CHAPTER - 1
INFLATION: THEORETICAL ASPECTS

1.1 Introduction:
Changes in the value of money or purchasing power is a continuous process which goes on taking place from time to time, whenever the volume of money in the country expands (other things remaining constant) its value falls or the price rise. The period of rising price is known as inflation. Inflation means continuous rise in the circulation of the money which exceeds requirements of all activities, it results in continuous rise in price which is another aspect of inflation, it simply means that when there is rise in prices because of the gap between money supply and transactions in the economy and where money supply exceed the requirement is called inflation.

1.2 Definition of Inflation:
Inflation is of different types and it is difficult to give a generally accepted definition. Technically the term inflation refers to rise in price due to an increase in the supply of money without a corresponding increase in demand. But generally it means a rise in the general level of price which has been brought about either by an increase in the supply of money or any other reason i.e., shortage of supply of goods increased volume of currency increased supply of money and of gold, etc. inflation take place “whenever the supply of money and of bank deposits circulating through checks so called ‘Deposit currency increase, relatively to the demand for media of exchange in such a way as to bring about a rise in the general price level”.

Gardner Ackley has defined inflation “As a persistence and appreciable rise in the general level or average price”. Accordingly to this definition a sporadic price spurt or an imperceptible rise in price will not be inflation.

According to Crowther “inflation is a state in which the value of money is falling, i.e. price are rising”

According to A C Pigu “Inflation exist when money income is expanding more than in proportion to income earning activity”

Hawtrey defines it as the “issue of too much currency.”
According to Kemmerer “inflation is too much currency in relation to the physical volume of business being done.”
In the words of Coulborn “inflation is too much money chasing too few goods.”
According to Goldenweiser “inflation occurs when the volume of money activity bidding for goods and services increase faster than the available supply of goods, when the growth in physical units’.
Paul Einzing defines inflation as “state of disequilibrium in which an expansion of purchasing power trends to cause or is the effect of an increase in price level.” According to Whittlesey, Friedman and Herman “Inflation mean an extra-high expansion of currency and credit beyond the legitimate requirements of trade, commerce and industry with the resultant effect of increasing, sometimes sky rocketing prices.” While according to Milton Friedman “inflation is always and everywhere a monetary phenomenon…and can be produced by only by a more rapid increase in the quantity of money than output.” But the economists do not agree that money supply alone is the cause of inflation. Prof. Kemmerer “Inflation is too much money and deposit currency, i.e. too much currency in relation to the physical volume of business being done.” According to H.G. Johnson “inflation is sustained rise in prices.”
It will be shown from above definitions that inflation is a situation wherein money incomes of the people continuously increase because of the increase in money supply, this leads to an increase in the purchasing power of the community and consequently increase in the demand for goods and commodities, but as there is no proportionate increase in the production and supply of goods, price level shows a sustained rise. It should be noted here that this rise in price level is not a temporary phenomenon, but is continuous and sustained over a long period. Besides this price rise occurs in almost all the sectors of the economy, it is wrong to judge that inflation takes place on in certain sectors of the economy, the rise in price level during inflation is not confined to a few sectors only, but it is of a general nature covering almost all the sectors of the entire economy.

1.3 Measurement of inflation:
Basically there are four measures of inflation viz., (i) The wholesale price index (WPI), (ii) The consumer price index (CPI), (iii) GDP implicit price deflator and (iv) The Personal Consumption Expenditure (PCE) implicit price deflator. Two of the four
measures CPI and WPI are the indexes of consumer prices. The third one is used to deflate current GDP or nominal GDP into real GDP or GDP at constant prices. It is called implicit because it is not obtained directly as are the former two. The PCE deflator is the last index and is an alternative to the CPI as a measure of change in consumer prices. Now we shall present them in detail.

➢ Wholesale Price Index – (WPI):

The wholesale price index (WPI) refers to the index of the average price of all commodities produced and transacted in the economy at the wholesale level. Thus it includes the prices of raw materials and semi finished goods as well as imported tangible goods, besides the prices of tangible goods included in GDP. If they are transacted in the economy at the wholesale level in the country, however, it excludes the prices of all services, such as education, health, banking, communication and transport etc.

The weight are assigned on the basis of the relative values of the wholesale transactions in various products in the country, all the major items are covered and price quotations are taken from a cross section of markets all over the country. The weighted arithmetic mean and the Laspeyre’s formula are used for the computations. In our country, the series is prepared for all India (country) level only. However, it is available for all commodities as well as major groups, sub groups and individual commodities and is regularly published on a weekly basis by the office of the economic advisor, ministry of industry, it is said that during hyperinflation in Germany in 1923, money had lost so much value that if two cartloads, one of coins (money) and the other bread, were in the street, people would run after the cart of bread rather than that of coins.

Government of India, it is these characteristics, which makes the WPI an ideal measure of the inflation rate, as the data are available by the commodity groups, the policy makers can easily pin down the sources of inflation and then suggest the required policy measures to deal with it. Since the WPI ignores the price of non commodity producing sectors in recent years and which currently constitute more than 50percent of GDP its use is questioned. However the prices of services are influenced by the prices of inputs coming from the commodity sector and vice-versa. Hence, the variations in WPI are considered an acceptable indicator of change in the general level of price in the economy.
➢ Consumer Price Index – CPI:

A consumer price index refers to the index of the average retail price of the goods and services contained in the consumption basket of the relevant group of consumers. It thus, excludes the price of service as well as imported goods. The consumption basket depends on the level of income and wealth, rural-urban living, types of work and profession, customs etc. thus, it varies practically from household to household.

In India there are three types of consumer price indices are available:
1. CPI-IW (consumer price index for industrial workers)
2. CPI-UNME (consumer price index for Urban Non-Manual Employees)
3. CPI-AL (consumer price Index for Agriculture Labor)

The labor Bureau, Ministry of labor publish data on CPI-IW and CPI-AL, While that on CPI-UNME is carried out by central Statistical Organization (CSO) Unlike the WPI, Which is prepared only at the all India level, CPI-AL is first prepared at the state level, CPI-IW and CPI-UNME at the selected center’s levels, and then they are arranged to all India levels. The aggregation is carried out as the weighted arithmetic average of the respective indices, width weight taken as proportionate to aggregate estimated expenditure of the state as well as center in the all India figure. The Laspeyre’s formula is used for computation. For deciding the weight for individual good and services, surveys of relevant families are carried out in various centers spread out all over the country.

➢ GDP Deflator:

GDP deflator refers to the index of the average price of the goods and services produced in the economy, it includes the price of all final goods produced in the economy, and thus, excludes those of intermediate goods and raw materials, the producers and buyers of these goods are immaterial, thus, whether they are produced by foreigners or locals operating in the country and bought by local consumers, firms, government, or even foreigners all are included, it ignores the prices of imported goods, which enter our consumption basket and to the list of inputs in production, it is computed as the ratio of the nominal (current price) GDP in a given year to the real (constant price) GDP of the year, since the nominal GDP is the value of current production valued at the base year price, the GDP deflator is based on the Pasche’s method of consumption.
For India, the GDP data are available on the annual basis only and roughly with two years lag, and thus, the GDP deflator data are also available on the annual basis only and with two years lag, since the time lag is long and the frequency is just once in a year this index is a poor indicator of inflation rate, which could be managed. Some internal studies in the R.B.I (BY Deepak Mohanty, Abha Prasad and Anupam Prakash) indicate that though there has been some divergence in the annual movement of the two indices and GDP deflator over the longer term, there has not been any secular or systematic bias, the analysis of the three measurements of inflation for the period 1950-51 to 1995-96 display broadly similar trends. A long term time series data of the three indices viz. WPI, GDP deflator and CPI-IW reveal that there have been leads and lags involved during certain phase, which tend to get evened out over long time spans, but there has not been any secular or systematic bias. The cross correlation between the three indices come close to one reaffirming the belief that any one of these could be used to study the phenomena of inflation in the economy.

The PCE implicit price Deflator:

One alternative measure of change in consumer prices is personal consumption expenditure (PCE) deflator. According to Shapiro “It is an index of price change for all of the goods and service include in the personal consumption expenditure component of GNP, and is derived as the implicit price deflator for GNP as a whole.” In this measure the weights are not fixed and if price of a commodity declines it automatically receives less weight and if price of commodity raises it receives more weight. This index in comparison of the GDP deflator has lesser coverage of these four indexes, the GDP deflator has the broadest coverage and, therefore, is the most popular among economists. It is regard as the best single indicator of the rate of inflation in the United States. In our country an average consumer who is concerned with day-to-day changes in prices and the purchasing power of his income looks mainly at consumer price index and the wholesale price index. The wages, incomes and pensions of salaried class person is adjusted in response to changes in CPI.

1.4 Theories of Inflation:

There are two basic theories of the inflation in the literature on theories of inflation in Economics, one is the institutional theory of inflation and another is money stock theory of inflation. Institutional theory considers a certain section of the people to be
responsible for the inflation whereas money stock theory of inflation considers the government and the central bank to be the main generators of inflation. Here there is one crucial difference between both these theories, one emphasizes the institution of the people and other finds fault with the government and the central bank as the institution of the state, but institutions of the people cannot increase money supply while government and central bank can augment money supply.

