MANAGERIAL ECONOMICS MACROECONOMICS FUNDAMENTALS

Macroeconomics (from the Greek prefix makro- meaning "large" + economics) is a branch of economics dealing with performance, structure, behavior, and decision-making of an economy as a whole. For example, using interest rates, taxes, and government spending to regulate an economy's growth and stability. This includes regional, national, and global economies

Macroeconomics is a part of economic study which analyzes the economy as a whole. It is the average of the entire economy and does not study any individual unit or a firm. It studies the national income, total employment, aggregate demand and supply etc.

Nature of Macroeconomics

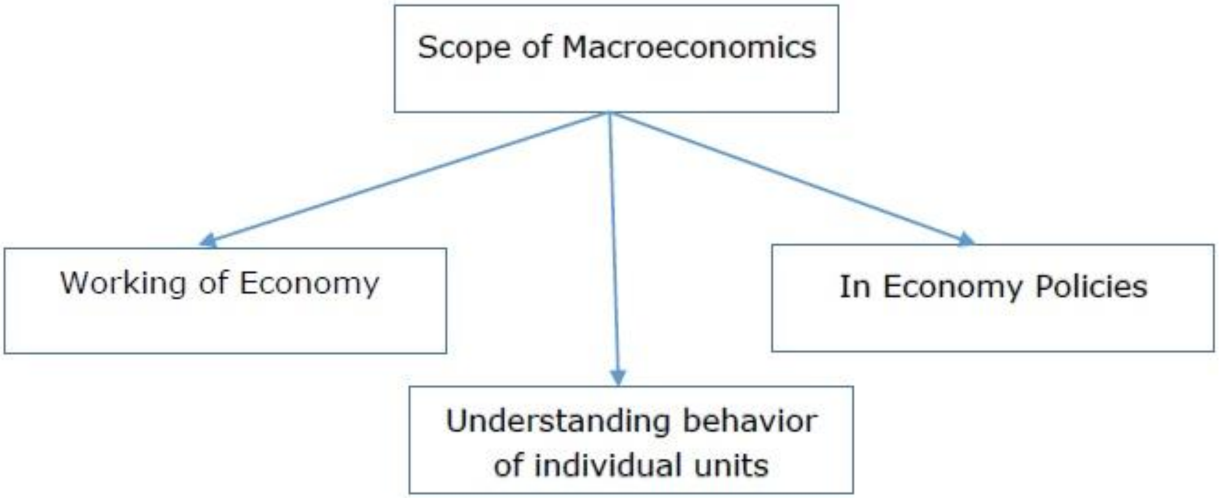
Macroeconomics is basically known as theory of income. It is concerned with the problems of economic fluctuations, unemployment, inflation or deflation and economic growth. It deals with the aggregates of all quantities not with individual price levels or outputs but with national output.

As per G. Ackley, Macroeconomics concerns itself with such variables −

- Aggregate volume of the output of an economy
- Extent to which resources are employed
- Size of the national income
- General price level

Scope of Macroeconomics

Macroeconomics is much of theoretical and practical importance. Following are the points covered under the scope of macroeconomics −



Working of the Economy

The study of macroeconomics is crucial to understand the working of an economy. Economic problems are mainly related to the employment, behavior of total income and general price in the economy. Macroeconomics help in making the elimination process more understandable.

In Economy Policies

Macroeconomics is very useful in an economic policy. Underdeveloped economies face innumerable problems related to overpopulation, inflation, balance of payments etc. The main responsibilities of government are controlling the overpopulation, prices, volume of trade etc.

Following are the economic problems where macroeconomics studies are useful

- In national income
- In unemployment
- In economic growth
- In monetary problems

Understanding the Behavior of Individual Units

The demand for individual products depends upon aggregate demand in the economy therefore understanding the behavior of individual units is very important in macroeconomics. Firstly, to solve the problem of deficiency in demand of individual products, understanding the causes of fall in aggregate demand is required. Similarly to know the reasons for increase in costs of a particular firm or industry, it is first required to understand the average cost conditions of the whole economy. Thus, the study of individual units is not possible without macroeconomics.

Macroeconomics enhances our knowledge of the functioning of an economy by studying the behavior of national income, output, savings, and consumptions.

