MACRO ECONOMICS AND NATIONAL INCOME

The Origin and Development of Macro Economics- Micro-Macro Paradox- Importance and use of Macro Economics Circular Flow of Income and Wealth. National Income- Concepts- Methods of Calculating National Income- Problems in the Estimation of National Income

The Origin and Development of Macro Economics

Macro Economics is a branch of economics that deals with the performance, structure, and behavior of a national economy as a whole. Macroeconomists seek to understand the determinants of aggregate trends in an economy with particular focus on national income, unemployment, inflation, investment, and international trade. In contrast, microeconomics is primarily focused on the determination of prices and the role of prices in allocating scarce resources. In particular, the Great Depression of the 1930s led economists to try to understand its causes, and thus to be able to avoid similar situations causing such suffering in the future.

Development of Modern Macro Economics

Macro Economics evolves with the evolution of the economy. Macroeconomic theories change over time. They keep on changing because major economic events — such as the Great Depression of the 1930s the Great Inflation of the 1970s — bring into focus problems within a prevailing theory. Eventually the theory is modified. Different schools of macroeconomic thought have emerged since the publication of Keynes' General Theory in 1936. The reason is that there is wide disagreement among economists. There is not much disagreement on theoretical views. But there are often heated debates over the implementation of macroeconomic policy. Economists disagree mainly about the way the theories should be applied to some current problems.

Definition of 'Macro Economics'

Definition: Macro Economics is the branch of economics that studies the behavior and performance of an economy as a whole. It focuses on the aggregate changes in the economy such as unemployment, growth rate, gross domestic product and inflation.

Definition

Macro Economics deals not with individual quantities as such but aggregates of these quantities, not with individual incomes but national income, not with individual output but.

Economics: The Basics

There are two major branches of economics:

Microeconomics and Macro Economics

In short, microeconomics is the study of individual economic units of the economy, while macro economics is the study of the economy as a whole and its totality. There are two main schools of economic thoughts. These schools are 1. Classical economics or 2. Keynesian economics.Macro economics before Keynes is sometimes called "classical" economics. According to classical economics:

1. An economy as a whole always functions at a level of full employment, due to free play of market forces in a free economy.
2. Supply creates its own demand.

This classical doctrine of automatic full employment was largely accepted until the early 1930s, when the Great Depression Occurred. The Great Depression of 1929-1933 exploded the myth that an automatic working of market mechanisms would ensure an equilibrium level of income consistent with full employment of resources. There was a persistent fall in the level of output, income, and employment during the Great Depression, even though the United States and other western countries were highly industrialised, with well-developed basic industries, electric power, means of transport and communication, banks, and other financial institutions. The Classicals failed to explain this situation during The Great Depression.

The Birth of Macro Economics

In 1936, well-known British economist J. M. Keynes introduced his own theory and wrote his famous book The General Theory of Employment, Interest and Money, which birthed the Keynesian revolution, the second primary school of economic thought. Keynes criticised the Classical assumption of full employment and developed modern macro economics: economic theory that attempts to connect money supply, employment, business cycles, and government policy.The incentive for development of modern macro economics came from the Great Depression of the early 1930s. Macro economics addresses the desire to control business cycles in advancing economies and the need to develop backward economies.

Meaning of Macro Economics

Macro economics is the study of the aggregates and averages of the entire economy. It's the part of economic theory which studies the economy in its totality or as a whole.In microeconomics, we study the individual economic units like a household, a firm, or an industry. However, in macro economics we study the whole economic system like national

income, total savings and investment, total employment, total demand, total supply, general price level. We study how these aggregates and averages of economy as a whole are determined and what causes fluctuations in them. The aim of the study is to understand the reason for the fluctuations and to ensure the maximum level of employment and income in a country.In other words: Microeconomics is the study of individual trees, whereas macro economics is the study of forest as a whole.Macro economics is also known as the theory of income and employment, since the subject matter of macro economics revolves around determination of the level of employment and income.At the time of the Great Depression, government participation through monetary and fiscal measures in the economy increased considerably. Since the study of millions of individual economic units is almost impossible, macro economics provided tools for the assessment of economic policy. Macro policies make it possible to control inflation and deflation, and moderate violent booms and recessions.The main functions of macro economics are the collection, organising, and analysis of data; determining national income; and formulating appropriate economic policies to maintain economic growth and full employment in a developing country.

The scope of macro economics include the following theories:

- National income
- Money
- Economic growth
- Employment
- Price levels

The studies of problem of balance of payment, unemployment, general price level are the parts of macro economics, as these relate to the economy as a whole.

The Importance of Macro economics

1. Functioning of an Economy:

Macroeconomic analysis is of paramount importance in getting us an idea of the functioning of an economic system.It is very essential for a proper and accurate knowledge of the behaviour pattern of the aggregative variables as the description of a large and complex economic system is impossible in terms of numerous individual items.

2. **Formulation of Economic Policies:**

Macro economics is of great help in the formulation of economic policies. The days of 'laissez faire' are over and government intervention in economic matters is an accomplished fact. Governments deal not with individuals but with groups and masses of individuals, thereby establishing the importance of macroeconomic studies. For example, during

depression, when the machines lie idle and men roam from pillar to post in search of employment, macro economics helps us to analyze the cause leading to depression and unemployment and to the adoption of suitable policies to cope with such a situation.

3. **Understanding Macro economics:**

The study of macro economics is essential for the proper understanding of microeconomics. No Microeconomic law could be framed without a prior study of the aggregates; for example, the theory of individual firm could not have been formulated with reference to the behaviour pattern of one single firm, howsoever representative it might have been; the theory was possible only after the behaviour pattern of several firms had been examined and analyzed, for example, the forest, though an aggregation of trees, does not exhibit the behaviour and characteristics of individual trees. Microeconomics has been, and to some extent, remains a jungle of special assumptions, special cases, unsatisfactory measurements and abstract theorising.

4. Understanding and Controlling Economic Fluctuations:

Economic fluctuations are a characteristic feature of the capitalist form of society. The theory of economic fluctuations can be understood and built up only with the help of macro economics, for here we have to take into consideration aggregate consumption, aggregate saving and investment in the economy. Thus, we are led to analyse the causes of fluctuations in income, output and employment, and make attempts to control them or at least to reduce their severity.

5. **Inflation and Deflation***:*

Macroeconomic approach is of utmost importance to analyse and understand the effects of inflation and deflation. Different sections of society are affected differently as a result of changes in the value of money. Macroeconomic analysis enables us to take certain steps to counteract the adverse influences of inflation and deflation.

6. **Study of National Income:**

It is the study of macro economics which has brought forward the immense importance of the study of national income and social accounts. In micro-economy such a study was relegated to the background. It is the study of national income which enables us to know that three-fourth of the world is living in abject poverty. Without a study of national income, as a result of the development in macro economics, it was not possible to formulate correct economic policies.

7. **Study of Economic Development:**

As a result of advanced study in macro economics, it has become possible to give more attention to the problem of development of underdeveloped countries. Study of macro economics has revealed not only the glaring inequalities of wealth within an economy but has also shown the vast differences in the standards of living of the people in various countries necessitating the adoption of important steps to promote their economic welfare.

8. **Performance of an Economy*:***

Macro economics helps us to understand and analyse the performance of an economy. It implies the result-oriented study of an economy—in terms of actual and factual achievements. Gross National Product (GNP) or National Income (NI) estimates are used to measure the performance of an economy over time by comparing the production of goods and services in one period with that of the other periods the composition of GNP gives information about the quantum of contribution of each sector of the economy to GNP.

LIMITATIONS AND DEMERITS OF MACRO ECONOMICS

1. **No importance to Individual Units**

   Under macro economics, in comparison to individual units, a group of units is given more importance. But it is not necessary that what is right for individual person, would also right for a group. For example, an individual can withdraw the amount saved in a bank at a time but if all individuals do the same, the banks will have to close down.

2. **Difficulty in Measuring Aggregates**

   Under macro economics, measurement of aggregates becomes very difficult. The reason is that there are numerous items in a group, which are sometimes not possible to measure separately.

3. **Danger in Ignorance of Individual Units**

   When we study a group under macro economics, there is always a danger that we may ignore the numerous individual units which form the group.

MACRO ECONOMICS VS MICROECONOMICS

- Microeconomics deals with individuals whereas macro economics deals with the economy as a whole entity consisting of collective individual units.
- Macro economics uses aggregate demand and aggregate supply to explain it's concepts whereas microeconomics employs demand and supply.
- Macro economics focuses on the determination of income and employment in the economy, on the other hand, microeconomics aims at the determination of the price of a good or service and factors of production.

- In macro economics, the degree of aggregation is highest because while dealing with the general aspects of the economy, factors have to be aggregated completely. On the other side, the degree of aggregation in microeconomics is limited.
- Macro economics is known as income theory. Microeconomics is also termed as price theory.

It can be easily observed that micro and macro economics differ on the application of economic theory to two different scales. Despite all these differences, both of these are not mutually exclusive of each other. Macro economics is the aggregation of economic behaviour by individual units. Microeconomic aspects can change with changes in macroeconomic aspects and vice versa.

The Need of Macro economics

It was earlier considered that concepts of microeconomics are sufficient enough to explain economic behaviours. But then it was observed that economic aspects differed when applied to two different scales. The concepts of microeconomics were not able to explain various phenomenon taking place at the highest level of aggregation. In addition to this, there emerged various paradoxes that microeconomics wasn't able to explain.

For example, microeconomics explains that to earn maximum profit producers should decrease supply when prices are low and increase supply when prices are high, but if all individual suppliers decrease the supply of a commodity, then collectively the overall supply would change, and this will have effects on income, expenditure, taxation policies etc. Thus to overcome the shortcomings of microeconomic theory, the macroeconomic theory came into existence which focuses on aggregates and discusses the welfare of the economy as a whole.

THE CIRCULAR FLOW OF INCOME:

1. Meaning:

The circular flow of income and expenditure refers to the process whereby the national income and expenditure of an economy flow in a circular manner continuously through time.

Circular Flow in a Two Sector Economy:

We begin with a simple hypothetical economy where there are only two sectors, the household and business. The household sector owns all the factors of production, that is, land, labour and capital. This sector receives income by selling the services of these factors to the business sector.The business sector consists of producers who produce products and sell them to the household sector or consumers. Thus the household sector buys the output of products of the business sector. The circular flow of income and expenditure in such an economy is

shown in Figure 1 where the product market is shown in the upper portion and the factor market in the lower portion.

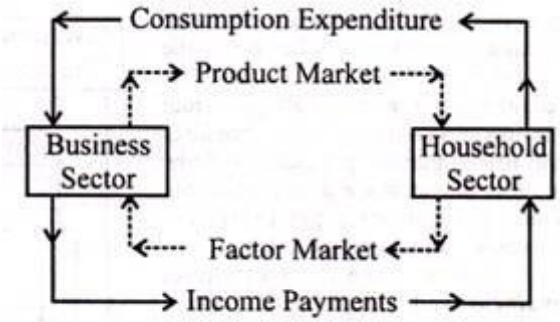

Fig. 1.

In the product market, the household sector purchases goods and services from the business sector while in the factor market the household sector receives income from the former for providing services. Thus the household sector purchases all goods and services provided by the business sector and makes payments to the latter in lieu of these.

The business sector, in turn, makes payments to the households for the services rendered by the latter to the business-wage payments for labour services, profit for capital supplied, etc. Thus payments go around in a circular manner from the business sector to the household sector and from the household sector to the business sector, as shown by arrows in the output portion of the figure.

There are also flows of goods and services in the opposite direction to the money payments flows. Goods flow from the business sector to the household sector in the product market, and services flow from the household sector to the business sector in the factor market, as shown in the inner portion of the figure. These two flows give GNP=GNI.

Circular Flow with Saving and Investment Added:

The actual economy is not as explained above. In an economy, "inflows" and "leakages" occur in the expenditure and income flows. Such leakages are saving, and inflows or injections are investment which equals each other.

Figure 2 shows how the circular flow of income and expenditure is altered by the inclusion of saving and investment.

Expenditure has now two alternative paths from household and product markets:

(i) Directly via consumption expenditure, and

(ii) indirectly via investment expenditure.

In Figure 2 there is a capital or credit market in between saving and investment flows from households to business firms. The capital market refers to a number of financial institutions

such as commercial banks, savings banks, loan institutions, the stock and bond markets, etc. The capital market coordinates the saving and investment activities of the households and the business firms. The households supply saving to the capital market and the firms, in turn, obtain investment funds from the capital market.

3. Circular Flow in a Three- Sector Closed Economy:

So far we have been working on the circular flow of a two-sector model of an economy. To this we add the government sector so as to make it a three-sector closed model of circular flow of income and expenditure. For this, we add taxation and government purchases (or expenditure) in our presentation. Taxation is a leakage from the circular flow and government purchases are injections into the circular flow.

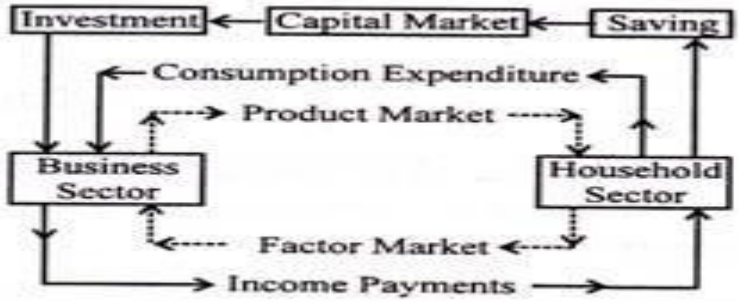

Fig. 2.

First, take the circular flow between the household sector and the government sector. Taxes in the form of personal income tax and commodity taxes paid by the household sector are outflows or leakages from the circular flow.But the government purchases the services of the households, makes transfer payments in the form of old age pensions, unemployment relief, sickness benefit, etc., and also spends on them to provide certain social services like education, health, housing, water, parks and other facilities. All such expenditures by the government are injections into the circular flow.Next take the circular flow between the business sector and the government sector. All types of taxes paid by the business sector to the government are leakages from the circular flow. On the other hand, the government purchases all its requirements of goods of all types from the business sector, gives subsidies and makes transfer payments to firms in order to encourage their production. These government expenditures are injections into the circular flow.

Now we take the household, business and government sectors together to show their inflows and outflows in the circular flow. As already noted, taxation is a leakage from the circular flow. It tends to reduce consumption and saving of the household sector. Reduced consumption, in turn, reduces the sales and incomes of the firms. On the other hand, taxes on business firms tend to reduce their investment and production.

The government offsets these leakages by making purchases from the business sector and buying services of the household sector equal to the amount of taxes. Thus total sales again equal production of firms. In this way, the circular flows of income and expenditure remain in equilibrium.

Figure 3 shows that taxes flow out of the household and business sectors and go to the government. Now the government makes investment and for this purchases goods from firms and also factors of production from households. Thus government purchases of goods and services are an injection in the circular flow of income and taxes are leakages.

If government purchases exceed net taxes then the government will incur a deficit equal to the difference between the two, i.e., government expenditure and taxes. The government finances its deficit by borrowing from the capital market which receives funds from households in the form of saving.

On the other hand, if net taxes exceed government purchases the government will have a budget surplus. In this case, the government reduces the public debt and supplies funds to the capital market which are received by firms.

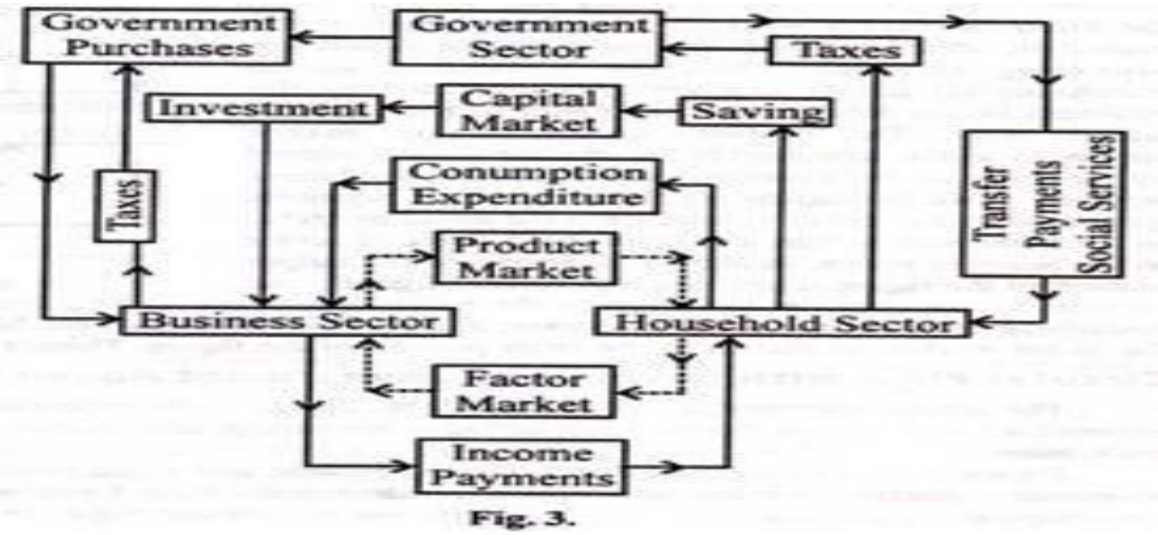

Fig. 3.

Adding Foreign Sector: Circular Flow in a Four-sector Open Economy:

So far the circular flow of income and expenditure has been shown in the case of a closed economy. But the actual economy is an open one where foreign trade plays an important role. Exports are an injection or inflows into the economy.

They create incomes for the domestic firms. When foreigners buy goods and services produced by domestic firms, they are exports in the circular flow of income. On the other hand, imports are leakages from the circular flow. They are expenditures incurred by the household sector to purchase goods from foreign countries. These exports and imports in the circular flow are shown in Figure 4.Take the inflows and outflows of the household, business

and government sectors in relation to the foreign sector. The household sector buys goods imported from abroad and makes payment for them which is a leakage from the circular flow. The households may receive transfer payments from the foreign sector for the services rendered by them in foreign countries.

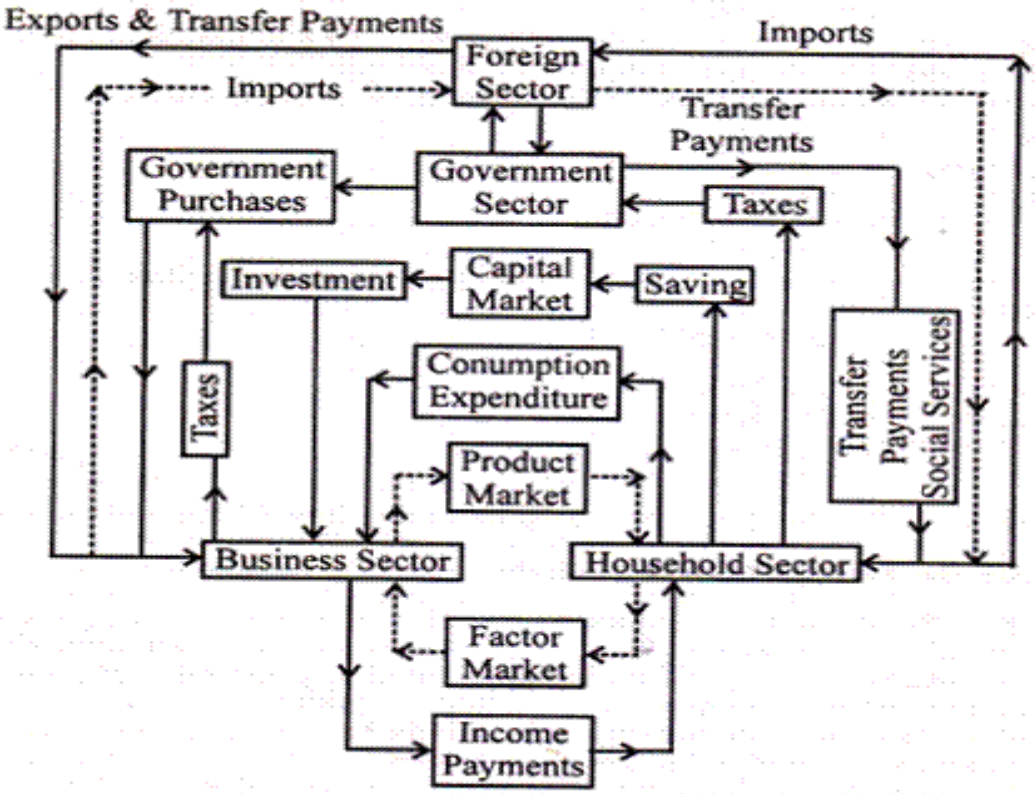

Fig. 4.

