



SYLLABUS

B.Com II YEAR (Plain)

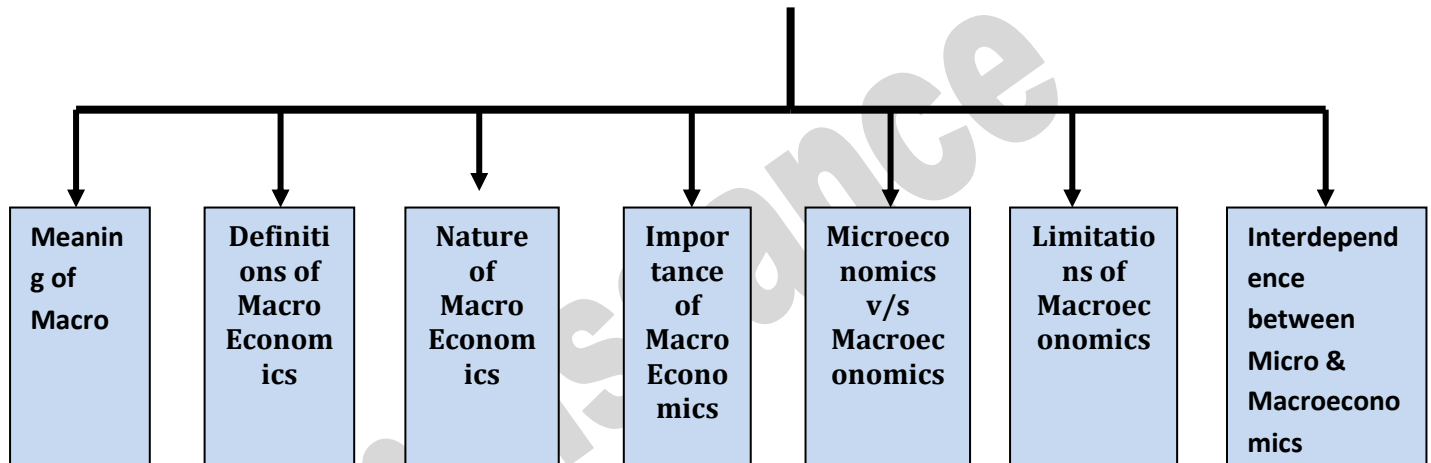
Subject – MACRO ECONOMICS

UNIT - I	Macro economics – concept, nature, importance, limitations, difference between micro and macro economics.
UNIT - II	National Income – Meaning, definition, concept, Methods for measuring national income in India and its problem.
UNIT - III	Theories of wages, Interest and employment.
UNIT - IV	Monitory Theories – Quantity theory of Money, Modern theory of Money, Keynes's Theory of Money and Price.
UNIT - V	Recent industrial Policy, Industrial Growth in Phase-II and III Disinvestments, Foreign Direct Investment.



UNIT-I

OVERVIEW OF UNIT 1



Macro

The term macro in English has its origin in the Greek term “macros” which means large. In the context of ‘Macroeconomics’ means economics of the large like economy as a whole. Macro economics deals primarily with the analysis of the relationship between broad economic aggregates like national income, level of total employment, aggregate consumption, total investment, general price level, balance of payment, the quantity of money etc. Macroeconomics is also known as the theory of income & employment as it is concerned with the problems of on employment, economic fluctuation, inflation or deflation international trade and economic growth.

Definitions of Macro Economics

- 1) **According to culberton’s**–“Macro Economics is the theory of income, employment, price and money.”
- 2) **Accordingly to K.E. Boulding** –“Macro economics deals not with individuals quantities as such but with aggregate income, but with national income, not with individuals price but with price levels, not with individuals output but with national output.”
- 3) **According to Edward Shapiro** – “Macro economics attempts to answer the truly ‘big’ question of economic life – full employment or unemployment, capacity or under capacity production.”

Nature of Macro Economics

- 1) Macro economics studies the concept of national income and its different elements and the method of measurement.
- 2) It studies problems relating to employment and unemployment. It studies different factors determining the level of employment.
- 3) Determination of general price level is also studied under macro economics. Problems relating to inflation and deflation are an important component of macro economics.
- 4) Change in demand and supply of money have an important impact on the level of employment. Macroeconomics studies function of money & theories relating to it.



- 5) Problems relating to economic growth is another important component of macro economics like plans for overall increase in national income, output, employment are framed so the economic development of economy as a whole.
- 6) It also studies issues relating to international trade, export, import exchange rate and balance of payments are the principal issue in this context.

Importance of Macro Economics

- 1) Macro economics is helpful for getting us an idea of the functioning of an economic system. It is very essential for a proper and adequate knowledge of behavior pattern of the aggregative variable, as the description of a large and complex economic system.
- 2) It says about the study of national income and social accounts. It is the study of national income which enables us to know that three fourth of the world is living in object poverty without proper national difficult to formulate proper economic policies.
- 3) Macroeconomic approaches are of almost importance to analyze and understand the effect of inflation and deflation different sections of society are affected differently as a result of charges in the value of money.
- 4) Economic fluctuation is a characteristics features of the capitalist form of economy. The economic booms and depression in the level of income and employment follow one another in cyclical fashion.
- 5) The study of macro economics is essential for the proper understanding of Micro economics. No micro economics law could be framed without a prior study of the aggregate.

Limitations of Macroeconomics

Following are the main limitations of macro economics:-

1. **Excessive Thinking**:-Macro economics suffers from the limitations that it always excessively thinks in the terms of aggregates and presumes circumstances to be normal and homogeneous but aggregates may result into heterogeneous character. As Prof. Boulding points:

(a) Six apples+Seven apples=Thirteen apples which constitutes a meaningful aggregate.

(b) Six apples+Seven oranges=Thirteen fruits, which constitutes a fairly meaningful aggregates.

(c) Six apples+Seven shoes constitutes a meaningless aggregates.

2. **Difference in individual items**:-Sometimes while aggregating the variables, the basic characteristics of the data or the variables is left untouched because there are important differences in the items. Sometimes, the features of individual components may not be true to the aggregate so macro suffers from the danger of excessive generalization.

3. **Unable to influence society equally**:-An aggregative tendency may not influence the entire sectors of the economy in the same way. For example, a general rise in price as inflation may not similar effects on different sectors of the economy.

4. **Contradictory**:-In aggregates, sometime the contradictory individual aspects are neutralized as in case of the estimation, prices in agriculture fall, of industrial products rise which have different affects on individual factors but as an aggregate, there may not be any effect at all. Thus, macro aggregate results may be misleading.

5. **Role of less aggregative analysis**:-Aggregates itself suffer from certain serious problems due to



statistical techniques. The recently introduced computational procedures and programming techniques have reduced the role of aggregative analysis.

Microeconomics V/s Macroeconomics

S.No.	Points	Microeconomics	Macroeconomics
1	Study	It studies individual unit	It studies aggregate or group of individual units.
2	Assumption	At micro level full employment is assumed which is never found in an economy. Hence this is an unreal assumption	At macro level, full employment is not assumed. Instead equilibrium employment is assumed which is a real assumption.
3	Subject Matter	We study demand supply, consumer behavior production, types of market, theory of cost & revenue etc.	We study national income, theory of wage, interest & employment, Theory of money, theory of international trade etc.
4	Applicability	It is useful in analysis of an individual unit like cost of an individual good, demand of a single good, price of a single good.	It is useful in analysis of aggregate units such as aggregate demand, aggregate prices or inflation-deflation, aggregate or national income etc.
5	Usefulness to Govt.	It is less useful to Govt. in formulating economic policies.	It is more useful to Govt. in formulating economic policies.

INTERDEPENDENCE BETWEEN MICRO AND MACRO ECONOMICS

Micro and macro economics are the two sides of the same coin. There is close interdependence between the two. We cannot analyse the individual behaviour without the assuming to aggregate and likewise aggregate cannot be effective unless individual variables are kept under consideration.

Micro economics contributes towards macro economics in a number of ways as:-

1. Study of economic fluctuations:- Business cycles which are universal in every sector, are influenced by both individuals and aggregate factors. Unless we review both micro and aggregate variables, we cannot provide an appropriate solution to business cycles. Therefore to study trade cycles micro and macro economics contribute significantly.

2. Basis of economic laws:- Micro economics acts as a basis macro economics because macro is an aggregate of individual units. The success and accuracy of aggregates depends on the individual units. Similarly, macro theories are used by micro economists.



3. **Role in international trade**:- In international trade both the approaches are used. Economists have developed their theories on the basis of micro economics presuming full employment of resources and mobility of factors of production. However, modern economists looked on the economy as a whole and recognized the role of aggregates. So general equilibrium is nothing but an extension of equilibrium of micro economics.

4. **Balance of payments and interdependence**:- Balance of payments problem is also a burning problem for economy. An individual sector may have favorable balance of payments whereas other sectors, unfavourable balance of payments. On the other hand, the overall position of an economy is to be assessed from aggregate position of all sectors.

5. **Theory of tariffs**:- Many economists have propounded that modern macro approaches of imposing tariffs with the intention of correcting balance of payments position is virtually based on the theory of monopoly. So micro economics has influenced the modern macro economics theory.



UNIT-II
DEFINITIONS OF NATIONAL INCOME

Marshall's Definition

"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."

Pigou's Definition

"National income is that part of the objective income of the community, including of course income derived from abroad, which can be measured in money."

"A national income estimate measures the volume of commodities and services turned out during a given period counted without duplication."

"The aggregate value of all final goods and services produced by the residents of a country, operating both within the national boundary and abroad, in any particular year, is called the national income of the country."

Characteristics of National Income –

- 1) National income is estimated in monetary terms. This may be expressed at current prices or some base year prices.
- 2) Only the value of final goods and services are taken into account for measuring national income.
- 3) National income is always expressed with respect to a given time period. Hence, it is a 'flow' concept.
- 4) All types of 'pure exchange transactions' are excluded from national income accounting. In case of pure exchange transactions, nothing new is produced in the current year. For instance, second-hand sales, purchase and sale of securities (shares and debentures), transfer payments (such as unemployment dole, pension payments) etc. are regarded as pure exchange transactions. All such transactions are not concerned with current year production. So, they are excluded from national income estimates.
- 5) National income is not simply the sum of all personal incomes in a country.

Difference between Domestic Income and National Income –

S.No.	National Income	Domestic Income
1	It includes income earned by the residents only.	It includes income earned by the residents as well as non-residents.
2	It consists of income earned both within and outside the domestic territory of a country.	It consists of income earned only within the domestic territory.
3	It is an economic concept.	It is a geographic concept.
4	It includes net factor income from abroad.	It does not include net factor income from abroad.
5	National income = Domestic income + Net factor income from abroad.	Domestic income = National income – Net factor income from abroad.



Net factor income from abroad is the difference between the income received by the residents from abroad for rendering factor services (e.g., banking and insurance services, other financial services, engineering services, etc.) and the income paid for the factor services rendered by the non-residents in the domestic territory of a country.