CIRCULAR FLOW MODEL OF ECONOMY

The circular flow model is used to represent the monetary transactions in an economy. It helps to show connections between different sectors of an economy. It shows flows of goods and services and factors of production between firms and households. The circular flow of income is a model that helps show the movement of income and spending throughout the economy. In the economy, households help provide firms with factors of production, e.g. labor. Organizations use these factors to provide goods and services to the household. The households will then spend their money on the goods and services provided by the firms. This money is use by the firms to pay the households for the work they provide, through wages. This process will repeat itself and then form the circular flow of income.

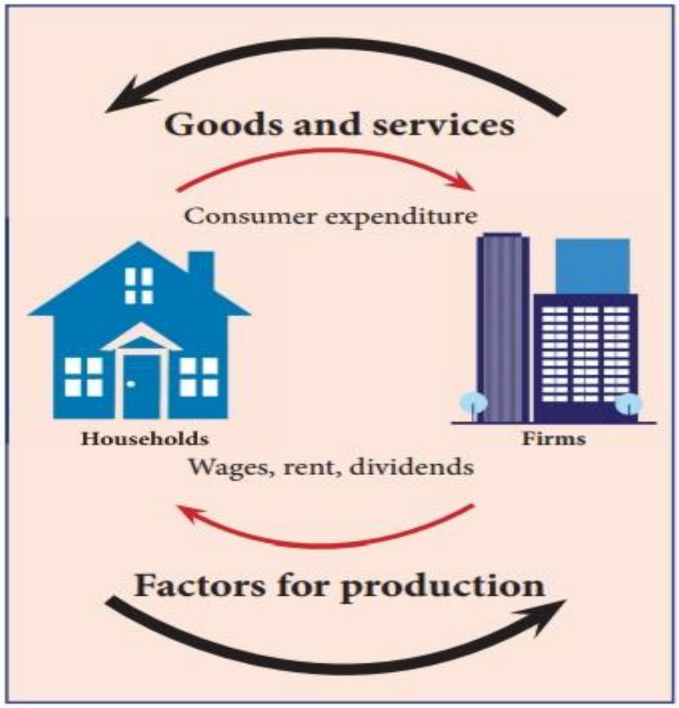
There are three models of circular flow of income, representing the major economic systems.

1. Two Sector Model: It is for a simple economy with households and firms.

2. Three Sector Model: It is for a mixed and closed economy with households, firms and government.

3. Four Sector Model: It is for an open economy with households, firms, government and rest of the world (External sector).

1. Circular Flow of Income in a Two-Sector Economy:



There are only two sectors namely, household sector and firm sector.

(i) Household Sector: The household sector is the sole buyer of goods and services, and the sole supplier of factors of production, i.e., land, labour, capital and organisation. It spends its entire income on the purchase of goods and services produced by the business sector. The household sector receives income from firm sector by providing the factors of production owned by it.

(ii) Firms: The firm sector generates its revenue by selling goods and services to the household sector. It hires the factors of production, i.e., land, labour, capital and organisation, owned by the household sector. The firm sector sells the entire output to households.

In a two- sector economy, production and sales are equal and there will be a circular flow of income and goods. The outer circle represents real flow (factors and goods) and the inner circle represents the monetary flow (factor prices and commodity prices). Real flow indicates the factor services flow from household sector to the business sector, and goods and services flow from business sector to the household. The basic identities of the two-sector economy are as under:

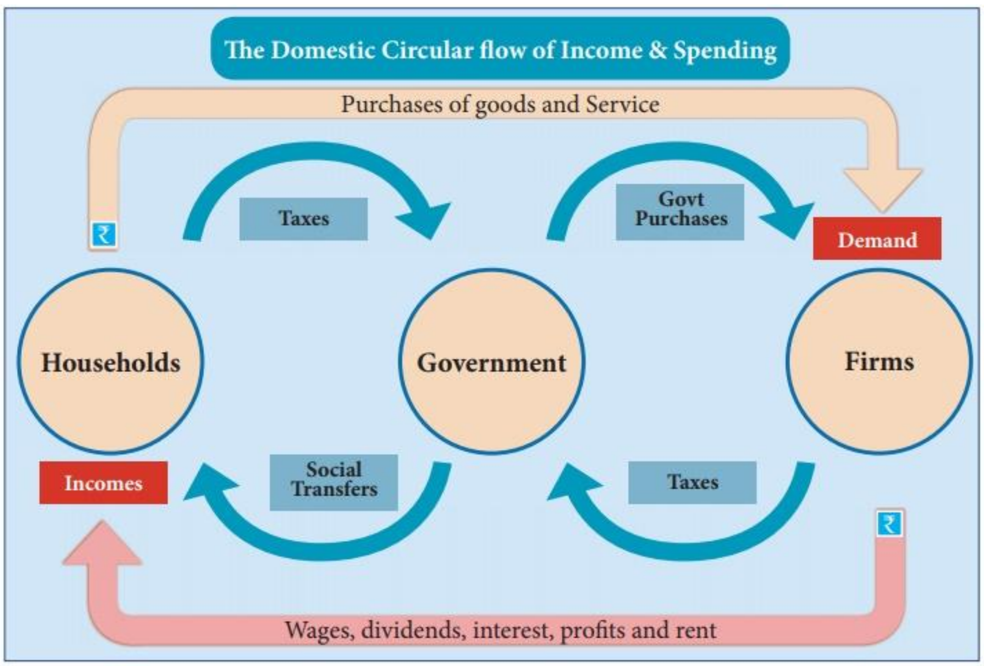
Y= C+I

Where

Y is Income; C is Consumption; I is investment

2. Circular Flow of Income in a Three-Sector Economy:

In addition to household and firms, inclusion of the government sector makes this model a three-sector model. The government levies taxes on households and firms, purchases goods and services from firms, and receive factors of production from household sector. On the other hand, the government also makes social transfers such as pension, relief, subsidies to the households. Similarly, Government pays the firms for the purchases of goods and services.



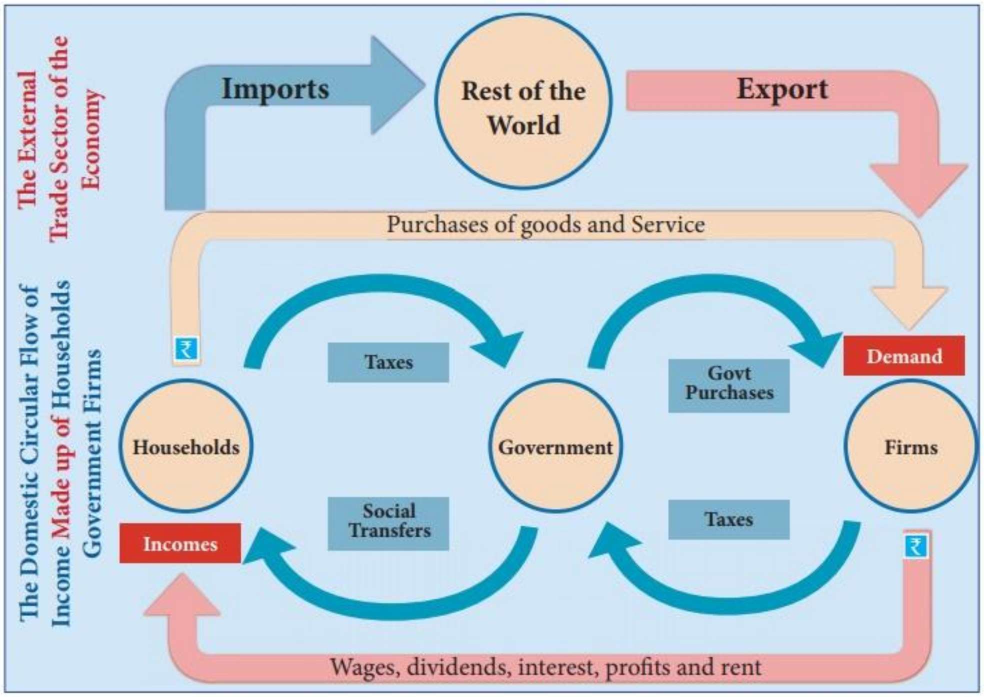
The Flow Chart illustrates three-sector economy model:

Under three sector model, national income (Y) is obtained by adding Consumption expenditure (C), Investment expenditure (I) and Government expenditure (G).

Therefore:

Y= C+I+G

3. Circular Flow of Income in a Four-Sector Economy:



In a Four- sector economy, in addition to household, firms and government, a fourth sector namely, external sector is included. In real life, only four-sector economy exists. This model is composed of four sectors namely,

(i) Households, (ii) Firms,

(iii) Government, (iv) External sector

The external sector comprises exports and imports. It is illustrated in the Flow Chart.

