) Exports of goods and services.

(vi) Foreign direct investment as well as portfolio investment from rest of the world.

Merits of Flexible Exchange Rate

(i) No need to hold foreign exchange reserves

(ii) Leads to automatic adjustment in the 'balance of payments'.

(iii) To enhances efficiency in resources allocation.

(iv) To remove obstacles in the transfer of capital and trade.

(v) It eliminates the problem of undervaluation or overvaluation of currency.

(vi) It promotes venture capital in the form of foreign exchange.

Demerits of Flexible Exchange Rate

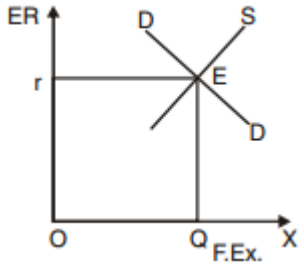
(i) Fluctuations in future exchange rate.

(ii) Encourages speculation.

(iii) Discourages international trade and investment.

(iv) It creates a situation of market instability.

Determination of Equilibrium Foreign Exchange Rate: Equilibrium FER is the rate at which demand for and supply of foreign exchange is equal. Under free market situation, it is determined by market forces i.e., demand for and supply of foreign exchange. There is inverse relation between demand for foreign exchange and exchange rate. There is direct relationship b/w supply of foreign exchange and exchange rate. Due to above reasons demand curve downward sloping and supply curve is upward sloping curve Graphically intersection of demand Curve and supply curve determines the equilibrium foreign exchange rate.



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) 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 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 down it. When it finds the rate is too low. It starts buying to raise the rate.

Business Process Reengineering

Business process reengineering is an approach to change management in which the related tasks required to obtain a specific business outcome are totally redesigned. An important goal of BPR is to analyse workflows within and between enterprises in order to optimize end-to-end processes and eliminate tasks that do not. provide the customer with value.

BPR was a very important management concept from the mid-1980s to the mid-1990s. The concept is generally credited to Michael Hammer and Thomas Davenport, working on a research program called PRISM (Partnership for Research in Information Systems Management). Sponsored by some of the biggest corporations at the time and involved developing an architectural model this would help large companies take advantage of recent advances in technology, including personal computers (PCs) and the internet.

Marquee companies ranging from Union Carbide to telecommunications giants GTE and AT&T were the initial adapters of this.

Technology vendors, enterprise resource planning (ERP) vendors such as SAP, JD Edwards, Oracle and PeopleSoft promoted their products as solutions for the redesign and improvement of business processes and helped to turn BPR into a multi-billion dollar industry seemingly overnight. Consultants

followed the money too, and suddenly firms that previously promoted their expertise in systems thinking found themselves in high demand as reengineering experts.

Backlash of BPR.

Radical change proved to be expensive and risky, but the most frequent critique of BPR was that it placed too much emphasis on technology and cost reduction and didn't consider how dramatic change affects people and company culture. By the end of the 1990s, the word reengineering was being used as a synonym for two practices that were radically impacting corporate life -- downsizing and outsourcing.

Today, there is a renewed interest in business process reengineering as a framework for digital transformation. The concept's focus on radical change can complement process improvement approaches that emphasize incremental change, such as continuous improvement (Kaizen) or the Total Quality Movement (TQM).

The need for radical organizational change

Product development cycles were too slow, order fulfillment errors too high and inventory levels were out of sync with demand at many companies, making large enterprises ill-equipped to succeed in a time of rapidly changing technologies, rising customer expectations and global competition. Hammer believed that information technology (IT) failed to improve results in performance or customer service, because it was simply being used to automate existing, deficient processes. He saw the need for companies to stop and rethink how technology could be used to create entirely new processes.

Impact of BPR's

Approach to process improvement and IT's role

Hammer recounted in detail the reengineering initiatives undertaken by Ford Motor Company. Ford's radical approach of having employees in the accounts payable department use an online database, negated the need for staff to spend time matching paper purchase orders with receiving documents and invoices. Completely rethinking the purchase process to take advantage of new technology allowed the company to reduce its accounts payable department's headcount by 75%. At the heart of this reengineering project was a willingness by the company to break away from established assumptions about how operations should work, a concept Hammer referred to as discontinuous thinking.