CONCEPTS OF NATIONAL INCOME

1) Gross Domestic Product (at market prices):

The gross domestic product at market price (GDPmp) indicates the value of all final goods and services produced within the domestic territory of a country during any particular year. These goods and services are valued at the prevailing market prices of those goods and services.

2) Net domestic product (at market prices):

The Net domestic product at market prices (NDPmp) refers to the value of all final goods and services at the prevailing market prices within the domestic territory of a country during any particular year after making allowance for the consumption of fixed capital or depreciation allowance.

$$\text{NDPmp} = \text{GDPmp} - \text{Depreciation allowance}$$

3) Gross National Product (at market price) :

The Gross National Product at market prices (GNPmp) refers to the aggregate market value of all final goods and services produced by the residents of a country during any particular year.

4) Net National Product (at market prices):

The net national product at market prices (NNPmp) refers to the market value of all final goods and services produced by the residents of a country after allowing for the depreciation of fixed capital during any particular year. Thus, if we deduct the consumption of fixed capital or the depreciation allowance from the GNPmp, we get NNPmp.

$$\text{NNPmp} = \text{GNPmp} - \text{Depreciation allowance}$$

5) Gross Domestic Product (at factor cost):

The Gross Domestic Product at factor cost (GDPfc) refers to the estimation of GDP in terms of the aggregate earnings of factors of production.

6) Gross National Product (at factor cost):

The Gross National Product at factor cost (GNPfc) refers to the GNP in terms of factor incomes. It is the aggregate earnings received by different factors of production (i.e., wages, rent, interest and profits) supplied by the residents of a country during any particular year.

7) Net Domestic Product (at factor cost):

The net domestic product at factor cost (NDPfc) estimates the NDP in terms of the aggregate factor incomes of the residents and non-residents within the domestic territory of a country during any particular year.

8) Net National Product (at factor cost):

The net national product at factor cost (NNPfc) to the value of the final goods and services produced by the residents of a country, whether operating within the domestic territory or outside it, at their factor costs. It is also termed as the National Income of a country.



9) Private Income

Central Statistical Organization defines Private Income as “the total of factor income from all sources and current transfers from the government and rest of the world accruing to private sector” or in other words the private income refers to the income from socially accepted source including retained income of corporation.

NI+ Transfer payment + Interest on public debt + Social security + Profit and Surplus of public enterprises = Private Income

10) Personal Income

Prof. Peterson defines Personal Income as “the income actually received by persons from all sources in the form of current transfer payments and factor income. In other words, Personal Income is the Total income received by the citizens of a country from all sources before direct taxes in a year.

PI = Private Income + Undistributed Corporate Profits – Direct Taxes

11) Disposable Income

Prof. Peterson defined Disposable Income as “the income remaining with individuals after deduction of all taxes levied against their income and their property by the government.”

Disposable Income refers to the income actually received by the households from all sources. The individual can dispose this income according to his wish, as it is derived after deducting direct taxes.

DI = Personal Income - Direct taxes – Miscellaneous receipt of the government.

Methods of calculating National Income

A) Value added or production or output approach

1) The output approach focuses on finding the total output of a nation by directly finding the total value of all goods and services a nation produces.

2) Problem of Double counting: Because of the complication of the multiple stages in the production of a good or service, only the final value of a good or service is included in the total output. This avoids an issue often called 'double counting', wherein the total value of a good is included several times in national output, by counting it repeatedly in several stages of production. In the example of meat production, the value of the good from the farm may be Rs10, then Rs 30 from the butchers, and then Rs 60 from the supermarket. The value that should be included in final national output should be Rs 60, not the sum of all those numbers, Rs 90. The values added at each stage of production over the previous stage are respectively Rs 10, Rs 20, and Rs 30. Their sum gives an alternative way of calculating the value of final output.

B) Income method

The income approach equates the total output of a nation to the total factor income received by residents or citizens of the nation. The main types of factor income are:

- Employee compensation/ salaries & wages (cost of fringe benefits, including unemployment, health, and retirement benefits);
- Interest received net of interest paid;
- Rental income (mainly for the use of real estate) net of expenses of landlords;
- Royalties paid for the use of intellectual property and extractable natural resources.
- Corporate Profits



C) Expenditure or Consumption method

The expenditure approach is basically an output accounting method. It focuses on finding the total output of a nation by finding the total amount of money spent. This is acceptable, because like income, the total value of all goods is equal to the total amount of money spent on goods

$$\text{GDP} = C + I + G + (X - M)$$

Where:

C = household consumption expenditures / personal consumption expenditures

I = gross private domestic investment

G = government consumption and gross investment expenditures

X = gross exports of goods and services

M = gross imports of goods and services

Note: $(X - M)$ is often written as X_N , which stands for "net exports"

PROBLEMS OF CALCULATING NATIONAL INCOME IN INDIA

- 1) **Difficulty in defining the nation** – As the world has become a global village, it is very difficult to identify the national boundaries has become difficult.
- 2) **Non-marketed service** – Services like love, kindness, and mercy has economic value but have no money value.
- 3) **Possibility of double counting** – The possibility of double counting which arises from the failure to distinguish properly between a final and intermediate product.
- 4) **Transfer payment** – Individual get pension, unemployment allowance and interest on public loans, but whether these should be included in national income is a difficult problem. The best way to solve the difficulty is to consider only the disposable income of individual or personal income minus all transfer payments.
- 5) **Capital gains or losses** – Commodity product this year is sold next year if at higher price is capital gain & at loss then capital losses e.g. other example could be selling of shares.
- 6) **Income earned through illegal activities** – Such as gambling or illicit extortion cannot be included in national income.
- 7) **Self-consumed production** – In many backward countries, substantial part of the output is not exchanged for money in market it is being either consumed directly by producer or bartered for other goods & services in the unorganized sector.
- 8) **Paucity of statistics** – According to the national income committee of India, the available statistics, especially for agriculture & small scale industry are extremely unreliable & incomplete.
- 9) **Inflation may give a false impression of growth in national income** – In a country when price rise, inflation rises even though the production falls & vice versa. It leads to mis-measurement of national income.
- 10) **Difficulties in classifying the commodities** – Coal is both household use & industrial use as well, so is the expenditure on coal consumption, expenditure on an investment.
- 11) **Multiple occupations** – The production in agri-industrial, in all sectors is highly scattered and unorganized making the calculation of national income very difficult.
- 12) **Capital depreciation** – Depreciation is charged on profit which lowers national income. But the problem of estimating the current depreciated value of a piece of capital whose expected life is forty year is very difficult.
- 13) **Data problems** – There are problems of collecting reliable statistical data about all the productive activities in the underdeveloped countries.
- 14) **Illiteracy** – The majority of people in the country like India are illiterate & they do not keep any accounts about the production & sale of their products.



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Subject – Macro Economics

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Unit -III
THEORIES OF WAGES, INTEREST AND EMPLOYMENT

THEORY OF WAGES

Wages

1) A wage is monetary compensation (or remuneration) paid by an employer to an employee in exchange for work done. Payment may be calculated as a fixed amount for each task completed (a task wage or piece rate), or at an hourly or daily rate, or based on an easily measured quantity of work done.

2) Wages is best associated with employee compensation based on the number of hours worked multiplied by an hourly rate of pay. For example, an employee working in an assembly plant might work 40 hours during the work week. If the person's hourly rate of pay is Rs.15, the employee will receive a paycheck showing gross wages of Rs. 600 (40 x Rs. 15)

Salary

1) Salary is a fixed amount of money or compensation paid to an employee by an employer in return for work performed. Salary is commonly paid in fixed intervals, for example, monthly payments of one-twelfth of the annual salary.

2) Salary is best associated with employee compensation quoted on an annual basis. For example, the manager of the assembly plan might earn a salary of Rs.120,000 per year. If the salaried manager is paid semi-monthly (perhaps on the 15th and last day of each month), her or his paycheck will show gross salary of Rs. 5,000 for the half-month.

3) Salary is typically determined by comparing market pay rates for people performing similar work in similar industries in the same region.

Wages V/s salary

- 1) Wage earners are paid by the hour whereas Salary earners are paid by the year.
- 2) Salary earners usually receive paid time when they are not working whereas Wage earners often have to give up pay for time off, Salaries are often calculated as packages
- 3) Wage earners get paid more for working more than 40 hours per week, Salary workers are rarely offered overtime pay.
- 4) Salaries can contain all kinds of benefits and perks whereas wage doesn't.

THE SUBSISTENCE THEORY OF WAGES

- 1) This theory was originated with the Physiocratic School of the French economists and was developed by Adam Smith and the later economists of the classical school. The German economist Lassalle called it the Iron Law of Wages or the Brazen Law of Wages. Karl Marx made it the basis of his theory of exploitation.
- 2) According to this theory, wages tend to settle at the level just sufficient to maintain the worker and his family at the minimum subsistence level. If wages rise above the subsistence level, the workers are encouraged to marry and to have large families. The large supply of labour brings wages down to the subsistence level. If wages fall below this level, marriages and births are discouraged and under-nourishment increases death rate. Ultimately, labour supply is decreased, until wages rise again to the



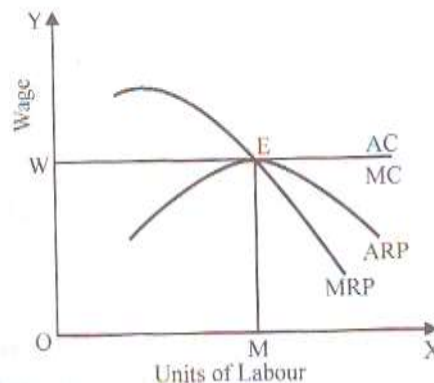
subsistence level. It is supposed that the labour supply is infinitely elastic, that is, its supply would increase if the price (i.e. wage) offered rises.

Criticism of subsistence theory

- 1) This theory is almost completely outdated and has no such practical application, especially in advanced countries. The theory was based on the Malthusian Theory of Population. It is inappropriate to say that every increase in wages must inevitably be followed by an increase in birth rate. An increase in wages may be followed by a higher standard of living.
- 2) Ricardo was one of the exponents of the subsistence theory. He stressed the influence of custom and habit in determining what was necessary for the workers. But habits and customs change over time. Hence, the theory cannot hold good for a longer period of time, especially of a world characterised by fast changing habits. Ricardo, therefore, admitted that wages might rise above the subsistence level for an indefinite period in an improving society.
- 3) The second criticism against this theory is that the subsistence level is more or less uniform for all working classes with certain exceptions. The theory, thus, does not explain differences of wages in different employment.
- 4) The third criticism is that the theory explains wages only with reference to supply; the demand side has been entirely ignored. On the demand side, the employer has to consider the amount of work which the employee gives him and not the subsistence of the worker.
- 5) The fourth criticism is that the theory explains the adjustment of wages over the lifetime of a generation and does not explain wage fluctuations from year to year.
- 6) The fifth and the final criticism is that the term 'subsistence' has a very vague impression. Does it refer to the minimum requirements of a modern man or of a tribal savage?

