INFLATION

Inflation is a situation in which the general price level rises or it is the same thing as saying that the value of money falls.

According to Coulbrun, “too much money chasing too few goods”. Crowther defines, “inflation is a state in which the value of money is falling”.

The Demand-Pull Inflation!

This represents a situation where the basic factor at work is the increase in aggregate demand for output either from the government or the entrepreneurs or the households. The result is that the pressure of demand is such that it cannot be met by the currently available supply of output.

If, for example, in a situation of full employment, the government expenditure or private investment goes up, this is bound to generate inflationary pressures in the economy. Keynes explained that inflation arises when there occurs an inflationary gap in the economy which comes to exist when aggregate demand exceeds aggregate supply at full employment level of output.

Basically, inflation is caused by a situation whereby the pressure of aggregate demand for goods and services exceeds the available supply of output (both being counted at the prices ruling at the beginning of a period). In such a situation, the rise in price level is the natural consequence.

Now, this imbalance between aggregate demand and supply may be the result of more than one force at work. As we know aggregate demand is the sum of consumers’ spending on consumer goods and services, government spending on consumer goods and services and net investment being contemplated by the entrepreneurs?

The ordinary functioning of an economy should result in distributing and spending income in such a manner that aggregate demand for output is equivalent to the cost of producing total output including profits and taxes. At times, however, the government, the entrepreneurs or the households may attempt to secure a larger part of output than would thus accrue to them.

If other sectors are not prepared to acquiesce in this increase in the share of output used by any one sector, all of the sectors together will be trying to get more of the national output than production has provided. This is the basic cause for inflation to start. When aggregate demand for all purposes— consumption, investment and government, expenditure—exceeds the supply of goods at current prices, there is a rise in prices.

This inflationary gap, according to him, leads to the rise in prices. Thus Keynes explained inflation in terms of demand-pull forces. Therefore, the theory of demand-pull inflation is associated with the name of Keynes. Since beyond full-employment level of aggregate supply, output cannot increase in response to increase in demand these results in rise in prices under the pressure of excess demand.

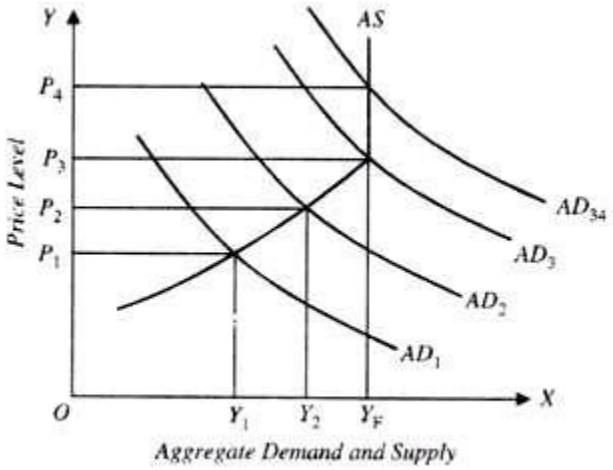

Fig. 23.1. *Demand-Pull Inflation*

Demand-pull inflation can be illustrated with aggregate demand and supply curves. Consider Fig. 23.1 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 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 he aggregate supply curves is yet sloping upward, increase in aggregate demand from AD_2, to AD_3 has -used the increase in output from OY_2 to OY_F. If aggregate demand further increases, say to AD_4 only price level raises to OP_4 with output remaining constant at YF. OY_F is the full-employment level or output and aggregate supply curve is perfectly inelastic at Y_F.

Demand-Pull Inflation and Wage Price Spiral:

A rise in prices reduces the real consumption of the wage earners. They will, therefore, press for higher money wages to compensate them for the higher cost of living. Now, an increase in wages, if granted, will raise the prime cost of production and, therefore, entrepreneurs will be tempted to raise the prices.

This adds fuel to the inflationary fire. A further rise in prices raises the cost of living still further and the workers ask for still higher wages. In this way, wages

and prices chase each other and the process of inflationary rise in prices gathers momentum. If unchecked, this may lead to hyper-inflation which signifies a state of affairs where wages and prices chase each other at a very quick speed.

Monetarist Theory of Inflation:

Keynes explained inflation as arising out of real sector forces.