➢ The Cost–Push Theory of Inflation:
The Cost- Push theory Of Inflation is the Wage- push theory of inflation. Trade unions are strong enough and well organized in the rich capitalistic economy. If the government pursues the full – employment policy, the laborers can get a good money wages than what they have. If the employers are not prepared to grant these higher money wages, then unemployment shall take place in the economy. However, as full-employment is the policy goal of the government, it will increase the supply of money through fiscal/ monetary means and thereby create additional demand so that ultimately all the unemployed persons get absorbed into the economy.

When the employers observe that the government is taking steps to increase their total demand which becomes easy for them to get higher money wages on their productivity. In the context of increasing demand, the increasing prices does not reduce demand, so when the employers demanded higher money wages, they grant it. Because they know that in the context of rising demand, the burden is to be shifted by the producers to the customers in the form of higher prices. As a result, unemployment is not created through money wages of employers demand. Actually real wages are reduced when prices should go up. The prices and real wages are continuously related to each other. And so now still higher money wages will be demanded by the workers which will ultimately result in still higher prices of goods and services and the vicious circle of higher prices and higher wages will ensue. Thus, the full-employment policy becomes the prime cause of the wage-push inflation. Wage and price both rise, and wages are one of the components or parts of the cost of production, so is it knows as cost-push inflation too.

We can visualize situation where even though there is no increase in aggregate demand, prices may be still rise. This may happen if there is increase in costs of independent of any increase in aggregate demand. Three such autonomous increases in costs which generate cost-push inflation have been suggested. They are:
1. Wage-push inflation
2. Profit-push inflation
3. Increase in prices raw materials, especially energy inputs such as rise in crude oil prices.

Here it may be noted that rise in prices of raw, especially energy inputs (petroleum products) which have a cost push effect are also called supply socks.

➢ Wage-Push inflation:

It has been suggested that the growth of powerful trade union is responsible for the spread of inflation, especially in the industrialized countries. When trade unions push for higher wages which are not justifiable either on grounds of a prior rise in productivity or of cost of living they produce a cost-push effect. Employers find it convenient to shift increased cost burden on consumers by way of price hike.
Chart no.1.4.1 Cost Push Inflation:

Cost-push Inflation

Price Level

AD

As1

As2

 Aggregate output
The cost-push inflation can also be illustrated with the aggregate demand and supply curves. Consider above figure, where aggregate supply and demand are measured along the X-axis and price level along the Y-axis. AD is the aggregate demand curve and AS₁ and AS₂ curves are aggregate supply curves. Now, when wages increase, and as a cost of production rises, the aggregate supply curve would shift upward to the left. As will be seen in above figure when there is an upward shift in the aggregate supply curve from AS₁ to AS₂ due to the rise in wages, price level rise from OP₁ to OP₂. Thus, in this case when aggregate demand curve remains the same, price level rises due to rise wages which has caused leftward shift in the supply curve. An important feature of cost-push inflation is that these causes not only rise in price level but brings about a fall in aggregate output. Thus in above figure when price level rises from OP₁ to OP₂, aggregate output falls from OY₁ to OY₂.

➢ Profit Push Inflation:

If the oligopolists dominate the economy, then they can fix relatively higher prices for their respective commodities and earn abnormal profits. Now, when the prices of goods and services rise, employees also demand for higher wages. Firstly to restore real wages to their original position, and secondly in order to share increase in the profits. But when money wages of employees are increased, the oligopolists further increase the prices of their commodities, because due to increase in the wages of the employees the cost of production of commodities also increase and labour is also a factor of production. However, a vicious circle of higher prices and higher wages is set in, but the beginning was made by profit push and that is why it is called the profits push theory of inflation.

Besides the increase in wages of labour without any increase in its productivity, there is another factor responsible for cost-push inflation. This is the increase in the profit margin by the firms working under monopolistic or oligopolistic conditions and as a result charging higher prices from the consumers. In the former case when the cause of cost-push inflation is the rise in wages it is called wage-push inflation and in the latter case when the cause of cost-push inflation is the rise in profit margins, it is called profit-push inflation. The increase in profit margins also produces a cost-push effect and results in shift in the aggregate supply curve to the left.
Demand- Pull Theory of Inflation:
This theory suggest that cost push is not the factor but demand pull leads to the emergence of Inflation. Total demand for goods in the economy can raise either on account of the increase in the money stock or increase in the velocity of money. In the modern economy, liabilities of the non-bank financial intermediaries work as near money substitutes and thereby reduce the demand for money that increase its velocity. Now the rise in the velocity of money can be understood in two ways: first the growth of near money substitute can decrease the demand for money and thereby increase its velocity and second the money held up on account of pervasive controls, as for example, during war time, may began to be spent when controls are relaxed, thereby increasing the turnover of money or the velocity of money. If there are no controls and no undue increase in money stock and if the velocity of money increases, then alone it is the genuine case of increased velocity of money. The above case in reality is the case of the increase in money stock rather than that of enhance velocity of money. Now when controls are relaxed, reduced velocity of money gets increased and accumulated money begins to be spent.

Chart no.1.4.2
Demand-pull Inflation

Demand - pull Inflation

price level

Aggregate Demand and supply
Demand-Pull inflation can be illustrated with aggregate demand and supply curves. Consider the above figure in which aggregate demand and aggregate supply are measured along the X-axis and general price level along the Y-axis. Curve AS represents the aggregate supply which rises upward in the beginning but when full employment level of aggregate supply \( OY_F \) is reached, aggregate supply curve AS takes a vertical shape. This is because after the level of full employment, supply of output cannot be increased. When aggregate demand curve is \( AD_1 \), the equilibrium is at less than full-employment level where price level \( OP_1 \) is determined. Now, if the aggregate demand increases to \( AD_2 \), price level rises to \( OP_2 \) due to the emergence of excess of demand at price level \( OP_1 \). It will be noticed that here the rise in price level has also brought about increase in aggregate output supplied from \( OY_1 \) to \( OY_2 \). If the aggregate demand further increases to \( AD_3 \), the price level rises to \( OP_3 \) under the pressure of more demand. But since the aggregate supply curve is yet sloping upward, increase in aggregate demand from \( AD_2 \) to \( AD_3 \) has caused the increase in output from \( OY_2 \) to \( OY_F \) if aggregate demand further increases, say to \( AD_4 \), only price level rises to \( OP_4 \) with output remaining constant at \( Y_F \). \( OY_F \) is the full-employment level of output and aggregate supply curve is perfectly inelastic at \( Y_F \).

Keynesian Theory of Inflation:
Keynesian theory of inflation works through the investment saving mechanism. It is little surprising to note that there are two Keynesian theories of inflation, one is demand-pull theory and the other is the cost-push theory. It may be said that the demand-pull theory was expressed in the form of an ‘inflationary gap’ by Keynes in his book ‘How to pay for War’ (J.M. Keynes, 1940) and the cost-push theory was contained in his General Theory.

Keynesian and believers in the Quantity Theory of money (QTM) are one in the belief that the immediate cause of inflation is excess demand, though they may disagree regarding the proximate and the ultimate cause of excess demand itself. According to Keynes, excess of investment over saving gives rise to an inflationary gap, which results in inflation. Thus, it is inflation through which saving is increased and made equal to investment. Keynesian Theory highlights the fact that it is because of the shortage of saving to support investment that inflationary gap emerges. It is also highlighted that saving results into the consumer goods which are to be utilized to add
to capital formation. It is only when investment is in access to savings that capital goods shall not match with consumer goods. It is in this respect that the price level shall continue to rise and there by increase in savings leading to inflationary gap when savings match investment the inflationary is reduced to nil and the price level ceases to grow.

Prof. S weintraub, in his famous article “The Keynesian Theory Of Inflation The two faces of Janus?” published in the International Economic Review (Sidney Weintraub, 1960) shows that the Keynesian Theory Of Inflation could only be the cost-push Theory Of Inflation, though generally it is considered to be the demand – pull theory.

➤ **Bent Hansen’s Dynamic Model of Demand inflation:**
Danish economist Bent Hansen rightly complains that the Keynesian theory of inflation is not a pure case of demand inflation. His special contribution in this respect is his emphasis on the dynamic role of the factor gap. So in order to explain inflation, he lays stress on the inflationary gap in the labour market and their mutual interaction. Hansen attempts an impossible task of proving the validity of demand inflation, without bringing into the picture, the institutional factors like the trade union pressure, employment policy, administered prices, etc. or money supply variations. His complaint against the Keynesian theory of inflation falls to the ground, as he himself becomes a prey to the same forces against which he revolted.