MARGINAL PRODUCTIVITY THEORY OF WAGES

- 1) The marginal productivity theory was first stated by Von-Thunen. The theory has been developed by Wicksteed Walras J.B. Clark and many others.
- 2) Statement of the theory: Marginal productivity theory of wage explains that under perfect competition a worker's wage is equal to marginal as well as average revenue productivity. In other words marginal revenue productivity and average revenue productivity (ARP) of a worker determine his wages.
- 3) According to this theory wage of a laborer is determined by his marginal productivity. In other words $MRP = M.W$. Marginal productivity is the addition made total productivity by employing one more unit of labour. As the laborers are given money wage their marginal productivity is calculated in terms of money. This is called marginal revenue productivity (MRP). MRP is the addition made to the total revenue by employing one more unit of a worker. A producer will maximize his profit when the wage of a laborer is equal to the marginal revenue product.
- 4) If MW is greater than MRP ($MW > MRP$) wage is greater than marginal revenue product. The producer will sustain loss then. If MW for labour is higher than its marginal revenue product then the employers get less and pay more. Thus he loses.
- 5) On the other hand if the producer pays wage less than MRP. ($ME < MRP$) he will gain. But his gain will not be maximized. Thus he will gain by employing workers so long when $MW = MRP$. Thus the wage of a laborer will be determined where $MRP = M.W$.



$$VMP = MPP \times P.$$

In Perfect competition $MRP = VMP$

In imperfect competition $MRP \neq VMP$

Point E in the diagram is the point of equilibrium where $MRP = ARP = MC = AC$

Assumptions of marginal productivity theory

- (1) Perfect competition prevails in both product and factor market.
- (2) Law of diminishing marginal returns operates on the marginal productivity of labour.
- (3) Labour is homogeneous.
- (4) Full employment prevails.
- (5) The theory is based on long run.
- (6) Modes of production in constant.

Criticism of marginal productivity theory:

1. The theory is based on the assumption of perfect competition. But perfect competition is unreal and imaginary. Thus theory seems in practicable.
2. The theory puts too much on demand side. It ignores supply side.
3. Production is started with the combination of four factors of production. It is ridiculous to say that production has increased by the additional employment of one worker. Employment of an additional laborer amounts nothing in a big scale industry.
4. The theory is static. It applies only when no change occurs in the economy. Under depression wage cut will not increase employment.
5. This, theory explains that wages will be equal to MRP and ARP.
6. It is difficult to measure MRP because any product is a joint product of both fixed and variable factors.
7. According to Watson the theory is cruel and harsh. This theory never takes into consideration the marginal product of old, aged, blind etc.

THE WAGES-FUND THEORY OF WAGES

- 1) Wages Fund Theory: This theory is associated with the name of J.S. Mill. According to Wages Fund Theory wages depend upon two quantities, viz.:
 - (i) The wage fund or the circulating capital set aside for the purchase of labour, and
 - (ii) The number of labourers seeking employment.
- 2) Since, the theory takes the wage fund as fixed, wages could rise only by a reduction in the number of workers. According to this theory, the efforts of trade unions to raise wages are futile. If they succeeded in raising wages in one trade, it can only be at the expense of another, since the wage fund



is fixed and the trade unions have no control over population. According to this theory, therefore, trade unions cannot raise wages for the labour class as a whole.

- 3) This theory has been widely criticised and stands rejected now. Even J.S. Mill himself recanted it in the second edition of his book 'Principles of Political Economy'. Mill thought that wages were paid out of circulating capital alone. Whether the source of wages is capital or the present products, has been the subject of a keen controversy in the past. The fact is that in some cases, where the process of production is short (e.g., final stages of the productive process), wages are paid out of the present production. On the other hand, when a process of production is long, the labourer obviously does not obtain wages from the product of his labour either directly or through exchange. In such cases, wages mainly come out of capital. This theory is inapplicable in highly industrialized countries, but, it is applicable in an under-developed country suffering from capital deficiency, where the wages cannot be increased unless national income is increased and capital accumulated through industrialisation.

MODERN OR SUPPLY –DEMAND THEORY OF WAGES

Modern Theory of Wages:

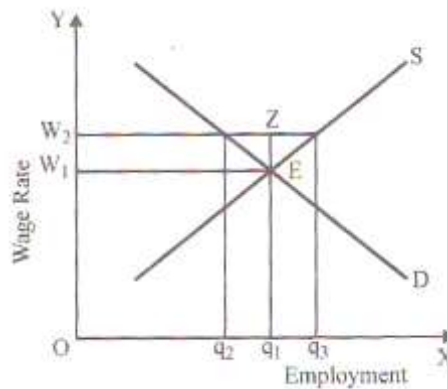
- 1) According to this theory, the wages are determined by the interaction of demand and supply as in the case of ordinary commodity. Thus, this theory is also referred to demand and supply theory.
- 2) Demand for Labour: According to the modern theory of wages, the demand for labour reflects partly labourer's productivity and partly the market value of the product at different levels of production.
- 3) **Demand of Labour:** The demand of labour depends on:
 - a) Derived Demand: The demand for labour is a derived demand. It is derived from the demand for the commodities it helps to produce. Greater the consumer demand for the product, greater the producer demand for labour required to produce that commodity. It may be observed that it is expected demand and not existing demand for the product that determines demand for labour. Hence, the expected increase in the demand for a product will increase the demand for labour.
 - b) Elasticity of Demand for Labour: The elasticity of demand for labour depends on the elasticity of demand for commodity. According to this theory, the demand for labour will generally be inelastic if their wages form only a small proportion of the total wages. The demand, on the other hand, will be elastic if the demand for product is also elastic or if cheaper substitutes are available.
 - c) Prices & Quantities of Co-Operating Factors: The demand for labour also depends on the prices and the quantities of the co-operating factors. If the machines are costly, the demand for labour will be increased. The greater the demand for the co-operating factors the greater will be the demand for labour, and vice versa.
 - d) Technical Progress: Another factor that influences the demand for labour is technical progress. In some cases labour and machineries are used in definite proportions.
 - e) After considering all relevant factors as discussed above, the employer is governed by one fundamental factor, viz., marginal productivity.
- 4) **Supply of Labour:** The supply of labour depends on:
 - (a) The number of workers of a given type of labour which would offer themselves for employment at various wage rates, and
 - (b) The number of hours per day or the number of days per week they are prepared to work,

Over a short period of time, reduction in wages may not cause any reduction in the supply of labour. But if wages are driven too low, competition among employers themselves will push them up. Even over a long period, the supply of labour is not very elastic.



Thus, the supply of labour will depend on the elasticity of demand for income which will vary according to the worker's temperament and social environment. When the workers' standard of living is low, they may be able to satisfy their wants with a small income and when they have made that much, they may prefer leisure to work. That is why it happens that sometimes increase in wages leads to a contraction of the supply of labour.

5) Interaction of Demand and Supply: The final wage rate is determined by the equilibrium of demand & supply.



THEORY OF INTEREST

MODERN THEORY OF INTEREST / THE HICKS-HANSEN THEORY OR IS-LM MODEL

In expounding the modern theory of interest, Professor Hansen, in his Monetary Theory and Fiscal Policy, points out that there are four determinants of the rate of interest:

1. The investment demand schedule;
2. The consumption function;
3. The liquidity preference schedule; and
4. The quantity of money.

Using the classical terminology, there are, four determinants of income and the rate of interest:

- (1) productivity;
- (2) thrift;
- (3) the desire for holding cash; and
- (4) the quantity of money or money supply.

The equilibrium condition of these four variables together determines the rate of interest. According to Hansen, "an equilibrium condition is reached when the desired volume of cash balances equals the quantity of money.

When the marginal efficiency of capital is equal to the rate of interest, and finally, when the volume of investment is equal to the normal or desired volume of saving. And these factors are interrelated."



In short, according to the modern theory of interest, when the four variables, viz. saving, investment, liquidity preference and the quantity of money, are integrated with income, we get a fairly satisfactory explanation of the rate of interest.

For this purpose, a synthesis between the loanable funds formulation and the liquidity preference theory is evolved by neo-Keynesian economists (Hicks, Lerner and Hansen).

In fact, the aim of such a synthesis was to combine the real sector and the monetary sector as well as the flow and stock variables of these distributive theories (loanable funds and liquidity preference) together as an explanation of interest rate determination.

Thus, the neo-Keynesian synthesis evolved two schedules, the IS schedule and the LM schedule the former showing the equilibrium between the flow variables in the real sector and the latter representing the equilibrium of the stock variables.

When the IS and LM schedules are plotted graphically, their respective curves (the IS curve and the LM curve) give us the equilibrium rate of interest at the point of their intersection. At this equilibrium rate of interest:

- (i) Total saving = total investment;
- (ii) Total demand for money = total supply of money; and
- (iii) The real as well as the monetary sectors are in equilibrium.

Let us now see, how these two schedules (IS and LM) and the respective curves are constructed.

The IS Schedule:

1. From the loanable funds formulation, we get a family of loanable fund schedules or saving schedules at various income levels. These together with the investment demand schedule gives us the IS schedule, and when represented diagrammatically we get the IS curve.
2. The IS curve denotes equilibrium in the real sector, showing various combinations of the levels of income (Y) and interest rate (r) at which there is equilibrium between aggregate real saving and real investment.
3. Now, in order to derive the IS schedule, we have to find out those rates of interest and those levels of income corresponding to which investment is equal to saving from a given investment schedule and a given saving schedule. For this, let us construct hypothetical schedules. To present the above schedules diagrammatically in a generalised form, let Y_1, Y_2, Y_3, Y_4 and Y_5 represent respectively the income levels of Rs.1000, 1500, 2000, 2500 and 3000 crores in the economy.
4. We may assume that at these income levels, $S_1, V_1, S_2, Y_2, S_3, V_3, S_4, Y_4$, and S_5, V_5 curves represent volumes of savings of Rs. 100, 200, 300, 400 and 500 crores respectively.

It is the investment curve when the income level is Y_1 ; the equilibrium between saving and investment is established at $R_1 M_1$ rate of interest (7% in the given illustration).

Or at Y_1 income level, $R_1 M_1$ is the equilibrium rate of interest which brings about equality between saving and investment (in our example, at 7% rate of interest $S = 100$ crores and $I = 100$ crores. (S - I).

Likewise, at the income level Y_3 , $R_2 M_2$ rate of interest establishes equilibrium between saving and investment. And in the same manner, at income levels Y_2, Y_4 and Y_5 , the equilibrium between saving and investment is established by $R_3 M_3$, and $R_4 M_4$ and $R_5 M_5$ rates of interest respectively. Now, connecting together the various rates of interest equalising saving and investment at the corresponding levels of income, Y_1, Y_2, Y_3 etc., we then get a curve called the IS.