In four-sector economy, expenditure for the entire economy include domestic expenditure (C+I+G) and net exports (X– M). Therefore,

Y = C + I + G + (X – M)

INFLATION:

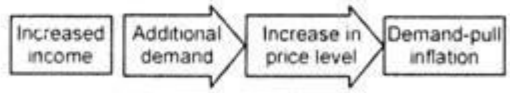
Inflation is often defined in terms of its supposed causes. Inflation exists when money supply exceeds available goods and services. Or inflation is attributed to budget deficit financing. A deficit budget may be financed by the additional money creation. But the situation of monetary expansion or budget deficit may not cause price level to rise. Hence the difficulty of defining 'inflation'. Inflation may be defined as 'a sustained upward trend in the general level of prices' and not the price of only one or two goods. G. Ackley defined inflation as 'a persistent and appreciable rise in the general level or average of prices'. In other words, inflation is a state of rising prices, but not high prices. It is not high prices but rising price level that constitute inflation. It constitutes, thus, an overall increase in price level. It can, thus, be viewed as the devaluing of the worth of money. In other words, inflation reduces the purchasing power of money. A unit of money now buys less. Inflation can also be seen as a recurring phenomenon. While measuring inflation, we take into account a large number of goods and services used by the people of a country and then calculate average increase in the prices of those goods and services over a period of time. A small rise in prices or a sudden rise in prices is not inflation since they may reflect the short term workings of the market

Types of Inflation

There are different types of inflation to get an analysis of distributional and other effects of inflation. There are mainly four types of inflation. Experts say that demand-pull and cost-push are more two types of inflation not yet categorized. There are various other types of inflation like asset inflation and wage inflation. The main type of inflations is given below;

1. 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. This increase in the aggregate demand might occur due to an increase in the money supply or income or the level of public expenditure. 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."



This concept is associated with full employment when altering the supply is not possible. Take a look at the graph below:

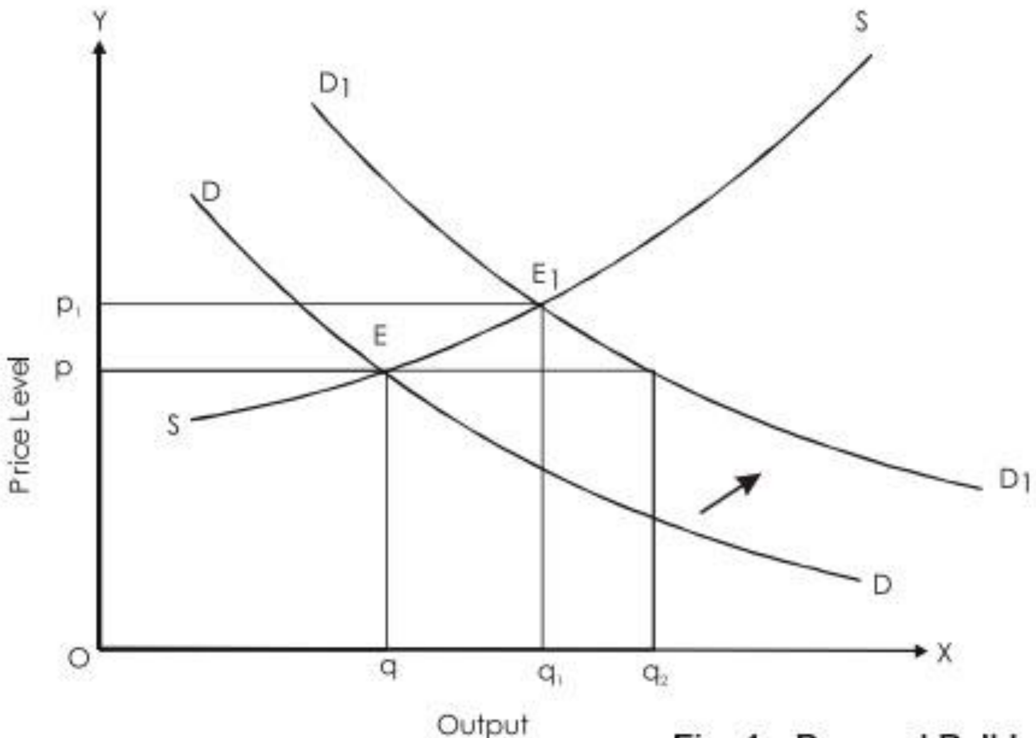


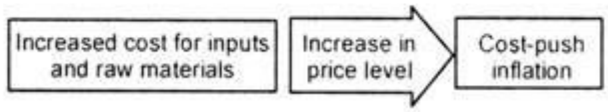
Fig. 1 - Demand Pull Inflation

In the graph above, SS is the aggregate supply curve and DD is the aggregate demand curve. Further,

- Op is the equilibrium price
- Oq is the equilibrium output

2. 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.