On the other hand, the business sector exports goods to foreign countries and its receipts are an injection in the circular flow. Similarly, there are many services rendered by business firms to foreign countries such as shipping, insurance, banking, etc. for which they receive payments from abroad.

They also receive royalties, interests, dividends, profits, etc. for investments made in foreign countries. On the other hand, the business sector makes payments to the foreign sector for imports of capital goods, machinery, raw materials, consumer goods, and services from abroad. These are the leakages from the circular flow.Like the business sector, modern governments also export and import goods and services, and lend to and borrow from foreign countries. For all exports of goods, the government receives payments from abroad.

Similarly, the government receives payments from foreigners when they visit the country as tourists and for receiving education, etc. and also when the government provides shipping, insurance and banking services to foreigners through the state-owned agencies.

It also receives royalties, interest, dividends etc. for investments made abroad. These are injections into the circular flow. On other hand, the leakages are payments made for the purchase of goods and services to foreigners.

Figure 4 shows the circular flow of the four-sector open economy with saving, taxes and imports shown as leakages from the circular flow on the right hand side of the figure, and investment, government purchases and exports as injections into the circular flow on the left side of the figure.

Further, imports, exports and transfer payments have been shown to arise from the three domestic sectors—the household, the business and the government. These outflows and inflows pass through the foreign sector which is also called the "Balance of Payments Sector."

If exports exceed imports, the economy has a surplus in the balance of payments. And if imports exceed exports, it has a deficit in the balance of payments. But in the long run, exports of an economy must balance its imports. This is achieved by the foreign trade policies adopted by the economy.

The whole analysis can be shown in simple equations:

$Y= C +I+ G \ldots (1)$

Where Y represents the production of goods and services, C for consumption expenditure, I investment level in the economy and G for government expenditure respectively.

Now we introduce taxation in the model to equate the government expenditure.

Therefore, $Y= C + S + T \ldots (2)$

Where S is saving T is taxation.

By equating (1) and (2), we get

$C + I + G = C + S + T$

$I + G = S + T$

With the introduction of the foreign sector, we divide investment into domestic investment (Id) and foreign investment (I_f) and get $I_d + I_F + G = S + T$ .But $I_f = X – M$

Where X is exports and M is imports

$I_d + (X – M) + G = S + T$

$l_d + (X – M) = S + (T – G)$

The equation shows the equilibrium condition in the circular flow of income and expenditure.

Importance of the Circular Flow:

The concept of the circular flow gives a clear-cut picture of the economy. We can know whether the economy is working efficiently or whether there is any disturbance in its smooth

functioning. As such, the circular flow is of immense significance for studying the functioning of the economy and for helping the government in formulating policy measures.

1. Study of Problems of Disequilibrium*:*

It is with the help of circular flow that the problems of disequilibrium and the restoration of equilibrium can be studied.

2. Effects of Leakages and Inflows:

The role of leakages enables us to study their effects on the national economy. For example, imports are a leakage out of the circular flow of income because they are payments made to a foreign country. To stop this leakage, government should adopt appropriate measures so as to increase exports and decrease imports.

3. Link between Producers and Consumers:

The circular flow establishes a link between producers and consumers. It is through income that producers buy the services of the factors of production with which the latter, in turn, purchase goods from the producers.

4. Creates a Network of Markets:

As a corollary to the above point, the linking of producers and consumers through the circular flow of income and expenditure has created a network of markets for different goods and services where problems relating to their sale and purchase are automatically solved.

5. Inflationary and Deflationary Tendencies:

Leakages or injections in the circular flow disturb the smooth functioning of the economy. For example, saving is a leakage out of the expenditure stream. If saving increases, this depresses the circular flow of income. This tends to reduce employment, income and prices, thereby leading to a deflationary process in the economy. On the other hand, consumption tends to increase employment, income, output and prices that lead to inflationary tendencies.

6. Basis of the Multiplier:

Again, if leakages exceed injections in the circular flow, the total income becomes less than the total output. This leads to a cumulative decline in employment, income, output, and prices over time. On the other hand, if injections into the circular flow exceed leakages, the income is increased in the economy. This leads to a cumulative rise in employment, income, output, and prices over a period of time. In fact, the basis of the Keynesian multiplier is the cumulative movements in the circular flow of income.

7. Importance of Monetary Policy:

The study of circular flow also highlights the importance of monetary policy to bring about the equality of saving and investment in the economy. Figure 2 shows that the equality between saving and investment comes about through the credit or capital market.

The credit market itself is controlled by the government through monetary policy. When saving exceeds investment or investment exceeds saving, money and credit policies help to stimulate or retard investment spending. This is how a fall or rise in prices is also controlled.

8. Importance of Fiscal Policy:

The circular flow of income and expenditure points toward the importance of fiscal policy. For national income to be in equilibrium desired saving plus taxes (S+T) must equal desired investment plus government spending (I + G). S+ T represents leakages from the spending stream which must be offset by injections of I + G into the income stream. If S + T exceed I + G, government should adopt such fiscal measures as reduction in taxes and spending more itself. On the contrary.

If I + G exceed S+T, the government should adjust its revenue and expenditure by encouraging saving and tax revenue. Thus the circular flow of income and expenditure tells us about the importance of compensatory fiscal policy.

NATIONAL INCOME

DEFINITIONS OF NATIONAL INCOME

The definitions of National income can be grouped into two classes as the traditional definition advanced by Marshall, Pigou and Fisher and the modern definitions.

Marshallion Definition:- According to Marshall, the labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country or national dividend. Pigovian Definition:- According to Pigou "National income is that part of objective income of the community, including of course income derived from abroad which can be measured in money" Fisher's Definition:- Fisher adopted consumption as the criterion of national certain whereas Marshall and Pigou regarded it to be production. According to Fisher 'The national income consists solely of services as received by ultimate consumers whether from their material or from their human environment'. From the modern point of view national income is defined as the net output of commodities and services flowing during the year from country's productive system in the hands of ultimate consumer.

CONCEPTS OF NATIONAL INCOME

There are various concepts of national income

GDP (GROSS DOMESTIC PRODUCT)

Here the catch word is 'Domestic' which refers to 'Geographical Area'
The total value of all final goods and services produced within the boundary of the country during a given period of time (generally one year) is called as GDP.
In this case, the final produce of resident citizens as well as foreign nationals who reside within that geographical boundary is considered.

GROSS NATIONAL PRODUCT (GNP)

Here the catch word is 'National' which refers to all the citizens of a country.
GNP is the total value of the total production or final goods and services produced by the nationals of a country during a given period of time (generally one year).
In this case, the income of all the resident and non-resident citizens (who resides in abroad) of a country in included whereas, the income of foreigners who reside within India is excluded.The GNP contains the income earned by Indian Nationals (both in Indian Territory and Abroad) only.

GNP = GDP+ NET FACTOR INCOME FROM ABROAD

Net National Product (NNP): NNP = GNP – Depreciation

It is calculated by subtracting Depreciation from Gross National Product.
Depreciation Wear and Tear of goods produced.
This deduction is done because a part of current produce goes to replace the depreciated parts of the products already produced. This part does not add value to current year's total produce. It is used to keep the products already produced intact and hence it is deducted.

National Income at Factor Cost (NIFC):

It is the sum of all factors of income earned by the residents of a country (Indian) both from within the country as well as abroad.

National Income at Factor Cost = NNP at Market Price – Indirect Taxes + Subsidies In India, and many developing countries across the world, National Income is measured at factor cost instead of market prices. Some of the reasons for the same are lack of uniformity in taxes, goods not being printed with their prices, etc.

Personal Income

It refers to all of the income collectively received by all of the individuals or households in a country.It includes compensation from a number of sources including salaries, wages and bonuses received from employment or self-employment; dividends and distributions received

from investments; rental receipt from real estate investments and profit sharing from businesses.In National Income Accounting, some income is attributed to individuals, which they do not actually receive. For Example: Undistributed Profits, Employees' contribution for social security, corporate income taxes etc. which needs to be deducted from National Income to estimate the Personal Income.

PI = NI + Transfer Payments – Corporate Retained Earnings, Income Taxes, Social Security Taxes.

Disposable Personal Income

It is the amount left with the individuals after paying Personal Taxes such as Income Tax, Property Tax, and Professional Tax etc. to spend as they like.

DPI = PI – Taxes (Income Tax i.e. Personal Taxes)

DPI results into Savings and Expenditure i.e. (Spend and Save). This concept is very useful for studying and understanding the consumption and saving behaviour of the individuals.

METHODS OF MEASUREMENT OF NATIONAL INCOME

There are three methods to calculate the national income of a country. They are:

1. Product or inventory method

Under this method national income is computed by adding the net value of all commodities and services produced during a given period. Thus national income is equal to the total of final products. We first estimate the gross value of domestic output in the various sectors of production (Agriculture, manufacturing industry, and services including government). The value of gross output is obtained by multiplying the output of each sector by their respective market prices and adding them together. Then we deduct value of depreciation from gross value of domestic output. The figure so obtained has to be adjusted with net income from abroad. This is the national income at factor cost. This method is also known as output method or value added method. This method is very complicated because of non-availability of adequate and requisite data. It is also difficult to calculate depreciation.

2. Income Method

Under this method the national income of a country is obtained by adding the incomes accrue to factors of production within the national territory. Basic factors of production used producing the national products are land, labour, capital and organisation. The national income is equal to total rent plus total wages and salaries of all employees including income of self-employed persons plus total interest on capital including dividends of the shareholders plus total profit of all firms including undistributed corporate profits and earnings of public enterprises. In short, the national income represents the total of rent, wages, interest and

profit. It is difficult to make distinction between the earnings from ordinary labour and organizational efforts. It is also difficult to make distinction between earnings from land and capital. Therefore factors of production are grouped as labour and capital for purposes of estimating national income. Under this method, the income earned by all individuals of the country during a year is taken. Individuals earn income in the form of Rent, profit, wages, and salaries and interest. This method is called income method.

3. Expenditure method

This method is based on the assumption that income is equal to expenditure plus savings. Under this method the personal consumption expenditure, government purchase of goods and services, gross private domestic investment and net foreign investment are added together to get the national income of a country. This method is also known as consumption- saving method. The expenditure method is not generally used because the necessary data regarding consumption expenditure are not easily available. This method includes the total expenditure of a country during a given year. The income is spent on consumer goods or on producer goods. The consumption expenditure and investment expenditure of all the individuals in a government during a year is added. Thus National Income = Consumption Expenditure + Investment Expenditure + government expenditure + exports - imports. Y = C + I + G + X-M

Difficulties in Measuring National Income

There are many difficulties in measuring national income of a country accurately. The difficulties involved in national income accounting are both conceptual and statical in nature. Some of these difficulties involved in the measurement of national income are discussed **below.**

1. Types of Goods and Services:

The kinds of goods and services which should be included in national income pose a problem.

Goods and services having money value are included in the national income but there are goods and services which may have no corresponding flow of money payments.The difficulty is whether these services should be included in national income and how to measure their money value.

2. Problems of Double Counting:

Another difficulty is of double counting usually associated with the inventory method. Double counting implies the possibility of a commodity like raw material or labour being included in national income more than once, e.g., a farmer sells maize worth rupees two hundred to a mill-owner, the mill owner further sells the maize flour to a wholesale dealer,

who further sells it to consumer; if we calculate it at every stage, its money value will increase to eight hundred rupees but actually the increase in national income has been to the extent of two hundred rupees only.

The best way to avoid this difficulty is to calculate only the value of all goods and services that enter into final consumption. The problem of differentiating intermediate and final products is very complex and acute in the computation of national income.

***(3)* Transfer Payments:**

Transfer payments are associated with the income method of national income calculation. A person receives income of say Rs. 1,000 per year; part of it may have been received as interest payments on government loans. This part is in the nature of transfer payments and may be taken either as the income of the individual or of the government. If it figures under both the categories, aggregate national income will be unduly inflated.

***(4)* Illegal Activities:**

All unlawful and illegal activities, whether economic or not, are omitted from national income accounting. Income earned through illegal activities like smuggling, black-marketing, gambling, betting, adulteration, bribery etc. are excluded on the ground that these activities are illegal and, therefore, cannot be included in the national income accounts. However, it is very difficult to estimate such activities because their definitions or notions may change from generation to generation or from society to society. In a free market economy—who is going to say or decide— what is a socially desirable or lawful activity? Thus, it is the larger issue of what constitute a lawful or socially desirable activity that demands closer examination.

***(5)* Second-hand Sales:**

The most obvious item for exclusion from the national income and product accounts is second-hand sales. In such sales the individual or the economic units merely exchange ownership of an already existing good, when no income is created in the process from current production. Even if a profit is made, there is no income generated in the accounting sense, for the gain is offset by the recording of the good at the transaction price by the buyer.

***(6)* Lack of Adequate Data:**

The lack of adequate statistical data makes the task of estimation of national income more acute and difficult.

Questions for practice

Part A

1. Define macroeconomics
2. Difference between macro and micro economics
3. State meaning of circular flow income
4. Write any four difficulties in calculating national income
5. What is mean by national income

Part B

1. Elaborate the importance of macro economics
2. Discuss about concept of national income
3. Summarize the three sector circular flow in closed economy
4. Outline the four sector circular flow income in closed economy
5. Analyze about methods of calculating national income

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Classical Theory of Income- Output and Employment- Say's Law of Market- Wage Price Flexibility- Critical Evaluation - Keynesian Theory of Income- Output and Employment- Effective Demand and Supply- Consumption Function- Average and Marginal Propensity to Consume- Factors Affecting Consumption Function- Investment Function – Marginal Efficiency of Capital- Multiplex Accelerator- Comparison Between Classical and Keynesian Theories.

Classical Theory of Income, Output and Employment Determination

The Classical economists disagreed with the Mercantilist view who emphasized State interference and money factors, for the determination of real variables like output and employment.

According to Adam Smith, "it is the real factor which is more important." Money was used only as a medium of exchange.

Assumptions:

1. Short-Run
2. Full Employment
3. No State Interference
4. Price Mechanism
5. State of Technology and Population is constant

The Classical model of employment consists of 2 components:

I. Aggregate Production Function:

Production function shows the relationship between input and output. Assume there are two inputs—Labour and capital. Due to the assumption of short-run, output will be a function of Labour (N) with capital constant (K), that is, output can be increased only by increasing the variable factor (N) with fixed factor (K) constant.

$Y = F(K, N)$ …(2.1)

Where K → Constant capital stock

N → Quantity of homogeneous Labour Input

Y → Real Output.

II. Labour supply and demand function:

With the help of these two functions output and employment is determined. As capital is constant in the short-run, output will change only with change in the labour input.As MP_N represents addition to output when the Labour input is increased, MP_N curve represents the slope of production function.$MP_N = \Delta Y/\Delta N$ .The slope of the production function (MP_N) is positive but decreases as we move along the curve.

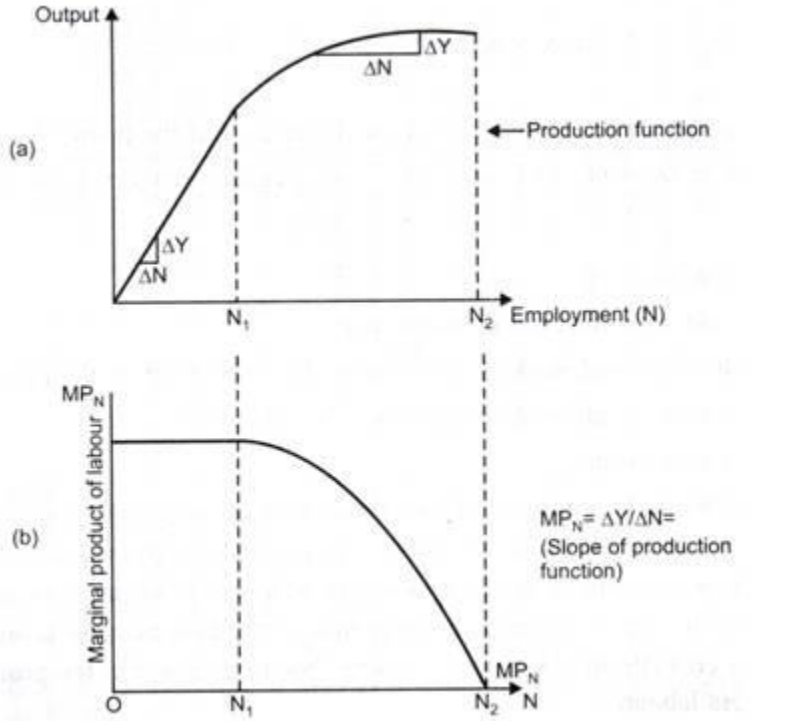


FIG. 2.1(A): PRODUCTION FUNCTION AND (B) MP OF LABOUR CURVE

Characteristics of Production Function:

In short run, production function shows technological relationship between the output level (Y) and the level of employment (N).

1. At low level of Labour input before N_1

The Production function is a straight line which exhibits constant returns to scale.

Therefore, MP_N curve is flat which represents constant MP_N.

It shows at very low level of output as we employ more labour to the given capital, productivity of the last worker added does not fall.

Therefore, MP_N does not fall.

2. After N, till N_2 As we add more labour, output increases but at a decreasing rate (i.e., increment to the output decreases) MP_N decreases but is positive.

3. Beyond N_2 The additional Labour employed will not lead to additional production/ output i.e, $MP_N = 0$. Therefore, MP_N curve touches X-axis at N_2.

(a) Demand for Labour:

Demand for labour is negatively related to the real wages (W/P). This is because real wages are the cost of production for the firms. Therefore, an increase in real wages due to increase in wages will lead to an increase in the cost of production. This in turn will decrease the profits of the firm because profit is equal to Revenue minus cost (Profit = Revenue – Cost). Due to decrease in the profit level, firm will demand less labour.

(b) Supply of Labour:

Supply of labour is positively related to the real wages (W/P). This is because wages are the income of the labourer. Increase in wages implies increase in income, therefore, a labourer is willing to work more at higher wages. Thus, the supply curve of labour is positively sloped.

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'

Say's Law of Market

Introduction:

An important element of classical economics is Say's Law of Markets, after J.B. Say, a French economist who first stated the law in a systematic form.Briefly stated, this law means that 'supply always creates its own demand.' In other words, according to J.B. Say, there cannot be general overproduction or general unemployment on account of the excess of supply over demand because whatever is supplied or produced is automatically exchanged for money.In an exchange economy whatever is produced represents the demand for another product because whatever is produced is easily sold. Whenever additional production takes place in the economy, necessary purchasing power is also generated at the same time to absorb the additional supply; hence, there is no scope of supply exceeding demand and causing unemployment. This law was the basis of their assumption of full employment in the economy which rested on the plea that income is spent automatically at a rate which will always keep the resources fully employed. Savings, according to classical are just another form of spending; all income, they believed, is partly spent on consumption and partly on investment. There is no ground to fear a break in the flow of income stream in the economy. Hence there cannot be any general over-production or unemployment.