➤ **Charles Schultze’s Sectoral Demand – Shift theory in Inflation:**
Professor Schultze could not find any excess demand in the economy in U.S.A. in the early fifties though the prices were found to be rising. He did not accept the cost-push theory of inflation. So, in his effort to reconcile the demand-pull theory with the fact of the rising price level without any general apparent excess demand, he developed this theory. He showed that in a dynamic economy, demand is shrinking in some sectors and shifting to others sectors and so the industry in whose favor, demand has shifted, will register a rise in the price of that commodity produced in that sector which will also enable the employers to grant the rise in money wages to the employees working in that sector. But the sectors in which demand has fallen will fail to register a fall in prices and money wages, on account of the downward rigidity of money wages and hence the general price level will rise (Charles L Schultze, 1959).
In a dynamic economy this will constantly happen, and the story will be repeated many times, giving rise to an inflationary wage-price spiral. Thus the rising price level is not explained by an overall excessive demand, but rather by the sectoral rise in demand in conjunction with the refusal by the declining demand sectors to register a price fall and the wage fall. In a way, it is mixed demand cost inflation. We may say that it is a hybrid variety of inflation sectoral demand-pull and the sectoral cost-push. Its popularity has been short-lived, as it failed to observe general excess demand that was actually prevalent, which enabled the sectoral demand-pull and the sectoral cost-push to transform the relative price and wage-changes into the general price and wage-level changes. We may say that it describes the process of inflation, but does not explain the cause of inflation.

➤ **Markup Theory of Inflation:**

If all firms add up a certain markup (by way of overhead costs and profits) to the costs of direct material and direct labour, in order to fix up the prices of their respective commodities, and if the labourers also price their service by adding a certain definite markup to their cost of living, and if these two do not tally, then inflation may result. We are given to understand that even the markups change. When the total demand in the economy is rising, firms increase their markups and when a high level of employment is reached, the labourers enhance their markups and vice versa. Thus the markup theory of inflation attempts to explain inflation by emphasizing the institutional factor of the markup resulting from the attempts of trade unions and oligopolists. The modified markup theory of inflation shows how markup inflation may become rapid in the circumstances of rising total demand and falling unemployment.

Markup inflation is the result of attempts of the firm and the laborers to maintain certain ‘fair’ relationship between buying prices,(which includes the cost of living), and selling prices (which includes the wage rates ). These classes not only want to maintain the ‘fair’ relationships, but they sometimes attempt to increases their share in the name of the fairness when the productivity is rising or otherwise. When the ‘fair’ shares of all the classes add up to more than 100 percent of the total national output, inflation results .But this is not possible unless money stock is augmented .Total demand for goods cannot be more than the total supply of the goods, unless demand is backed by increased money stock .In reality, the markup theory is simply the
description of the process of inflation. A certain markup, i.e., inconsistency between
the markups of employers and employees here, is not the cause of inflation. All the
theories except the money – stock theory emphasize the institutional factor or some
kind another.

Money Stock Theory of Inflation:
Institutional theory of inflation describes the process of inflation rather than explain
the causes of inflation. Some institutional factors cause rise in money stock and
others bring pressure for the increases in money stock and thus create pressure for
further rise in money stock. So, if this further rise in money stock is not allowed to
take place, inflation does not take place.
According to prof. Milton Friedman, the demand for money function is a stable
function and it depends upon other macro variables. People want to maintain a certain
preposition of real output in form of liquid money. In Cambridge equation $M = KPY$,
$K$ represents such real demand of a certain percentage of annual national output. The
classical or neo-classical economists assumed the value of $K$ to be constant. However,
this may not be true in the modern world where there exist several money substitutes.
But assumption of limitless change in the velocity in also unrealistic and so Friedman
took a middle position and pointed out that $K$ is not constant, nor is it unstable as
Radcliffe’s claimed. But the demand for real money is predictably stable and depends
on the returns on other real variables in the economy.
Prof. Milton Friedman pointed out that if the unit in which $P$ and $Y$ are measured is
changed, the amount of money demanded should change in the same proportion. I.e.
the function is homogeneous of degree one in $P$ and $Y$.
i.e. $M_d = f(P,Y,r-1/r \ dr/dt,1/p,dp/dt,h)$ becomes
$M_d = f(\lambda \ P, \lambda \ Y, r^{-1/r} \ dr/dt,1/p \ dp/dt, h)$
Where $P$: Price level, $Y$: National Income, $r-1/r \ dr/dt = $ Net Interest income
$1/p \ dp/dt = $ expected rate of change of total price level
$h = $ ratio of human wealth and minimum human wealth

$M_d = \lambda \ f (P,Y, r^{-1/r} \ dr/dt, i/p \ dp/dt, h)$

If $\lambda = 1/p$ than $M_d/p = f (p/p, y/p, r-1/r .1/p)$
This is the demand for real money function.
Similarly if $\lambda = 1/Y$ than
\[
\text{Md}/Y = f (p/Y, Y/Y, r-1/r \text{ dr}/dt, 1/p \text{ dp}/dt, h)
\]

So, Prof. Friedman says “the relationship between changes in the stock of money and changes in prices, while close, is not of course precise or mechanically rigid. Two major factors produce discrepancies-changes in output and changes in the amount of money that the public desires to hold relative to income.”

**Structuralist Theory of Inflation:**

There is another important theory of inflation which given by the well known economists Myrdal and Streeten which known as structuralist inflation which explains inflation in the developing- countries especially in Latin America in a slightly different way. The structuralists argue that increase in investment expenditure and the expansion of money supply to finance it are the only proximate and not the ultimate factors responsible for inflation in the developing countries. According to them, one should go deeper into the question as to why aggregate output, especially of foodgrains, has not been increasing sufficiently in the developing countries to match the increase in demand brought about by the increase in investment expenditure, and money supply. Further, they argue why investment expenditure has not been fully financed by voluntary savings and as a result excessive deficit financing has been done. Recently Kirkpatrick and Nixon have generalized this structural theory of inflation as an explanation of inflation prevailing in all developing countries.

Myrdal and Streeten have argued that it is not correct to apply the highly aggregative demand supply model for explaining inflation in the developing countries. According to them, there is a lack of balanced integrated structure in them where substitution possibilities between consumption and production and inter-sectoral flows of resources between different sectors of the economy are not quite smooth and quick so that the inflation in them cannot be reasonably explained in terms of aggregate demand and aggregate supply. In this connection it is noteworthy that V.N. Pandit of Delhi School of Economics has also felt the need for distinguish price behavior in the Indian agricultural sector form that in the manufacturing sector.

Thus, it has been argued by the exponents of structural theory of inflation that economies of the developing countries of Latin America and India are structurally underdeveloped as well as highly fragmented due to the existence of market imperfections and Structural rigidies of various types. The result of these Structural
imbalance and rigidities is that whereas in some sectors of these developing countries, we find shortages of supply relative to demand, in others under-utilisation of resources and excess capacity exist due to lack of demand. According to Structuralist, these Structural features of the developing countries make the aggregative demand-supply model of inflation inapplicable to them. They therefore argue for analyzing disaggregative and sectoral demand-supply imbalances to explain inflation in the developing countries. They mention various sectoral constraints or bottlenecks which generate the sectoral imbalances and lead to rise in prices. Therefore, explain the origin and propagation of inflation in the developing countries, the forces which generate these bottlenecks or imbalances of various types in the process of economic development need to be analysed. A study of these bottlenecks is therefore essential for explaining inflation in the developing countries. These bottlenecks are of three types: (1) Agricultural bottlenecks which make supply of agricultural products inelastic, (2) resources constraint or Government budget constraint, and (3) foreign exchange bottleneck.

1.5 Causes of Inflation:

- Expansion of currency and deposit money:
The monetary authorities deliberately expands the currency during deflationary period to lessen the burden upon the debtors and to provide relief to poor agriculturists, this policy is also adopted to finance development plans and achieve the full employment of productive resources, the low interest rate policy of the government also brings about an expansion of banks loans which increases deposit money.

- Increased Output of Gold:
Inflation something occurs due to a sudden increase in supply of gold, such an increased supply may be due to the discovery of gold mines or heavy importation of gold from foreign countries.

- Scarcity of Goods and Services:
The scarcity of goods and services cause inflation, it happens when the supply of currency increase faster than that of the growth of commodities and supply of services. As a result of it the commodities and services will become scarce and their price would go up.
Raising the Velocity of money:
Inflation also occurs when there is a great increase in the velocities of bank deposit currency. It happens when people stop preferring liquid money and their consumption function dominates the saving attitude.

Deficit Financing:
Inflation sometimes occurs due to the fact that the government has to create money as a means of providing itself with funds for paying government issues more currency in the market to meet its expenditure on monetary lines or government borrow money from the foreign countries to increase money supply. This device of the government to finance itself with funds is known as “deficit financing”

International price rise:
It is said that inflation may be imported; for the example rising price in one country may bring sympathetic rise in the price in the other country.

Devaluation:
Devaluation may cause inflation. After devaluation exports are encouraged. More goods are exported and thus there is scarcity of commodities at home. Hence the price rise and induce inflation.

Increase in taxation:
Thought increase in taxation is as a rule disinflationary, it is because such increase reduce the purchasing power of the people, however, it taxes imposed are on production and sale of such goods which they can be passed on to consumer, price of such goods rise may augment inflation.