Supply can also cause inflationary pressure. If the aggregate demand remains unchanged but the aggregate supply falls due to exogenous causes, then the price level increases. Take a look at the graph below:

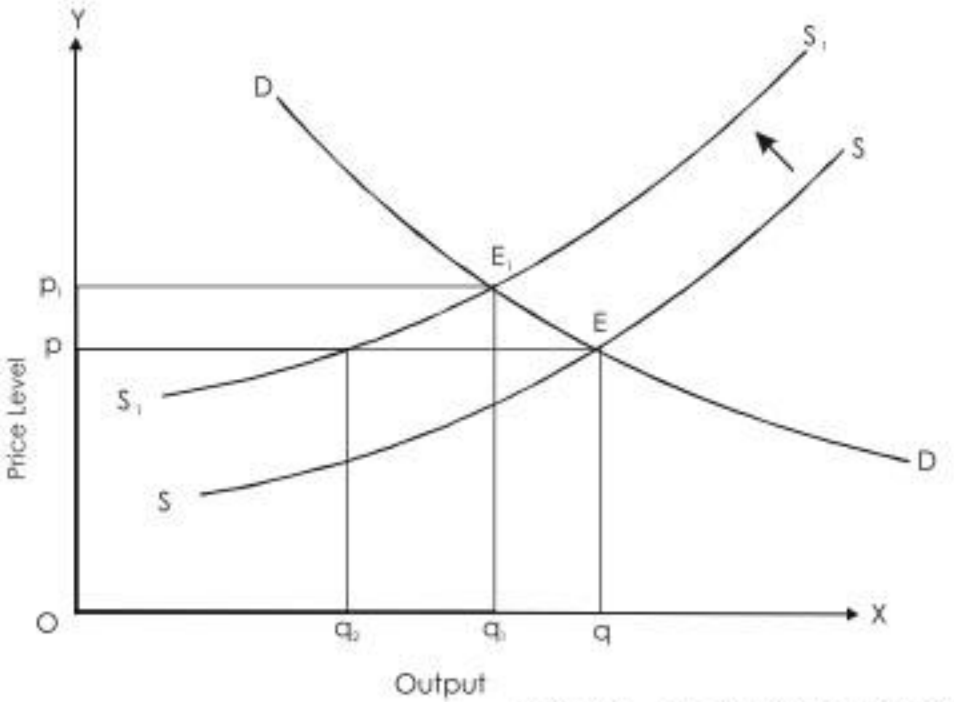


Fig. 2 - Cost-Push Inflation

In the graph above, the equilibrium price is Op and the equilibrium output is Oq. If the aggregate supply falls, then the supply curve SS shifts left to reach S_1S_1.Now, at the price Op, the demand is Oq but the supply is Oq_2 which is lesser than Oq. Therefore, the prices are pushed high till a new equilibrium is reached at Op_1.

At this point, there is no excess demand. Hence, you can see that inflation is a self-limiting phenomenon.

Causes of Inflation

There can be two set of factors that can cause inflation in an economy. They are Demand Pull and Cost Push.

Demand Pull Factors

1. Rise in population.
2. Black money.
3. Rise in income.
4. Excessive government expenditure.

Cost Push Factors

1. Infrastructure bottlenecks which lead rise in production and distribution costs.
2. Rise in Minimum Support Price (MSP).
3. Rise in international prices.
4. Hoarding and black marketing.
5. Rise in indirect taxes.

CPI Vs. WPI

What is the Consumer Price Index (CPI)?
Consumer Price Index (CPI) is a price index that represents the average price of a basket of goods over time. CPI calculates the average price paid by the consumer to the shopkeepers. Education, communication, transportation, recreation, apparel, foods and beverages, housing and medical care are the 8 groups for which the CPI is measured.