Propositions and Implications of the Law:

Say's propositions and its implications present the true picture of the market law.

These are given below:

1. Full Employment in the Economy:

The law is based on the proposition that there is full employment in the economy. Increase in production means more employment to the factors of production. Production continues to increase until the level of full employment is reached. Under such a situation, the level of production will be maximum.

2. Proper Utilization of Resources:

If there is full employment in the economy, idle resources will be properly utilized which will further help to produce more and also generate more income.

3. Perfect Competition:

Say's law of market is based on the proposition of perfect competition in labour and product markets.

Other conditions of perfect competition are given below:

(a) Size of the Market:

According to Say's law, the size of the market is large enough to create demand for goods. Moreover, the size of the market is also influenced by the forces of demand and supply of various inputs.

(b) Automatic Adjustment Mechanism:

The law is based on this proposition that there is automatic and self-adjusting mechanism in different markets. Disequilibrium in any market is a temporary situation. For example, in capital market, the equality between saving and investment is maintained by the rate of interest while in the labour market the adjustment between demand and supply of labour is maintained by the wage rate.

(c) Role of Money as Neutral:

The law is based on the proposition of a barter system where goods are exchanged for goods. But it is also assumed that the role of money is neutral. Money does not affect the production process.

4. Laissez-faire Policy:

The law assumes a closed capitalist economy which follows the policy of laissez-faire. The policy of laissez-faire is essential for an automatic and self-adjusting process of full employment equilibrium.

5. Saving as a Social Virtue:

All factor income is spent in buying goods which they help to produce. Whatever is saved is automatically invested for further production. In other words, saving is a social virtue.

Criticisms of Say's Law:

J.M. Keynes in his General Theory made a frontal attack on the classical postulates and Say's law of markets.**He criticised Say's law of markets on the following grounds:**

1. Supply does not create its Demand:

Say's law assumes that production creates market (demand) for goods. Therefore, supply creates its own demand. But this proposition is not applicable to modern economies where demand does not increase as much as production increases. It is also not possible to consume only those goods which are produced within the economy.

2. Self-adjustment not Possible:

According to Say's law, full-employment is maintained by an automatic and self-adjustment mechanism in the long run. But Keynes had no patience to wait for the long period for he believed that "In the long-run we are all dead." It is not the automatic adjustment process which removes unemployment. But unemployment can be removed by increase in the rate of investment.

3. Money is not Neutral:

Say's law of markets is based on a barter system and ignores the role of money in the system. Say believes that money does not affect the economic activities of the markets. On the other hand, Keynes has given due importance to money. He regards money as a medium of exchange. Money is held for income and business motives. Individuals hold money for unforeseen contingencies while businessmen keep cash in reserve for future activities.

4. Over Production is Possible:

Say's law is based on the proposition that supply creates its own demand and there cannot be general over-production. But Keynes does not agree with this proposition. According to him, all income accruing to factors of production is not spent but some fraction out of it is saved which is not automatically invested. Therefore, saving and investment are always not equal and it becomes the problem of overproduction and unemployment.

5. Underemployment Situation:

Keynes regards full employment as a special case because there is underemployment in capitalist economies. This is because the capitalist economies do not function according to Say's law and supply always exceeds its demand. For example, millions of workers are prepared to work at the current wage rate, and even below it, but they do not find work.

6. State Intervention:

Say's law is based on the existence of laissez-faire policy. But Keynes has highlighted the need for state intervention in the case of general overproduction and mass unemployment. Laissez-faire, in-fact, led to the Great Depression.

Had the capitalist system been automatic and self-adjusting. This would not have occurred. Keynes, therefore, advocated state intervention for adjusting supply and demand within the economy through fiscal and monetary measures.

7. Equality through Income:

Keynes does not agree with the classical view that the equality between saving and investment is brought about through the mechanism of interest rate. But in reality, it is changes in income rather than the rate of interest which bring the two to equality.

8. Wage-cut no Solution:

Pigou favoured the policy of wage-cut to solve the problem of unemployment. But Keynes opposed such a policy both from the theoretical and practical points of view. Theoretically, a wage-cut policy increases unemployment instead of removing it. Practically, workers are not prepared to accept a cut in money wage. Keynes, therefore, favoured a flexible monetary policy to a flexible wage policy to raise the level of employment in the economy.

9. Demand creates its own supply:

Say's law of market is based on the proposition that "supply creates its own demand". Therefore, there cannot be general overproduction and mass unemployment. Keynes has criticized this proposition and propounded the opposite view that demand creates its own supply. Unemployment results from the deficiency of effective demand because people do not spend the whole of their income on consumption.

Wage Flexibility:

The importance of wage flexibility arises from the fact that, in most macroeconomic models, we find an inverse relationship between wages and employment. Unemployment is thus associated with wages in excess of full-employment level and the persistence of unemployment then depends on how quickly wages adjust in the face of unemployment.

It is often argued that if wages were very (if not completely) flexible, unemployment would be eliminated quickly and automatically by wage cuts, and that, consequently, any persistence of unemployment must be attributable to wage rigidity.

Although the classical economists admitted that hoarding could cause spending to decline, they did not believe that it would lead to unemployment. Full employment would be maintained because wage and price adjustments would compensate for any deficiency in total spending.The existence of flexible wages and prices implies an AS curve that is vertical, not upward-sloping as in the initial section of this chapter.

Recall that the upward slope of the earlier AS curve resulted from the assumption that wage rates and some other input prices remain fixed in the short run. Given these rigidities, an increase in the price level would allow businesses to profit by expanding output, thus producing the upward-sloping AS curve.

But the classical economists believed that all prices—including wage rates (the price of labor) and other input prices—were highly flexible. An increase in product prices would therefore be quickly matched by higher costs, which would eliminate any incentive to expand output.

Thus, the existence of highly flexible wages and prices implies an AS curve that is vertical at the full-employment level of output (potential GDP), as represented in Exh. 2.To illustrate

how flexible wages and prices guarantee full employment, let us assume that the economy is operating at a price level of 100 and a real GDP of $1,000 billion, the intersection of AS and AD1. Now, suppose that consumers become pessimistic about the future and hide some of their income in cookie jars rather than spend it. What will happen? Aggregate demand will fall—the AD curve will shift from AD1 to AD2—because households are spending less and thus demanding less real output at any given price level.

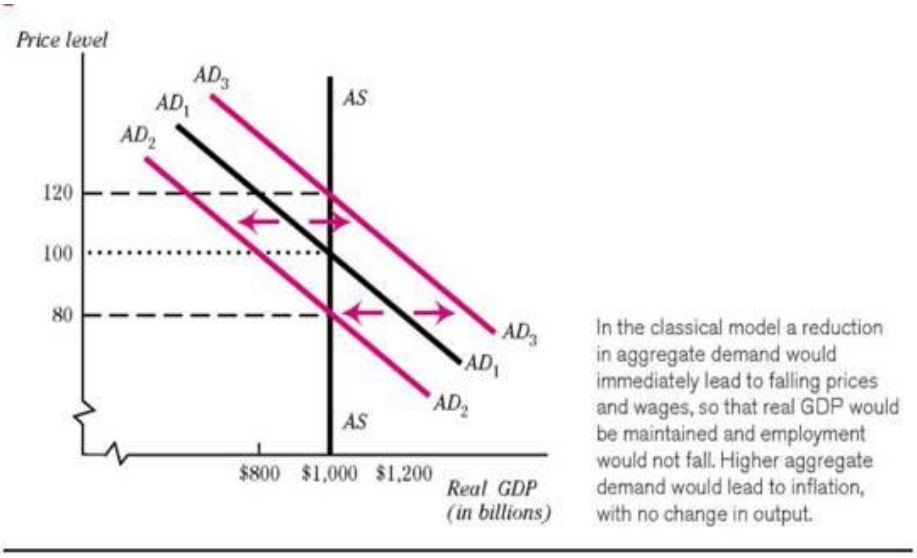
Reasoning from the assumptions of the classical economists, a reduction in aggregate demand leads quickly to falling prices. In our example the price level will not be maintained at 100; it will fall to 80. If that occurs, businesses will be able to sell the same amount of real output as before but at lower prices.

Wages will also decline because reductions in the demand for goods and services will be accompanied by falling demand for labor, which will lead to labor surpluses and wage reductions. Thus, employers will still be able to make a profit at the lower price level.If AD were to increase (due to dishoarding—spending the money that had been hoarded—for example), this entire process would work in reverse.

An increase in aggregate demand from AD1 to AD3 would quickly push up product prices. On the surface this would seem to make it attractive for businesses to increase output; if product prices rise while input prices remain stable, producers can make a profit by expanding output to satisfy the higher level of demand.

But in the classical model, wage rates and other input prices are also highly flexible, and they would tend to rise because increases in the demand for goods and services would be accompanied by rising demand for labor and other inputs.

Thus, businesses would have no incentive to expand output. The higher level of aggregate demand would lead to inflation, leaving output and employment unchanged.In summary, the classical economists did not believe that changes in aggregate demand would have any impact on real GDP or employment; they maintained that only the price level would be affected.



The Keynesian Theory of Income, Output and Employment

In the Keynesian theory, employment depends upon effective demand. Effective demand results in output. Output creates income. Income provides employment. Since Keynes ssumes all these four quantities, viz., effective demand (ED), output (Q), income (Y) and employment (N) equal to each other, he regards employment as a function of income.

Effective demand is determined by two factors, the aggregate supply function and the aggregate demand function. The aggregate supply function depends on physical or technical conditions of production which do not change in the short-run.As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment. The total expenditure is equal to the national income, which is equivalent to the national output. Therefore, effective demand is equal to total expenditure as well as national income and national output.

The theory of Keynes was against the belief of classical economists that the market forces in capitalist economy adjust themselves to attain equilibrium. He has criticized classical theory of employment in his book. Vie General Theory of Employment, Interest and Money. Keynes not only criticized classical economists, but also advocated his own theory of employment. His theory was followed by several modern economists.

Keynes book was published post-Great Depression period. The Great Depression had proved that market forces cannot attain equilibrium themselves; they need an external support for achieving it. This became a major reason for accepting the Keynes view of employment.The Keynes theory of employment was based on the view of the short run. In the short run, he assumed that the factors of production, such as capital goods, supply of labor, technology,

and efficiency of labor, remain unchanged while determining the level of employment. Therefore, according to Keynes, level of employment is dependent on national income and output.In addition, Keynes advocated that if there is an increase in national income, there would be an increase in level of employment and vice versa. Therefore, Keynes theory of employment is also known as theory of employment determination and theory of income determination.

Principle of Effective Demand:

The main point related to starting point of Keynes theory of employment is the principle of effective demand. Keynes propounded that the level of employment in the short run is dependent on the aggregate effective demand of products and services.According to him, an increase in the aggregate effective demand would increase the level of employment and vice-versa.

Total employment of a country can be determined with the help of total demand of the country. A decline in total effective demand would lead to unemployment.As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment.

The total expenditure is equal to the national income, which is equivalent to the national output. Therefore, effective demand is equal to total expenditure as well as national income and national output.

The effective demand can be expressed as follows:

Effective demand = National Income = National OutputTherefore effective demand affects employment level of a country, national income, and national output. It declines due to the mismatch of income and consumption and this decline lead to unemployment.With the increase in the national income the consumption rate also increases, but the increase in consumption rate is relatively low as compared to the increase in national income. Low consumption rate leads to a decline in effective demand.Therefore, the gap between the income and consumption rate should be reduced by increasing the number of investment opportunities.

Consequently, effective demand also increases, which further helps in reducing unemployment and bringing full employment condition.Moreover, effective demand refers to the total expenditure of an economy at a particular employment level. The total equal to the total supply price of economy (cost of production of products and services) at a certain level of employment. Therefore, effective demand refers to the demand of consumption and investment of an economy.

Determination of Effective Demand:

Keynes has used two key terms, namely, aggregate demand price and aggregate supply price, for determining effective demand. Aggregate demand price and aggregate supply price together contribute to determine effective demand, which further helps in estimating the level of employment of an economy at a particular period of time.In an economy, the employment level depends on the number of workers that are employed, so that maximum profit can be drawn. Therefore, the employment level of an economy is dependent on the decisions of organizations related to hiring of employee and placing them.The level of employment can be determined with the help of aggregate supply price and aggregate demand price. Let us study these two concepts in detail.

Aggregate Supply Price:

Aggregate supply price refers to the total amount of money that all organizations in an economy should receive from the sale of output produced by employing a specific number of workers. In simpler words, aggregate supply price is the cost of production of products and services at a particular level of employment.It is the total amount of money paid by organizations to the different factors of production involved in the production of output. Therefore, organizations would not employ the factors of production until they can recover the cost of production incurred for employing them.

A certain minimum amount of price is required for inducing employers to offer a specific amount of employment. According to Dillard, "This minimum price or proceeds, which will just induce employment on a given scale, is called the aggregate supply price of that amount of employment."If an organization does not get an adequate price so that cost of production is covered, then it employs less number of workers. Therefore the aggregate supply price varies according to different number of workers employed. So, aggregate supply price schedule Id Tut can be prepared as per the total number of workers employed.Aggregate supply price schedule is a schedule of minimum price required to induce the different quantities of employment. Thus, higher the price required to induce the different quantities of employment, greater the level of employment would be. Therefore, the slope of the aggregate supply curve is upward to the right.

Aggregate Demand Price:

Aggregate demand price is different from demand for products of individual organizations and industries. The demand for individual organizations or industries refers to a schedule of quantity purchased at different levels of price of a single product. On the hand, aggregate demand price is the total amount of money that an organization expects to receive from the

sale of output produced by a specific number of workers. In other words, the aggregate demand price signifies the expected sale receipts received by the organization by employing a specific number of workers.Aggregate demand price schedule refers to the schedule of expected earnings by selling the product at different level of employment Mo higher the level of employment, greater the level of output would be.Consequently, the increase in the employment level would increase the aggregate demand price.

Thus, the slope of aggregate demand curve would be upward to the right. However, the individual demand curve slopes downward. The basic difference between the aggregate supply price and aggregate demand price should be analysed carefully as both of them seem to be same.

In aggregate supply price, organizations should receive money from the sale of output produced by employing a specific number of workers. However, in aggregate demand price, organizations expect to receive from the sale of output produced by a specific number of workers. Therefore, in aggregate supply price, the amount of money is the necessary amount that should be received by the organization, while in aggregate demand price the amount of money may or may not be received.

Determination of Equilibrium Level of Employment:

The aggregate demand price and aggregate supply price help in determining the equilibrium level of employment.

The aggregate demand (AD) and aggregate supply (AS) curve are used for determining the equilibrium level of employment, as shown in Figure-3:

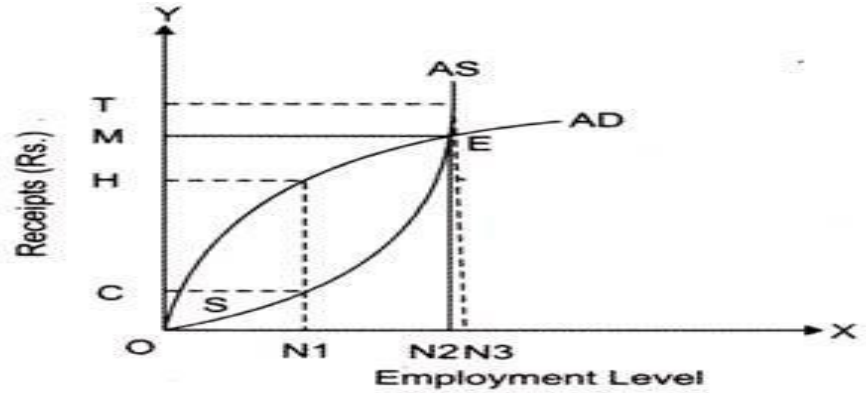


Figure-3: Determination of Employment Level

n Figure-3, AD represents the aggregate demand curve, while AS represents the aggregate supply curve. It can be interpreted from Figure-3 that although the aggregate demand and aggregate supply curve are moving in the same direction, but they are not alike. There are different aggregate demand price and aggregate supply price for different levels of employment.For example, in Figure-3, at AS curve, the organization would employ

ON_1 number of workers, when they receive OC amount of sales receipts. Similarly, in case of AD curve, the organization would employ ON_1 number of workers with the expectation that they would produce OH amount of sales receipt for them.

The aggregate demand price exceeds the aggregate supply price or vice versa at some levels of employment. For example, at ON_1 employment level, the aggregate demand price (OH) is greater than the aggregate supply price (OC). However, at certain level of employment, the aggregate demand price and aggregate supply price become equal.

At this point, aggregate demand and aggregate supply curve intersect each other. This point of intersection is termed as the equilibrium level of employment. In Figure-3, point E represents the equilibrium level of employment because at this point, the aggregate demand curve and aggregate supply curve intersect each other.

In Figure-3, initially, there is a slow movement in the AS curve, but after a certain point of time it shows a sharp rise. This implies that when a number of workers increases initially, the cost incurred for production also increases but at a slow rate. However, when the amount of sales receipt increases, the organization starts employing more and more workers. In Figure-3, the ON_1 numbers of workers are employed, when OT amount of sales receipts are received by the organization.

On the other hand, the AD curve shows a rapid increase initially, but after some time it gets flattened. This means that the expected sales receipts increase with an increase in the number of workers. As a result, the expectations of the organization to earn more profit increases. As a result, the organization start employing more workers. However, after a certain level, the increase in employment level would not show an increase in the amount of sales receipts.

In Figure-3, before reaching the employment level of ON_2, the employment level keeps on increasing as the organizations want to higher more and more workers to get the maximum profit. However, when the employment level crosses the ON_{21} level, the AD curve is below the AS curve, which shows that the aggregate supply price exceeds the aggregate demand price. As a result, the organization would start incurring losses; therefore would reduce the employment rate.

Thus, the economy would be in equilibrium when the aggregate supply price and aggregate demand price become equal. In other words, equilibrium can be achieved when the amount of sales receipt necessary and the amount of sales receipt expected to be received by the organization at a specified level of employment are equal.

Consumption Function

Meaning

The consumption function or propensity to consume refers to income consumption relationship. It is a "functional relationship between two aggregates, i.e., total consumption and gross national income. "Symbolically, the relationship is represented as C= f(Y), where C is consumption, Y is income, and/is the functional relationship. Thus the consumption function indicates a functional relationship between C and Y, where C is the depend at and Y is the independent variable, i.e., C is determined by YIn fact, propensity to consume or consumption function is a schedule of the various amounts of consumption expenditure corresponding to different levels of income.

A hypothetical consumption schedule is given in Here it is shown that when income is zero during the depression, people spend out of their past savings on consumption because they must eat in order to live.When income is generated in the economy to the extent of Rs 60 crores, it is not sufficient to meet the consumption expenditure of the community so that the consumption expenditure of Rs 70 crores is still above the income amounting to Rs 60 crores (Rs 10 crores are dissaved). When both consumption expenditure and income equal Rs 120 crores, it is the basic consumption level. After this, income is shown to increase by 60 crores and consumption by 50 crores. This implies a stable consumption function during the short-run as assumed by Keynes. Figure 1 illustrates the consumption function diagrammatically.

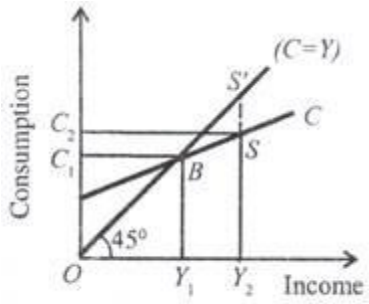


Fig. 1.

In the diagram, income is measured horizontally and consumption is measured vertically. 45° is the unity line where at all levels income and consumption are equal. The C curve is a linear consumption function based on the assumption that consumption changes by the same amount (Rs 50 crores).