1.6 Types of Inflation:
Inflations of different types classified on various bases, some of the basis on which inflation is classified is discussed below:
On the basis of full employment:

I. Semi inflation:
According to Lord Keynes if an increase in the price is partly due to increase in the cost of production and partly due to increase in the supply of money before the point of full employment, it is called semi inflation or Bottleneck inflation. This kind of inflation is chronic to the countries which are below the full employment level. This inflation causes increase in the employment opportunities.

II. Full inflation
This kind of inflation which prevails after an economy has achieved the level of full employment, any increase in the money supply will only result in the rise of price since there is full employment in the economy.
In full inflation every unit of more money in circulation will directly increase the price; it is not good for the economy according to the lord Keynes.

On the basis of Causes

I. Credit inflation
It is a kind of inflation which originates due to expansion of credit money which further increases the purchasing power of money without any further increase in the inflation.
Currency inflation when inflation is caused due to the excessive flow of currency it is the currency inflation. It happens when government issues more currency without any legitimate demand of currency in the form of goods and services,

II. Purchasing power inflation
When the restrictions on the wages and salaries are lifted and more money is paid to these people whose purchasing power increases, causing increase in the price. It is called purchasing power inflation.

I. Taxation and budgetary inflation:
Increase in the taxes whether direct or indirect raises the price of the commodities which result in the inflation. To meet the gap between revenue and expenditure some time government adopts the technique of deficit financing, which further increase the
money supply and consequently raises the prices. If this kind of inflation is not checked it results in to galloping inflation.

II. Over investment inflation
When the investment exceeds the production done by the units, the economy faces inflation due to the increase of money supply in the market due to over investment.

III. Dis-Saving inflation
When saving starts falling down, the purchasing power of the individual goes up. This is result in increasing the expenditure which causes inflation.

I. Devaluation inflation
This kind of inflation occurs when there is decrease in the value of money, this act is called as devaluation, and the inflation caused due to this act is called devaluation inflation.

II. Commonly inflation
When the inflation is caused due to the increase in the commodity price, it is called commodity price inflation,

I. Imported inflation
When there is inflation to meet the repayment of the imports, it is called imported inflation. It generally happens when imports goes up very quickly.

❄ Inflation under a complete metallic currency system:
Now-a-days no economy prevails with the complete currency system. In theory, in such a country the inflation occurs due to various reasons. If currency supply goes up or if the government accepts some other metal as currency metal then the supply of coins will go up. In case if more token money is issued more currency will flow into the market and that will further cause inflation. The same thing will happen if foreign coins are monetized.
On the basis of inducing causes:

I. Profit induced inflation:
When the sellers want more and more profit; this they do either by reducing them per unit cost or by increasing the selling price then inflation occurs. This is called profit induced inflation.

II. Wage induced inflation:
When the workers demand more wages and it is increased without any increase in the production of the commodities; then it creates inflation. Because increase in the money-wages; automatically boosts up the purchasing power of the workers.

I. Deficit induced inflation:
It occurs when the money supply goes up without any legitimate increase in production through deficit financing. Deficit finance is the printing of new currency and circulating it in the market, to meet the excess of expenditure over its revenue on the part of the government.

On the basis of Rapidity:

I. Creeping inflation or slow inflation:
Creeping inflation is the inflation with slow speed. This inflation is helpful to those developing economies which fear a kind of stagnation or breakage in the course of economic transition. It is sometimes inevitable for the economy. As the economy have to divert its resources towards productive field with less amount left to meet the increasing demand for goods and services.
However economists have warned that if such type of inflation is allowed to prevail for long then it would result into galloping type of inflation which will uproot the development of economy.

II. Hyper inflation or galloping inflation or jumping inflation:
It is worst type of inflation which lies beyond the normal conditions and may end in the ruin of Monetary System of the affected economy. It is a kind of inflation in which prices starts going up, quite rapidly within a very short period. The ratio of increase in price level is higher than that of the ratio of change in the time. It all
happens at galloping speed. Lord Keynes has called it as the full inflation in the sense that it is the final stage of inflation.

- **On the basis of control:**
  
  **I. Open inflation:**
  
  When inflation is out of control and government does not attempt to check it or if it goes out of the controlling rein; it is called open inflation.

  **II. Controlled inflation of suppressed inflation:**
  
  It is also known as suppressed inflation. When prevailing inflation is put under control for a time being; the inflation is not checked for ever, but it is under the pressure of some monetary policy which does not allow the inflationary trends to come up. To quote Paul Einzing, if the inflation, is prevented by governmental measures such as rationing, price control, etc. from producing its effect on prices, it is suppressed inflation.

- **Classification On the basis of nature:**
  
  **I. Demand Pull inflation:**
  
  When demand for the commodity increase and exceeds the supply, the prices of the commodities starts going up. Demand exceeds the supply and thus purchasing power goes over the commodities available in the economy. It happens, according to experts on the subject due to increasing expenditure of the government and small volume of taxation.

  **II. Cost Push inflation:**
  
  Cost push inflation occurs when less supply is available at higher prices due to the increase in the cost per unit of the production. The push in the cost may be due to various reasons like increase in the wages of the laborers, increase in the price of the raw- material or manufacturing. Cost push inflation chiefly takes place when trade unions press for increase in the wage level and if their demand is accepted.
On the basis of Area of Activity:

I. National inflation:

When inflationary process attacks national economy only then it is called national inflation; in such an inflation price rise only in the economy. They do not have any parallel effect on the price level of the trading countries. This often happens during war.

II. International inflation:

When the rise in prices becomes common for the whole world it is called international inflation. The international inflation affects the other economies through trade which bibles the whole world. The price-rice becomes the talk of the town, everywhere without caring for any country as an exception.’

This may happen in case of world war. A world war creates acute shortage of certain essential commodities in the whole world.

1.7 Effects of Inflation:

Inflation is a very unpopular happening in an economy. Opinion surveys conducted in India, the U.S.A. and other countries reveal that inflation is the most important concern of the people as it badly affects their standard of living. The political fortunes of many political leaders (Prime Ministers and Presidents) and governments in India and abroad have been determined by how far they have succeeded in talking the problem of Inflation. Some American presidential candidates called ‘inflation as enemy number one’. Same is the case in India where inflation id the most hotly debated issue during the general elections for the Parliament and Assemblies. A high rate of inflation makes the lie of the poor very miserable. It is, therefore, described as anti-poor. It redistributes income and wealth in favour of some and greatly harms others. By making the rich richer and the poor poorer, it militates against social justice. Besides, inflation lowers national output and employment and impedes long run economic growth especially in developing countries like India. We shall discuss below all these effects of inflation.

Anticipated and Unanticipated Inflation:

The difference between anticipated and unanticipated inflation is of crucial importance as the effects of inflation, especially its redistributive effect, depend on
whether it is anticipated or not. If rate of inflation is anticipated, then people take steps to make suitable adjustments in their contracts to avoid the adverse effects which inflation could bring to them. For example, if a worker correctly anticipates the rate of inflation in a particular year to be equal to 10% and if his present wage rate is Rs. 5000 per month, he can enter into contract with the employer that to compensate for the 10% rise in prices his money wage per month next year be raised by 10% so that next year gets Rs. 5500 per month. In this way he has been able to prevent the erosion of his real income with the automatic revision of his money wage depending on the anticipated rate of inflation.

Take another example. You lend Rs. 10,000 to a person a rate of 10% per annum. After a year you will receive Rs. 11,000. But if it’s anticipated that during the year there will be 8% rate of inflation, then 8% of your income will be offset by the rise in prices that would occur so that you will get only 2% real rate of interest. Therefore, in order to receive 10% real rate of interest, in view of 8% anticipated inflation rate you must demand 18% nominal rate of interest.

On the other hand, effects if unanticipated inflation is unavoidable because in this case you do not know what would be the rise in the price level. That is, unanticipated inflation catches you by surprise. In what we shall examine the effects of unanticipated inflation. The effects of inflation can be divided into three categories:

A. Effects on real income;
B. Effects on distribution of income and wealth;
C. Effects on output; and
D. Effects on long-run economic growth

- Inflation Erodes Real Incomes of the People:

To examine the effects of inflation it is important to note the difference between money income and real income. It is the change in the general price level that creates the crucial difference between the two. Money income or what is also called nominal income means the income such as wages, interest, and rent received in terms of ruppes. On the other hand, real income implies the amount of goods and services which you can buy. In other words, real income means the purchasing power of your income. If your money or nominal income increases at a lower rate than the rate of rise in the general price level (i.e., the rate of inflation), you will be able to buy less goods and services, that is, your real income will decline. Real income will rise only if
nominal income rises faster than the rate of inflation, for illustration; take the case of workers who enter into contract with their employer at an agreed wage rate of Rs. 5000 per month for the period, say 5 years. Now, suppose the rate of inflation is 10% per annum. This means after a year, with money wage rate of Rs. 5,000 workers will be able to buy less goods and services. That is, their real income will decrease and therefore their standard of living will fall.