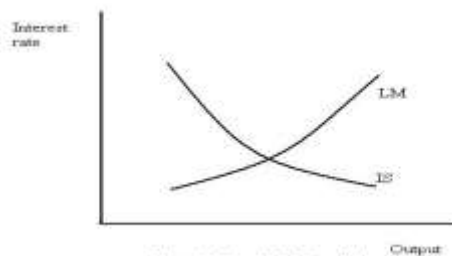
5. It is easy to see from the diagram that each point along the IS curve gives different income levels at which the savings and investment are in equilibrium.
6. The IS curve slopes downward to the right for the simple reason that at higher levels of income, saving is greater, but the greater the saving, the lower the rate of interest. Thus, as the level of income rises, the rate of interest declines, with increasing saving. And, as the rate of interest declines, investment rises till saving equals investment.

The LM Schedule:

1. In order to observe the monetary sector equilibrium in the theory, neo-Keynesians have derived the LM schedule or curve from Keynes' liquidity preference theory.
2. It has been pointed out that the liquidity preference function L and the money supply M also establish a relation between the income and the rate of interest. Hansen states that from the Keynesian formulation we get a family of liquidity preference schedules at various income levels. These, together with the supply of money fixed by the monetary authority, give us the LM schedule. The LM schedule tells us what the various rates of interest will be (given the quantity of money and the family of liquidity preference schedules) at different levels of income.
3. In fact, the LM schedule shows the relation that (given a certain liquidity or demand schedule for money) and a certain quantity of money fixed by the monetary authority; the rate of interest will be low when income is low and high when income is high.
4. Thus, the LM schedule is the schedule showing the relation between income and interest (given the L function and the supply of M) when the desired cash equals the actual cash, or when $L = M$. This means, the LM schedule presupposes equilibrium between L and M , just as the IS schedule presupposes equilibrium between I and S ⁴.

Determination of the Rate of Interest:

According to the modern theory of interest, the intersection of the IS and LM curves determines the rate of interest. Y^* is how the real sector and the monetary sector are integrated by the neo-Keynesian synthesis in explaining interest rate determination.



It appears from this figure that:

1. With a given LM curve, when the IS is shifted to the right, income rises and the rate of interest also rises.
 2. When the IS curve is constant and the LM curve is shifted to the right, the rate of interest falls and so on.
- Thus, for a determinate theory of interest, we should view the interaction of the following factors: (1) the investment-demand function, (2) the saving function, (3) the liquidity preference function, and (4) the supply of money. Hansen, states that the Keynesian analysis, in a broad sense, involves all these. In this sense, Keynes, unlike the neo-classicists, did formulate a determinate interest theory. But he failed to bring all the elements together in a comprehensive manner to formulate plainly an integrated theory of interest.



He, however, did not realise that liquidity preference plus the quantity of money can furnish not the rate of interest but only an LM schedule.

Thus, the credit goes to Professor Hicks for using the Keynesian tools in a proper manner to construct a comprehensive and determinate theory of interest.

In short, the modern theory of interest holds that productivity, thrift, liquidity preference, and the money supply are all important determinants of the rate of interest.

THE LIQUIDITY PREFERENCE THEORY OF INTEREST

1) What is liquidity preference : Liquidity means shift ability without loss. It refers to easy convertibility. Money is the most liquid assets. Money commands universal acceptability. Everybody likes to hold assets in form of cash money. If at all they surrender this liquidity they must be paid interest. As water is liquid and it can be used for anything at will, so also money can be converted to anything immediately.

Demand for money:

(a) The transaction motive:-

An individual for his day to day transaction demand money. A man has to buy food and medicines in his day to day life. For this purpose people want to keep some cash with them.

(b) The precautionary motive:

People demand to hold money with them to meet the unforeseen contingencies. An individual may become unemployed; he may fall sick or may meet serious accident. For all these misfortune, he demands money to hold with him. The amount of money under the precautionary motive depends on the individual's condition, economic as well as political which he lives.

(c) Speculative motive:

Under speculative motive people want to keep each with them to take advantage of the changes in the price of bonds and securities. People under speculative motive hold money in order to secure profit from the future speculation of the bond market. Money under the above three motives constitute the demand for money. An increase in the demand for money leads to a rise in the rate of interest, a decrease in the demand for money leads to a fall in the rate of interest.

Supply of Money:

The supply of money is different from the supply of ordinary commodity. The supply of commodity is a flow whereas the supply of money is a stock. The aggregate supply of money in a community at any time is the sum of money stock of all the members of the society. The supply of money is controlled by the govt. The supply of money in existence consists of legal tender money, bank money and credit money. The supply of money is determined by the central bank of a country. The total supply of money is fixed at a particular point of time. The supply of money is not influenced by the rate of interest.

Equilibrium rate of interest:

The rate of interest is determined by the demand for money and supply of money. The equilibrium rate of interest is fixed at that point where supply of and demands for money are equal. If the rate of interest is high peoples demand for money (liquidity preference) is low. The liquidity preference function or demand curve states that when interest rate falls, the demand to hold money increases and when interest rate raises the demand for money, diminishes.



THEORY OF UNEMPLOYMENT

Types of unemployment

- 1) **Frictional unemployment** : Frictional unemployment is a kind of unemployment that occurs when people are “between jobs” or are looking for their first jobs. It is a kind of unemployment that occurs when the economy is trying to match people and jobs correctly. So, if you get fired for poor work, if you quit because you dislike your job, or if you are just looking for your first job, you are frictionally unemployed.
- 2) **Seasonal unemployment** : Seasonal unemployment occurs when people are not working because their jobs only exist at some times of the year. Agricultural and construction workers are examples of this type of unemployment.
- 3) **Structural unemployment** Structural unemployment occurs when a given set of skills is no longer needed in a given economy. For example, E.g. closure of mines, left many miners struggling to find suitable work. For example, there may be jobs available in the service sector, but unemployed miners don't have the relevant skills to be able to take the jobs
- 4) **Cyclical unemployment** : Cyclical unemployment, which economists say is the worst kind. In this kind of unemployment, people are out of work because the economy has slowed and there is no demand for whatever the workers make. This sort of unemployment occurs during recessions.
- 5) **Voluntary unemployment**: is a situation when a person is unemployed because of not being able to find employment of his/her own choice. It is a situation when a person is unemployed. Sometimes people reject employment opportunities if they do not receive desired wages or if they are not offered the kind of work they wish to do.
- 6) **Disguised Unemployment**: Disguised unemployment is the most widespread type of unemployment in under-developed countries. In under-developed countries, the stock of capital does not grow fast. The capital stock has not been growing at a rate fast enough to keep pace with the growth of population, the country's capacity to offer productive employment to the new entrants to the labour market has been severely limited. This manifests itself generally in two ways: (i) the prevalence of large-scale unemployment in the urban areas; and (ii) in the form of growing numbers engaged in agriculture, resulting in 'disguised unemployment'

CLASSICAL THEORY OF UNEMPLOYMENT

The classical theory of employment is based on the following assumptions.

1. There is existence of full employment without inflation.
2. There is a closed laissez-faire capitalistic economy.
3. There is perfect competition in labor market and product market.
4. Labor is homogenous.
5. Total output of the economy is divided between consumption and investment expenditure.
6. The quantity of money is given.
7. Wages and prices are flexible.
8. Money wages and real wages are directly related and proportional.

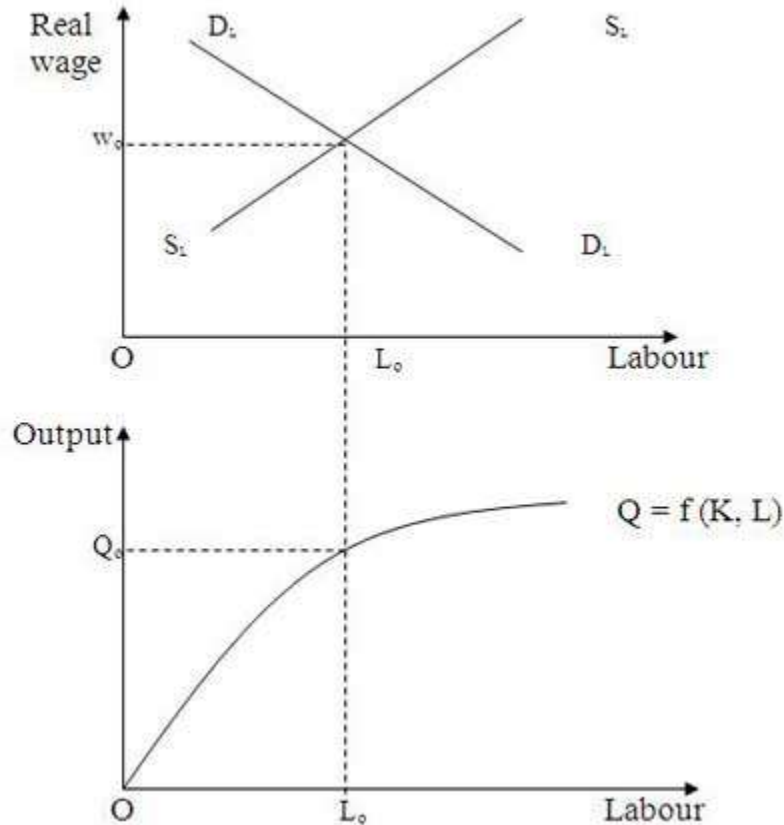


The main Postulates of classical theory are:

1) The basic contention of classical economists was that if wages and prices were flexible, a competitive market economy would always operate at full employment. That is, economic forces would always be generated so as to ensure that the demand for labour was always equal to its supply.

2) In the classical model the equilibrium levels of income and employment were supposed to be determined largely in the labour market. At lower wage rate more workers will be employed. That is why the demand curve for labour is downward sloping. The supply curve of labour is upward sloping because the higher the wage rate, the greater the supply of labour.

In the following figure the equilibrium wage rate (w_0) is determined by the demand for and the supply of labour. The level of employment is OL_0 .



The lower panel of the diagram shows the relation between total output and the quantity of the variable factor (labour). It shows the short-run production function which is expressed as $Q = f(K, L)$, where Q is output, K is the fixed quantity of capital and L is the variable factor labour. Total output Q_0 is produced with the employment of L_0 units of labour. According to classical economists this equilibrium level of employment is the 'full employment' level. So the existence of unemployed workers was a logical impossibility. Any unemployment which existed at the equilibrium wage rate (W_0) was due to frictions or restrictive practices in the economy in nature.



3) The classical economists believed that aggregate demand would always be sufficient to absorb the full capacity output Q_0 . In other words, they denied the possibility of under spending or overproduction. This belief has its root in Say's Law.