Table 1 : Consumption Schedule

(Rs Crores)

Income (*Y*)	*Consumption* $C = f(Y)$
0	20
60	70
120	120
180	170
240	220
300	270
360	320

Its upward slope to the right indicates that consumption is an increasing function of income. B is the break-even point where C=Y or $OY_1 = OC_1$ When income rises to $0Y_1$ consumption also increases to $0C_2$, but the increase in consumption is less than the increase in income, $C_1C_2 < Y_1Y_2$ The portion of income not consumed is saved as shown by the vertical distance between 45° line and C curve, i.e., SS'."Thus the consumption function measures not only the amount spent on consumption but also the amount saved. This is because the propensity to save is merely the propensity not to consume. The 45° line may therefore be regarded as a zero-saving line, and the shape and position of the C curve indicate the division of income between consumption and saving."

2. Properties or Technical Attributes of the Consumption Function:

The consumption function has two technical attributes or properties:

(i) The average propensity to consume, and (ii) The marginal propensity to consume.

(1) The Average Propensity to Consume:

"The average propensity to consume may be defined as the ratio of consumption expenditure to any particular level of income." It is found by dividing consumption expenditure by income, or APC = C/Y. It is expressed as the percentage or proportion of income consumed. The APC at various income levels is shown in column 3 of Table 2. The APC declines as income increases because the proportion of income spent on consumption decreases.

But reverse is the case with APS (average propensity to save) which increases with increase in income (see column 4). Thus the APC also tells us about the APS, APS=1-APC.

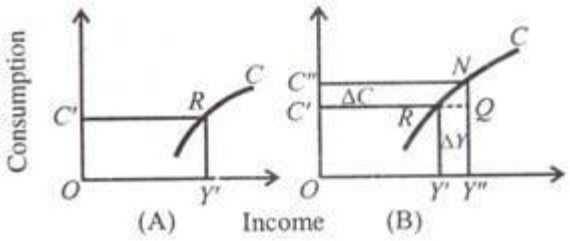


Fig. 2.

Diagrammatically, the average propensity to consume is any one point on the C curve. In Figure 2 Panel (A), point R measures the APC of the C curve which is OC'/OY'. The flattening of the C curve to the right shows declining APC.

(2) The Marginal Propensity to Consume:

"The marginal propensity to consume may be de- fined as the ratio of the change in consumption to the change in income or as the rate of change in the average propensity to consume as income changes." It can be found by dividing change in consumption by a change in income, or MPC — $\Delta C/\Delta Y$. The MPC is constant at all levels of income as shown in column 5 of Table 2.It is 0.83 or 83 per cent because the ratio of change in consumption to change in income is $\Delta C/\Delta Y$ = 50/60. The marginal propensity to save can be derived from the MPC by the formula 1 -MPC. It is 0.17 in our example (see column 6).

TABLE 2

(Rs. Crores)

(1) Income Y	*(2) Consump-tion(C)*	*(3) APC=C/Y*	*(4) APS=S/Y (1-APC)*	*(5) MPC= ΔC/ΔY*	*(6) MPS=ΔS/ΔY (1-MPC)*
120	120	$\frac{120}{120}$ = 1 or 100%	0	—	—
180	170	$\frac{170}{180}$ = 0.92 or 92%	0.08	$\frac{50}{60}$ = 0.83	0.17
240	220	$\frac{220}{240}$ = 0.91 or 91%	0.09	$\frac{50}{60}$ = 0.83	0.17
300	270	$\frac{270}{300}$ = 0.90 or 90%	0.10	$\frac{50}{60}$ = 0.83	0.17
360	320	$\frac{320}{360}$ = 0.88 or 88%	0.12	$\frac{50}{60}$ = 0.83 or 83%	0.17

Diagrammatically, the marginal propensity to consume is measured by the gradient or slope of the C curve. This is shown in Figure 2 Panel (B) by NQ/RQ where NQ is change in consumption (ΔC) and RQ is change in income (ΔY) or C'C"/Y'Y".

Factors Affecting Consumption Functions:

Subjective and Objective Factor

According to Keynes, two types of factors influence the consumption function: subjective and objective. The subjective factors are endogenous or internal to the economic system itself. The subjective factors relate to psychological characteristics of human nature, social structure, social institutions and social practices.

Subjective Factors: Subjective factors basically underlie and determine the form of the consumption function (i.e., its slope and position).

Keynes enlists eight such motives:

1. The Motive of Precaution:The desire to build up a reserve against unforeseen contingencies.

2. The Motive of Foresight:The desire to provide for anticipated future needs, e.g., in relation to old age, family education, etc.

3. The Motive of Calculation:The desire to enjoy interest and appreciation, because a larger real consumption, at a later date, is preferred to a smaller immediate consumption.

4. The Motive of Improvement:The desire to enjoy a gradually increasing expenditure since it gratifies the common instinct to look forward to a gradually improving standard of life rather than otherwise.

5. The Motive of Independence:The desire to enjoy a sense of independence and the power to do things.

6. The Motive of Enterprise:The desire to secure a mass de manoeuvre to carry on speculation or establish business projects.

7. The Motive of Pride:The desire to possess or to bequeath a fortune.

8. The Motive of Avarice:The desire to satisfy pure miserliness, i.e., unreasonable, but insistent abstinence from expenditure as such.

Objective Factors:

Objective factors, subject to rapid changes and causing violent shifts in the consumption function, are considered below:

1. Money Income: Money income of the individual is the dominant factor in determining his consumption. Income, consumption and savings of an individual are related to each other.2. Real Income: Keynes points out that the consumption is influenced by real income than by money income. A change in the price level will change the value of money and the purchasing power. Fluctuation in prices will affect real income and also the propensity to consume. Phenomenal rise in the price level will reduce the real income and so there will be a fall in the propensity to consume.

3. **Distribution of Income:**The most important factor determining consumption function is the manner in which the income or wealth of the community is distributed. Normally the average and marginal propensities to consume will be higher for poor people than the rich; the reason being that the former will be living without many essential and basic needs of life and additional income will be fully made use of in consumption to satisfy basic wants.

On the other hand, the rich may not be having many unsatisfied wants and hence their propensity to save will be higher. Statistical studies have proved that a large portion of investment has come only from the savings of the rich. Consumption will be low when there are gross inequalities of income in the country. Reduction of inequalities will increase the propensity to consume in the economy.

4. Fiscal Policy

The fiscal policy of the government relating to taxation, expenditure and public debt will appreciably affect the propensity to consume. Heavy indirect taxes will leave little money with the people of low-income groups and their consumption will get depressed.

A reduction in taxes will leave more disposable income which can be used for consumption. Highly progressive system of taxation will reduce inequalities which will in turn increase the propensity to consume in the economy.

5. Financial policies of Corporations

If joint-stock companies and corporations adopt a 'fat dividend' policy, the disposable income of the shareholders will be high and consequently the propensity to consume will also go up.

6. Expectations of future changes

If the people in the economy expect sudden changes in the future regarding their income, price-level or shortage of commodities or bumper harvest, the consumption function will change.

During war, shortage of commodities will be expected and the consumers will rush to buy far in excess of their needs. If they anticipate bumper crop or massive import which would reduce the prices in the near future, consumption would be postponed to a future date and hence propensity to consume will become low.

7. Windfall gains and huge losses

Sudden windfall income or gains will increase the consumption function, while huge losses will reduce the consumption. In the late twenties, the windfall gains in the stock market of U.S.A., increased the consumption function of the wealthier classes.

9. Rate of interest

Views differ regarding the role of interest in consumption function. The classical view is that if the rate of interest goes up, people will consume less and save more to take advantage of the higher interest rate. When interest rate falls, they will consume more and save less. Consumption varies inversely with the rate of interest.

10. Demographic factors

The consumption expenditure differs from family depending on demographic factors, though the income may happen to be the same for all families. 'Large-sized' families will spend more than 'small-sized' families. Occupation, residence, composition of the family will determine expenditure.

Normally urban-bred families will spend more than rural families. Farmers and small businessmen will spend less than professional people. Families having children attending colleges will be spending more. In short, the propensity to consume depends on tastes, preferences, standard of living and aptitude and attitude of the people.)

Investment Function

It leads to increase in the levels of income and production by increasing the production and purchase of capital goods. Investment thus includes new plant and equipment, construction of public works like dams, roads, buildings, etc., net foreign investment, inventories and stocks and shares of new companies. In the words of Joan Robinson, "By investment is meant an addition to capital, such as occurs when a new house is built or a new factory is built. Investment means making an addition to the stock of goods in existence."

Types of Investment:

1**. Induced Investment:**Real investment may be induced. Induced investment is profit or income motivated. Factors like prices, wages and interest changes which affect profits influence induced investment. Similarly demand also influences it. When income increases, consumption demand also increases and to meet this, investment increases. In the ultimate analysis, induced investment is a function of income i.e., I = f(Y). It is income elastic. It increases or decreases with the rise or fall in income, as shown in Figure 1.

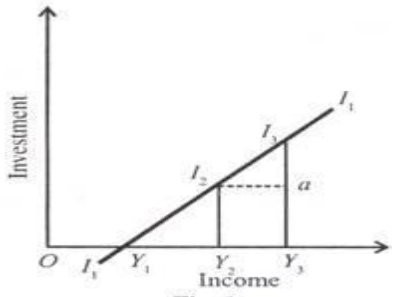


Fig. 1

I1 I1is the investment curve which shows induced investment at various levels of income. Induced investment is zero at OY1 income. When income rises to OY3 induced investment is I3Yy A fall in income to OY2 also reduces induced investment to I2Y2.

Induced investment may be further divided into (i) the average propensity to invest, and (ii) the marginal propensity to invest:

(i) The average propensity to invest is the ratio of investment to income, I/Y. If the income is Rs. 40 crores and investment is Rs. 4 crores, I/Y = 4/40 = 0.1. In terms of the above figure, the average propensity to invest at OY3 income level is I3Y3/ OY3

(ii) The marginal propensity to invest is the ratio of change in investment to the change in income, i.e., $\Delta I/\Delta Y$. If the change in investment, ΔI=Rs 2 crores and the change in income, ΔY = Rs 10 crores, then $\Delta I/\Delta Y = 2/10=0.2$ In Figure 1, $\Delta I/\Delta Y$ =I3a/Y2Y3

2. **Autonomous Investment:**

Autonomous investment is independent of the level of income and is thus income inelastic. It is influenced by exogenous factors like innovations, inventions, growth of population and labour force, researches, social and legal institutions, weather changes, war, revolution, etc. But it is not influenced by changes in demand. Rather, it influences the demand. Investment in economic and social overheads whether made by the government or the private enterprise is autonomous.Such investment includes expenditure on building, dams, roads, canals, schools, hospitals, etc. Since investment on these projects is generally associated with public policy, autonomous investment is regarded as public investment. In the long-run, private investment of all types may be autonomous because it is influenced by exogenous factors. Diagrammatically, autonomous investment is shown as a curve parallel to the horizontal axis as I1I' curve in Figure 2. It indicates that at all levels of income, the amount of investment OI1remains constant.

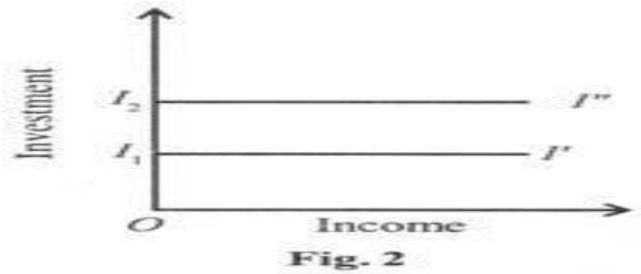


Fig. 2

The upward shift of the curve to I_2I" indicates an increased steady flow of investment at a constant rate OI_2 at various levels of income. However, for purposes of income

determination, the autonomous investment curve is superimposed on the C curve in a 45° line diagram.

Determinants of the Level of Investment:

The decision to invest in a new capital asset depends on whether the expected rate of return on the new investment is equal to or greater or less than the rate of interest to be paid on the funds needed to purchase this asset. It is only when the expected rate of return is higher than the interest rate that investment will be made in acquiring new capital assets.

In reality, there are three factors that are taken into consideration while making any investment decision. They are the cost of the capital asset, the expected rate of return from it during its lifetime, and the market rate of interest. Keynes sums up these factors in his concept of the marginal efficiency of capital (MEC).

Marginal Efficiency of Capital:

The marginal efficiency of capital is the highest rate of return expected from an additional unit of a capital asset over its cost. In the words of Kurihara, "It is the ratio between the prospective yield to additional capital goods and their supply price."

The prospective yield is the aggregate net return from an asset during its life time, while the supply price is the cost of producing this asset.If the supply price of a capital asset is Rs. 20,000 and its annual yield is Rs. 2,000, the marginal efficiency of this asset is 2000/20000 × 100/1 = 10 per cent. Thus the marginal efficiency of capital is the percentage of profit expected from a given investment on a capital asset. Keynes relates the prospective yield of a capital asset to its supply price and defines the MEC as "equal to the rate of discount which would make the present value of the series of annuities given by the returns expected from the capital assets during its life just equal to its supply price."

Multiplier:

Definition

Estimated number by which the amount of a capital investment (or a change in some other component of aggregate demand) is multiplied to give the total amount by which the national income is increased. This multiplier takes all direct and indirect benefits from that investment (or from the change in demand) into account. Expressed as the reciprocal of the marginal propensity to save

Types of Multiplier

(a) Employment Multiplier:

Employment multiplier is associated with the name of Prof. R.F. Kahn. The idea of multiplier had its origin in 1931 when Prof. Kahn was discussing the favourable effects of public

investment on aggregate employment.Prof. Kahn was of the view that an initial increase in employment leads to a very large increase in the total employment. All discussions on public works prove that besides the 'original' or 'primary' employment in the public works, there will be 'secondary' employment, resulting from public works. Secondary employment is that which occurs in consumption goods industries as a result of the primary employment in public works.

(b) Price Multiplier:

Investment or income multiplier operates only so far as full employment is not reached. In other words, it has a full employment ceiling. When the full employment ceiling in an economy is reached, the scarcities of factors, goods and services start appearing: as such, after the full employment, the multiplier starts working in relation to prices only and is rightly described as the 'price multiplier'.When 'inflationary shook' is introduced by a constant stream of an autonomous real investment, (fixed amount regardless of price increases, such as associated with war expenditure, deficit spending etc.), it will increase the level of money national income via the multiplier action. A small injection to the money income stream of the economy increases it (income) by many times. Price multiplier, therefore, refers to the ratio of the ultimate increase in the general price level to the initial increase in prices (on account of the increased money supply).

(c) Consumption Multiplier:

Consumption multiplier as enunciated by Dr. P.R. Brahmanand and Prof. C.N. Vakil, is based on the concept of 'saving potential' developed by Prof. R. Nurkse in his famous book 'Capital Formation in Underdeveloped Countries'. It is their belief that if we really want to break the vicious circle of poverty and generate a process of economic development it is essential to make use of the saving potential, of the subsistence and un-organised sector in the economy.According to them, there is 25 to 30% disguised unemployment in the rural sector of underdeveloped economies. The 'disguised unemployment' constitutes the 'saving potential'. Thus, we can always remove from the land certain unproductive workers, who seem to be apparently employed but who in fact are not actually employed, i.e., their removal will not lead to a decline in the production.

Leakages of Multiplier:

Leakages are the potential diversions from the income stream which tend to weaken the multiplier effect of new investment. Given the marginal propensity to consume, the increase in income in each round declines due to leakages in the income stream and ultimately the

process of income propagation “peters out.” (See Table II).**The following are the important leakages:**

1. Saving: Saving is the most important leakage of the multiplier process. Since the marginal propensity to consume is less than one, the whole increment in income is not spent on consumption. A part of it is saved which peters out of the income stream and the increase in income in the next round declines.Thus the higher the marginal propensity to save, the smaller the size of the multiplier and the greater the amount of leakage out of the income stream, and vice versa. For instance, if MPS = 1/6, the multiplier is 6, according to the formula K = 1/MPS; and the MPS of 1/3 gives a multiplier of 3.

2. Strong Liquidity Preference: If people prefer to hoard the increased income in the form of idle cash balances to satisfy a strong liquidity preference for the transaction, precautionary and speculative motives, that will act as a leakage out of the income stream. As income increases people will hoard money in inactive bank deposits and the multiplier process is checked.

3. Purchase of Old Stocks and Securities: If a part of the increased income is used in buying old stocks and securities instead of consumer goods, the consumption expenditure will fall and its cumulative effect on income will be less than before. In other words, the size of the multiplier will fall with a fall in consumption expenditure when people buy old stocks and shares.

4.Debt Cancellation: If a part of increased income is used to repay debts to banks, instead of spending it for further consumption, that part of the income peters out of the income stream. In case, this part of the increased income is repaid to other creditors who save or hoard it, the multiplier process will be arrested.

5. Price Inflation: When increased investment leads to price inflation, the multiplier effect of increased income may be dissipated on higher prices. A rise in the prices of consumption goods implies increased expenditure on them. As a result, increased income is absorbed by higher prices and the real consumption and income fall. Thus price inflation is an important leakage which tends to dissipate increase in income and consumption on higher prices rather than in increasing output and employment.

6. Net Imports: If increased income is spent on the purchase of imported goods it acts as a leakage out of the domestic income stream. Such expenditure fails to effect the consumption of domestic goods. This argument can be extended to net imports when there is an excess of imports over exports thereby causing a net outflow of funds to other countries.

7. Undistributed Profits: If profits accruing to joint stock companies are not distributed to the shareholders in the form of dividend but are kept in the reserve fund, it is a leakage from the income stream. Undistributed profits with the companies tend to reduce the income and hence further expenditure on consumption goods thereby weakening the multiplier process.

8. Taxation: Taxation policy is also an important factor in weakening the multiplier process. Progressive taxes have the effect of lowering the disposable income of the taxpayers and reducing their consumption expenditure. Similarly commodity taxation tends to raise the prices of goods, and a part of increased income may be dissipated on higher prices. Thus increased taxation reduces the income stream and lowers the size of the multiplier.

Accelerator

Meaning of Accelerator:

The multiplier and the accelerator are not rivals: they are parallel concepts. While multiplier shows the effect of changes in investment on changes in income (and employment), the accelerator shows the effect of a change in consumption on private investment

"Since the production of any given amount of final output usually requires an amount of capital several times larger than the output produced with it during any short period (say a year) any increase in final demand will give rise to an additional demand for capital goods several times larger than the new final demand."

The Principle of Acceleration states that if the demand for consumption goods rises, there will be an increase in the demand for the equipment, say machines, which produce these oods. But the demand for the machines will increase at a faster rate than the increase in demand for the product.

Working of the Accelerator:

It is interesting to analyse the working of the Principle of Acceleration.

Accelerator depends primarily upon two factors:

(i) The capital-output ratio, and

(ii) The durability of the capital equipment.

Importance and Limitations of the Accelerator:

The introduction of the Principle of Acceleration enables us to understand the process of income generation more clearly. No doubt, a certain level of income (or employment) could be attained by multiplier action alone. But along with accelerator the process of income propagation is speeded up. When accelerator and multiplier join hands, more violent fluctuations in income occur in upward and downward directions.

Firstly, this multiplier-accelerator interaction enables us to throw light on one of the most important features of business cycle. This feature is that the investment goods industries fluctuate more violently than the consumption-goods industries. It has helped us to show that small demand changes in consumption-goods industries lead to considerably enlarged changes in investment-goods industries.Secondly, the multiplier-accelerator interaction has profoundly increased our understanding of business cycles. Prof. Hicks' theory of the business cycle is based primarily on the principle of acceleration.

Further, Prof. R.F. Harrod has based his theory of Steady Growth on the acceleration principle. Harrod's analysis of economic growth grew out of his analysis of business cycle as a dynamic economic phenomenon. Despite its great theoretical importance, its qualifications indicate that attempts to apply very simplified models using the acceleration principle are likely to give misleading results.