Take another example; suppose you deposit your saving of Rs. 100 in a saving account which carries 5% rate of interest. After a year you will receive Rs. 105. However, if during that year rate of inflation has been 12%, you will be a loser in real terms. In fact your real interest income will be negative as with 12% rate of inflation, Rs. 105 after a year will buy less goods and services than what you can purchase with Rs. 100 today.

The above two examples clearly show that inflation reduces the purchasing power of money and thereby adversely affects real income of the people.

➤ **Effects on Distribution of Income and Wealth:**
An Important effect of inflation is that it redistributes income and wealth in favour of some at the cost of others. Inflation adversely affects those who receive relatively fixed incomes and benefits businessmen, producers, traders and others who enjoy flexible incomes. Inflation brings windfall profits for the producers and traders. Inflation produces a deep impact on the distribution of income and wealth in the society. Businessman, traders, merchants and speculators reap rich harvests on account of windfall profits accruing to them as a result of the inflationary rise in price. Thus, all do not lose as a result of inflation, rather some gain from it. The impacts of inflation on various group of society are as below:

i. **Debtors and creditors:**
Unanticipated inflation harms creditors and benefits debtors and in this way redistributes income in favour of the latter. As explained above, value of money declines due to inflation. For creditors (including financial institutions such as banks and insurance companies) who enter into agreement with the borrowers to provide loans at fixed nominal rate of interest, the real value of money in terms of goods and services which they will receive at the end of the period would be much less if during the period prices rise sharply. Thus, during inflation debtors or borrowers are
generally the gainers because they would return the loan-money when its real value has declined greatly due to the unexpected rapid rate of inflation; while the creditors are losers. The reason behind it is the purchasing power of money was high at the time creditor lent the money, while the purchasing power of money is low right now.

ii. **Wages and salary earners:**
Wages and salary earners mostly suffer during inflation because Wages and salaries generally do not rise in the same proportion as the cost of living standard. When workers are well-organized into powerful trade unions, they may not suffer much during inflation, but if they are unorganized they may suffer much during inflation.

iii. **Fixed income groups:**
It is generally found that people having fixed incomes generally loose from inflation. This is particularly found intensively with the workers and salaried people. There tends to be an increased gap in between the employers and fixed income employees owing to hectic inflationary pressures. When inflation occurs, the purchasing power of their nominal incomes falls greatly causing a decline in their levels of living. Thus, when inflation persists for some years there are demands for revision of wages and salaries. It may be mentioned that now-a-days workers and other salaried people get dearness allowances to compensate them for the rise in cost of living due to inflation. However, these dearness allowances do not fully neutralize the rise in price level and therefore they also demand revision of wages and pay scales. The fixed income groups are the hardest hit during inflation because their income being fixed, do not bear any relationship with the rising cost of living. The main targets of this hit are pensioners, interest and rent receivers, etc. as their income remain fixed while the prices soar highest.

iv. **Entrepreneurs:**
Businessmen, that is, Entrepreneurs and traders, stand to gain by inflation. During periods of inflation, the prices of goods produced by Entrepreneurs rise relatively faster than the cost of production because wages lag behind the rise in prices of goods. Consequently, *inflation increases the profits of businessmen.* The value of the inventories or stocks of goods and materials kept by the Entrepreneurs and traders
increases due to rise in prices of goods which brings about an increases in their profits.

v. **Investors:**
Investors are generally of two kinds:
- a. Investor in equities (shares), and
- b. Investors in fixed interest yielding bonds and debentures

Inflation also adversely affects wealth holders who hold their wealth in the form of cash money, demand deposits, saving and fixed deposits and interest-bearing bonds debentures. These wealth holders are severely hurt by inflation as inflation reduces the real value of their wealth. Saving and demand deposits, bonds and debentures represent assets whose value is fixed in terms of money. The rise in prices reduces the purchasing power of these fixed-value money assets such as saving and time deposits, bonds and debentures which bear a fixed nominal rate of interest.

Inflation therefore reduces the real rate of interest earned by them. Consequently, it has been observed that during periods of rapid inflation people try to convert their holdings of money and near money into goods and physical property so as to avoid the loss due to inflation. It may also be noted that if inflation is anticipated and all expect equal rates of inflation the nominal rates of interest are adjusted upward so as to obtain targeted real rate of interest. Thus, if creditors want real rate of interest equal to 10% and anticipate rate of inflation is equal to 8%, they will try to have nominal rate of interest fixed at 18%. This is known as Fisher effect which states that market or nominal rate of interest is equal to the real rate of interest (based on productivity of capital and rate of time preference) thus nominal rate of inflation includes what is called inflation premium to prevent the erosion of purchasing power due to inflation.

vi. **Farmers:**
Farmers are generally gainers during inflation. The price of farm products goes up while the costs incurred by them do not go up to the same extent. Moreover, the farmers are generally debtors and can repay their debts during inflation in terms of less purchasing power scenario of money.

Thus, inflation redistributes wealth and income in such a manner as to injure the interest of consumers, creditors, salary and wages earners, fixed income groups, small investors and to favour businessmen, merchants, traders and farmers. Socially,
inflation is unjust and iniquitous. It transfers wealth to those sections that have too much.

vii. Pensioners:
They also come in the category of the people who get income in fixed nominal terms. For the people who retired in 1984 with the monthly pension of Rs. 2000, the real value of their pension in Oct. 1998 would been reduced to one third as compared to 1984 as there has been more than 300% rise in the price level during this period. It may also be noted that in order to reduce the hardship of the pensioners, some dearness allowance is also provided on pension. But effects of inflation on the real value of their pension are only partly offset in this way.

Effects on Production:
There is good deal of uncertainty and also disagreement as to whether inflation will adversely or favourably affect national output. The effect of inflation on output also depends on whether it has been caused by demand-pull or cost-push factors. Further, the effect of inflation on output depends on whether it is moderate or very rapid or whether it is anticipated or unanticipated.

The phenomenon of inflation produces a very deep impact on the production of wealth in the economy. In fact, the impact of inflation can be studied under two situations. One is Mild Inflation which is not detrimental to productive activities in the economy. An expansion of money supply in an underemployed economy will result in slow and gradual rise in the price. But such the situations exist until full employment is attained. Other is Hyperinflation which disrupts the smooth functioning of the economy.

Since hyperinflation results in a serious depreciation of the value of money, it discourages saving on the part of the public. Consequently the process of capital formation suffers a serious setback. As inflation results in a seller’s market, it may lead to a serious deterioration in the quality of goods produced in the economy.

The most serious effect of inflation is that disrupts the smooth working of the price mechanism. It also loses the flexibility under the inflationary forces, which results in the reduction of mobilization of productive resources.
Hyperinflation and Economic Crisis:

When inflation is extremely rapid, it is called hyperinflation. The effect of hyperinflation on national output and employment turns out to be devastating. This hyper inflation is generally caused when government issues too much currency which greatly adds to the money supply in the economy. However, some economists are of the view that even mild or creeping inflation may ultimately lead to hyperinflation. They argue that when prices go on creeping upward for some time, people start expecting that prices will rise further and value of money will depreciate. In order to protect themselves from the fall in the purchasing power of money in the future, they try to spend money now. That is, they try to beat the anticipated price increases. This raises the aggregate demand for goods in the present. Businessmen too increase their purchases of capital goods and build up larger than normal inventories if they anticipate rise in prices. Thus, inflationary exploitations raise the pressure on prices and in this way inflation feeds on itself. Further, the rise in prices and the cost of living, under the influence of rising aggregate demand, prompts the workers and their unions to demand higher wages to compensate them for the rise in prices. During the periods of boom these demands of the workers for hike in wages are generally conceded. But rise in labour costs due to higher wages are recovered by business firms from the consumers by raising the prices of their products. This increase in prices gives rise to demand for further increases in wages resulting in still higher costs. Thus, cumulative wage-price inflationary spiral starts operating which may cumulative in hyperinflation.

Hyperinflation not only has disruptive redistributive effect, it also brings about economic crisis and may even cause collapse of the economic system. Hyperinflation encourages speculative activity on the part of people and businessmen who shy away from productive activities, as they find it highly profitable to hoard both finished goods and materials expectations of further rise in prices. But such hoardings of goods and materials restrict the supply and availability of goods and tend to intensify the inflationary pressure in the economy. Instead of making productive investment, people and businesses tend to invest in unproductive assets such as gold and jewellery, real estate, houses etc., as a means of protecting themselves from inflation. In the extreme when, as a result of issuing too much money supply or working of wage-price spiral, inflation becomes extremely rapid or what economists called hyperinflation, normal working of the economy collapses. In this situation, “prices are
so rapidly rising and consequently purchasing power of money so much declining those businessmen do not know what to charge for their products and consumers do not know what to pay. Resource suppliers will want to be paid with actual output rather than with rapidly depreciating money. Creditors will avoid debtors to escape the repayment of debts with cheap money. Money becomes virtually worthless and ceases to do its job as a measure of value and a medium of exchange. The economy may be literally thrown into a state of barter. Production and exchange grind towards a halt and the net result is economic, social and political chaos”.