(a) Say's Law: According to Say's Law supply creates its own demand, i.e., the very act of producing goods and services generates an amount of income equal to the value of the goods produced. Say's Law can be easily understood under barter system where people produced (supply) goods to demand other equivalent goods. So, demand must be the same as supply. Say's Law is equally applicable in a modern economy. The circular flow of income model suggests this sort of relationship. For instance, the income created from producing goods would be just sufficient to demand the goods produced.

(b) Saving-Investment Equality: There is a serious omission in Say's Law. If the recipients of income in this simple model save a portion of their income, consumption expenditure will fall short of total output and supply would no longer create its own demand. Consequently there would be unsold goods, falling prices, reduction of production, unemployment and falling incomes. However, the classical economists ruled out this possibility because they believed that whatever is saved by households will be invested by firms. That is, investment would occur to fill any consumption gap caused by savings leakage. Thus, Say's Law will hold and the level of national income and employment will remain unaffected.

(c) Saving-Investment Equality in the Money Market: The classical economists also argued that capitalism contained a very special market – the money market – which would ensure saving investment equality and thus would guarantee full employment. According to them the rate of interest was determined by the demand for and supply of capital. The demand for capital is investment and its supply is saving. The equilibrium rate of interest is determined by the saving-investment equality. Any imbalance between saving and investment would be corrected by the rate of interest. If saving exceeds investment, the rate of interest will fall. This will stimulate investment and the process will continue until the equality is restored. The converse is also true.

(d) Price Flexibility: The classical economists further believed that even if the rate of interest fails to equate saving and investment, any resulting decline in total spending would be neutralized by proportionate decline in the price level. That is, Rs 100 will buy two shirts at Rs 50, but Rs 50 will also buy two shirts if the price falls to Rs 25. Therefore, if households saves more than firms would invest, the resulting fall in spending would not lead to decline in real output, real income and the level of employment provided product prices also fall in the same proportion.

(e) Wage Flexibility: The classical economists also believed that a decline in product demand would lead to a fall in the demand for labour resulting in unemployment. However, the wage rate would also fall and competition among unemployed workers would force them to accept lower wages rather than remain unemployed. The process will continue until the wage rate falls enough to clear the labour market. So a new lower equilibrium wage rate will be established. Thus, involuntary unemployment was logical impossibility in the classical model.



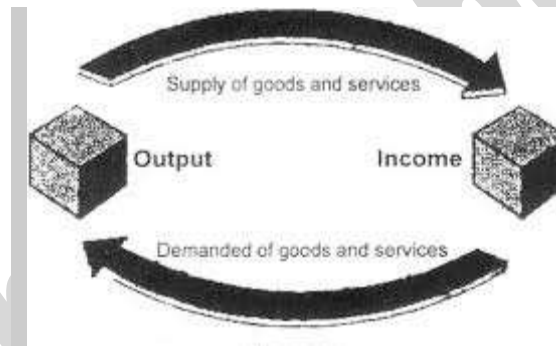
Keyne's Criticism of Classical Theory:

J.M. Keynes criticized the classical theory on the following grounds:

1. According to Keynes saving is a function of national income and is not affected by changes in the rate of interest. Thus, saving-investment equality through adjustment in interest rate is ruled out. So Say's Law will no longer hold.
2. The labour market is far from perfect because of the existence of trade unions and government intervention in imposing minimum wages laws. Thus, wages are unlikely to be flexible. Wages are more inflexible downward than upward. So a fall in demand (when S exceeds I) will lead to a fall in production as well as a fall in employment.
3. Keynes also argued that even if wages and prices were flexible a free enterprise economy would not always be able to achieve automatic full employment.

SAYS LAW OF MARKET

- 1) Say's Law is the foundation of classical economics. Assumption of full employment as a normal condition of a free market economy is justified by classical economists by a law known as 'Say's Law of Markets'. It was the theory on the basis of which classical economists thought that general over-production and general unemployment are not possible.
- 2) Say's law states that the production of goods creates its own demand



The basic assumptions of Say's law are :

- (a) **Perfectly competitive market and free exchange economy.**
- (b) **Free flow of money incomes.** All the savings must be immediately invested and all the income must be immediately spent.
- (c) **Savings are equal to investment** and equality must be brought about by flexible interest rate.
- (d) **No intervention of government** in market operations, i.e., a laissez faire economy, and there is no government expenditure, taxation and subsidies.
- (e) Market size is limited by the volume of production and **aggregate demand is equal to aggregate supply.**
- (f) It is a **closed economy.**

The Say's law has the following implications:



1. **Production creates market (demand) for goods:** when the producer obtained the various inputs to be used in the production process they generate the necessary income.

2. **Barter system is its basis:** in its original form the law is applicable to a barter economy where goods are ultimately sold for goods. Therefore, whatever produced is ultimately consumed in the economy.

3. **General over production is impossible:** if the production process is continuing under normal condition, then there will be no deficiency for the producer in the market. According to say, work being unpleasant no person will work to make a product unless he wants to exchange it for some other product which he desires therefore the very act of supplying goods implies a demand for them. In such a situation there cannot be general overproduction because the supply of goods will not exceed demand as a whole.

4. **Saving investment Equality:** Income occurring to the factors owners in the form of rent, wages and interest is not spent on consumption but some proportion out of it is saved which is automatically invested for further production.

5. **Rate of interest as a determinant factor:** If there is any gap between saving and investment, the rate of interest brings about the equality between two

6. **Flexibility between interest and wage rate:** The theory assumes the part of income is saved and available for investment. If at any point of time saving is more than investment, the rate of interest will fall, which will result in low savings and more investments. At a lower rate of interest, household will like to save less, whereas producers will like to invest more and economy will be in equilibrium. If there are unemployed persons in an economy, wage rate will fall. This will induce entrepreneurs to demand more labor. Ultimately all labor will be absorbed. The economy will be in full employment equilibrium.

This view suggests that the key to economic growth is not increasing demand, but increasing production. Say's views were expanded on by classical economists, such as James Mill and David Ricardo.

Pigou's Formulation of Says law

1. According to Professor Pigou, the unemployment which exists at any time is because of the fact that changes in demand conditions are continually taking place and that frictional resistances prevent the appropriate wage adjustment from being made instantaneously.

2. Thus, according to classical theory, there could be small amounts of 'frictional unemployment' attendant on changing from one job to another but there could not be 'involuntary unemployment' for a long period.

3. According to Professor Pigou, if people were unemployed, wages would fall until all seeking employment were in fact employed.

4. Involuntary unemployment which was found at times of depression was because of the fact that wages were kept too high by the actions of labour unions and governments. Therefore, Professor Pigou advocated that a general cut in money wages at a time of depression would increase employment.



5. According to Pigou, perfectly elastic wage policy would abolish fluctuations of employment and would ensure full employment.

Criticism of Classical Theory

1. **Supply may not create its own demand** when a part of the income is saved. Aggregate demand is not always equal to aggregate supply.
2. **Employment in a country cannot be increased by cutting general wages.**
3. **There is no direct relationship between wages and employment.**
4. **Interest rate adjustments cannot solve savings-investment problem.**
6. Classical economists have made the economy completely self-adjusting and self-reliant. **An economy is not so self-adjusting and government intervention is unobvious.**
7. Classical economists have made the wages and prices so much flexible. **In practical, wages and prices are not so flexible. It will create chaos in the economy.**
8. **Money is not a mere medium of exchange.** It has an essential role in the economy.
9. **The classical theory has failed to explain the occurrence of trade cycles.**

KEYNESIAN THEORY OF EMPLOYMENT

- 1) Keynes has strongly criticised the classical theory in his book 'General Theory of Employment, Interest and Money'. His theory of employment is widely accepted by modern economists. Keynesian economics is also known as 'new economics' and 'economic revolution'. Keynes has invented new tools and techniques of economic analysis such as consumption function, multiplier, marginal efficiency of capital, liquidity preference, effective demand, etc.
- 2) In the short run, it is assumed by Keynes that capital equipment, population, technical knowledge, and labour efficiency remain constant. That is why, according to Keynesian theory, volume of employment depends on the level of national income and output. Increase in national income would mean increase in employment. The larger the national income the larger the employment level and vice versa. That is why, the theory of Keynes is known as 'theory of employment' and 'theory of income'.

Keynes Theory can be explained as:

- 1) **Effective Demand:** According to Keynes, the level of employment in the short run depends on aggregate effective demand for goods in the country. Greater the aggregate effective demand, the greater will be the volume of employment and vice versa. According to Keynes, the unemployment is the result of deficiency of effective demand. Effective demand represents the total money spent on consumption and investment. The equation is:

$$\text{Effective demand} = \text{National Income (Y)} = \text{National Output (O)}$$

The deficiency of effective demand is due to the gap between income and consumption. The gap can be filled up by increasing investment and hence effective demand, in order to maintain employment at a high level.

- 2) According to Keynes, the level of employment in effective demand depends on two factors:
 - (a) Aggregate supply function, and
 - (b) Aggregate demand function.



(a) Aggregate supply function:

1. According to Dillard, the minimum price or proceeds which will induce employment on a given scale, is called the 'aggregate supply price' of that amount of employment.
2. If the output does not fetch sufficient price so as to cover the cost, the entrepreneurs will employ less number of workers.
3. Therefore, different numbers of workers will be employed at different supply prices.
4. Thus, the aggregate supply price is a schedule of the minimum amount of proceeds required to induce varying quantities of employment.
5. We can have a corresponding aggregate supply price curve or aggregate supply function, which slopes upward to right.

(b) Aggregate demand function:

1. The essence of aggregate demand function is that the greater the number of workers employed, the larger the output. That is, the aggregate demand price increases as the amount of employment increases, and vice versa.
2. The aggregate demand is different from the demand for a product. The aggregate demand price represents the expected receipts when a given volume of employment is offered to workers.
3. The aggregate demand curve or aggregate demand function represents a schedule of the proceeds of the output produced by different methods of employment.

Significance of Keynesian Theory:

1. Keynes has given a new approach, i.e., **Macro-approach** to the field of economics. His theory has several names: theory of income and employment, demand-side theory, consumption theory, and macro-economic theory. In fact, he has brought about a revolution in economic analysis, often known as 'Keynesian Revolution'.
2. Keynes' theory has **completely demolished the idea of full-employment** and forwards the idea of under-employment equilibrium. He states that employment level in the economy can only be increased by increasing investment.
3. The **new economic tools and techniques** developed by Keynes have enabled the today's economists to draw correct conclusions on the economic situation of a country. Such tools are consumption function, multiplier, investment function, liquidity preference, etc.
4. Keynes has **integrated the theory of money with the theory of value and output**.
5. Keynes has first time introduced a **dynamic economic theory**, in order to depict more realistic situation of the economy.
6. He also states the reasons of excess or deficiency of aggregate demand through **inflationary and deflationary gap analysis**.
7. Keynes' theory is a general theory and therefore, can be **applied to all types of economic systems**.
8. Keynes **influenced on practical policies** and criticised the policy of surplus budget. He advocated deficit financing, if that suited the economic situation in the country.
9. Keynes has **emphasised on suitable fiscal policy** as an instrument for checking inflation and for increasing aggregate demand in a country. He advocated extensive public work programmes as an integral part of government programmes in all countries for expanding employment.