The principles of business process reengineering

In 1993, Hammer and organizational theorist James Champy published a book to expand upon the ideas Hammer proposed in his research paper. The book, titled "Reengineering the Corporation: A Manifesto for Business Revolution," explains Seven principles for reengineering a work process and achieving a significant level of improvement in quality, time management, speed and profitability.`

Organize around outcomes, not tasks.

Identify all the processes in an organization and prioritize them in order of redesign urgency.

Integrate information processing work into the real work that produces the information.

Treat geographically dispersed resources as though they were centralized.

Link parallel activities in the workflow instead of just integrating their results.

Put the decision point where the work is performed and build control into the process.

Capture information once and at the source.

5 Steps to business process redesign

The business community's enthusiasm for business process reengineering inevitably generated many interpretations for how radical change should be implemented. For example, while Hammer used the word reengineering and provided business leaders with broad guiding principles, Thomas Davenport used the word redesign and provided business leaders with more concrete advice, emphasizing the value of prototypes, simulations and tests.

Davenport's book with James Short, entitled "The New Industrial Engineering: Information Technology and Business Process Redesign," suggested that business leaders use a five-step approach to radically change workflow:

Develop the business vision and process objectives.

Identify the processes to be redesigned.

Understand and measure the existing processes.

Identify IT levers.

Design and build a prototype of the new process.

BPR team member roles

Team Leader - a senior executive who has envisioned and authorized the overall reengineering effort. The team leader is responsible for appointing the process owner.

Process Owner - a senior-level manager in charge of a specific business process. The process owner is responsible for assembling a team to reengineer the process he or she oversees.

Reengineering Team - a group that is composed of insiders whose work involves the process being reengineered and outsiders whose jobs will not be affected by changes in process. The reengineering team is responsible for analyzing the existing process and overseeing its redesign.

Steering Committee – a group of senior managers who have championed the concept of reengineering within the organization and set specific goals for improving performance. The steering committee, which is led by the Team Leader, is responsible for arbitrating disputes and helping process owners make decisions about competing priorities.

Reengineering Czar – an individual who is responsible for the day-to-day coordination of all ongoing reengineering activities. The czar's responsibility is to be a facilitator and develop the techniques and tools the organization will use to reengineer workflow.

Why BPR in the 1990s was a failure

Reasons for failure;

a. Negative press on the excessive power given to third-party consultants who were primarily interested in cost savings

b. No emotional investment in the company. [a pharmaceutical company that went through two major consulting contracts before calling off its BPR initiative and a large telecommunications firm whose treatment of employees as interchangeable components only succeeded at alienating the company's brightest minds.]

c. The difficulty of mapping processes accurately and working across business silos that made change difficult.

IT is a major driver of most reengineering business processes and the failure of business leaders to align IT infrastructure with BPR strategies and wisely invest in technology that performed as promised also raised frustration levels.

Future of BPR

A recent emphasis in business on digital transformation as a way to gain competitive advantage, however, as well as the pervasiveness of the Internet of Things (IoT) and advances in artificial intelligence (AI) have spurred many companies to radically rethink their workflows and make technology-driven changes. In the future, it's expected that business process reengineering will continue to be part and parcel of most business transformation and enterprise resource planning initiatives.

Business Process Reengineering (BPR) –

Definition, Steps, and Examples

Meeting goals being easy, but the way one meets the goal is problematic, BPR steps in here. Business processes play an important role in driving goals, but they are not as efficient as you'd like them to be.

Making changes to the process gets more and more difficult as your business grows because of habits and investments in old methods. But in reality, you cannot improve processes without making changes. Processes have to be reengineered carefully since experiments and mistakes bring in a lot of confusion.

What is business process re-engineering (BPR)?

Business process re-engineering is the radical redesign of business processes to achieve dramatic improvements in critical aspects like quality, output, cost, service, and speed. Business process reengineering (BPR) aims at cutting down enterprise costs and process redundancies on a very huge scale.

Is business process re-engineering (BPR) same as business process improvement (BPI)?

On the surface, BPR sounds a lot like business process improvement (BPI). Yet there are fundamental differences that distinguish the two.

1.BPI is tweaking a few rules here and there, but reengineering is an unconstrained approach to look beyond the defined boundaries and bring in seismic changes.

2. While BPI is an incremental setup that focuses on tinkering with the existing processes to improve them, BPR looks at the broader picture.

3.BPI doesn't go against the grain. It identifies the process bottlenecks and recommends changes in specific functionalities.