The presumptions of a fixed ratio of consumer to capital goods, of constant replacement demand, of no excess capacity, of permanent demand are lacking in realism. In other words, acceleration theory is valid only so long as all machines are in use (no excess capacity), overtime is excluded, the relation between production factors is not altered (unchanged technology), sufficient raw materials and labour are present and the entrepreneurs command the necessary financial means.

Since this is not the case generally, the simple concept of accelerator as we have studied it is of little significance.

Many attempts to measure the accelerator have yielded little result. Entrepreneurs' behaviour is to be explained through numerous other factors, especially future expectations play a particularly important part.

More realistic assumptions would virtually lead to results significantly different from those obtained under simplifying assumptions.

Question for practice

Part A

1. Define multiplier
2. What you mean by Accelerator
3. Mention the Says law
4. Explain the Average and Marginal Propensity to Consume
5. Recall the consumption function

Part B

1. Discuss the Factors Affecting Consumption Functions
2. Elaborate the determination of Equilibrium Level of Employment
3. Summarise the types of multiplier
4. Determination Classical Theory of Income, Output and Employment
5. Explain the importance and limitations of the Accelerator

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MONEY AND BANKING

DEFINITION

According to Crowther, "Anything that is generally acceptable as a means of exchange and which at the same time acts as a measure and store of value.

Functions of Money –

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.

Money as 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.

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.

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.

Classification of Money –

There are 4 major types of money: • Commodity Money • Fiat Money • Fiduciary Money • Commercial Bank Money

Commodity Money- It is the simplest kind of money which is used in barter system where the valuable resources fulfill the functions of money. The value of this kind of money comes from the value of resource used for the purpose. It is only limited by the scarcity of the resources. Value of this kind of money involves the parties associated with the exchange process. These money have intrinsic value. Whenever any commodity is used for the exchange purpose, the commodity becomes equivalent to the money and is called commodity money. There are certain types of commodity, which are used as the commodity money. Among these, there are several precious metals like gold, silver, copper and many more. Again, in many parts of the world, seashells (also known as cowrie shells), tobacco and many other items were in use as a type of money & medium of exchange. Ex : gold coins , beads , shells, pearls, stones, tea, sugar, metal

Fiat Money - The word fiat means the "command of the sovereign". Fiat currency is the kind of money which don't have any intrinsic value and it can't converted into valuable resource. The value of fiat money is determined by government order which makes it a legal instrument for all transaction purposes. The fiat money need to be controlled as it may affect entire economy of a country if it is misused. Today Fiat money is the basis of all the modern money system. The real value of fiat money is determined by the market forces of demand and supply. Ex : Paper money, Coins

Fiduciary Money- Today's monetary system is highly fiduciary. Whenever, any bank assures the customers to pay in different types of money and when the customer can sell the promise or transfer it to somebody else, it is called the fiduciary money. Fiduciary money is generally paid in gold, silver or paper money. There are cheques and bank notes, which are the

examples of fiduciary money because both are some kind of token which are used as money and carry the same value.

Commercial Bank Money - Commercial Bank money or demand deposits are claims against financial institutions that can be used for the purchase of goods and services. A demand deposit account is an account from which funds can be withdrawn at any time by cheque or cash withdrawal without giving the bank or financial institution any prior notice. Banks have the legal obligation to return funds held in demand deposits immediately upon demand (or 'at call'). Demand deposit withdrawals can be performed in person, via cheques or bank drafts, using automatic teller machines (ATMs), or through online banking.

Metallic Money:

Includes money made up of metals, such as copper, brass, silver, gold, alloys, and aluminium. The need for metallic money was realized due to the limitations of commodity money. However, the exact period when metallic money was invented is unknown.It is supposed that metallic coins were traded in India around 2500 years ago. Initially, the pieces of metals, such as gold, silver, copper, and aluminum, served the purpose of money. However, in later years, these pieces took the form of coins.

Paper Money:

Refers to the form of money printed, authenticated, and issued by the government of a country. Paper money is regarded as the most common form of money and constitutes a large part in the money supply of a country. Some of the countries adopted the dual system of currency notes.For example, in India, both, five rupees notes and coins are issued by Reserve Bank of India (RBI). The currency notes issued by RBI are promissory notes, but they get a status of legal money. For example, on every currency note, it is written, “I promise to pay the bearer a sum of Rupees.”Paper money was invented as the supply of metallic coins, such as silver and gold, was very less as compared to its demand. In addition, a large amount of metallic money is not easily portable and the value of metallic coins depreciates with time.

Bank Deposits:

Refers to money that is in the form of current account deposits, saving account deposits, and time deposits. This form of money was invented with the evolution of the banking system. Unlike metallic money and paper money, this form of money cannot be passed hand to hand for purchasing goods and services.Deposit money is considered as entries in the ledger of the bank to the credit of the holder. These deposits can only be transferred through checks.Since time immemorial, money has retained some value; therefore has demand.

Demand for Money:

The demand for money is different from demand for a commodity. Demand for money refers to the amount of money to be held by individuals and businesses. On the other hand, demand for a commodity is the demand for the continuous flow of goods and services. Therefore, the difference between the demand for money and demand for commodity is that the former focuses on the holding, while later focuses on the flow. Earlier, the demand for money was defined as the amount of money required for making business transactions.In simple terms, the demand for money was dependent on the number of transactions done in an economy. As a result, there was a rapid rise in the demand for money in the boom period, whereas the demand for money fell at the time of depression. On the other hand, modern view on demand of money given by Keynes, demand for money is the demand for money to hold.

There are three broad motives on the basis of which money is required by people, which are as follows:

(a) Transaction Motive:

Refers to the demand for money to fulfill the present needs of individuals and businesses. Individuals require money to fulfill their current requirements, which is termed as income motive. On the other hand, businesses need money for carrying out their business activities, which is known as business motive.

These two motives of money are discussed as follows:

(i) Income Motive:

Refers to the motive of individuals who demand money for fulfilling the needs of themselves as well as their family. Generally, individuals hold cash for bridging the gap between the receipt of income and its expenditure.The income is received once in a month but the expenditure takes place every day. Therefore, it is required to hold some part of income to make current payments. The holding amount depends on the amount of an individual's income and interval of receiving income.

(ii) Business Motive:

Refers to the requirement of money by businesses in liquid form to meet the current requirements. Businesses require money for procuring raw material and paying transport charges, wages, salaries, and other expenses. The money demanded by businesses depends on their turnover. The higher turnover indicates the requirement of higher amount of money to cover up expenses.

(b) Precautionary Motive:

Refers to the longing of individuals to hold money for various contingencies that may take place in future. These contingencies can include unemployment, sickness, and accidents. The amount of money need to be held for the precautionary motive depends on the nature of a person and his/her living conditions.

(c) Speculative Motive:

Refers to the motive of individuals for holding cash to make out benefit from the movements of market regarding the change in interest rate in future. The precautionary and speculative motive acts as the store of value with different purposes.

Supply of Money:

We have described the demand for money as the demand for the stock (not flow) of money to be held. The flow is over a period of time and not at a given moment. In the case of commodity, it is a flow. Goods are being continually produced and disposed of. This is the essential difference between the demand for money and the demand for a commodity.Similarly, the supply of money conforms to the 'stock' concept and not the 'flow' concept. Just as the demand for money is the demand for money to hold, similarly, the supply of money means the supply of money to hold. Money must always be held by someone, otherwise it cannot exist. Hence, the supply of money means the sum total of all the forms of money which are held by a community at any given moment.The stock of money, which constitutes the supply of it, consists of (a) metallic money or coins, (b) currency notes issued by the currency authority of the country whether the Central bank or the government, and (chequable bank deposits. In old times, the coins formed the bulk of money supply of the country. Later, the currency notes eclipsed the metallic currency and now the bank deposits in current account withdraw-able by cheques have overwhelmed all other forms of money.Thus, money supply means total volume of monetary media of exchange available to the community for use in connection with the economic activity of the country. Broadly speaking, money supply in a country is composed of two main elements, viz., (a) currency with the public; and (b) deposit money with the public.

In order to arrive at the total amount of currency with the public, we add: (i) currency notes in circulation; (ii) circulation of rupee notes and coins; and (iii) circulation of small coins; and from the total deduct- 'Cash in hand with banks' The bulk of the currency with the public (over 95 per cent) is in the form of currency notes issued by the Reserve Bank of India. Next in importance are the rupee notes issued by the Government of India.

Besides currency, money supply with the public includes the deposit money, i.e., the bank balances held in current accounts of the banks. In underdeveloped countries, the currency,

and not the bank deposits, occupies a dominant position, because in such countries the bulk of commercial dealings are done through cash as a medium of exchange and not through cheques as in advanced countries. Deposit money with the public in India consists of two items, viz., net demand deposits of bank and 'other deposits' with the Reserve Bank of India.

By adding total currency with the public and the total demand deposits, we get the total money supply with the public.

It is also worth nothing here that in India the deposit money with the public has now come to exceed, albeit slightly, the total currency money with the public. Compare with it the position in 1950-51, when deposit money with the public was not even one-half of the currency in circulation among the public.

This shows that the banking habit has steadily been growing in the country and the time will not be far off when deposit money will far outstrip the currency money.

The total amount of bank deposits in the country is determined by the monetary policy of the central bank of the country. When the central bank wants to give a boost to the economy of the country, it follows a cheap money policy, lowers the bank rate, which is followed by lower rates of interest charged by the commercial banks, thus helping credit creation by the banks.There are times, however, when in the interest of economic stability, the central bank follows a policy of credit squeeze by raising the bank rate and purchasing securities through open market operations and adopting other credit control measures.

Conclusion:

Thus, the supply of money in a country, by and large, depends on the credit control policies pursued by the banking system of the country.

Value of Money

The value of money, then, is the quantity of goods in general that will be exchanged for one unit of money. The value of money is its purchasing power, i.e., the quantity of goods and services it can purchase. What money can buy depends on the level of prices. When the price level rises, a unit of money can purchase less goods than before. Money is then said to have depreciated. Conversely, a fall in prices signifies that a unit of money can buy more than before.Money is then said to appreciate. The "general level of prices" and the value of money are thus the same thing from two opposite angles. When the prices rise the value of money falls and vice versa. In other words, the value of money and the general price level are inversely proportions' to each other. Violent changes in the value of money (or the price level) disturb economic life and do great harm. We must, therefore, carefully study the factors which' determine the value of money.

Measurement of Changes in the Value of Money:

Changes in prices are not uniform. Some prices rise, others fall; while still others remain stationary. They are like bees dashing out of a hive higgledy-higgledy, some buzzing off this way, some that way, while others keep hovering at the spot. But there may be a trend in a particular direction. A comparison of price changes would give a very confusing picture. We have to discover the extent of the overall changes in the value of money before suggesting a remedy. The seriousness of the disease must be known before a remedy can be suggested.

Index Numbers:

The device of index numbers comes to our aid in measuring changes in the value of money or price level. An index number is a statement in the form of a table which represents a change in the general price level. Index numbers have great importance in these days. When it is desired to find out to what extent prices have risen or fallen, an index number is prepared. In every advanced country, index numbers are being regularly prepared officially by the governments and also non-officially by other bodies interested in economic changes.

Preparation of Index Numbers:

The following steps are necessary for the preparation of index numbers:

(a) Selection of the Base Year:

The first thing necessary is to select a base year. It is the year with which we wish to compare the present prices, in order to see how much the prices have risen or fallen. The base year must be a normal year. It should not be a year of famine, or war, or a year of exceptional prosperity.

(b) Selection of Commodities:

The next step is to select the commodities to be included in the index number. The commodities will depend on the purpose for which the index number is prepared. Suppose we want to know how a particular class of people has been affected by a change in the general price level. In that case, we should include only those commodities which enter into the consumption of that class.

(c) Collection of Prices:

After commodities have been selected, their prices have to be ascertained. Retail prices are the best for the purpose, because it is at the retail prices that a commodity is actually consumed. But retail prices differ almost from shop to shop, and there is no proper record of them. Hence we have to take the wholesale prices of which there is a proper record.

(d) Finding Percentage Change:

The next step is to represent the present prices as the percentages of the base year prices. The base year price is equated to 100, and then the current year's price is represented accordingly. This will be clear from the index number given on the next page.

(e) Averaging.

Finally, we take the average of both the base year and the current year figures in order to find out the overall change. In May 1985, the price index was 355 which means that the price on the average were more than three-and a-half times as much or 255 per cent higher than what they were in 1970-71.

Uses of Index Numbers:

Index numbers can be used for a number of purposes:

(i) Index numbers are used not merely to measure changes in the price level or changes in the value of money. They can be used to measure quantitative change. Thus, we can prepare an index number of wages, imports, exports, industrial production, unemployment, profits, area under cultivation, enrolment in a college, etc.(ii) Such quantitative changes as are measured by index numbers can indicate social and economic trends and help in framing policies with respect to them. For instance, an index number of cost of living can guide us in the adjustment of wages to changing prices.(iii) We can also compare, with the help of index numbers, economic conditions of a class of people at two different periods.(iv) Index numbers can be used as basis for, and equitable discharge of, contracts relating to borrowing and lending. We know when prices rise, creditors lose. It may perhaps be considered more just to ensure that the creditor gets back the same purchasing power. Hence, when prices rise, the debtor may be asked to pay a correspondingly higher sum to discharge a debt.

Limitations:

It may, however, be pointed out that index numbers are not a faultless guide.

They suffer from a number of limitations, some of which are given below:

(i) Approximations: Index numbers are at best only approximations. They cannot be taken as infallible guides. Their data are open to question and they lead to different interpretations.

(ii) International Comparisons Difficult:

Use of index numbers for international comparisons presents several difficulties. The result is that such comparisons are difficult, if not impossible, on account of the different bases, different sets of commodities or differences in their quality, etc.

(iii) Comparisons between Different Times Difficult:

It is not easy to institute comparisons between different periods of time. Over long periods, some popular commodities are replaced by others. Entirely new commodities come to figure in consumption, or a commodity may be vastly different from what' it used to be. Think of a modern railway engine and one of the early ones. Ford cat 1985 is a different commodity from the 1950 Ford.

(iv) Measure Sectional Price Levels Only:

Index numbers measure only changes in the sectional price-levels. An index number, therefore, prepared for a particular purpose, may not be useful for another. An index number that helps us to study the economic conditions of mill-hands or railway coolies will be useless for a study of the conditions of college lecturers.

An entirely different set of commodities will have to be selected. Different people use different things and hold different assets. Therefore, different classes of people are affected differently by a given change in the price-level. Hence, the same index numbers cannot throw light on the effects of a price change on all sections of society.

(v) Weighting Changes Result:

One set of weights may yield quite a different result from another, and weighting is all arbitrary.

Conclusion: We may conclude in the words of Coulborn who observes, "No general price-level is in fact compiled in this way because the practical difficulties of collecting the various prices and assessing weights strictly appropriate to the base year, and approximately relevant to the subsequent ones, prove to be difficulties which are insuperable in practice"

CASH TRANSACTIONDEFINITION :

A cash transaction is a transaction where there is an immediate payment of cash for the purchase of an asset. It differs from other types of transactions that involve delayed delivery of the purchased item, or delayed payment for the item, such as forward contracts, futures contracts, credit transactions and margin transactions.

COMMERCIAL BANK

Meaning of Commercial Banks:

A commercial bank is a financial institution which performs the functions of accepting deposits from the general public and giving loans for investment with the aim of earning profit.In fact, commercial banks, as their name suggests, axe profit-seeking institutions, i.e., they do banking business to earn profit.

FUNCTIONS OF COMMERCIAL BANKS

Functions of commercial banks are classified in to two main categories—

(A) Primary functions and (B) Secondary functions.

(A) Primary Functions:

1. It accepts deposits:

A commercial bank accepts deposits in the form of current, savings and fixed deposits. It collects the surplus balances of the Individuals, firms and finances the temporary needs of commercial transactions. The first task is, therefore, the collection of the savings of the public. The bank does this by accepting deposits from its customers. Deposits are the lifeline of banks.

Deposits are of three types as under:

(i) Current account deposits:

Such deposits are payable on demand and are, therefore, called demand deposits. These can be withdrawn by the depositors any number of times depending upon the balance in the account. The bank does not pay any Interest on these deposits but provides cheque facilities. These accounts are generally maintained by businessmen and Industrialists who receive and make business payments of large amounts through cheques.

(ii) Fixed deposits (Time deposits):

Fixed deposits have a fixed period of maturity and are referred to as time deposits. These are deposits for a fixed term, i.e., period of time ranging from a few days to a few years. These are neither payable on demand nor they enjoy cheque facilities.They can be withdrawn only after the maturity of the specified fixed period. They carry higher rate of interest. They are not treated as a part of money supply Recurring deposit in which a regular deposit of an agreed sum is made is also a variant of fixed deposits.

(iii) Savings account deposits:

These are deposits whose main objective is to save. Savings account is most suitable for individual households. They combine the features of both current account and fixed deposits. They are payable on demand and also withdraw able by cheque. But bank gives this facility with some restrictions, e.g., a bank may allow four or five cheques in a month. Interest paid on savings account deposits in lesser than that of fixed deposit.

It gives loans and advances:

The second major function of a commercial bank is to give loans and advances particularly to businessmen and entrepreneurs and thereby earn interest. This is, in fact, the main source of income of the bank. A bank keeps a certain portion of the deposits with itself as reserve and gives (lends) the balance to the borrowers as loans and advances in the form of cash credit, demand loans, short-run loans, overdraft as explained under.

Cash Credit:

An eligible borrower is first sanctioned a credit limit and within that limit he is allowed to withdraw a certain amount on a given security. The withdrawing power depends upon the borrower's current assets, the stock statement of which is submitted by him to the bank as the basis of security. Interest is charged by the bank on the drawn or utilised portion of credit (loan).

(ii) Demand Loans:

A loan which can be recalled on demand is called demand loan. There is no stated maturity. The entire loan amount is paid in lump sum by crediting it to the loan account of the borrower. Those like security brokers whose credit needs fluctuate generally, take such loans on personal security and financial assets.

(iii) Short-term Loans:

Short-term loans are given against some security as personal loans to finance working capital or as priority sector advances. The entire amount is repaid either in one instalment or in a number of instalments over the period of loan.

(B) Secondary Functions:

Apart from the above-mentioned two primary (major) functions, commercial banks perform the following secondary functions also.

3. Discounting bills of exchange or bundles:

A bill of exchange represents a promise to pay a fixed amount of money at a specific point of time in future. It can also be encashed earlier through discounting process of a commercial bank. Alternatively, a bill of exchange is a document acknowledging an amount of money owed in consideration of goods received. It is a paper asset signed by the debtor and the creditor for a fixed amount payable on a fixed date. It works like this.

Suppose, A buys goods from B, he may not pay B immediately but instead give B a bill of exchange stating the amount of money owed and the time when A will settle the debt. Suppose, B wants the money immediately, he will present the bill of exchange (Hundi) to the bank for discounting. The bank will deduct the commission and pay to B the present value of the bill. When the bill matures after specified period, the bank will get payment from A.

4. Overdraft facility:

An overdraft is an advance given by allowing a customer keeping current account to overdraw his current account up to an agreed limit. It is a facility to a depositor for overdrawing the amount than the balance amount in his account.

In other words, depositors of current account make arrangement with the banks that in case a cheque has been drawn by them which are not covered by the deposit, then the bank should grant overdraft and honour the cheque. The security for overdraft is generally financial assets like shares, debentures, life insurance policies of the account holder, etc.

5. Agency functions of the bank:

The bank acts as an agent of its customers and gets commission for performing agency functions as under:

Transfer of funds: It provides facility for cheap and easy remittance of funds from place-to-place through demand drafts, mail transfers, telegraphic transfers, etc.