What Is Wholesale Price Index (WPI)?
Wholesale Price Index (WPI) is an indicator of price changes in the wholesale market. WPI calculates the price paid by the manufacturers and wholesalers in

the market. WPI measures the changes in commodity price at selected stages before goods reach the retail level.

Key differences between WPI & CPI

- Primary use of WPI is to have inflationary trend in the economy as a whole. However, CPI is used for adjusting income and expenditure streams for changes in the cost of living.
- WPI is based on wholesale prices for primary articles, administered prices for fuel items and ex-factory prices for manufactured products. On the other hand, CPI is based on retail prices, which include all distribution costs and taxes.
- Prices for WPI are collected on voluntary basis while price data for CPI are collected by investigators by visiting markets.
- CPI covers only consumer goods and consumer services while WPI covers all goods including intermediate goods transacted in the economy.
- WPI weights primarily based on national accounts and enterprise survey data and CPI weights are derived from consumer expenditure survey data.

Difference between WPI and CPI is as follows;

Basis For Comparison	Wholesale Price Index (WPI)	Consumer Price Index (CPI)
Meaning	WPI, amounts to the average change in prices of commodities at the wholesale level	CPI, indicates the average change in the prices of commodities, at the retail level.
Published by	Office of Economic Advisor (Ministry of Commerce & Industry)	Central Statistics Office (Ministry of Statistics and Programme Implementation)
Measures prices of	Goods only	Goods and Services both

Measurement of Inflation	The first stage of the transaction	The final stage of the transaction
Prices paid by	Manufacturers and wholesalers	Consumers
How many items covered	697 (Primary, fuel & power and manufactured products)	448(Rural Basket) 460 (Urban Basket)
What type of items covered	Manufacturing inputs and intermediate goods like minerals, machinery basic metals etc.	Education, communication, transportation, recreation, apparel, foods and beverages, housing and medical care
Base year	2011-12	2012
Used by	Only a few countries including India	157 countries
Data released on	Primary articles, fuel, and power (Weekly basis) & overall (monthly basis since 2012)	Monthly basis

Effects of Inflation

Inflation affects different people differently. This is because of the fall in the value of money. When prices rise or the value of money falls, some groups of the society gain, some lose and some stand in between. Broadly speaking, there are two economic groups in every society, the fixed income group and the flexible income group.

People belonging to the first group lose and those belonging to the second group gain. The reason is that price movements in the case of different goods, services, assets, etc. are not uniform. When there is inflation, most prices are rising, but the rates of increase of individual prices differ much. Prices of some goods and services rise faster, of others slowly, and of still others remain unchanged. We discuss below the effects of inflation on redistribution of income and wealth, production, and on the society as a whole.

1. Effects of inflation on Redistribution of Income and Wealth:

There are two ways to measure the effects of inflation on the redistribution of income and wealth in a society. First, on the basis of the change in the real value of such factor incomes as wages, salaries, rents, interest, dividends and profits.

Second, on the basis of the size distribution of income over time as a result of inflation, i.e. whether the incomes of the rich have increased and that of the middle and poor classes have declined with inflation. Inflation brings about shifts in the distribution of real income from those whose money incomes are relatively inflexible to those whose money incomes are relatively flexible.

The poor and middle classes suffer because their wages and salaries are more or less fixed but the prices of commodities continue to rise. They become more impoverished. On the other hand, businessmen, industrialists, traders, reals estate holders, speculators, and others with variable incomes gain during rising prices.

The latter category of persons becomes rich at the cost of the former group. There is unjustified transfer of income and wealth from the poor to the rich. As a result, the rich roll in wealth and indulge in conspicuous consumption, while the poor and middle classes live in abject misery and poverty.

But which income group of society gains or losses from inflation depends on who anticipates inflation and who does not. Those who correctly anticipate inflation, they can adjust their present earnings, buying, borrowing, and lending activities against the loss of income and wealth due to inflation.

They, therefore, do not get hurt by the inflation. Failure to anticipate inflation correctly leads to redistribution of income and wealth. In practice, all persons are unable to anticipate and predict the rate of inflation correctly so that they cannot adjust their economic behaviour accordingly. As a result, some persons gain while others lose. The net result is redistribution of income and wealth.

2. Effects on Production:

When prices start rising, production is encouraged. Producers earn wind-fall profits in the future. They invest more in anticipation of higher profits in the future. This tends to increase employment, production and income. But this is only possible up to the full employment level.