Such grim and gloomy situation created by hyperinflation did occur in the Germany during 1920s and in Hungary and Japan in the forties. At that time, money depreciate so much that for some time barter system came to prevail and after some time, the new currency had to be issued. It is therefore desirable that appropriate anti-inflationary measures be taken so that inflation should not go out of control and get transformed into hyperinflation.

**Effects of Inflation on Long-run Economic Growth:**

Some economists have argued that inflation of a creeping or mild variety has a tonic effect on the long-run economic growth. In their support they give the example of today’s industrialized countries in the Eighteenth and Nineteenth Centuries when the rate of growth of output had been more rapid during long periods of inflation witnessed in these countries. The driving force in the process of economic growth, according to them, has been *high profit margin* created by inflation. They argued that wages lag behind the rise in general price level and thus creating higher profit margin for businessmen and industrialists. This tends to increase the profit share in national income. The businessmen and industrialists who receive profit as income belong to the upper income brackets whose propensity to save is higher as compared to the workers. As a result, savings go up which ensures higher rate of investment. With greater rate of investment more accumulation of capital is made possible. More rapid capital accumulation generates a higher rate of long-run economic growth.

Looking at the problem from an alternative angel, with wages lagging behind rise in prices, inflation causes a large shift of resources away from the production of consumer goods for the wage earners to the production of capital goods. The higher rate of expansion in capital stock raises the growth of productive capacity of the economy and productivity of labour. This generates rapid economic growth.

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Bad Effects of Inflation on Economic Growth:-

It is now widely recognized that, encouraging savings and generating higher rate of economic growth, inflation slows down the rate to the capital growth. There are several reasons responsible for this.

First, when the rapid inflation, value of money is declining; people will not like to keep money and will, and they are eager to spend it before its value goes down heavily. This raises their consumption demand and therefore lowers their saving. Besides, people find that the rapid inflation will erode the real value of their savings. This discourages them to save. Thus, inflation or rapid rise in prices serves as a disincentive to save.

Second, inflation or rising prices lead to unproductive form of investment in gold, jewellery, real estate, construction of houses etc. These unproductive forms of wealth do not add to the productive capacity of the economy. It is quite useless from the viewpoint of economic growth. Thus, inflation may lead to more investment but much of this is of unproductive type.

Third, a highly undesirable consequence of inflation is poverty, especially in developing countries. It is often said inflation is enemy number one of the poor people. Due to rising prices poor people are not able to meet their basic needs and maintain their demands. Thus, inflation sends many people to live below the poverty line with the result that the number of people living below the poverty line increases. In India, rapid inflation in recent years is as much responsible for mounting number of people below the poverty line as the lack of employment opportunities.

Fourth, inflation adversely affects balance of payments and thereby hampers economic growth, especially in the developing countries. When prices of domestic goods rise due to inflation, they cannot export the goods to the abroad and as a result, exports of country are discouraged. On the other hand, when domestic prices rise relatively to prices of foreign goods, imports of foreign goods increase. Thus, falling exports and rising imports create disequilibrium in the balance of payments which may lead to foreign exchange crises in the long run. The shortage of foreign exchange prevents the country to import even essential materials and capital goods needed for industrial growth of the country. The India experienced during 1988-92 when foreign exchange reserves declined to abysmally low level and created an economic crisis in the country, shows the validity of this argument.
There is no agreement among economists whether or not moderate or mild inflation encourages saving and therefore ensures higher rate of capital accumulation and economic growth. However, there is complete unanimity that a very rapid inflation or what is often called hyperinflation discourages saving and hinders economic growth. However, barring the special case of hyperinflation, whether or not saving is encouraged by inflation depends on whether there exists wage lag. While there is sufficient evidence in the industrialized countries such as the U.S.A., Great Britain, and France etc. about the existence of wage lag in the period before the World War 2, in the period after this there is no solid evidence of it. In the present wages quickly catch up with the rising prices. Indeed, there is evidence in some developed countries that the share of profits in national income has declined and that of wages has going up during the post World War 2 period. Therefore, “To the extent the rate of long-run economic growth depends on the rate of capital accumulation, a major basis for the conclusion that inflation promotes rapid economic growth is undermined given that wages no longer lag during inflation as they apparently did in time of pas”. However, it may be noted that in the developing countries like India where labour is mostly unorganized and trade unions of labour are not strong and further there is a lack of information which causes wages lagging behind prices during period of inflation. This it will cause greater proportion of national income going to profits and other business incomes which should ensure higher saving rate. However, in India, businessmen are prone to make unproductive investment in speculative activities, gold, jewellery, real estate and palatial houses whose prices rise rapidly during periods of inflation. Such kind of investment is not only counter-productive and anti-growth but is repugnant to social justice as it further accentuates inequalities in the distribution of income and wealth. It follows from above that rising prices as a goal of monetary policy are full of disastrous consequences for the economy and the people and therefore cannot be recommended as a desirable goal for the economic policy. Rising prices often get out of hand and hyperinflation might set in which will shake the confidence of the people in the monetary and fiscal system of the country.
1.8 The Social Cost of Inflation:
The Social Cost of Inflation reducing the purchasing power of people’s incomes, inflation inflicts some other costs on the society. To explain such costs of inflation it is necessary to distinguish between anticipated inflation and unanticipated inflation.

Cost of Anticipated Inflation:
Suppose in an economy there has annual inflation rate of 5% for a long time in the past and everybody expects that this 5% rate of inflation will continue in the future too. In such a case all contracts made by the people such as loan agreements with borrowers, wage contracts with labour, property lease contracts will provide for 5% annual rise in rates of interest, wages, rent to compensate for inflation of that order. That is, in any contract in which passage of time is involved 5% rate of inflation will be taken into account and rates will be agreed to rise per period equal to the anticipated rate of inflation. If rates of interest, wages, rent etc are agreed to rise at the anticipated rate of inflation, then there will be no cost of inflation except the following two types of costs shoe-leather costs which are not very high. We explain below both these types of costs.

I. Shoe-leather costs:
This types of costs occurs because on account of inflation cost of holding money in the form of currency i.e. (notes and coins) rises with the increase in inflation rate. Such cost arises because no interest is paid on holding currency, while money kept in deposits with the bank or used for keeping bonds earns interest. When inflation rate raises, the nominal interest rate on bank deposits rises, the interest lost by holding currency by the people therefore increases. In order to reduce the cost of holding currency people will tend to reduce their holdings of currency for transaction purposes. Accordingly, at a time people will hold less currency with them and keep as long as possible greater amount of money in bank deposits that yield interest. Therefore, rather than withdrawing a large amount of currency from banks at a time, they will withdraw less money which is sufficient for meeting daily expenses for a few days, say for a week. But for doing so the people will make more trips to withdraw cash. More trips to a bank in a month involve greater cost to the people. These costs have to be incurred on spending on petrol if car is used for making trips, more wear and tear of car, the time spent for making a trip. These costs of making
more trips to the bank for withdrawing currency is metaphorically called shoe-leather of inflation, as waking to banks more often, one’s shoes wear out more rapidly and one has to spend money on new shoes more often.

II. Menu Costs:
The second type of anticipated inflation is menu costs, a term derived from a restaurant’s costs of printing a new menu. Menu costs arise because high inflation requires them to change their listed prices more often. Changing prices is somewhat more expensive because the firms have to print new catalogues listing new prices and distribute them among their customers. They have even to incur expenditure on advertisements to inform the public about their new prices.

III. Macroeconomic inefficiency in resource allocation:
A third cost of inflation arises because firms having menu costs change their prices quite infrequently. Given the reluctance to change prices frequently, the higher the rate of inflation, the greater the variability in relative prices of a firm. Suppose a firm issue a new catalogue listing prices of its products once in a year, say in the month of January of every year. If during the year inflation occurs, there will be change in the relative prices of a firm to the general price level. If inflation rate of 1% per month takes place in a year the firm’s relative prices to the general price level will fall by 12% by the end of the year (when its prices are relatively high) and higher in the later part of the year (when its prices are relatively low). Thus when due to inflation relative prices of a firm vary during a year as compared to the overall price level, it causes distortion in production and therefore leads microeconomic inefficiencies in resource allocation.

IV. Inconvenience of Living:
Lastly, another social cost of inflation is the inconvenience of living in a world with a changing price level. Money is the yardstick with which we measure the value of transactions. When inflation is taking place the value of money changes and as a result it becomes difficult to correctly estimate the value of transactions in real terms every time transaction is made during a year. The rising price level makes it difficult to make optimal decisions about saving and investment and thus do the rational financial planning covering a long period of time. To quote Mniw, “A dollar saved
today and invested at a fixed nominal interest rate will yield a fixed dollar amount in the future. Yet the real value of that dollar amount – which will determine the retiree’s living standards – depends on the future price level. Deciding how much to save would be much simpler if people could count on the price level in 30 years being similar to its level today.”