(ii) Collection of funds: It collects funds through cheques, bills, bundles and demand drafts on behalf of its customers.

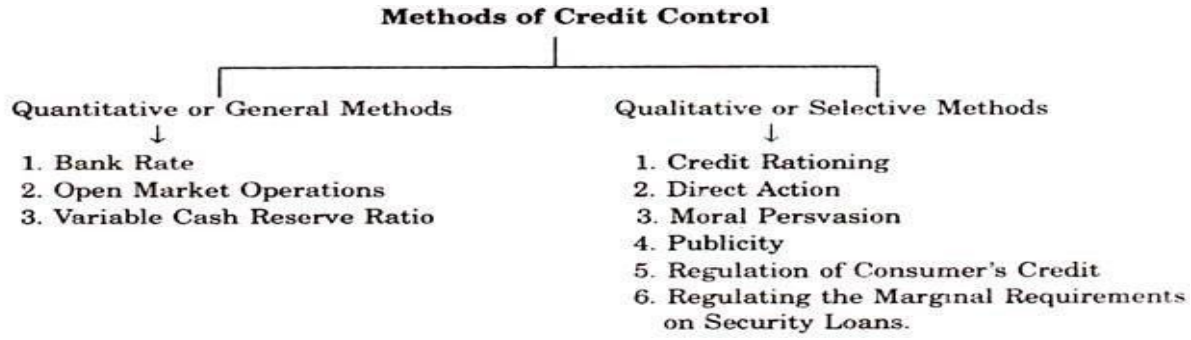
(iii) Payments of various items: It makes payment of taxes. Insurance premium, bills, etc. as per the directions of its customers.

CREDIT CREATION

Credit creation is a situation in which banks make more loans to consumers and businesses, with the result that the amount of money in circulating (being passed from one person to another) increases. In other words it refers to the unique power of the banks to multiply loans and advance and hence deposits.

Methods of credit control

The two categories are: I. Quantitative or General Methods II. Qualitative or Selective Methods.



I. Quantitative Method:

(i) Bank Rate:

The bank rate, also known as the discount rate, is the rate payable by commercial banks on the loans from or rediscounts of the Central Bank. A change in bank rate affects other market rates of interest. An increase in bank rate leads to an increase in other rates of interest and

conversely, a decrease in bank rate results in a fall in other rates of interest. A deliberate manipulation of the bank rate by the Central Bank to influence the flow of credit created by the commercial banks is known as bank rate policy. It does so by affecting the demand for credit the cost of the credit and the availability of the credit.

(ii) Open Market Operations:

Open market operations refer to the sale and purchase of securities by the Central bank to the commercial banks. A sale of securities by the Central Bank, i.e., the purchase of securities by the commercial banks, results in a fall in the total cash reserves of the latter. A fall in the total cash reserves is leads to a cut in the credit creation power of the commercial banks. With reduced cash reserves at their command the commercial banks can only create lower volume of credit. Thus, a sale of securities by the Central Bank serves as an anti-inflationary measure of control. Likewise, a purchase of securities by the Central Bank results in more cash flowing to the commercials banks. With increased cash in their hands, the commercial banks can create more credit, and make more finance available. Thus, purchase of securities may work as an anti-deflationary measure of control.

(iii) Variable Reserve Ratios:

Variable reserve ratios refer to that proportion of bank deposits that the commercial banks are required to keep in the form of cash to ensure liquidity for the credit created by them. A rise in the cash reserve ratio results in a fall in the value of the deposit multiplier. Conversely, a fall in the cash reserve ratio leads to a rise in the value of the deposit multiplier. A fall in the value of deposit multiplier amounts to a contraction in the availability of credit, and, thus, it may serve as an anti-inflationary measure. The Reserve Bank employs two types of reserve ratio for this purpose, viz. the Statutory Liquidity Ratio (SLR) and the Cash Reserve Ratio (CRR). The statutory liquidity ratio refers to that proportion of aggregate deposits which the commercial banks are required to keep with themselves in a liquid form. The commercial banks generally make use of this money to purchase the government securities. Thus, the statutory liquidity ratio, on the one hand is used to siphon off the excess liquidity of the banking system, and on the other it is used to mobilise revenue for the government. The Reserve Bank of India is empowered to raise this ratio up to 40 per cent of aggregate deposits of commercial banks. Presently, this ratio stands at 25 per cent. The cash reserve ratio refers to that proportion of the aggregate deposits which the commercial banks are required to keep with the Reserve Bank of India. Presently, this ratio stands at 9 percent.

II. Qualitative Method:

The qualitative or selective methods of credit control are adopted by the Central Bank in its pursuit of economic stabilisation and as part of credit management.

(i) Margin Requirements:

Changes in margin requirements are designed to influence the flow of credit against specific commodities. The commercial banks generally advance loans to their customers against some security or securities offered by the borrower and acceptable to banks.

More generally, the commercial banks do not lend up to the full amount of the security but lend an amount less than its value. The margin requirements against specific securities are determined by the Central Bank. A change in margin requirements will influence the flow of credit. A rise in the margin requirement results in a contraction in the borrowing value of the security and similarly, a fall in the margin requirement results in expansion in the borrowing value of the security.

***(ii)* Credit Rationing:**

Rationing of credit is a method by which the Central Bank seeks to limit the maximum amount of loans and advances and, also in certain cases, fix ceiling for specific categories of loans and advances.

***(iii)* Regulation of Consumer Credit:**

Regulation of consumer credit is designed to check the flow of credit for consumer durable goods. This can be done by regulating the total volume of credit that may be extended for purchasing specific durable goods and regulating the number of installments through which such loan can be spread. Central Bank uses this method to restrict or liberalise loan conditions accordingly to stabilise the economy.

***(iv)* Moral Suasion:**

Moral suasion and credit monitoring arrangement are other methods of credit control. The policy of moral suasion will succeed only if the Central Bank is strong enough to influence the commercial banks. In India, from 1949 onwards, the Reserve Bank has been successful in using the method of moral suasion to bring the commercial banks to fall in line with its policies regarding credit. Publicity is another method, whereby the Reserve Bank marks direct appeal to the public and publishes data which will have sobering effect on other banks and the commercial circles.

CENTRAL BANK

According to Samuelson, “Every Central Bank has one function. It operates to control economy, supply of money and credit.” According to Bank of International Settlement, “A

Central Bank is the bank in any country to which has been entrusted the duty of regulating the volume of currency and credit in that country."

FUNCTIONS OF CENTRAL BANK

a.Traditional function

b.Developental function

The different functions of a central bank (as discussed in Figure-4) are explained as follows:

(a) Traditional Functions:

The traditional functions of the central bank include the following:

(i) Bank of issue:

Possesses an exclusive right to issue notes (currency) in every country of the world. In the initial years of banking, every bank enjoyed the right of issuing notes. However, this led to a number of problems, such as notes were over-issued and the currency system became disorganized. Therefore, the governments of different countries authorized central banks to issue notes. The issue of notes by one bank has led to uniformity in note circulation and balance in money supply.

(ii) Government's banker, agent, and advisor:

Implies that a central bank performs different functions for the government. As a banker, the central bank performs banking functions for the government as commercial banks performs for the public by accepting the government deposits and granting loans to the government. As an agent, the central bank manages the public debt, undertakes the payment of interest on this debt, and provides all other services related to the debt.As an advisor, the central bank gives advice to the government regarding economic policy matters, money market, capital market, and government loans. Apart from this, the central bank formulates and implements fiscal and monetary policies to regulate the supply of money in the market and control inflation.

(iii) Custodian of cash reserves of commercial banks:

Implies that the central bank takes care of the cash reserves of commercial banks. Commercial banks are required to keep certain amount of public deposits as cash reserve, with the central bank, and other part is kept with commercial banks themselves.The percentage of cash reserves is deeded by the central bank! A certain part of these reserves is kept with the central bank for the purpose of granting loans to commercial banks Therefore, the central bank is also called banker's bank.

(iv) Custodian of international currency:

Implies that the central bank maintains a minimum reserve of international currency. The main aim of this reserve is to meet emergency requirements of foreign exchange and overcome adverse requirements of deficit in balance of payments.

(v) Bank of rediscount:

Serve the cash requirements of individuals and businesses by rediscounting the bills of exchange through commercial banks. This is an indirect way of lending money to commercial banks by the central bank. Discounting a bill of exchange implies acquiring the bill by purchasing it for the sum less than its face value. Rediscounting implies discounting a bill of exchange that was previously discounted. When owners of bill of exchange are in need of cash they approach the commercial bank to discount these bills. If commercial banks are themselves in need of cash they approach the central bank to rediscount the bills.

(vi) Lender of last resort:

Refer to the most crucial function of the central bank. The central bank also lends money to commercial banks. Instead of rediscounting of bills, the central bank provides loans against treasury bills, government securities, and bills of exchange.

(vii) Bank of central clearance, settlement, and transfer:

Implies that the central bank helps in settling mutual indebtness between commercial banks. Depositors of banks give checks and demand drafts drawn on other banks. In such a case, it is not possible for banks to approach each other for clearance, settlement, or transfer of deposits.The central bank makes this process easy by setting a clearing house under it. The clearing house acts as an institution where mutual indebtness between banks is settled. The representatives of different banks meet in the clearing house to settle inter-bank payments. This helps the central bank to know the liquidity state of the commercial banks.

(viii) Controller of Credit:

Implies that the central bank has power to regulate the credit creation by commercial banks. The credit creation depends upon the amount of deposits, cash reserves, and rate of interest given by commercial banks. All these are directly or indirectly controlled by the central bank. For instance, the central bank can influence the deposits of commercial banks by performing open market operations and making changes in CRR to control various economic conditions.

(b) Developmental Functions:

Refer to the functions that are related to the promotion of banking system and economic development of the country. These are not compulsory functions of the central bank.

These are discussed as follows:

(i) Developing specialized financial institutions:

Refer to the primary functions of the central bank for the economic development of a country. The central bank establishes institutions that serve credit requirements of the agriculture sector and other rural businesses.Some of these financial institutions include Industrial Development Bank of India (IDBI) and National Bank for Agriculture and Rural Development (NABARD). These are called specialized institutions as they serve the specific sectors of the economy.

(ii) Influencing money market and capital market:

Implies that central bank helps in controlling the financial markets Money market deals in short term credit and capital market deals in long term credit. The central bank maintains the country's economic growth by controlling the activities of these markets.

(iii) Collecting statistical data:

Gathers and analyses data related to banking, currency, and foreign exchange position of a country. The data is quite helpful for researchers, policymakers, and economists. For instance, the Reserve Bank of India publishes a magazine called Reserve Bank of India Bulletin, whose data is useful for formulating different policies and making macro-level decisions.

Questions for practice

Part A

1. Define money
2. State the meaning of credit creation
3. Write short on index number
4. What is mean by credit rationing
5. List down the three motives of money

Part B

1. Elaborate the procedure for preparation of index numbers
2. Summarize the functions of commercial bank
3. Explain the functions of central bank
4. Discuss the methods of credit creation
5. Outline the functions of money

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Public Finance – Meaning- Branches- Principle of Maximum Social Advantage- Sources of Public Revenue- Direct and Indirect Taxes Impact and Incidence Effects of Taxation on Production- Consumption and Distribution - Public Expenditure – Causes of Growth of Public Borrowing – Methods of Debt Redemption- Budget – Types.

GOVERNMENT BUDGET AND THE ECONOMY

MEANING

In public finance we study the finances of the Government. Thus, public finance deals with the question how the Government raises its resources to meet its ever-rising expenditure. As Dalton puts it," public finance is "concerned with the income and expenditure of public authorities and with the adjustment of one to the other."

Accordingly, effects of taxation, Government expenditure, public borrowing and deficit financing on the economy constitutes the subject matter of public finance. Thus, Prof. Otto Eckstein writes "Public Finance is the study of the effects of budgets on the economy, particularly the effect on the achievement of the major economic objects—growth, stability, equity and efficiency."

BRANCHES OF PUBLIC FINANCE

PUBLIC FINANCE is broadly divided into four branches. These are Public Expenditure, Public Revenue, Public Debt and Financial Administration.

Under Public Expenditure, we study the various principles, effects and problems of expenditure made by the public authorities.

Under the branch of Public Revenue, we study the various ways of raising revenues by the public bodies. We also study the principles and effects of taxation and how the burden of taxation is distributed among the various classes in the society.

Public Debt is the study of the various principles and methods of raising debts and their economic effects. It also deals with the methods of repayment and management of public debt. The branch of Financial Administration deals with the methods of budget preparation, various types of budgets, war finance, development finance, etc

Public revenue:

Public revenue concentrates on the methods of raising public revenue, the principles of taxation and its problems. In other words, all kinds of income from taxes and receipts from the public deposit are included in public revenue. It also includes the methods of raising funds. It further studies the classification of various resources of public revenue into taxes, fees, and assessment etc.

Public Expenditure:

In this part of Government finance, we study the principles and problems relating to the expenditure of public funds. This part studies the fundamental principles that govern the flow of Government funds into various streams.

Public Debt:

In this section of public-finance, we study the problem of raising loans. The public or any Government can raise income through loans to meet the shortfall in its traditional income. The loan raised by the government in a particular year is the part of receipts of the

Financial Administration:

Now comes the problem of organization and administration of the financial mechanism of the Government. In other words, under financial or fiscal administration, we are concerned with the Government machinery which is responsible for performing various functions of the state.

The fiscal or budgetary operations of the state have manifold effects on the economy. The revenue collected by the state through taxation and the dispersal of public expenditures can have significant influence on the consumption, production and distribution of the national income of the country.

The fiscal operations of the government resolve themselves into a series of transfers of purchasing power from one section of the community to another, along with the variations in the total incomes available in the community. In fact, the fiscal activities of the state affect the allocation of resources, the use of resources from one channel to another, hence, the level of income, output and employment.

Hence, it is desirable that some standard or criterion should be laid down to judge the appropriateness of a particular operation of public finance — the government's revenue and expenditures. In a modern welfare state, such a criterion can obviously be nothing else but the economic welfare of the people. It follows, thus, that the particular financial activity of the state which leads to an increase in economic welfare is considered as desirable. It may be considered as undesirable if such an activity does not cause an increase in the welfare or even sometimes, it may be the cause of a reduction in the general economic welfare.

The guiding principle of state policy has been technically desirable as the Principle of Maximum Social Advantage by Hugh Dalton. According to Dalton, the principle of maximum social advantage is the most fundamental principle lying at the root of public finance. Hence, the best system of public finance is that which secures the maximum social advantage from its fiscal operations. Maximum social advantage is the maxim for the states. The optimum financial activities of a state should, therefore, be determined by the principle of maximum social advantage.

Diagrammatic Representation:

In technical jargon, the maximum social net advantage is achieved when the marginal social sacrifice (disutility) of taxation and the marginal social benefit (utility) of public expenditure are equated. Thus, the point of equality between the marginal social benefit and the marginal social sacrifice is referred to as the point of aggregate maximum social advantage or least aggregate social sacrifice.

The equilibrium point of maximum social advantage may as well be illustrated by means of a diagram, as in Fig. 1.

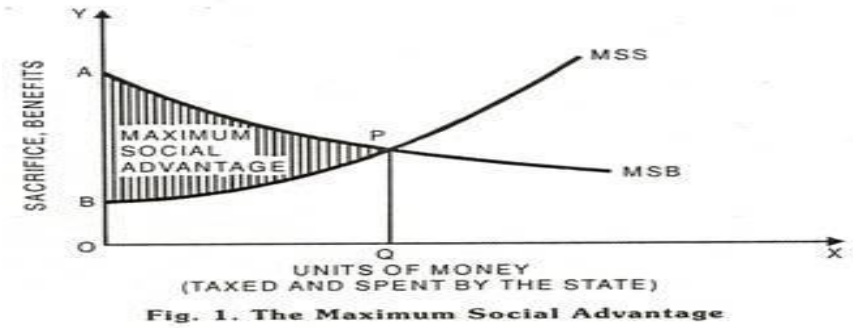

Fig. 1. The Maximum Social Advantage

In Fig. 1, MSS is the marginal social sacrifice curve. It is an upward sloping curve implying that the social sacrifice per unit of taxation goes on increasing with every additional unit of money raised. MSB is the marginal social benefit curve. It is a downward sloping curve implying that the social benefits per unit diminishes as the public expenditure increases.

The curves MSS and MSB intersect at point P. This equality (P) of MSS and MSB curves is regarded as the optimum limit of the state's financial activity. It is easy to see that so long as the MSB curve lies above the MSS curve, each additional unit of revenue raised and spent by the state leads to an increase in the net social advantage.

This beneficial process would then be continued till marginal social sacrifice (MSS) becomes just equal to the marginal social benefit (MSB). Beyond this point, a further increase in the

state's financial activity means the marginal social sacrifice exceeding the marginal social benefit, hence the net social loss.

Thus, only under the condition of MSS = MSB, the maximum social advantage is achieved. Diagrammatically, the shaded area APB (the area between MSS and MSB curves, till both intersect each other) represents the quantum of maximum social advantage. OQ is the optimum amount of financial activities of the state.

Sources of Public Revenue

Meaning of Public Revenue:

The income of the government through all sources is called public income or public revenue.

The following points highlight the nine main sources of government revenue. The sources are: 1. Tax 2. Rates 3. Fees 4. Licence Fee 5. Surplus of the public sector units 6. Fine and penalties 7. Gifts and grants 8. Printing of paper money 9. Borrowings.

Tax:

A tax is a compulsory levy imposed by a public authority against which tax payers cannot claim anything. It is not imposed as a penalty for only legal offence. The essence of a tax, as distinguished from other charges by the government, is the absence of a direct quid pro quo (i.e., excange of favour) between the tax payer and the public authority.

Rates:

Rates refer to local taxation, i.e., taxation levied by (or for) local rather than central government. Normally rates are proportional to the estimated rentable value of business and domestic properties. Rates are often criticised as being unrelated to income.

Fees:

Fee is a payment to defray the cost of each recurring service undertaken by the government, primarily in the public interest.

4. Licence fee:

A licence fee is paid in those instances in which the government authority is invoked simply to confer a permission or a privilege.

. Surplus of the public sector units:

The government acts like a business- person and the public acts like its customers. The government may either sell goods or render services like train, city bus, electricity, transport, posts and telegraphs, water supply, etc. The government also earns revenue from the production of commodities like steel, oil, life-saving drugs, etc.

Fine and penalties:

They are the charges imposed on persons as a punishment for contravention of a law. The main purpose of these is not to raise revenue from the public but to force them to follow law and order of the country.

Gifts and grants:

Gifts are voluntary contribution from private individuals or non-government donors to the government fund for specific purposes such as relief fund, defence fund during war or an emergency. However, this source provides a small portion of government revenue.

Printing of paper money:

It is another source of revenue of the government. It is a method of creating extra resources. This method is normally avoided because if once this method of financing is started, it becomes difficult to stop it.

Borrowings:

Borrowings from the public is another source of government revenue. It includes loans from the public in the form of deposits, bonds, etc. and also from the foreign agencies and organisations.

Economic Effects of Taxation

Effects of Taxes:

The most important objective of taxation is to raise required revenues to meet expenditures. Apart from raising revenue, taxes are considered as instruments of control and regulation with the aim of influencing the pattern of consumption, production and distribution. Taxes thus affect an economy in various ways, although the effects of taxes may not necessarily be good. There are same bad effects of taxes too.

Effects of Taxation on Production:

Taxation can influence production and growth. Such effects on production are analysed under three heads:

(i) effects on the ability to work, save and invest

(ii) effects on the will to work, save and invest

(iii) effects on the allocation of resources.

Effects on the Ability to Work Save:

Imposition of taxes results in the reduction of disposable income of the taxpayers. This will reduce their expenditure on necessaries which are required to be consumed for the sake of

improving efficiency. As efficiency suffers ability to work declines. This ultimately adversely affects savings and investment. However, this happens in the case of poor persons.