10. He **advised several monetary controls** for the central bank, which in turn will act as the instrument of controlling cyclical fluctuations.
11. Keynesian theory has played a **vital role in the economic development** of less-developed countries.
12. He **rejected the theory of wage-cut** as a means of promoting full-employment.
13. Keynes' theory has given rise to the **importance of social accounting or national income accounting**.



UNIT 4
DEFINITION OF MONEY

- 1) **Meaning of Money** refers to the definition of money. Money is a token or item which acts as a medium of exchange that has both legal and social acceptance with regards to making payment for buying commodities or receiving services, as well as repayment of loans
- 2) Money refers both to currency, specifically a large number of currencies that circulate under the legal tender status, and different types of financial deposit accounts, for example savings accounts, demand deposits, as well as certificates of deposit.

Functions of Money

- 1) **Money as a Medium of Exchange:**

The function of money as a medium of exchange solves all the difficulties of barter system. There is no necessity for a double coincidence of wants in the money economy. The man with cow who wants to purchase cloth need not seek a cloth seller who wants a cow. He can sell his cow in the market for money and then purchase cloth with the money obtained.

- 2) **Money as a Measure of Value:**

In money economy values of all commodities are expressed in terms of money. Money is like the yard stick of cloth merchant, as yard-stick measures all varieties of cloth, money measures the value of all varieties goods. This function of money makes transactions easy and also fair

- 3) **Standard of Deferred Payment:**

In a money economy the contracts are made for future payments terms of money instead of goods and promise to repay the loan in money. In this way money is the standard of deferred payments. This function stimulates all kinds of economic activities which depend on borrowed money.

- 4) **Money as a Store of Value:**

Goods cannot be stored because they are perishable. People receive their incomes in money form and keep their savings in money form in banks. In this way, money is used to store value of commodities.

Supply-Demand theory of money or Quantity theory of money

In monetary economics, the quantity theory of money states that money supply has a direct, proportional relationship with the price level.

The determinants of money demand are infinite. In general, consumers need money to purchase goods and services. The most important variable in determining money demand is the average price level within the economy. If the average price level is high and goods and services tend to cost a significant amount of money, consumers will demand more money. If, on the other hand, the average price level is low and goods and services tend to cost little money, consumers will demand less money.

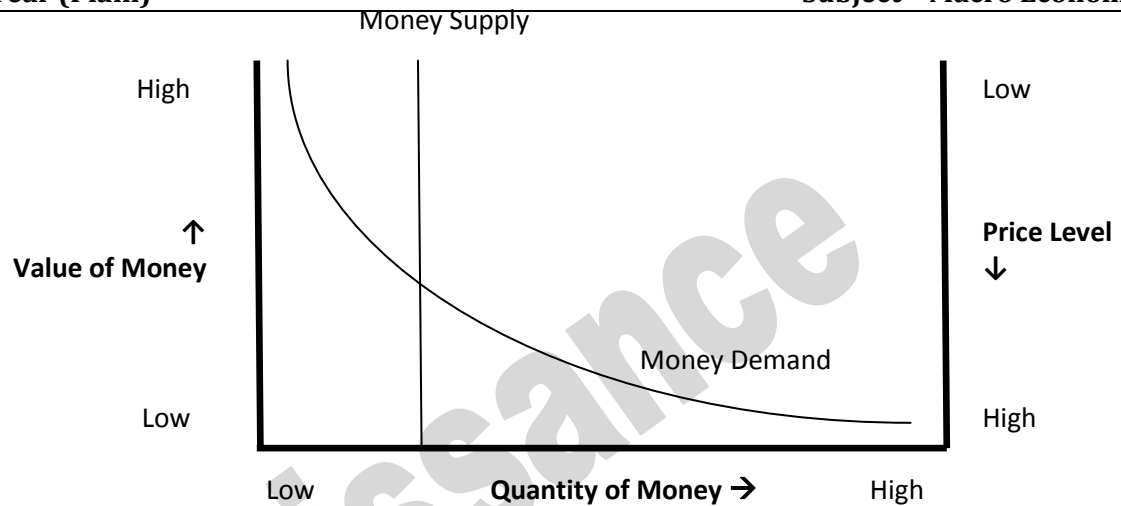


Figure: Determination of value of money

The value of money is ultimately determined by the intersection of the money supply, as controlled by the central bank, and money demand, as created by consumers. The above figure depicts the money market in a sample economy. The money demand curve slopes downward because as the value of money decreases, consumers are forced to carry more money to make purchases because goods and services cost more money.

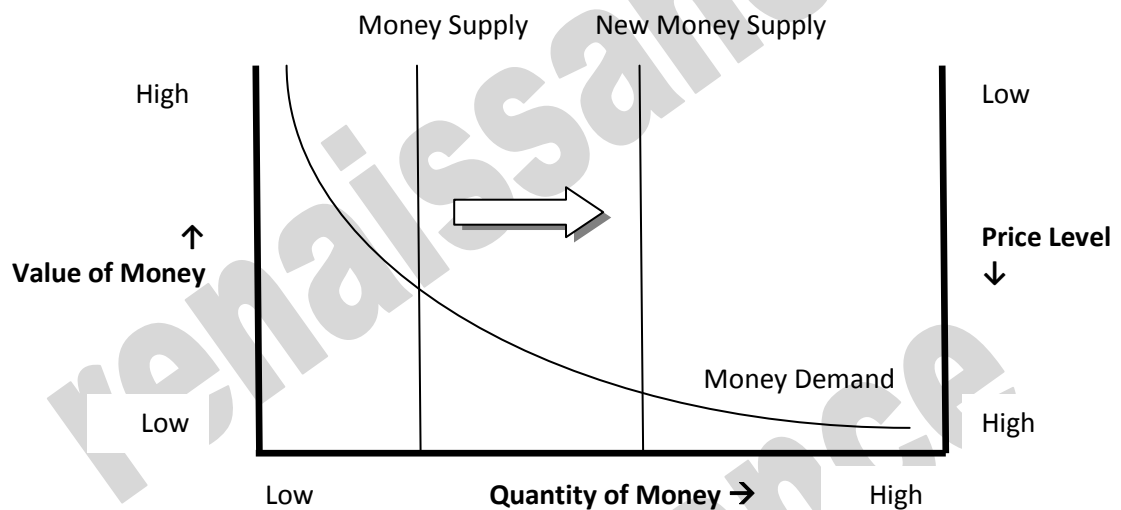


Figure: shift in the money market

The value of money, as revealed by the money market, is variable. A change in money demand or a change in the money supply will yield a change in the value of money and in the price level. An increase in the money supply is depicted in the Figure above.

Fisher's Quantity Theory of Money or Price theory of money

The Quantity Theory was first developed by Irving Fisher in the inter-war years as is a basic theoretical explanation for the link between money and the general price level. The quantity theory rests on what is



sometimes known as the **Fisher identity** or the **equation of exchange**. This is an identity which relates total aggregate demand to the total value of output (GDP).

MV = PT

1. M is the money supply
2. V is the velocity of circulation of money
3. P is the general price level
4. Y is the real value of national output (i.e. real GDP)

The **velocity of circulation** represents the number of times that a unit of currency (for example a Rs.10 note) is used in a given period of time when used as a medium of exchange to buy goods and services. The velocity of circulation can be calculated by dividing the money value of national output by the money supply.

Assumptions in Fisher's Quantity theory of money

Quantity Theory of Money by Fisher proceeds with the idea that price level is determined by the demand for and supply of money. It is based upon the following assumptions.

1. Price level is to be measured over a period of time, it being the average of prices of all sale transactions that take place during the said time period.
2. There are no credit sales in the market. All sales/purchase transactions are cash transactions..
3. Money is only a medium of exchange. Therefore, its demand is determined only because it is needed for making current payments. It is not considered one of the alternative forms of assets for holding wealth. Money is accepted by sellers so as to pay for their own purchases.
4. Each unit of money can change hands several times during the said time interval. The average number of time money changes hands is termed its average velocity of circulation (V). Accordingly, total cash payments during the year are always equal to the average quantity of money in circulation (M) multiplied by its velocity (V), that is equal to MV.
5. Similarly, because there are no credit sales, all cash payments received during the year must be equal to the volume of goods and services sold multiplied by their respective prices. If, therefore, 'T' denotes the aggregate volume of all items sold and 'P' stands for their average price, then total sales proceeds received are equal to 'P'.

Criticism of Fisher's Quantity Theory of money

1. **The price level (P) is wrongly assumed to be a passive factor:** The price level P is not passive as assumed by Fisher. In reality P may be active. P does influence T, because rising prices give profit incentives to business expansion, T would increase. Thus, a rise in P may increase the volume of trade which may cause an increase in the quantity of money and V.
2. **The velocity of circulation of money (V) may not be a constant factor:** Fisher regards V as independent and constant. But, in practice V may vary with the volume of trade and price level, i.e., with P and T. V is also affected by the actual and expected changes in M or money supply. Then, the effect of changes in M may be neutralized by an opposite change in V. Sometimes, M being constant, V may increase, causing the price level to rise. For instance, the hyperinflation in Germany in 1923 was more as a result of the increase in the velocity of circulation rather than the increase in the money supply.
3. **The assumption of full employment is unrealistic:** A fundamental objection raised by Keynes against the cash transactions approach is that it is based on the assumption of full employment, which is a rare possibility in a modern society.



4. The theory neglects the role of interest rate: It is argued by critics like Mrs. Robinson that the quantity theory cannot be regarded as an adequate theory of money because it does not take into account the rate of interest.

Cambridge cash Balance Approach

The **Cambridge equation** formally represents the **Cambridge cash-balance theory**, an alternative approach to the classical quantity theory of money. Both quantity theories, Cambridge and classical, attempt to express a relationship among the amount of goods produced, the price level, amounts of money, and how money moves. The Cambridge equation focuses on money demand instead of money supply. The theories also differ in explaining the movement of money: In the classical version, associated with Irving Fisher, money moves at a fixed rate and serves only as a medium of exchange while in the Cambridge approach money acts as a store of value and its movement depends on the desirability of holding cash.

The Cambridge equation is : $M^d = k.P.Y$

Keynes liquidity preference theory of money

Liquidity preference in macroeconomic theory refers to the demand for money, considered as liquidity. The concept was first developed by John Maynard Keynes in his book *The General Theory of Employment, Interest and Money* (1936) to explain determination of the interest rate by the supply and demand for money. The demand for money as an asset was theorized to depend on the interest foregone by not holding bonds. Instead of a reward for saving, interest in the Keynesian analysis is a reward for parting with liquidity.