Further increase in investment beyond this level will lead to severe inflationary pressures within the economy because prices rise more than production as the resources are fully employed. So inflation adversely affects production after the level of full employment.

The adverse effects of inflation on production are discussed below:

(1) Misallocation of Resources:

Inflation causes misallocation of resources when producers divert resources from the production of essential to non-essential goods from which they expect higher profits.

(2) Changes in the System of Transactions:

Inflation leads to changes in transactions pattern of producers. They hold a smaller stock of real money holdings against unexpected contingencies than before. They devote more time and attention to converting money into inventories or other financial or real assets. It means that time and energy are diverted from the production of goods and services and some resources are used wastefully.

(3) Reduction in Production:

Inflation adversely affects the volume of production because the expectation of rising prices along with rising costs of inputs brings uncertainty. This reduces production.

(4) Fall in Quality:

Continuous rise in prices creates a seller's market. In such a situation, producers produce and sell sub-standard commodities in order to earn higher profits. They also indulge in adulteration of commodities.

(5) Hoarding and Black-marketing:

To profit more from rising prices, producers hoard stocks of their commodities. Consequently, an artificial scarcity of commodities is created in the market. Then the producers sell their products in the black market which increase inflationary pressures.

(6) Reduction in Saving:

When prices rise rapidly, the propensity to save declines because more money is needed to buy goods and services than before. Reduced saving adversely affects investment and capital formation. As a result, production is hindered.

3. Other Effects:

Inflation leads to a number of other effects which are discussed as under:

(1) Government:

Inflation affects the government in various ways. It helps the government in financing its activities through inflationary finance. As the money income of the people increases, the government collects that in the form of taxes on incomes and commodities. So the revenues of the government increase during rising prices.

Moreover, the real burden of the public debt decreases when prices are rising. But the government expenses also increase with rising production costs of public projects and enterprises and increase in administrative expenses as prices and wages rise. On the whole, the government gains under inflation because rising wages and profits spread an illusion of prosperity within the country.

(2) Balance of Payments:

Inflation involves the sacrificing of the advantages of international specialisation and division of labour. It adversely affects the balance of payments of a country. When prices rise more rapidly in the home country than in foreign countries, domestic products become costlier compared to foreign products. This tends to increase imports and reduce exports, thereby making the balance of payments unfavourable for the country. This happens only when the country follows a fixed exchange rate policy. But there is no adverse impact on the balance of payments if the country is on the flexible exchange rate system.

(3) Exchange Rate:

When prices rise more rapidly in the home country than in foreign countries, it lowers the exchange rate in relation to foreign currencies.

(4) Collapse of the Monetary System:

If hyperinflation persists and the value of money continues to fall many times in a day, it ultimately leads to the collapse of the monetary system, as happened in Germany after World War I.

(5) Social. Inflation is socially harmful:

By widening the gulf between the rich and the poor, rising prices create discontentment among the masses. Pressed by the rising cost of living, workers resort to strikes which lead to loss in production. Lured by profit, people resort to hoarding, black-marketing, adulteration, manufacture of substandard commodities, speculation, etc. Corruption spreads in every walk of life. All this reduces the efficiency of the economy.

(6) Political:

Rising prices also encourage agitations and protests by political parties opposed to the government. And if they gather momentum and become unhandy they may bring the downfall of the government. Many governments have been sacrificed at the alter of inflation.

REMEDIES OF INFLATION

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 reserved 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) Demonetisation of Currency:

However, one of the monetary measures is to demonetise currency of higher denominations. Such a measure 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 it 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 economy measures are 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. Keynes, therefore, advocated compulsory savings or what he called 'deferred payment' where the saver gets his money back after some years.

For this purpose, the government should float public loans carrying high rates of interest, start saving schemes with prize money, or lottery for long periods, etc. It should also introduce compulsory provident fund, provident fund-cum-pension schemes, etc. compulsorily. All such measures to increase savings are likely to be effective in controlling inflation.

(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 the 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 rationalization of industries should be adopted as a long-term measure. Rationalization 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. But such a drastic measure can only be adopted for a short period and by antagonising both workers and industrialists. Therefore, the best course is to link increase in wages to increase in productivity. This will have a dual effect. It will control wages and at the same time increase productivity, and hence increase production of goods in the economy.

(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 stabilize 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 favor rationing for it "involves a great deal of waste, both of resources and of employment."