Taxation on rich persons has the least effect on the efficiency and ability to work. Not all taxes, however, have adverse effects on the ability to work. There are some harmful goods, such as cigarettes, whose consumption has to be reduced to increase ability to work. That is why high rate of taxes are often imposed on such harmful goods to curb their consumption.

But all taxes adversely affect ability to save. Since rich people save more than the poor, progressive rate of taxation reduces savings potentiality. This means low level of investment. Lower rate of investment has a dampening effect on economic growth of a country.

Thus, on the whole, taxes have the disincentive effect on the ability to work, save and invest.

Effects on the will to Work, Save and Invest:

The effects of taxation on the willingness to work, save and invest are partly the result of money burden of tax and partly the result of psychological burden of tax. Taxes which are temporarily imposed to meet any emergency (e.g., Kargil Tax imposed for a year or so) or taxes imposed on windfall gain (e.g., lottery income) do not produce adverse effects on the desire to work, save and invest.

But if taxes are expected to continue in future, it will reduce the willingness to work and save of the taxpayers. Taxpayers have a feeling that every tax is a burden. This psychological state of mind of the taxpayers has a disincentive effect on the willingness to work.

They feel that it is not worth taking extra responsibility or putting in more hours because so much of their extra income would be taken away by the government in the form of taxes. However, if taxpayers are desirous of maintaining their existing standard of living in the midst of payment of large taxes, they might put in extra efforts to make up for the income lost in tax. It is suggested that effects of taxes upon the willingness to work, save and invest depends on the income elasticity of demand. Income elasticity of demand varies from individual to individual.

If the income demand of an individual taxpayer is inelastic, a cut in income consequent upon the imposition of taxes will induce him to work more and to save more so that the lost income is at least partially recovered. On the other hand, the desire to work and save of those people whose demand for income is elastic will be affected adversely. Thus, we have conflicting views on the incentives to work. It would seem logical that there must be a disincentive effect of taxes at some point but it is not clear at what level of taxation that crucial point would be reached.

Effects on the Allocation of Resources:

By diverting resources to the desired directions, taxation can influence the volume or the size of production as well as the pattern of production in the economy. It may, in the ultimate analysis, produce some beneficial effects on production. High taxation on harmful drugs and commodities will reduce their consumption. This will discourage production of these commodities and the scarce resources will now be diverted from their production to the other products which are useful for economic growth. Similarly, tax concessions on some products are given in a locality which is considered as backward. Thus, taxation may promote regional balanced development by allocating resources in the backward regions.

Effects of taxation on consumption

A tax increases the price of the taxed good relative to the prices of untaxed or lower taxed goods. The increase in the relative price affects the taxpayer in two ways.

Taxation influences the consumption as well. Such influence can be studied on the following grounds:

1. Taxation influence the Allocation of Resource of Individuals

Every individual has limited money income and allocate it to different uses. Taxation affects their allocation directly or indirectly.For example, the income tax reduces the money income of a consumer and forces him to buy a smaller volume of goods and it reduces the standard of living of the consumers.

Likewise, a levy of indirect taxes on the goods of common consumption will affect the allocation of individual resources. Thus, taxes influence the allocation of resources of individuals.

2. Effects of Taxation on Consumption and Employment

Taxation reduces the purchasing power of the people and it reduces their consumption. The decline in consumption leads to decrease in effective demand for the goods and services, which in turn affects the production of these commodities. Ultimately, the reduction in consumption leads to a reduction in employment opportunities.

For example, due to rise in price, instead of getting two different commodities, the individual may buy more quantity of any one commodity to maximize the utility and his satisfaction.

3. Effects of Taxation on Consumption during Inflation and Depression

Taxation has different effects in times of inflation and depression. During the time of inflation, the purchasing power of the people is reduced by a raise in the rates of existing taxes or imposition of new taxes. This would control the consumption and therefore, help in bringing up stability in prices.

During the period of depression, taxation may be reduced. As the result of the reduction on direct tax rates, the people will have more disposable income and higher purchasing power and a decrease in indirect taxes leads to the reduction of selling prices. Both of them encourage the total consumption of the people and thereby the economic activities are induced in the country.

4. Regulatory Effect of Taxation on Consumption

Taxation may be used to regulate the production and consumption. Consumption can be regulated by taxing the production and use of certain commodities.

For example, the object of some taxes may be to reduce the consumption of certain harmful commodities such as liquors, cigars etc.

Effects of Taxation on Distribution

An important objective of taxation in most of the welfare states is to reduce the inequalities of income and wealth and to bring about an equal society. The effects of taxation on the distribution of income and wealth among the different sections of the society, depends upon two important factors. They are as below: Nature of Taxation, and Kinds of Taxes.The nature of taxation influences the distribution of tax among the different sections of the society. It includes proportional regressive and progressive nature of taxation.

a. Effects of Regressive Taxation on Distribution

Under regressive taxation, the burden of taxation falls more heavily upon the poor than on the rich. Regressive taxation may increase the inequalities on the distribution of income and wealth. Hence, the burden of taxation is higher on the poor than on the rich. In effect, this system widens the gap between the rich and the poor.

b. Effects of Proportional Taxation on Distribution

Under the proportional taxation, taxes are levied uniformly upon the rich and the poor. When the tax rate remains the same, it creates inequalities between them. However, if there is any increase in the income of these sections, the inequalities in distribution of income will also increase. The burden of taxation falls more heavily upon the poor than on the rich.

c. Effects of Progressive Taxation on Distribution

Under the system of progressive taxation, the tax rates go up with the increase in the income. Thus, in this system, the inequalities in the income and wealth will be reduced.The major portion of the income and the wealth of the rich is taken away by way of higher tax rates. Hence, the progressive tax system tends to reduce the inequalities in the distribution of income and wealth.

Public Expenditure: Causes and Growth of public borrowing

Meaning of Public Expenditure:

Expenses incurred by the public authorities—central, state and local self- governments—are called public expenditure. Such expenditures are made for the maintenance of the governments as well as for the benefit of the society as whole.

Causes of Increase in Public Expenditure:

(a) Size of the Country and Population:

We see an expansion of geographical area of almost all countries. Even in no-man's land one finds the activities of the modern government. Assuming a fixed size of a country, developing world has seen an enormous increase in population growth. Consequently, the expansion in administrative activities of the government (like defence, police, and judiciary) has resulted in a growth of public expenditures in these areas.

(b) Defence Expenditure:

The tremendous growth of public expenditure can be attributed to threats of war. No great war has been conducted in the second half of the twentieth century. But the threats of war have not vanished; rather it looms large. Thus, mere sovereignty, demands a larger allocation of financial sources for defence preparedness.

(c) Welfare State:

The 19th century state was a **'police state'** while, in 20th and 21st centuries modern state is a **'welfare state'**. Even in a capitalist framework, socialistic principles are not altogether discarded. Since socialistic principles are respected here, modern governments have come out openly for socio-economic uplift of the masses.

(d) Economic Development:

Modern government has a great role to play in shaping an economy. Private capitalists are utterly incapable of financing economic development of a country. This incapacity of the private sector has prompted modern governments to invest in various sectors so that economic development occurs. Economic development is largely conditioned by the availability of economic infrastructure. Only by building up economic infrastructure, road, transport, electricity, etc., the structure of an economy can be made to improve. Obviously, for financing these activities, government spends money.

(e) Price Rise:

Increase in government expenditure is often ascribed to inflationary price rise.

Public Debt:

Meaning of Public Debt:

Modern governments need to borrow from different sources when current revenue falls short of public expenditures. Thus, public debt refers to loans incurred by the government to finance its activities when other sources of public income fail to meet the requirements. In this wider sense, the proceeds of such public borrowing constitute public income.

Classification of Public Debt:

The structure of public debt is not uniform in any country on account of factors such as categories of markets in which loans are floated, the conditions for repayment, the rate of interest offered on bonds, purposes of borrowing, etc.

In view of these differences in criteria, public debt is classified into various categories:

i. Internal and external debt

ii. Short term and long term loans

iii. Funded and unfunded debt

iv. Voluntary and compulsory loans

v. Redeemable and irredeemable debt

vi. Productive or reproductive and unproductive debt/deadweight debt

i. Internal and External Debt:

Sums owed to the citizens and institutions are called internal debt and sums owed to foreigners comprise the external debt. Internal debt refers to the government loans floated in the capital markets within the country. Such debt is subscribed by individuals and institutions of the country.

On the other hand, if a public loan is floated in the foreign capital markets, i.e., outside the country, by the government from foreign nationals, foreign governments, international financial institutions, it is called external debt.

ii. Short term and Long Term Loans:

Loans are classified according to the duration of loans taken. Most government debt is held in short term interest-bearing securities, such as Treasury Bills or Ways and Means Advances (WMA). Maturity period of Treasury bill is usually 90 days.

Government borrows money for such period from the central bank of the country to cover temporary deficits in the budget. Only for long term loans, government comes to the public. For development purposes, long period loans are raised by the government usually for a period exceeding five years or more.

iii. Funded and Unfunded or Floating Debt:

Funded debt is the loan repayable after a long period of time, usually more than a year. Thus, funded debt is long term debt. Further, since for the repayment of such debt government maintains a separate fund, the debt is called funded debt. Floating or unfunded loans are those which are repayable within a short period, usually less than a year.

It is unfunded because no separate fund is maintained by the government for the debt repayment. Since repayment of unfunded debt is made out of public revenue, it is referred to as a floating debt. Thus, unfunded debt is a short term debt.

iv. Voluntary and Compulsory Loans:

A democratic government raises loans for the nationals on a voluntary basis. Thus, loans given to the government by the people on their own will and ability are called voluntary loans. Normally, public debt, by nature, is voluntary. But during emergencies (e.g., war, natural calamities, etc.,) government may force the nationals to lend it. Such loans are called forced or compulsory loans.

V.Redeemable and Irredeemable Debt: Redeemable public debt refers to that debt which the government promises to pay off at some future date. After the maturity period, the government pays the amount to the lenders. Thus, redeemable loans are called terminable loans. In the case of irredeemable debt, government does not make any promise about the payment of the principal amount, although interest is paid regularly to the lenders. For the most obvious reasons, redeemable public debt is preferred. If irredeemable loans are taken by the government, the society will have to face the consequence of burden of perpetual debt.

vi. Productive (or Reproductive) and Unproductive (or Deadweight) Debt: On the criteria of purposes of loans, public debt may be classified as productive or reproductive and unproductive or deadweight debt. Public debt is productive when it is used in income-earning enterprises. Or productive debt refers to that loan which is raised by the government for increasing the productive power of the economy.

METHODS OF DEBT REDEMPTION

Refunding: Refunding of debt implies issue of new bonds and securities for raising new loans in order to pay off the matured loans (i.e., old debts). When the government uses this method of refunding, there is no liquidation of the money burden of public debt. Instead, the debt servicing (i.e., repayment of the interest along with the principal) burden gets accumulated on account of postponement of the debt- repayment to save future debt.

ii. Conversion: By debt conversion we mean reduction of interest burden by converting old but high interest-bearing loans into new but low interest-bearing loans. This method tends to reduce the burden of interest on the taxpayers. As the government is enabled to reduce the

burden of debt which falls, it is not required to raise huge revenue through taxes to service the debt. Instead, the government can cut down the tax liability and provide relief to the taxpayers in the event of a reduction in the rate of interest payable on public debt. It is assumed that since most taxpayers are poor people while lenders are rich people, such conversion of public debt results in a less unequal distribution of income.

iii. Sinking Fund: One of the best methods of redemption of public debt is sinking fund. It is the fund into which certain portion of revenue is put every year in such a way that it would be sufficient to pay off the debt from the fund at the time of maturity. In general, there are, in fact, two ways of crediting a portion of revenue to this fund. The usual procedure is to deposit a certain (fixed) percentage of its annual income to the fund. Another procedure is to raise a new loan and credit the proceeds to the sinking fund. However, there are some reservations against the second method. Dalton has opined that it is in the Tightness of things to accumulate sinking fund out of the current revenue of the government, not out of new loans. Although convenient, it is one of the slowest methods of redemption of debt. That is why capital levy as a form of debt repudiation is often recommended by economists.

iv. Capital Levy: In times of war or emergencies, most governments follow the practice of raising money necessary for the redemption of the public debt by imposing a special tax on capital. A capital levy is just like a wealth tax in as much as it is imposed on capital assets. This method has certain decisive advantages. Firstly, it enables a government to repay its (emergency) debt by collecting additional tax revenues from the rich people (i.e., people who have huge properties). This then reduces consumption spending of these people and the severity of inflation is weakened. Secondly, progressive levy on capital helps to reduce inequalities in income and wealth. But it has certain clear-cut disadvantages too. Firstly, it hampers capital formation. Secondly, during normal time this method is not suggested.

v. Terminal Annuity: It is something similar to sinking fund. Under this method, the government pays off its debt on the basis of terminal annuity. By using this method, the government pays off the debt in equal annual instalments. This method enables government to reduce the burden of debt annually and at the time of maturity it is fully paid off. It is the method of redeeming debts in instalments since the government is not required to make one huge lump sum payment.

vi. Budget Surplus: By making a surplus budget, the government can pay off its debt to the people. As a general rule, the government makes use of the budgetary surplus to buy back from the market its own bonds and securities. This method is of little use since modern governments resort to deficit budget. A surplus budget is usually not made.

vii. Additional Taxation: Sometimes, the government imposes additional taxes on people to pay interest on public debt. By levying new taxes—both direct and indirect— the government can collect the necessary revenue so as to be able to pay off its old debt. Although an easier means of repudiation, this method has certain advantages since taxes have large distortionary effects.

viii. Compulsory Reduction in the Rate of Interest: The government may pass an ordinance to reduce the rate of interest payable on its debt. This happens when the government suffers from financial crisis and when there is a huge deficit in its budget. There are so many instances of such statutory reductions in the rate of interest. However, such practice is not followed under normal situations. Instead, the government is forced to adopt this method of debt repayment when situation so demands.

BUDGET

Meaning

A **budget** is a financial plan for a defined period, often one year. It may also include planned sales volumes and revenues, resource quantities, costs and expenses, assets, liabilities and cash flows. Companies, governments, families and other organizations use it to express strategic plans of activities or events in measurable terms.

A budget is the sum of money allocated for a particular purpose and the summary of intended expenditures along with proposals for how to meet them. It may include a budget surplus, providing money for use at a future time, or a deficit in which expenses exceed income.

Objectives of a Government Budget:

Economic growth: To promote rapid and balanced economic growth so as to improve living standard of the people Economic growth implies a sustained increase in real GDP of the economy, i.e., a sustained increase in volume of goods and services. Public welfare is the main guide.

Reduction of poverty and unemployment: To eradicate mass poverty and unemployment by creating employment opportunities and providing maximum social benefits to the poor .In fact, social welfare is the single most important objective. Every Indian should be able to meet his basic needs like food, clothing, housing (roti, kapda, makaan) along with decent health care and educational facilities.

Reduction of inequalities/Redistribution of income: To reduce inequalities of income and wealth, government can influence distribution of income through levying taxes and granting subsidies. Government levies high rate of tax on rich people reducing their disposable income and lowers the rate on lower income group.Again, government provides subsidies and

amenities to people whose income level is low. Again public expenditure can be useful in reducing inequalities. More emphasis is laid on equitable distribution of wealth and income. Economic progress in itself is not a sufficient goal but the goal must be equitable progress.

Redistribution of income: Equalities in income distribution mean allocating the income distribution in such a way that reduces income inequalities and also there is no concentration of income among few rich. It primarily requires that rate of increase in real Income of poor sections of society should be faster than that of rich sections of society. Fiscal instruments like taxation, subsidies and public expenditure can be made use of to achieve the object.

Types of Budget:

Recall, a budget is defined as an annual statement of the estimated receipts and expenditure of the government over the fiscal year. Budgets are of three types: balanced, surplus and deficit budgets—depending upon whether the estimated receipts are equal to, less than or more than estimated receipts, respectively its three types are explained hereunder.

(I) Balanced Budget: A government budget is said to be a balanced budget in which government estimated receipts (revenue and capital) are equal to government estimated expenditure. Let us suppose for the sake of convenience that the only source of revenue is a lump sum tax. A balanced budget will then imply that the amount of tax is equal to the amount of expenditure.

II. Unbalanced Budget

(a) Surplus Budget: When government receipts are more than government expenditure in the budget, the budget is called a surplus budget. In other words, a surplus budget implies a situation where in government revenue is in excess of government expenditure.

Symbolically:

Surplus Budget =Estimated Govt. Receipts > Estimated Govt. Expenditure

A surplus budget shows that government is taking away more money than what it is pumping in the economic system. As a result, aggregate demand tends to fall which helps in reducing the price level. Therefore, in times of severe inflation, which arises due to excess demand, a surplus budget is the appropriate budget. But in situation of deflation and recession, surplus budget should be avoided. Mind, balanced budget and surplus budget are rarely used by the government in modern-day world.

(b) Deficit Budget: When government estimated expenditure exceeds government receipts in the budget, the budget is said to be a deficit budget. In other words, in a deficit budget, government estimated revenue is less than estimated expenditure.

Symbolically:

Deficit Budget = Estimated Govt. Expenditure > Estimated Govt. Receipts.These days' popular democratic governments adopt mostly deficit budget to meet the growing needs of the people. It may be mentioned that Keynes had advocated a deficit budget to remedy the situation of unemplo3mient and under-employment.

III. Functional Budgets:

A functional budget is a budget which relates to the individual functions of the organisation like sales, production, purchase, capital expenditure etc. For each function there is usually a separate budget which is controlled by the functional manager.

1. Sales Budget: This budget is a forecast of quantities and values of sales to be achieved in a budget period. Generally, sales budget is the starting point for the preparation of the functional budgets. This budget can be prepared on the basis of products, sales areas or territories, salesmen or agent wise, types of customers etc.

2. Selling and Distribution Cost Budget: This budget is a forecast of the expenses connected with the selling and distributing the product of a concern during the budget period. This budget is closely connected with the sales budget. While preparing this budget, a classification is made according to the variability of cost. This budget is prepared by the sales managers.

3. Production Budget: After preparing the sales budget, the production budget is prepared. This budget is prepared in physical units. It shows the number of units of each product that must be produced to satisfy the sales forecasts and to achieve the desired level of inventory.

4. Production Cost Budget: Production cost budget shows in detail the estimated cost of carrying out the production plan and programmes set out in the production budget. This budget summarizes material cost, labour cost and factory overhead for production. Factory overheads are usually further subdivided into fixed, variable and semi-variable. Cost are analysed by departments and/or products.

5. Material Budget:A Material Budget shows the estimated quantity as well as the cost of each type of direct material and component required for producing goods as per production budget. There are two stages of preparing material budget. At the first stage, the quantifies of different types of direct material are estimated.

Afterwards the price of each kind of direct material and component is used to obtain the cost of different types of materials and components consumed. It is necessary to know unit material utilisation rate for preparing material budget. The unit material utilisation rate is multiplied by the number of units to be produced in order to determine the total units of material required for estimated production.

Question for practice

Part A

1. What is mean by public finance
2. List down the sources of public revenue
3. State the meaning of public debt
4. Recall the material budget
5. What do you mean by tax?

Part B

1. Elaborate the methods of debt redemption
2. Summarise the types of budget
3. Discuss the causes of increase in public expenditure
4. Explain about methods of debt redemption
5. Outline the economic effects of taxation

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Meaning- Approaches – Demand Pull and Cost Push- Effects of Inflation on Production-Consumption and Distribution- Inflationary Gap- Methods to Control Inflation – Fiscal, Monetary and Administrative Measures- Trade Cycles – Phases.

INFLATION

Introduction

Inflation is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over a period of time. It is the constant rise in the general level of prices where a unit of currency buys less than it did in prior periods. Often expressed as a percentage, inflation indicates a decrease in the purchasing power of a nation's currency.