According to Keynes, demand for liquidity is determined by three motives:

1. **The transactions motive:** people prefer to have liquidity to assure basic transactions, for their income is not constantly available. The amount of liquidity demanded is determined by the level of income: the higher the income, the more money demanded for carrying out increased spending.
2. **The precautionary motive:** people prefer to have liquidity in the case of social unexpected problems that need unusual costs. The amount of money demanded for this purpose increases as income increases.
3. **Speculative motive:** people retain liquidity to speculate that bond prices will fall. When the interest rate decreases people demand more money to hold until the interest rate increases, which would drive down the price of an existing bond to keep its yield in line with the interest rate. Thus, the lower the interest rate, the more money demanded (and vice versa).

The liquidity-preference relation can be represented graphically as a schedule of the money demanded at each different interest rate. The supply of money together with the liquidity-preference curve in theory interact to determine the interest rate at which the quantity of money demanded equals the quantity of money supplied



**UNIT-V
BANKING & CREDIT MANAGEMENT**

CENTRAL BANK

A **central bank**, **reserve bank**, or **monetary authority** is a public institution that usually issues the currency, regulates the money supply, and controls the interest rates in a country. Central banks often also oversee the commercial banking system of their respective countries. In contrast to a commercial bank, a central bank possesses a monopoly on printing the national currency, which usually serves as the nation's legal tender. The primary function of a central bank is to provide the nation's money supply, but more active duties include controlling interest rates, and acting as a lender of last resort to the banking sector during times of financial crisis. It may also have supervisory powers, to ensure that banks and other financial institutions do not behave recklessly or fraudulently.

What are functions of central bank?

1. **Supervision of the banking system:** Central bank supervises the banking system of the country. Central may be responsible for banking system. They collect information from commercial bank and take necessary decision by two ways- a) bank examine and b) bank regulation
2. **Advising the government on monetary policy:** The decision on monetary policy may be taken by the central bank. Monetary policy refers to interest rates and money supply. The central bank will corporate with the government on economic policy generally and will produce advice on monetary policy and economic matters, including all the statistics.
3. **Issue of banknotes:** The central bank controls the issue of banknotes and coins. Most payment these day do not involve cash but cheques, standing order, direct debit, credit cards and so on. Nevertheless, cash is important as bank's cash holdings are a constraint on creation of credit, as we have seen.
4. **Acting as banker to other banks:** The Central bank will act as banker to the other banks in the country. As well as holding accounts with international bodies like IMF World bank. It is a common habit for the central bank to insist that the other banks hold non-interest bearing reserves with in proportion to their deposit.
5. **Acting as banker to government:** Normally a central bank acts as the government's banker. It receives revenues for Taxes and other income and pay out money for t6he government's expenditure. Usually, it will not lend to the government but will help the government to borrow money by the sales of its bill and bonds.
6. **Raising money for the government:** The government Treasury bill and bond markets are covered by the central bank. While sometimes the treasury or ministry of finance handle

Reserve Bank of India (RBI)

The central bank of the country is the Reserve Bank of India (RBI). It was established in April 1935 with a share capital of Rs. 5 crores on the basis of the recommendations of the Hilton Young Commission. The share capital was divided into shares of Rs. 100 each fully paid which was entirely owned by private shareholders in the begining. The Government held shares of nominal value of Rs. 2,20,000.

Reserve Bank of India was nationalised in the year 1949. The general superintendence and direction of the Bank is entrusted to Central Board of Directors of 20 members, the Governor and four Deputy Governors, one Government official from the Ministry of Finance, ten nominated Directors by the Government to give representation to important elements in the economic life of the country, and four nominated Directors by the Central Government to represent the four local Boards with the headquarters at Mumbai, Kolkata, Chennai and New Delhi. Local Boards consist of five members each Central Government appointed for a



term of four years to represent territorial and economic interests and the interests of co-operative and indigenous banks.

The Reserve Bank of India Act, 1934 was commenced on April 1, 1935. The Act, 1934 (II of 1934) provides the statutory basis of the functioning of the Bank.

The Bank was constituted for the need of following:

- To regulate the issue of banknotes
- To maintain reserves with a view to securing monetary stability and
- To operate the credit and currency system of the country to its advantage.

Functions of Reserve Bank of India

The Reserve Bank of India Act of 1934 entrust all the important functions of a central bank the Reserve Bank of India.

Bank of Issue - Under Section 22 of the Reserve Bank of India Act, the Bank has the sole right to issue bank notes of all denominations. The distribution of one rupee notes and coins and small coins all over the country is undertaken by the Reserve Bank as agent of the Government. The Reserve Bank has a separate Issue Department which is entrusted with the issue of currency notes. The assets and liabilities of the Issue Department are kept separate from those of the Banking Department. Originally, the assets of the Issue Department were to consist of not less than two-fifths of gold coin, gold bullion or sterling securities provided the amount of gold was not less than Rs. 40 crores in value. The remaining three-fifths of the assets might be held in rupee coins, Government of India rupee securities, eligible bills of exchange and promissory notes payable in India. Due to the exigencies of the Second World War and the post-war period, these provisions were considerably modified. Since 1957, the Reserve Bank of India is required to maintain gold and foreign exchange reserves of Ra. 200 crores, of which at least Rs. 115 crores should be in gold. The system as it exists today is known as the minimum reserve system.

Banker to Government

The second important function of the Reserve Bank of India is to act as Government banker, agent and adviser. The Reserve Bank is agent of Central Government and of all State Governments in India excepting that of Jammu and Kashmir. The Reserve Bank has the obligation to transact Government business, via. to keep the cash balances as deposits free of interest, to receive and to make payments on behalf of the Government and to carry out their exchange remittances and other banking operations. The Reserve Bank of India helps the Government - both the Union and the States to float new loans and to manage public debt. The Bank makes ways and means advances to the Governments for 90 days. It makes loans and advances to the States and local authorities. It acts as adviser to the Government on all monetary and banking matters.

Bankers' Bank and Lender of the Last Resort

The Reserve Bank of India acts as the bankers' bank. According to the provisions of the Banking Companies Act of 1949, every scheduled bank was required to maintain with the Reserve Bank a cash balance equivalent to 5% of its demand liabilities and 2 per cent of its time liabilities in India. By an amendment of 1962, the distinction between demand and time liabilities was abolished and banks have been asked to keep cash reserves equal to 3 per cent of their aggregate deposit liabilities. The minimum cash requirements can be changed by the Reserve Bank of India.

The scheduled banks can borrow from the Reserve Bank of India on the basis of eligible securities or get financial accommodation in times of need or stringency by rediscounting bills of exchange. Since



commercial banks can always expect the Reserve Bank of India to come to their help in times of banking crisis the Reserve Bank becomes not only the banker's bank but also the lender of the last resort.

Controller of Credit

The Reserve Bank of India is the controller of credit i.e. it has the power to influence the volume of credit created by banks in India. It can do so through changing the Bank rate or through open market operations. According to the Banking Regulation Act of 1949, the Reserve Bank of India can ask any particular bank or the whole banking system not to lend to particular groups or persons on the basis of certain types of securities. Since 1956, selective controls of credit are increasingly being used by the Reserve Bank.

The Reserve Bank of India is armed with many more powers to control the Indian money market. Every bank has to get a licence from the Reserve Bank of India to do banking business within India, the licence can be cancelled by the Reserve Bank if certain stipulated conditions are not fulfilled. Every bank will have to get the permission of the Reserve Bank before it can open a new branch. Each scheduled bank must send a weekly return to the Reserve Bank showing, in detail, its assets and liabilities. This power of the Bank to call for information is also intended to give it effective control of the credit system. The Reserve Bank has also the power to inspect the accounts of any commercial bank.

As supreme banking authority in the country, the Reserve Bank of India, therefore, has the following powers:

- (a) It holds the cash reserves of all the scheduled banks.
- (b) It controls the credit operations of banks through quantitative and qualitative controls.
- (c) It controls the banking system through the system of licensing, inspection and calling for information.
- (d) It acts as the lender of the last resort by providing rediscount facilities to scheduled banks.

Custodian of Foreign Reserves

The Reserve Bank of India has the responsibility to maintain the official rate of exchange. According to the Reserve Bank of India Act of 1934, the Bank was required to buy and sell at fixed rates any amount of sterling in lots of not less than Rs. 10,000. The rate of exchange fixed was Re. 1 = sh. 6d. Since 1935 the Bank was able to maintain the exchange rate fixed at 1sh.6d. though there were periods of extreme pressure in favour of or against the rupee. After India became a member of the International Monetary Fund in 1946, the Reserve Bank has the responsibility of maintaining fixed exchange rates with all other member countries of the I.M.F.

Besides maintaining the rate of exchange of the rupee, the Reserve Bank has to act as the custodian of India's reserve of international currencies. The vast sterling balances were acquired and managed by the Bank. Further, the RBI has the responsibility of administering the exchange controls of the country.

Supervisory functions

In addition to its traditional central banking functions, the Reserve bank has certain non-monetary functions of the nature of supervision of banks and promotion of sound banking in India. The Reserve Bank Act, 1934, and the Banking Regulation Act, 1949 have given the RBI wide powers of supervision and control over commercial and co-operative banks, relating to licensing and establishments, branch expansion, liquidity of their assets, management and methods of working, amalgamation, reconstruction, and liquidation. The RBI is authorised to carry out periodical inspections of the banks and to call for returns and necessary information from them. The nationalisation of 14 major Indian scheduled banks in July 1969 has imposed new responsibilities on the RBI for directing the growth of banking and credit policies towards more rapid development of the economy and realisation of certain desired social objectives. The



supervisory functions of the RBI have helped a great deal in improving the standard of banking in India to develop on sound lines and to improve the methods of their operation.

Promotional functions

With economic growth assuming a new urgency since Independence, the range of the Reserve Bank's functions has steadily widened. The Bank now performs a variety of developmental and promotional functions, which, at one time, were regarded as outside the normal scope of central banking. The Reserve Bank was asked to promote banking habit, extend banking facilities to rural and semi-urban areas, and establish and promote new specialised financing agencies. Accordingly, the Reserve Bank has helped in the setting up of the IFCI and the SFC; it set up the Deposit Insurance Corporation in 1962, the Unit Trust of India in 1964, the Industrial Development Bank of India also in 1964, the Agricultural Refinance Corporation of India in 1963 and the Industrial Reconstruction Corporation of India in 1972. These institutions were set up directly or indirectly by the Reserve Bank to promote saving habit and to mobilise savings, and to provide industrial finance as well as agricultural finance. As far back as 1935, the Reserve Bank of India set up the Agricultural Credit Department to provide agricultural credit. But only since 1951 the Bank's role in this field has become extremely important. The Bank has developed the co-operative credit movement to encourage saving, to eliminate moneylenders from the villages and to route its short term credit to agriculture. The RBI has set up the Agricultural Refinance and Development Corporation to provide long-term finance to farmers.

What Is Credit Creation?