4.The process framework principally remains the same when BPI is in play. BPR, on the other hand, rejects the existing rules and often takes an unconventional route to redo processes from a high-level management perspective.

5. BPI is like upgrading the exhaust system on your project car. Business Process Reengineering, BPR is about rethinking the entire way the exhaust is handled.

Five steps of business process reengineering (BPR)

To keep business process reengineering fair, transparent, and efficient, stakeholders need to get a better understanding of the key steps involved in it. Although the process can differ from one organization to another, the following steps summarize the process:

1. Map the current state of your business processes

Data from all resources–both software tools and stakeholders should be gathered.Working of the process to be assessed.

2. Analyze them and find any process gaps or disconnects

All the errors and delays that hold up a free flow of the process should be identified. Details should be made available in the respective steps for the stakeholders to make quick decisions.

3. Look for improvement opportunities and validate them

Checking of all the steps are absolutely necessary. If a step is there to solely inform the person, it should be removed and an automated email should be triggered.

4. Design a cutting-edge future-state process map

Create and identify a new process that solves all the problems. KPIs should be designated for every step of the process.

5. Implement future state changes and be mindful of dependencies

Inform every stakeholder of the new process. Only proceed after everyone is on board and educated about how the new process works. KPIs should be monitored constantly. .

CASE STUDY;

Many companies like Ford Motors, GTE, and Bell Atlantic tried out BPR during the 1990s to reshuffle their operations. The reengineering process they adopted made a substantial difference to them, dramatically cutting down their expenses and making them more effective against increasing competition.

The story

An American telecom company that had several departments to address customer support regarding technical snags, billing, new connection requests, service termination, etc. Every time a customer had an issue, they were required to call the respective department to get their complaints resolved. The company was doling out millions of dollars to ensure customer satisfaction, but smaller companies with minimal resources were threatening their business.

The telecom giant reviewed the situation and concluded that it needed drastic measures to simplify things–a one-stop solution for all customer queries. It decided to merge the various departments into one, let go of employees to minimize multiple handoffs and form a nerve center of customer support to handle all issues.

A few months later, they set up a customer care center in Atlanta and started training their repair clerks as 'frontend technical experts' to do the new, comprehensive job. The company equipped the team with new software that allowed the support team to instantly access the customer database and handle almost all kinds of requests.

Now, if a customer called for billing query, they could also have that erratic dial tone fixed or have a new service request confirmed without having to call another number. While they were still on the phone, they could also make use of the push-button phone menu to connect directly with another department to make a query or input feedback about the call quality.

The redefined customer-contact process enabled the company to achieve new goals.

Reorganized the teams and saved cost and cycle time

- Accelerated the information flow, minimized errors, and prevented reworks
- Improved the quality of service calls and enhanced customer satisfaction
- Defined clear ownership of processes within the now-restructured team
- Allowed the team to evaluate their performance based on instant feedback
- Real-world business process management examples.

When should you consider BPR

The problem with BPR is that the larger the corporate is, the more expensive it is to implement. A startup, five months after launch, might undergo a pivot including business process reengineering that only has minimal costs to execute.

As an organization grows, it will have a harder and more expensive time to completely reengineer its processes. But they are also the ones who are forced to change due to competition and unexpected marketplace shifts.

But more than being industry-specific, the call for BPR is always based on what an organization is aiming for. BPR is effective when companies need to break the mold and turn the tables in order to accomplish ambitious goals. For such measures, adopting any other process management options will only be rearranging the deck chairs on the Titanic.

Core questions

- Before you decide to adopt BPR for functional reshuffling, ask yourself the following questions:
- Who are our customers? What values are we offering them?
- Are the current processes delivering expected values?
- Do the processes need to be redefined or redesigned?
- Are the processes in sync with our long-term mission and goals?
- How would we handle the existing processes if we were a new company?

If a company concludes that it is, in fact, operating on complacent grounds, it has to identify the right kind of solution to address the problem or consider BPR for a total overhaul. Done well, BPR's radical approach yields dramatic results for a company in terms of improved cycle times, product quality, productivity, and so on.

BPM reduces the need f or BPR

The productivity of employees definitely takes a hit during process reengineering. Changes are difficult to manage and it saves a lot of costs on analysis, reengineering, and documentation. If processes are managed better during runtime, the need for reengineering is greatly.

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