Taking account of all costs anticipated inflation one finds that the cost of anticipated inflation are quite small or trivial and if these alone are considered, it is then surprising why inflation it a matter of serious concern for the policy makers and politicians. In our opinion the above view of costs of inflation does not consider the true cost of inflation which, as mentioned above, refers to the reduction in purchasing power or real incomes of the people which lowers their standard of living. Besides, there is ample cross country evidence that high rates of inflation lead to low rate of sustained economic growth.

It may be further noted that in the above analysis of cost of inflation it is assumed that there is only small to moderate inflation rate, say a single digit rate of inflation occurs so that it does not disrupt the payment system. With such a low to moderate inflation, costs of inflation are small. The hyperinflation has more harmful effect as it disrupts the payment system which leads to the collapse the economy.

Costs of Unanticipated Inflation:

Unanticipated inflation has a more substantial and harmful effect as compared to the cost of anticipated inflation rate. The significant effect of unanticipated inflation is that it arbitrarily re-distributes wealth among individuals. Consider the value of assets fixed in nominal terms. Between 1995 and 2006, price level in India rose by about 100%. This implies that those who held claims on assets fixed in nominal terms in 1996, their real value in terms of purchasing power would have declined significantly. Thus, a person who bought government bond of 10 years maturely with a face value of Rs. 1000 bearing 8% nominal interest rate in 1996 will find that Rs. 1000 he gets bank in 2006 has far less value than when he purchased the bond in 1996. Similarly, unanticipated inflation harms the individuals, who retire on pensions fixed in rupee terms. After some years of inflation, the real value or purchasing power of the fixed nominal pension will greatly decline and will therefore reduce his standards of living in his old age. Thus inflation hurts individuals with fixed pensions. Workers and the private firms often agree on fixed nominal pension payable to the workers.
after retirement. Workers are greatly harmed when inflation is higher than anticipated. Likewise, higher than anticipates inflation rate hurts the creditors who give loans to the others and get back the principal amount after the stipulated period. Thus inflation redistributes wealth in favour of debtors.

1.9 Controls of Inflation:
There are various measures to control inflation, but monetary and fiscal are most effective and significant tools. Now we will discuss how these policies helps to control inflation.

➢ Monetary policy:
Inflation is primarily a monetary phenomenon and it has been accepted by many classical and neo-classical economists. Hence, the most logical situation to check inflation is to check the flow of money supply by devising appropriate monetary policy and carefully implementing them.
In order to control inflation, it is necessary to control total outlays because under full employment, increase in total outlays will be reflected in a general rise in prices, i.e. inflation. The central bank’s monetary management method, the devices for decreasing or increasing the supply of money and credit for monetary stability is called monetary policy.
Reserve Bank of India, which works as Central bank of India generally use three quantitative tools.
   a) Bank rate policy,
   b) Open market operations and
   c) Variable reserve ratio to control the volume of credit in an economy
A dear money policy is used in order to curb inflationary pressure. In this context bank rate may be raised, open market operation may be taken and the reserve requirement ratio may be increased.
Monetary policy refers to the adoption of suitable policy regarding interest rate and the ability of credit. Monetary policy is another important measure for reducing aggregate demand to control inflation. As an instrument of demand management monetary policy can work in two ways. First, it can affect the cost of credit and second, it can influence the credit availability for private business firms. Let us first consider the cost of credit. The higher rate of interest, the greater the cost of
borrowing from the banks by the business firms. As anti-inflationary measure, the rate of interest has to be kept high to discourage businessmen to borrow and more also to provide incentives for saving more. In fifties and early sixties, the cheap credit policy (i.e., lower interest rates) was recommended on the ground that lower rate of interest will promote more private investment which is an important factor determining economic growth. Keeping in view this consideration, cheap money policy was adopted in India up to 1964 and accordingly bank rate was kept low. However, private investment demand has been empirically found to be interest-inelastic. This implies that changes in the rate of interest do not affect the much the inducement to invest. Therefore, rational behind cheap money policy was not based upon valid grounds. Since the mid sixties the dear money policy (that is, higher interest ‘rate policy’) has been pursued in India to curb the inflationary pressures in the Indian economy. As maintain above, the higher rate of interest on saving and fixed deposits will induced more savings by the households and help in cutting down aggregate consumption expenditure. Besides higher rates of interest will discourage more investment in inventories and consumer durables and will help in reducing aggregate demand. Not only has the bank rate had to be raised but also the deposit and lending rates of commercial banks if full effects of the monetary measure are to be achieved.

It is noteworthy that a recent monetary theory emphasizes that it is the changes in the credit availability rather than cost of credit (i.e., rate of interest) that is a more effective instrument of regulating aggregate demand. There are several methods by which credit availability can be reduced. Firstly, it is through open market operations that the central bank of a country can reduce the availability of credit in the economy. Under open market operations, the reserve bank sells government securities. Those, especially banks, who buy these securities, will make payment for them in terms of cash reserves. With their reduced cash reserves, their capacity to lend money to the business firms will be curtailed. This will tend to reduce the supply of credit or loanable funds which in turn would tend to reduce investment demand by the business firms.

However, in India open market operations do not play a significant role as an instrument of credit control to fight against inflationary situation. This is because market for government securities is narrow as well as captive. General public do not buy more than a fraction of government securities. It is the institutions such as commercial banks, LIC, GIC and provident funds which are required by law to invest
a certain proportion of their funds in buying government securities. Thus, in the context of captive market for government securities open market operations cannot be usefully used for checking inflation.

In India, it is the Cash Reserve Ratio (CRR) which can be raised to curb inflation. By law banks have to keep a certain proportion of cash money as reserve against their deposits. This is called Cash Reserve Ratio. To contract credit availability Reserve Bank can raise the ratio. In recent years to squeeze credit for checking inflation, cash reserve ratio in India has been raised from time to time.

Another instrument for affecting credit availability is the Statutory Liquidity Ratio (SLR). According to statutory liquidity ratio, in addition to CRR, banks have to keep to a certain minimum proportion of their deposits in the form of specified liquid assets. And the most important specified liquid asset for this purpose is the government securities. To mop up extra liquid assets with banks which may lead to undue expansion in credit availability for the business class, the Reserve Bank often raised statutory liquidity ratio.

➢ **Selective Credit Controls:-**

By far the most important anti-inflationary measure in India is the use of selective credit control. The method of credit control described above is known as quantitative or general methods as they are meant to control the availability of credit in general. Thus, bank rate policy, open market operations and variation in cash reserve ratio expand or contract the availability of credit for all purposes. On the other hand, selective credit controls are meant to regulate the flow of credit for particular or specific purpose. Whereas the general credit controls seek to regulate the total available quantity of credit (through changes in the high powered money) and the cost of credit, the selective credit controls seeks to change the distribution or allocation of credit between various uses. These selective controls are also known as *Qualitative Credit Controls*. The selective credit controls have both the positive and negative aspect, measure are taken to stimulate the greater flow of credit to some particular sectors considered as important. Thus in India, agriculture, small and marginal farmers, small artisans, and small-scale industries are the priority sectors to which greater flow of bank credit has been sought to be encouraged by the Reserve Bank of India. In its negative aspect, several measures are taken to restrict the credit flowing
into specific activities or sectors which are regarded as undesirable or harmful from
the social point of view. The selective credit controls generally used are:

1. Changes in the minimum margin for lending by banks against the stocks of
   specific goods kept or against other type of securities.
2. The fixation of maximum limit or ceiling on advances to individual borrowers
   against stock of particular sensitive commodities.
3. The fixation of minimum discriminatory rates of interest chargeable on credit
   for particular purposes.

In India selective credit controls are being used by the Reserve Bank to prevent
speculative hoarding of commodities so as to check the rise in prices of these
commodities. The selective credit controls in India are being used in case of food
grains, oilseeds, vegetable oils, cotton, sugar, gur and khandsari.

Though, all the above techniques of selective credit controls are used, in India it is the
first technique, namely, the changes in the minimum margin against stocks of
commodities or other securities that has been mostly used. It may be noted that the
Reserve Bank of India has the power to vary the minimum margin requirements
against the security of stocks of commodities. While lending advances to
businessmen, the commercial banks leave a margin of the value of stock kept as
security to be financed by the businessmen from their own sources and lend money
equal to the remaining amount of the value of the stock. This minimum requirement
of the value of the stock left to be financed by the borrowers themselves is known as
margin. Suppose the margin fixed for a stock of particular commodity is 60 percent.
In this case, the businessmen can borrow up to the value of 40 percent of the stock of
commodity and the remaining 60 percent of the value of stock will be financed by the
businessman himself. Now, if the Reserve Bank raises the margins to 70%, then he
can borrow from the bank to the extent of 30% of the value of the stock of that
commodity by the businessmen. If the businessmen are not able finance the holding of
10% extra stock of the commodity. This will lower the prices, other things remaining
the same.