One of the important functions of commercial bank is the creation of credit. Credit creation is the multiple expansions of banks demand deposits. It is an open secret now that banks advance a major portion of their deposits to the borrowers and keep smaller parts of deposits to the customers on demand. Even then the customers of the banks have full confidence that the depositor's lying in the banks are quite safe and can be withdrawn on demand. The banks exploit this trust of their clients and expand loans by much more time than the amount of demand deposits possessed by them. This tendency on the part of the commercial banks to expand their demand deposits as a multiple of their excess cash reserve is called creation of credit. The single bank cannot create credit. It is the banking system as a whole which can expand loans by many times of its excess cash reserves. Further, when a loan is advanced to an individuals or a business concern, it is not given in cash. The bank opens a deposit account in the name of the borrower and allows him to draw upon the bank as and when required. The loan advanced becomes the gain of deposit by some other bank. Loans thus make deposits and deposits make loans.

What are the objectives of credit control by central banks?

The central bank makes efforts to control the expansion or contraction of credit in order to keep it at the required level with a view to achieving the following ends.

- 1) To save Gold Reserves: The central bank adopts various measures of credit control to safe guard the gold reserves against internal and external drains.
- 2) To achieve stability in the Price level: Frequently changes in prices adversely affect the economy. Inflationary and deflationary trends need to be prevented. This can be achieved by adopting a judicious of credit control.
- 3) To achieve stability in the Foreign Exchange Rate: Another objective of credit control is to achieve the stability of foreign exchange rate. If the foreign exchange rate is stabilized, it indicates the stable economic conditions of the country.
- 4) 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 an industry. So by controlling credit central bank can meet the requirement



The RBI adopt two methods to control credit in modern times for regulating bank advances. They are as follows:-

(A) Quantitative or General Credit Control

This method aims to regulate the amount of bank advance. This method includes:

- (a) Bank Rate**
- (b) Open Market Operation**
- (c) Variables Reserves Ratio**

(a) Bank Rate: It is the rate at which central bank discounts the securities of commercial banks or advance loans to commercial banks. This rate is the minimum and it affects both cost and availability of credit. Bank rate is different from market rate. Market rate is the rate of discount prevailing in the money market among other lending institutions. Generally bank rate is higher than the market rate. If the bank rate is changed all the other rates normally change at the same direction. A central bank control credit by manipulating the bank rate. If the central bank raise the bank rate to control credit, the market discount rate and other lending rates in the money will go up. The cost of credit goes up and demand for credit goes down. As a result, the volume of bank loans and advances is curtailed. Thus raise in bank rate will contract credit.

(b) Open Market Operation: It refers to buying and selling of Government securities by the central bank in the open market. this method of credit control become very popular after the 1st World War. During inflation, the bank will securities and during depression, it will purchase securities from the public and financial institutions. The RBI is empowered to buy and sell government securities from the public and financial institutions. The RBI is empowered to buy and sell government securities, treasury bills and other approved securities. The central bank uses the weapon to overcome seasonal stringency in funds during the slack season. When the central bank sells securities, they are purchased by the commercial banks and private individuals. So money supply is reduced in the economy and there is contraction in credit. When the securities are purchased by the central bank, money goes to the commercial banks and the customers. SO money supply is increased in the economy and there is more demand for credit. Thus open market operation is one of the superior instrument of credit control. But for achieving an ideal result both Bank Rate and Open Market Operation must be used simultaneously.

(c) Variable Reserve Ratio (VRR): This is a new method of credit control adopted by central bank. Commercial banks keep cash reserves with the central bank to maintain for the purpose of liquidity and also to provide the means for credit control. The cash reserve is also called minimum legal reserve requirement. The percentage of this ratio can be changed legally by the central bank. The credit creation of commercial banks depends on the value of cash reserves. If the value of reserve ratio increase and other things remain constant, the power of credit creation by the commercial bank is decreased and vice versa. Thus by varying the reserve ratio, the lending capacity of commercial banks can be affected.

(B) Qualitative or Selective Control Method:

It is also known as **qualitative credit control**. This method is used to control the flow of credit to particular sectors of the economy. The direction of credit is regulated by the central bank. This method is used as a complementary to quantitative credit control discourage the flow of credit to unproductive sectors and speculative activities and also to attain price stability. The main instruments used for this purpose are:

(1) Varying margin requirements for certain bank: While lending commercial banks accept securities, deduct a certain margin from the market value of the security. This margin is fixed by the central bank and



adjust according to the requirements. This method affects the demand for credit rather than the quantity and cost of credit. This method is very effective to control supply of credit for speculative dealing in the stock exchange market. It also helps for checking inflation when the margin is raised. If the margin is fixed as 30%, the commercial banks can lend up to 70% of the market value of security. This method has been used by RBI since 1956 with suitable modifications from time to time as per the demand and supply of commodities.

(2) Regulation of consumer's credit: Apart from trade and industry a great amount of credit is given to the consumers for purchasing durable goods also. RBI seeks to control such credit in the following ways:

- (a) by regulating the minimum down payments on specific goods.
- (b) by fixing the coverage of selective consumers durable goods.
- (c) by regulating the maximum maturities on all installment credit and
- (d) by fixing exemption costs of installment purchase of specific goods.

(3) Control through Directives: Under this system, the central bank can issue directives for the credit control. There may be a written or oral voluntary agreement between the central bank and commercial banks in this regard. Sometimes the commercial banks do not follow these directives of the RBI.

(4) Rationing of credit: The amount of credit to be granted is fixed by the central bank. Credit is rationed by limiting the amount available to each commercial bank. The RBI can also restrict the discounting of bills. Credit can also be rationed by the fixation of ceiling for loans and advances.

(5) Direct Action: It is an extreme step taken by the RBI. It involves refusal by RBI to extend credit facilities, denial of permission to open new branches etc. RBI also gives wide publicity about the erring banks to create awareness amongst the public.

(6) Moral suasion: RBI uses persuasion to influence lending activities of banks. It sends letters to banks periodically, advising them to follow sound principles of banking. Discussions are held by the RBI with banks to control the flow of credit to the desired sectors.

Inflation & deflation of money

Demand-pull inflation refers to the idea that the economy actually demands more goods and services than available. This shortage of supply enables sellers to raise prices until an equilibrium is put in place between supply and demand. The cost-push theory, also known as "supply shock inflation", suggests that shortages or shocks to the available supply of a certain good or product will cause a ripple effect through the economy by raising prices through the supply chain from the producer to the consumer. You can readily see this in oil markets. When OPEC reduces oil supply, prices are artificially driven up and result in higher prices at the pump.

Money supply plays a large role in inflationary pressure as well. Monetarist economists believe that if the Federal Reserve does not control the money supply adequately, it may actually grow at a rate faster than that of the potential output in the economy, or real GDP. The belief is that this will drive up prices and hence, inflation. Low interest rates correspond with a high level of money supply and allow for more investment in big business and new ideas which eventually leads to unsustainable levels of inflation as cheap money is available. The credit crisis of 2007 is a very good example of this at work.



Inflation can artificially be created through a circular increase in wage earners demands and then the subsequent increase in producer costs which will drive up the prices of their goods and services. This will then translate back into higher prices for the wage earners or consumers. As demands go higher from each side, inflation will continue to rise.

Effects of Inflation

The most immediate effects of inflation are the decreased purchasing power of the dollar and its depreciation. Depreciation is especially hard on retired people with fixed incomes because their money buys a little less each month. Those not on fixed incomes are more able to cope because they can simply increase their fees. A second destabilizing effect is that inflation can cause consumers and investors to change their spending habits. When inflation occurs, people tend to spend less meaning that factories have to lay off workers because of a decline in orders. A third destabilizing effect of inflation is that some people choose to speculate heavily in an attempt to take advantage of the higher price level. Because some of the purchases are high-risk investments, spending is diverted from the normal channels and some structural unemployment may take place. Finally, inflation alters the distribution of income. Lenders are generally hurt more than borrowers during long inflationary periods which means that loans made earlier are repaid later in inflated dollars.

Deflation

In economics, deflation is a decrease in the general price level of goods and services. Deflation occurs when the annual inflation rate falls below 0% (a negative inflation rate). This should not be confused with disinflation, a slow-down in the inflation rate (i.e. when inflation declines to lower levels). Inflation reduces the real value of money over time; conversely, deflation increases the real value of money – the currency of a national or regional economy. This allows one to buy more goods with the same amount of money over time.

Causes of Inflation

An increase in the general level of prices implies a decrease in the purchasing power of the currency. That is, when the general level of prices rises, each monetary unit buys fewer goods and services. The effect of inflation is not distributed evenly in the economy, and as a consequence there are hidden costs to some and benefits to others from this decrease in the purchasing power of money. For example, with inflation, lenders or depositors who are paid a fixed rate of interest on loans or deposits will lose purchasing power from their interest earnings, while their borrowers benefit. Individuals or institutions with cash assets will experience a decline in the purchasing power of their holdings. Increases in payments to workers and pensioners often lag behind inflation, especially for those with fixed payments.

Negative Effects of Inflation

High or unpredictable inflation rates are regarded as harmful to an overall economy. They add inefficiencies in the market, and make it difficult for companies to budget or plan long-term. Inflation can act as a drag on productivity as companies are forced to shift resources away from products and services in order to focus on profit and losses from currency inflation.^[11] Uncertainty about the future purchasing power of money discourages investment and saving.^[31] And inflation can impose hidden tax increases, as inflated earnings push taxpayers into higher income tax rates unless the tax brackets are indexed to inflation.

With high inflation, purchasing power is redistributed from those on fixed nominal incomes, such as some pensioners whose pensions are not indexed to the price level, towards those with variable incomes whose earnings may better keep pace with the inflation.^[11] This redistribution of purchasing power will also occur between international trading partners. Where fixed exchange rates are imposed, higher inflation in one



economy than another will cause the first economy's exports to become more expensive and affect the balance of trade. There can also be negative impacts to trade from an increased instability in currency exchange prices caused by unpredictable.

The effects of deflation are:

1. Decreasing nominal prices for goods and services
2. Increasing real value of cash money and all monetary items
3. Discourages bank savings and decreases investment
4. Enriches creditors at the expenses of debtors
5. Benefits fixed-income earners
6. Recessions and unemployment

Deflation is generally regarded negatively, as it causes a transfer of wealth from borrowers and holders of illiquid assets, to the benefit of savers and of holders of liquid assets and currency. In this sense it is the opposite of inflation, which is similar to taxing currency holders and lenders (savers) and using the proceeds to subsidize borrowers. Thus inflation may encourage short term consumption. In modern economies, deflation is usually caused by a drop in aggregate demand, and is associated with recession and (more rarely) long term economic depressions.

While an increase in the purchasing power of one's money sounds beneficial, it amplifies the sting of debt. This is because after some period of significant deflation, the payments one is making in the service of a debt represent a larger amount of purchasing power than they did when the debt was first incurred. Consequently, deflation can be thought of as a phantom amplification of a loan's interest rate.