In his model of inflation excess demand comes into being as a result of autonomous increase in expenditure on investment or consumption, that is, the increase in aggregate expenditure or demand occurs independent of any increase in the supply of money. On the other hand, monetarists explain the emergence of excess demand and the resultant rise in prices on account of the increase in money supply in the economy. To quote Friedman, "Inflation is always and everywhere a monetary phenomenon……. and can be produced only by a more rapid increase in the quantity of money than in output.

Friedman holds that when money supply is increased in the economy, then there emerges an excess supply of real money balances with the public over the demand for money. This disturbs the equilibrium. In order to restore the equilibrium, the public will reduce the money balances by increasing expenditure on goods and services.

Thus, according to Friedman and other modern quantity theorists, the excess supply of real monetary balances results in the increase in aggregate demand for goods and services. If there is no proportionate increase in output, then extra money supply leads to excess demand for goods and services. This causes inflation or rise in prices.

$M^s > kPY \rightarrow AD\uparrow \rightarrow P\uparrow ...(1)$

M stands for quantity of money and P for the price level. Therefore, M/P represents real cash balances.

Y stands for national income and k for the ratio of income which people want to keep in cash balances. Hence represents demand for cash balances (i.e., demand for money)

AD represents aggregate demand for or aggregate expenditure on goods and services which is composed of consumption demand (C) and investment demand (I).

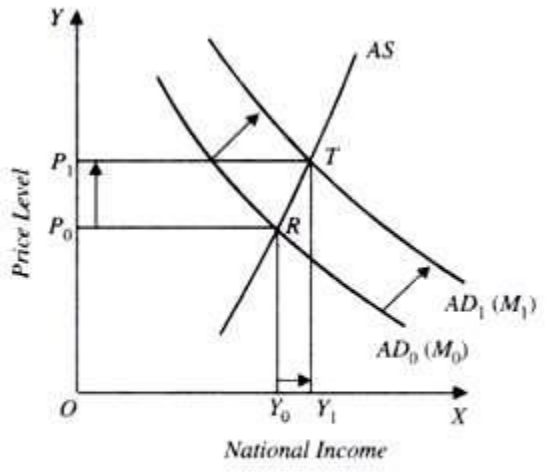

Fig. 23.2. *The Effect of expansion in money supply in the short run is split up into price rise and Increase in Real National Income: Friedman's Monetarist Approach.*

To what extent price level increases depends upon the elasticity of supply or aggregate output. It will be seen from Fig. 23.2 that effect of increase in money supply from M_0 to M_1 and resultant increase in aggregate demand curve for goods and services from AD_0 to AD_1 is split up into the rise in price level (from P_0 to P_2) and the increase in real income or aggregate output (from (Y_0 to Y_1).

COST PUSH INFLATION

We can visualise situations where even though there is no increase in aggregate demand, prices may still rise. This may happen if there is increase in costs 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 m crude oil prices.

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

We discuss these below:

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.

The employers in a situation of high demand and employment are more agree-able to concede to these wage claims because they hope to pass on these rises in costs to the consumers in the form of hike in prices. If this happens we have cost-push inflation. It may be noted that as a result of cost-push effect of higher wages, aggregate supply curve of output shifts to the left and, given the aggregate demand curve, this results in higher price of output.

Profit-Push 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.

Rise in Raw material Prices or Oil Price Shock:

In addition to the rise in wage rate of labour and increase in profit margins, in the seventies the other supply-shocks causing increase in marginal cost of production became more prominent in bringing about cost-push inflation. During the seventies in prices of raw materials, especially energy inputs (hike in crude oil price made by OPEC resulting in rise in prices of petroleum products). The sharp rise in world oil prices during 1973-75 and again in 1979-80 produced significant supply shocks resulting in cost-push inflation.

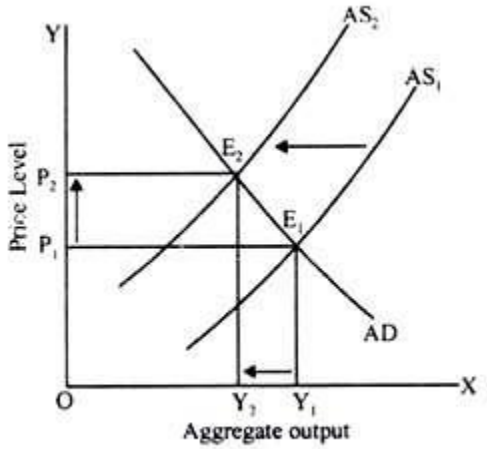

Fig. 23.3. *Cost-Push Inflation*

The cost-push inflation can also be illustrated with the aggregate demand and supply curves. Consider Fig. 23.3, 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 AS_1 and AS_2 curves are aggregate supply curves.
Now, when wages increase, and as a result cost of production rises, the aggregate supply curve would shift upward to the left. As will be seen in Fig. 23.3 when there is an upward shift in the aggregate supply curve from AS_1 to AS_2 due to the rise in wages, price level rises from OP_1 to OP_2.
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 this causes not only rise in price level but brings about a fall in aggregate output. Thus in Fig. 23.3 when price level rises from OP_1 to OP_2 aggregate output falls from OY_1 to OY_2.

Interaction between Demand-Pull and Cost-Push Inflation:

Many economists think inflation in the economy is generally caused by the interaction of the demand pull and cost-push factors. The inflation may be started in the first instance either by cost-push factors or by demand pull factors both work and interact to cause sustained inflation over time.

We will explain this interaction, first with inflationary process starts with cost push factor and then secondly when inflation begin with shift in aggregate demand. In both cases rate of inflation over time is the result of interaction of

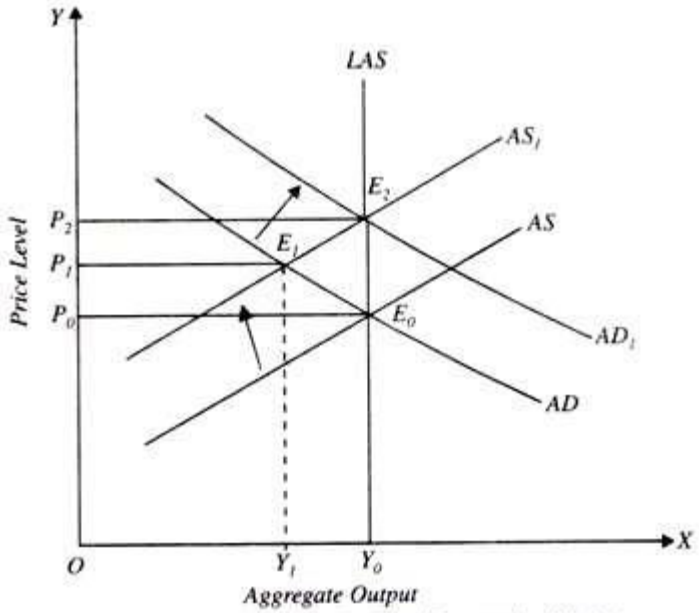

Fig. 23.5. *Interaction of Cost-Push and Demand-pull Inflation*

demand-pull and cost-push factors. 1. Let us consider the Figure 23.5 where to begin with aggregate demand curve AD and aggregate supply curve AS intersect at point E_0 and determine price level P_0 and output level Y_0. Further suppose that Y_0 is the full capacity (i.e., full-employment) level of output and therefore long-run aggregate supply curve LAS is vertical at Y_0 level of output. Suppose there is increase in oil prices which causes shifts in aggregate supply curve to the left from AS to AS'$_1$.

As a result, price level rises to P_1 but output falls from Y_0 to Y_1. With decline in output unemployment will also increase. This is a cost-push inflation which has caused recessionary conditions in the economy. The Government and Central Bank are likely to adopt expansionary monetary and fiscal policies in order to avoid recession.

Consequent to the adoption of expansionary policies, (for example, increase in money- supply or increase in Government expenditure or reduction in taxes), aggregate demand curve will shift to the right, say to AD_1 which intersects AS_1 curve and LAS curve at point E_2.

Though as a result of this accommodatary policy while output level has increased to the original full capacity level Y_0 price level has further risen to P_2 level. This later rise in price level from P_1 to P_2 is the result of demand-pull Inflation. It is

thus clear that both cost-push and demand -pull inflation interact to cause inflation in the economy.

2. Let us now explain inflationary process which starts with demand-pull inflation in the first instance. Consider Figure 23.6. Where to begin with aggregate demand curve AD_0 and aggregate supply curve AS_0 intersect at E_0 and determine level of price P_0 and aggregate output Y_0.

Assume long-run aggregate supply curve LAS also passes through point E_0 so that equilibrium level of output Y_0 also represents full-employment level of output (that is, at K_0 only natural unemployment exists) and price level P_0 also represents long-run equilibrium price level.

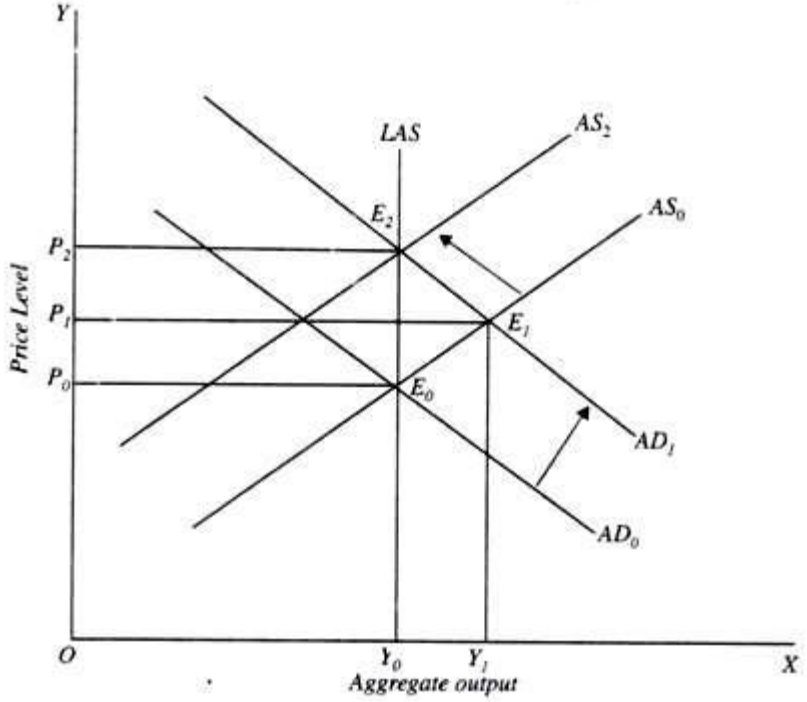

Fig. 23.6. *Interaction betwen Demand-Pull and Cost-Push Inflation*

Now suppose due to increase in Government expenditure financed by creation of new money aggregate demand curve shifts from AD_0 to AD_1. The new aggregate demand curve AD, intersects the short-run aggregate supply curve AS_0 at point E_1. As a result, in the short run price level rises to P_1 and output to Y_1.

It may be recalled, short-run aggregate supply curve is drawn assuming a given expected price level by the workers which is usually the price level prevailing in the last few years which is here taken to be P_0. Now that as a result of increase in

aggregate demand price level has actually risen to P_1, workers' real wages would decline.

Therefore, in order to restore their real wages, they would demand higher money wages. When their demands for higher wages are conceded to, short-run aggregate supply curve will shift to the left. With this leftward shift in the aggregate supply curve, price level will rise further. In this way wage-price spiral will go on operating until short-run aggregate supply curve shifts to the level AS_2 and together with aggregate demand curve AD_1 determine a long-run equilibrium at point E_2. It will be seen that both demand-pull inflation and cost-push inflation have operated together to raise price level from P_0 to P_2.

To conclude, demand-pull inflation and cost-push inflation are intertwined and operate together to determine rate of inflation over time. It is difficult to say in actual practice what part of inflation is due to demand-pull factors and what due to cost-push factors, though, as seen above, theoretically speaking, we can distinguish between demand-pull and cost-push inflation.

The effects of inflation on different groups of society are discussed below:

(1) Debtors and Creditors:

During periods of rising prices, debtors gain and creditors lose. When prices rise, the value of money falls. Though debtors return the same amount of money, but they pay less in terms of goods and services. This is because the value of money is less than when they borrowed the money.

Thus the burden of the debt is reduced and debtors gain. On the other hand, creditors lose. Although they get back the same amount of money which they lent, they receive less in real terms because the value of money falls. Thus inflation brings about a redistribution of real wealth in favour of debtors at the cost of creditors.

(2) Salaried Persons:
Salaried workers such as clerks, teachers, and other white collar persons lose when there is inflation. The reason is that their salaries are slow to adjust when prices are rising.

(3) Wage Earners:
Wage earners may gain or lose depending upon the speed with which their wages adjust to rising prices. If their unions are strong, they may get their wages linked to the cost of living index. In this way, they may be able to protect themselves from the bad effects of inflation. But the problem is that there is often a time lag between the raising of wages by employees and the rise in prices.

So workers lose because by the time wages are raised, the cost of living index may have increased further. But where the unions have entered into contractual wages for a fixed period, the workers lose when prices continue to rise during the period of contract. On the whole, the wage earners are in the same position as the white collar persons.

(4) Fixed Income Group:
The recipients of transfer payments such as pensions, unemployment insurance, social security, etc. and recipients of interest and rent live on fixed incomes. Pensioners get fixed pensions. Similarly the rentier class consisting of interest and rent receivers get fixed payments. The same is the case with the holders of fixed interest bearing securities, debentures and deposits.

All such persons lose because they receive fixed payments, while the value of money continues to fall with rising prices. Among these groups, the recipients of transfer payments belong to the lower income group and the rentier class to the upper income group. Inflation redistributes income from these two groups towards the middle income group comprising traders and businessmen.

(5) Equity Holders or Investors:

Persons who hold shares or stocks of companies gain during inflation. For when prices are rising, business activities expand which increase profits of companies. As profits increase, dividends on equities also increase at a faster rate than prices. But those who invest in debentures, securities, bonds, etc. which carry a fixed interest rate lose during inflation because they receive a fixed sum while the purchasing power is falling.

(6) Businessmen:

Businessmen of all types, such as producers, traders and real estate holders gain during periods of rising prices. Take producers first. When prices are rising, the value of their inventories rise in the same proportion. So they profit more when they sell their stored commodities. The same is the case with traders in the short ran. But producers profit more in another way.

Their costs do not rise to the extent of the rise in the prices of their goods. This is because prices of raw materials and other inputs and wages do not rise immediately to the level of the price rise. The holders of real estate's also profit during inflation because the prices of landed property increase much faster than the general price level.

(7) Agriculturists:

Agriculturists are of three types: landlords, peasant proprietors, and landless agricultural workers. Landlords lose during rising prices because they get fixed rents. But peasant proprietors who own and cultivate their farms gain. Prices of farm products increase more than the cost of production.

For prices of inputs and land revenue do not rise to the same extent as the rise in the prices of farm products. On the other hand, the landless agricultural workers are hit hard by rising prices. Their wages are not raised by the farm owners because trade unionism is absent among them. But the prices of consumer goods rise rapidly. So landless agricultural workers are losers.

(8) Government:

The government as a debtor gains at the expense of households who are its principal creditors. This is because interest rates on government bonds are fixed and are not raised to offset expected rise in prices. The government, in turn, levies less taxes to service and retire its debt. With inflation, even the real value of taxes in reduced. Thus redistribution of wealth in favour of the government accrues as a benefit to the tax-payers.

Since the tax-payers of the government are high- income groups, they are also the creditors of the government because it is they who hold government bonds. As creditors, the real value of their assets declines and as tax-payers, the real value of their liabilities also declines during inflation. The extent to which they will be gainers or losers on the whole is a very complicated calculation.

Conclusion:

Thus inflation redistributes income from wage earners and fixed income groups to profit recipients, and from creditors to debtors. In so far as wealth redistributions are concerned, the very poor and the very rich are more likely to lose than middle income groups.

This is because the poor hold what little wealth they have in monetary form and has few debts, whereas the very rich hold a substantial part of their wealth in bonds and have relatively few debts. On the other hand, the middle income groups are likely to be heavily in debt and hold some wealth in common stock as well as in real assets.

2. Effects on Production:

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

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

The adverse effects of inflation on production are discussed below:

(1) Misallocation of Resources:

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

(2) Reduction in Production:

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

(3) Fall in Quality:

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

(4) Hoarding and Black-marketing:

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

(5) Reduction in Saving:

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

(6) Hinders Foreign Capital:

Inflation hinders the inflow of foreign capital because the rising costs of materials and other inputs make foreign investment less profitable.

(7) Encourages Speculation:

Rapidly rising prices create uncertainty among producers who indulge in speculative activities in order to make quick profits. Instead of engaging themselves in productive activities, they speculate in various types of raw materials required in production.

3. Other Effects:

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

(1) Government:

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

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

(2) Balance of Payments:

Inflation involves the sacrificing of the advantages of international specialisation and division of labour. It adversely affects the balance of payments of a country. When prices rise more rapidly in the home country than in foreign countries, domestic products become costlier compared to foreign products. This tends to

increase imports and reduce exports, thereby making the balance of payments unfavourable for the country. This happens only when the country follows a fixed exchange rate policy. But there is no adverse impact on the balance of payments if the country is on the flexible exchange rate system.

(3) Exchange Rate:
When prices rise more rapidly in the home country than in foreign countries, it lowers the exchange rate in relation to foreign currencies.

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

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

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