Types of Inflation:

As the nature of inflation is not uniform in an economy for all the time, it is wise to distinguish between different types of inflation. Such analysis is useful to study the distributional and other effects of inflation as well as to recommend anti-inflationary policies. Inflation may be caused by a variety of factors. Its intensity or pace may be different at different times. It may also be classified in accordance with the reactions of the government toward inflation.

Thus, one may observe different types of inflation in the contemporary society:

A. On the Basis of Causes:

(i) Currency inflation:

This type of inflation is caused by the printing of currency notes.

(ii) Credit inflation:

Being profit-making institutions, commercial banks sanction more loans and advances to the public than what the economy needs. Such credit expansion leads to a rise in price level.

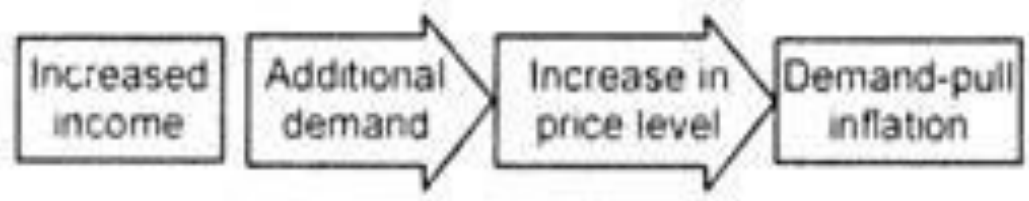
(iii) Deficit-induced inflation:

The budget of the government reflects a deficit when expenditure exceeds revenue. To meet this gap, the government may ask the central bank to print additional money. Since pumping

of additional money is required to meet the budget deficit, any price rise may the be called the deficit-induced inflation.

(iv) Demand-pull inflation:

An increase in aggregate demand over the available output leads to a rise in the price level. Such inflation is called demand-pull inflation (henceforth DPI). But why does aggregate demand rise? Classical economists attribute this rise in aggregate demand to money supply. If the supply of money in an economy exceeds the available goods and services, DPI appears. It has been described by Coulborn as a situation of "too much money chasing too few goods."



Keynesians hold a different argument. They argue that there can be an autonomous increase in aggregate demand or spending, such as a rise in consumption demand or investment or government spending or a tax cut or a net increase in exp orts (i.e., C + I + G + X – M) with no increase in money supply. This would prompt upward adjustment in price. Thus, DPI is caused by monetary factors (classical adjustment) and non-monetary factors (Keynesian argument).

DPI can be explained in terms of Fig. 4.2, where we measure output on the horizontal axis and price level on the vertical axis. In Range 1, total spending is too short of full employment output, Y_F. There is little or no rise in the price level. As demand now rises, output will rise. The economy enters Range 2, where output approaches towards full employment situation. Note that in this region price level begins to rise. Ultimately, the economy reaches full employment situation, i.e., Range 3, where output does not rise but price level is pulled upward. This is demand-pull inflation. The essence of this type of inflation is that "too much spending chasing too few goods."

(v) Cost-push inflation:

Inflation in an economy may arise from the overall increase in the cost of production. This type of inflation is known as cost-push inflation (henceforth CPI). Cost of production may rise due to an increase in the prices of raw materials, wages, etc. Often trade unions are blamed for wage rise since wage rate is not completely market-determinded. Higher wage means high cost of production. Prices of commodities are thereby increased.A wage-price spiral comes into operation. But, at the same time, firms are to be blamed also for the price

rise since they simply raise prices to expand their profit margins. Thus, we have two important variants of CPI wage-push inflation and profit-push inflation.

B. On the Basis of Speed or Intensity:

(i) Creeping or Mild Inflation: If the speed of upward thrust in prices is slow but small then we have creeping inflation. What speed of annual price rise is a creeping one has not been stated by the economists. To some, a creeping or mild inflation is one when annual price rise varies between 2 p.c. and 3 p.c. If a rate of price rise is kept at this level, it is considered to be helpful for economic development. Others argue that if annual price rise goes slightly beyond 3 p.c. mark, still then it is considered to be of no danger.

(ii) Walking Inflation: If the rate of annual price increase lies between 3 p.c. and 4 p.c., then we have a situation of walking inflation. When mild inflation is allowed to fan out, walking inflation appears. These two types of inflation may be described as 'moderate inflation'. Often, one-digit inflation rate is called 'moderate inflation' which is not only predictable, but also keep people's faith on the monetary system of the country. Peoples' confidence get lost once moderately maintained rate of inflation goes out of control and the economy is then caught with the galloping inflation.

(iii) Galloping and Hyperinflation: Walking inflation may be converted into running inflation. Running inflation is dangerous. If it is not controlled, it may ultimately be converted to galloping or hyperinflation. It is an extreme form of inflation when an economy gets shattered." Inflation in the double or triple digit range of 20, 100 or 200 p.c. a year is labelled "galloping inflation".

Effects on Distribution of Income and Wealth: The impact of inflation is felt unevenly by the different groups of individuals within the national economy—some groups of people gain by making big fortune and some others lose.

(a) Creditors and debtors: During inflation creditors lose because they receive in effect less in goods and services than if they had received the repayments during a period of low prices. Debtors, on other hand, as a group gain during inflation, since they repay their debts in currency that has lost its value (i.e., the same currency unit will now buy less goods and services).

(b) Producers and workers: Producers gain because they get higher prices and thus more profits from the sale of their products. As the rise in prices is usually higher than the increase in costs, producers can earn more during inflation. But, workers lose as they find a fall in their real wages as their money wages do not usually rise proportionately with the increase in prices. They, as a class, however, gain because they get more employment during inflation.

(c) Fixed income-earners: Fixed income-earners like the salaried people, rent-earners, landlords, pensioners, etc., suffer greatly because inflation reduces the value of their earnings.

(d) Investors: The investors in equity shares gain as they get dividends at higher rates because of larger corporate profits and as they find the value of their shareholdings appreciated. But the bondholders lose as they get a fixed interest the real value of which has already fallen.

(e) Traders, speculators, businesspeople and black-marketers: They gain because they make more profits from the persistent rise in prices.

(f) Farmers: Farmers also gain because the rise in the prices of agricultural products is usually higher than the increase in the prices of other goods. Thus, inflation brings a shift in the pattern of distribution of income and wealth in the country, usually making the rich richer and the poor poorer. Thus during inflation there is more and more inequality in the distribution of income.

Effects on Production: The rising prices stimulate the production of all goods—both of consumption and of capital goods. As producers get more and more profit, they try to produce more and more by utilising all the available resources at their disposal.

But, after the stage of full employment the production cannot increase as all the resources are fully employed. Moreover, the producers and the farmers would increase their stock in the expectation of a further rise in prices. As a result hoarding and cornering of commodities will increase. But such favourable effects of inflation upon production are not always found. Sometimes, production may come to a standstill position despite rising prices, as was found in recent years in developing countries like India, Thailand and Bangladesh. This situation is described as stagflation.

Inflationary Gap: We have so far used the theory of aggregate demand to explain the emergence of DPI in an economy. This theory can now be used to analyse the concept of **'inflationary gap'**—a concept introduced first by Keynes. This concept may be used to measure the pressure of inflation. If aggregate demand exceeds the aggregate value of output at the full employment level, there will exist an inflationary gap in the economy.

Aggregate demand or aggregate expenditure is composed of consumption expenditure (C), investment expenditure (I), government expenditure (G) and the trade balance or the value of exports minus the value of imports (X – M). Let us denote aggregate value of output at the full employment by Y_f. This inflationary gap is given by $C + I + G + (X - M) > Y_f$. The consequence of such gap is price rise. Prices continue to rise so long as this gap persists.

Inflationary gap thus describes disequilibrium situation. Inflationary gap is thus the result of excess demand. It may be defined as the excess of planned levels of expenditure over the available output at base prices. An example will help us to clear the meaning of the concept of inflationary gap.

Suppose, the aggregate value of output at current price is Rs. 600 crore. The government now takes away output worth Rs. 100 crore for its own requirements, leaving thus Rs. 500 crore for civilian consumption. National income analysis says that the value of aggregate money income equals the net value of aggregate output.

Here also the total money income of the people (Rs. 500 crore) is equal to the net value of aggregate output (i.e., Rs. 600 crore – Rs. 100 crore = Rs. 500 crore). Thus, prices will remain stable since aggregate expenditure is equal to aggregate output. Let us further assume that the money income of the community is increased to Rs. 800 crore by creating additional purchasing power. Let us denote aggregate value of output at the full employment by Y_f.

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An example will help us to clear the meaning of the concept of inflationary gap. Suppose, the aggregate value of output at current price is Rs. 600 crore. The government now takes away output worth Rs. 100 crore for its own requirements, leaving thus Rs. 500 crore for civilian consumption.

National income analysis says that the value of aggregate money income equals the net value of aggregate output. Here also the total money income of the people (Rs. 500 crore) is equal to the net value of aggregate output (i.e., Rs. 600 crore – Rs. 100 crore = Rs. 500 crore). Thus, prices will remain stable since aggregate expenditure is equal to aggregate output. Let us further assume that the money income of the community is increased to Rs. 800 crore by creating additional purchasing power.

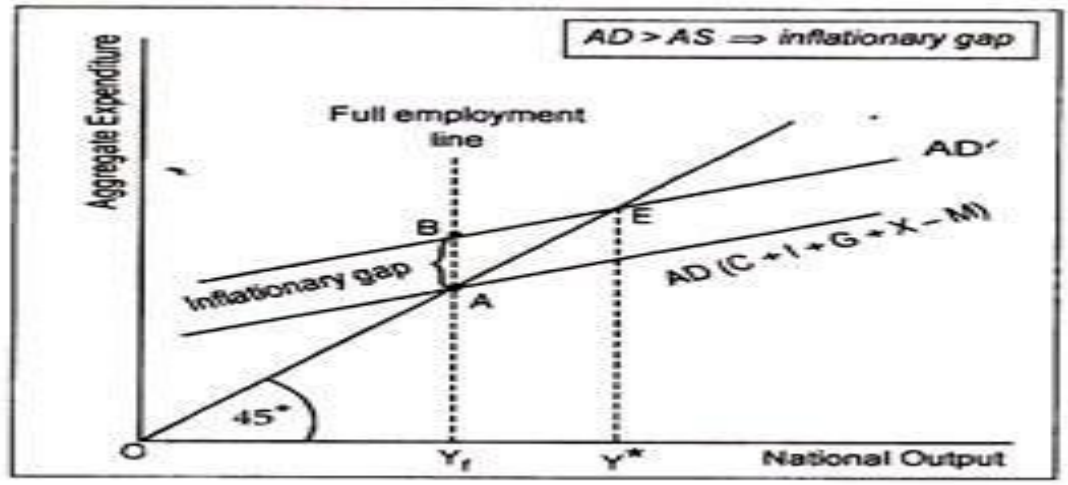

Fig. 11.5: Inflationary Gap

Let us assume that Y_f is the full employment level of national income. If C + I + G + (X – M) is the aggregate demand (AD) curve that cuts the 45° line at point A then an equilibrium income is determinded at Y_f. There will not be any price rise since aggregate demand equals aggregate supply. Now if the AD curve shifts up to AD', equilibrium output will not increase since output cannot be increased beyond the full employment level.In other words, because of full employment, output cannot increase to Y*.

Thus at Y_f level of full employment output, there occurs an inflationary gap to the extent of AB. The vertical distance between the aggregate demand and the 45° line at the full employment level of national income is termed the inflationary gap. Or at full employment, there is an excess demand of AB that pulls up prices. To describe inflationary gap in a simple way, we use Fig. 11.6. In this figure, we weigh aggregate demand (i.e., C + I + G + X-M) and aggregate supply. Since the former exceeds the latter, an inflationary gap emerges.

Controlling Inflation: 3 Important Measures to Control Inflation

Some of the important measures to control inflation are as follows: 1. Monetary Measures 2. Fiscal Measures 3. Other Measures. Inflation is caused by the failure of aggregate supply to equal the increase in aggregate demand. Inflation can, therefore, be controlled by increasing the supplies of goods and services and reducing money incomes in order to control aggregate demand. The various methods are usually grouped under three heads: monetary measures, fiscal measures and other measures.

1. Monetary Measures: Monetary measures aim at reducing money incomes.

(a) **Credit Control:**One of the important monetary measures is monetary policy. The central bank of the country adopts a number of methods to control the quantity and quality of credit. For this purpose, it raises the bank rates, sells securities in the open market, raises the reserve ratio, and adopts a number of selective credit control measures, such as raising margin requirements and regulating consumer credit. Monetary policy may not be effective in controlling inflation, if inflation is due to cost-push factors. Monetary policy can only be helpful in controlling inflation due to demand-pull factors.

(b) **Demonetization of Currency:** However, one of the monetary measures is to demonetise currency of higher denominations. Such a measures is usually adopted when there is abundance of black money in the country.

(c) Issue of New Currency: The most extreme monetary measure is the issue of new currency in place of the old currency. Under this system, one new note is exchanged for a number of notes of the old currency. The value of bank deposits is also fixed accordingly. Such a measure is adopted when there is an excessive issue of notes and there is hyperinflation in the country. It is a very effective measure. But is inequitable for its hurts the small depositors the most.

2. Fiscal Measures: Monetary policy alone is incapable of controlling inflation. It should, therefore, be supplemented by fiscal measures. Fiscal measures are highly effective for controlling government expenditure, personal consumption expenditure, and private and public investment.

The principal fiscal measures are the following:

(a) Reduction in Unnecessary Expenditure:The government should reduce unnecessary expenditure on non-development activities in order to curb inflation. This will also put a check on private expenditure which is dependent upon government demand for goods and services. But it is not easy to cut government expenditure. Though this measure is always welcome but it becomes difficult to distinguish between essential and non-essential expenditure. Therefore, this measure should be supplemented by taxation.

(b) **Increase in Taxes:**To cut personal consumption expenditure, the rates of personal, corporate and commodity taxes should be raised and even new taxes should be levied, but the rates of taxes should not be so high as to discourage saving, investment and production. Rather, the tax system should provide larger incentives to those who save, invest and produce more. Further, to bring more revenue into the tax-net, the government should penalise the tax evaders by imposing heavy fines. Such measures are bound to be effective in controlling

inflation. To increase the supply of goods within the country, the government should reduce import duties and increase export duties.

(c) Increase in Savings: Another measure is to increase savings on the part of the people. This will tend to reduce disposable income with the people, and hence personal consumption expenditure. But due to the rising cost of living, people are not in a position to save much voluntarily.

(d) Surplus Budgets: An important measure is to adopt anti-inflationary budgetary policy. For this purpose, the government should give up deficit financing and instead have surplus budgets. It means collecting more in revenues and spending less.

(e) Public Debt: At the same time, it should stop repayment of public debt and postpone it to some future date till inflationary pressures are controlled within the economy. Instead, the government should borrow more to reduce money supply with the public. Like monetary measures, fiscal measures alone cannot help in controlling inflation. They should be supplemented by monetary, non-monetary and non-fiscal measures.

3. Other Measures:

The other types of measures are those which aim at increasing aggregate supply and reducing aggregate demand directly.

(a) To Increase Production:

The following measures should be adopted to increase production:

(i) One of the foremost measures to control inflation is to increase the production of essential consumer goods like food, clothing, kerosene oil, sugar, vegetable oils, etc. (ii) If there is need, raw materials for such products may be imported on preferential basis to increase the production of essential commodities, (iii) Efforts should also be made to increase productivity. For this purpose, industrial peace should be maintained through agreements with trade unions, binding them not to resort to strikes for some time, (iv) The policy of rationalisation of industries should be adopted as a long-term measure. Rationalisation increases productivity and production of industries through the use of brain, brawn and bullion, (v) All possible help in the form of latest technology, raw materials, financial help, subsidies, etc. should be provided to different consumer goods sectors to increase production.

(b) Rational Wage Policy: Another important measure is to adopt a rational wage and income policy. Under hyperinflation, there is a wage-price spiral. To control this, the government should freeze wages, incomes, profits, dividends, bonus, etc.

(c) Price Control: Price control and rationing is another measure of direct control to check inflation. Price control means fixing an upper limit for the prices of essential consumer goods. They are the maximum prices fixed by law and anybody charging more than these prices is punished by law. But it is difficult to administer price control.

(d) Rationing: Rationing aims at distributing consumption of scarce goods so as to make them available to a large number of consumers. It is applied to essential consumer goods such as wheat, rice, sugar, kerosene oil, etc. It is meant to stabilise the prices of necessaries and assure distributive justice. But it is very inconvenient for consumers because

it leads to queues, artificial shortages, corruption and black marketing. Keynes did not favour rationing for it "involves a great deal of waste, both of resources and of employment."

TRADE CYCLE

The four important features of Trade Cycle are (i) Recovery, (ii) Boom, (iii) Recession, and (iv) Depression

The trades cycle or business cycle are cyclical fluctuations of an economy. A full trade cycle has got four phases: (i) Recovery, (ii) Boom, (iii) Recession, and (iv) depression. The upward phase of a trade cycle or prosperity is divided into two stages—recovery and boom, and the downward phase of a trade cycle is also divided into two stages—recession and depression.

Phases of Trade Cycle:

The phases of trade cycle are explained with a diagram:

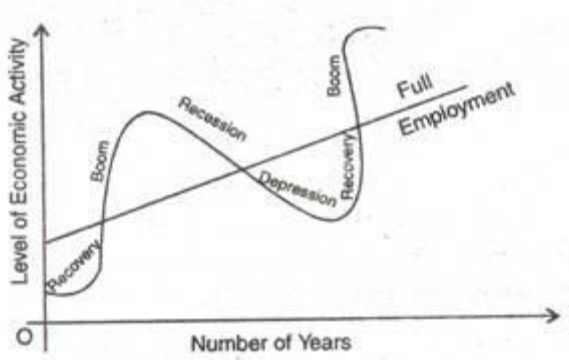

FIG. 2 : PHASES OF TRADE CYCLE

(1) Recovery:

In the early period of recovery, entrepreneurs increase the level of investment which in turn increases employment and income. Employment increases purchasing power and this leads to an increase in demand for consumer goods.

As a result, demand for goods will press upon their supply and it shall, thereby, lead to a rise in prices. The demand for consumer's goods shall encourage the demand for producer's goods.

The rise in prices shall depend upon the gestation period of investment. The longer the period of investment, the higher shall be the price rise. The rise of prices shall bring about a change in the distribution of income. Rent, wages, interest do not rise in the same proportion as prices.

(2) Boom:

The rate of investment increases still further. Owing to the spread of a wave of optimism in business, the level of production increases and the boom gathers momentum. More investment is possible only through credit creation. During a period of boom, the economy surpasses the level of full employment and enters a stage of over full employment.

(3) Recession:

The orders for raw materials are reduced on the onset of a recession. The rate of investment in producers' goods industries and housing construction declines. Liquidity preference rises in society and owing to a contraction of money supply, the prices falls. A wave of pessimism spreads in business and those markets which were sometime before sellers markets become buyer's markets now.

(4) Depression:

The main feature of a depression is a general fall in economic activity. Production, employment and income decline. The prices fall and the main factor responsible for it is, a fall in the purchasing power.

The distribution of national income changes. As the costs are rigid in nature, the margin of profit declines. Machines are not used to their full capacity in factories, because effective demand is much less. The prices of finished goods fall less than the prices of raw materials.

Questions for practice

Part A

1. Define inflation
2. What do you mean by trade cycle?
3. State the meaning of cost push inflation
4. Write short notes inflationary gap
5. List out the phases of trade cycle

Part B

1. Elaborate types of inflation
2. Explain three important methods in control inflation
3. Discuss about fiscal policy measures
4. Summarise phases of trade cycle
5. Illustrate and explain the inflationary gap

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