Some conditions are necessary for the successful operations of selective credit
controls of commodities. First, they should be accompanied by general credit control
measures. This is because the clever businessmen can obtain credit from the banks by
offering other securities and use the funds so obtained to finance the speculative
holdings of the stocks of sensitive commodities. There for, if the selective credit
controls are to succeed in preventing the rise in prices of sensitive commodities, they have to be accompanied by general credit controls aimed at reducing the capacity of banks to lend money. It is also follows from above that end-use or purpose of all credit ought to be taken into account by the banks and credit advanced accordingly if selective credit controls are to be effective. In India the selective credit controls have been in operation since 1956 to check the rise in prices of sensitive commodities.

The success of the selective credit controls also depends upon the extent to which the funds from *non-bank sources* (i.e., from their own funds and also from the unregulated money market) is available to the businessmen. When the bank credit for a particular purpose is reduced, the businessmen can use their own funds or borrow from non-regulated money markets for speculative holding of inventories. In India today the businessmen have large quantities of black money with them which they generally use for speculative holding of inventories of sensitive commodities and in this way succeed in defeating the purpose of selective controls.

**Fiscal Policy:**

Fiscal policy is budgetary policy in relation to taxation, public borrowings and public expenditure. Changes in the total expenditure can be effected by fiscal measures. To combat inflation, fiscal measures are would involve increase in taxation and decrease in government spending.

Obviously, during a period of full employment inflation, the aggregate demand in relation to the limited supply of goods and services is reduced to the extent that government expenditures are curtailed.

A certain public expenditure may is not be sufficient. Government must simultaneously increases taxes to affect a cut in private expenditure also, in order to minimize inflationary pressures. As we know, when more taxes are imposed the size of the disposable income diminishes, as also the magnitude of the inflationary gap, given the available supply of goods and services. Inflationary pressure is significantly weakened by the simultaneous curtailment of government expenditure and an increase in taxation because, more resources are released for expanding the productive capacity in the private sector, the supply curve of aggregate goods and services shifts upwards with a contraction of monetary demand due to a decline in disposable income with people.
A tax policy can be directed towards restricting demand without restricting production. For instance, excise duties or sales tax on various commodities take away the buying power from the consumer goods market without discouraging the expansion of production capacity. However, some economists point out that this is not a correct way of combating inflation because of its regressive nature. On the other hand, this may lead to a further rise in prices of such commodities, and inflation can spread from one sector to another and one commodity to another. But, it is also justified in the interest of social equity.

The budget deals with how a government raises its revenue and spends it. If the total revenue raised by the government through taxation, fees, surpluses from the public undertakings is less than the expenditure it incurs on buying goods and services to meet its requirements of defense, civil administration and various welfare and developmental activities, there are emerges a deficit in budget. It may be noted here that the budget of the government has two parts: (1) Revenue Budget (2) Capital Budget. In the Revenue Budget on the receipt side revenue raised through taxes, interests, fees, surpluses from public undertakings are given and on the expenditure side consumption expenditure by the government on goods and services required to meet the needs of defense, civil administration, education and health services, subsidies on food, fertilizers and exports, and interest payments on the loans taken by it in the previous years are important items. In the capital budget, the main items of receipts are market borrowings by the government from the banks and other financial institutions, foreign aid, small savings (i.e. Provident Fund, National Saving Schemes etc.). The important items of expenditure in the capital budget are defense, loans to public enterprises for developmental purposes, and loans to states and union territories.

The deficit may occur either in the revenue budget or capital budget or both taken together. When there is overall budget of the government, it has to be financed by borrowing from the Reserve Bank of India which is the nationalized central bank of the country and has the power to create new money, that is, to issue new notes. Thus, to finance its budget deficit, the government borrows from Reserve Bank of India against its own securities. This is only a technical way of creating new money because the government has to pay neither the rate of interest nor the original amount when it borrows from Reserve Bank of India against its own securities. It is thus clear that budget deficit implies that government incurs more expenditure on goods and services.
than its normal receipts from revenue and capital budget. This excess expenditure by the government financed by newly created money leads to the rise in income of the people. This causes the aggregate demand of the community to rise to a greater extent than the amount of deficit financing undertaken through the operation of what Keynes called income multiplier.

In the opinion of many economists, the expansion in money supply caused by deficit financing leads to the excess aggregate demand in the economy, especially when aggregate supply of output is inelastic. To some extent deficit financing may not generate demand-pull inflation because if the aggregate output increases, especially of essential consumer goods such as food grains, cloth, the extra demand arising out newly created money would be matched by extra supply of output. There is no wonder that this has contributed a good deal to the general rise in prices and is an important factor responsible for current inflation in the Indian economy.

To reduce budget deficit and keep deficit financing within a safe limit, the government can mobilize more resources through raising (a) taxes, both direct and indirect, (b) market borrowings, and (c) raising small savings such as receipts from Provident Funds. National Saving Schemes (NSC and NSS) by offering suitable incentives. On the other hand, it can reduce budget deficit by curtailing its wasteful and inessential expenditure. In India, it is often argued that there is a large scope for pruning down non-planned expenditure on defence, police and general administration and on subsidies being provided on food, fertilizers and exports. Though it is easy to suggest cutting down of government expenditure, it is difficult to implement it in practice. However, in our view, there is a large-scale inefficiency in resource use and also a lot of corruption involved in the spending by the government expenditure which can be curtailed to some extent. Thus, both by greater resource mobilization on the one hand and pruning down of wasteful and inessential government expenditure on the other, the budget deficit and consequently deficit financing can be reduced.

➢ Supply Management through Imports

To correct excess demand relative to aggregate supply, the latter can also be raised by importing goods in short supply. In India, to check the rise in prices of foodgrains, edible oils, sugar etc., the government has been frequently importing them to enlarge their available supplies.
At times of inflationary expectations, there is a tendency on the part of businessmen to hoard goods for speculative purposes. The attempt by the government to import goods in short supply would compel the hoarders to release their hoarded stocks. This will have a favorable impact on prices of these goods. It should be noted that overall excess demand relative to supply will be reduced if total imports of goods exceed the exports so that there is a net import surplus. At times of inflationary pressures in the economy, efforts are to be made to enlarge the import surplus as far as possible. However, the country can achieve and enlarge this imports surplus if it has either enough foreign exchange reserves which can be used to spend on imports or if sufficient foreign aid is available to import the goods in short supply.

Income Policy: Freezing Wages

Another anti-inflationary measure which has often been suggested is the avoidance of wage increases which are unrelated to improvements in productivity. This requires exercising control over wage-income. When cost of living rises due to the initial rise in prices, workers demand higher wages to compensate for the rise in the cost of living. When their wage demands are concerned to, it gives rise to cost-push inflation. And this generates inflationary expectations which add fuel to the fire. To check this vicious circle of wages-chasing prices, an important measure will be to exercise control over wages. However, if wages are raised equal to the increase in the productivity of labour, then it will have no inflationary effect. Therefore, the proposal has been to freeze wages in the short run and wages should be linked with the changes in the level of productivity over a long period of time. According to this, wage increases should be allowed to the extent of rise in labour productivity only. This will check the net growth in aggregate demand relative to aggregate supply of output.

However, freezing wages and linking it with productivity only irrespective of what happens to the cost of living has been strongly opposed by trade unions. It has been validly pointed out why freeze wages only to ensure social justice the other kinds of income such as rent, interest and profits should also be freeze similarly. Indeed, effective way to control inflation will be to adopt a broad based incomes policy which should cover not only wages but also profits, interest and rental incomes.
Raising Aggregate Supply through Fuller Utilisation of Productive Capacity:

If productive capacity in the economy is not fully utilised; then excess demand can also be reduced by adopting measures for utilizing fully the idle productive capacities in various industries of the economy. This would augment the aggregate supply of output and reduce the gap between aggregate demand and output and will therefore tend to check the inflationary potential. In India, in many industries such as cotton textiles, cement, leather products, fertilizers, commercial vehicles, etc, not more than 70% of productive capacity is being utilized.

To achieve fuller utilization of capacity, one has to know the causes of idle productive capacity in various industries. The available or installed capacity may not be fully utilized due to the shortage of power, fuel, or some crucial raw materials needed for the productive in an industry. Further, transport bottlenecks and bad labour-relations (due to which there are strikes and lockouts resulting in quite a large loss in human days) may be preventing the fuller utilization capacity. Above all, the capacity in some industries may lie unutilized due to lack of effective demand for some products though there may be overall excess demand relative to the aggregate supply of output. This would therefore call for special measure to raise the capacity utilization of the industries experiencing demand recession.

It is thus clear that with the adoption of various monetary, fiscal and other policy measures, the aggregate demand can be reduced on the one hand and the aggregate supply of output can be increased on the other. This would help in bridging the gap between aggregate demand aggregate supplies which would enable us to contain the inflationary pressures in the economy.

1.10 Conclusion:

In this introductory chapter an attempt is to make to examine the concept of inflation. Some major theories are also discussed.

How the theorist have viewed inflation and what kind of experiences are found that we shall discuss in the second chapter as part of review of literature. The 2nd section of the chapter follows research methodolo
References: