***Study Materials -1***

***Topic of Study Materials: MONEY AND INFLATION***

***Paper/ Course No.: C-ECO 204 (PG. Sem II) , Elective Course: CBCS***

***Name of the Paper: Fundamentals of Economic Theory***

***(Group B, Chapter 3)***

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###### 3.1 MONEY AND ITS FUNCTIONS

**3.1.1 What is Money?**

Money is one of the key elements in an economy. Money is often defined on the conceptual basis as something generally accepted as a medium of exchange. This definition can be labelled as a ‘functional’ definition of money because it provides a simple medium of exchange without which every transaction simply becomes complicated.

**3.1.2 Functions of Money:**

There are four traditional functions of money.

* + - * 1. Money is a medium of exchange: Money is that for which people exchange their productive services or that which gift for goods and services.
        2. Money is a unit of accounting: The monetary unit is used to value goods and services.
        3. Money acts as store of value: It is a store of value, meaning it will not lose its worth over time. Money is an asset that is a convenient store for generalized purchasing power.
        4. Money is a standard of deferred payment: Money is used to pay future obligations or debt.

**3.1.3 Measures of Money Supply**

We can obtain the money supply of a country **at any one point in time** by adding up the coins, currency notes and the demand deposits that are in existence. However if we want to know the money supply **over a period of time**, another important element comes into the picture which is velocity of circulation of money. The supply of money over the period of time will be equal to the amount of money multiplied by its velocity of circulation.

Money supply (M) consists of currency (CU) with the public and deposits (D) at commercial bank

So, M = CU **+** D

###### MONETARY INSTITUTIONS

These monetary/financial institutions include the central banks, the commercial banks, the Non-Bank Financial Companies (NBFCs) etc.

1. **Central Bank**

In almost every country where there is a viable banking system there is a central bank. The central bank of our country is known as the Reserve Bank of India which was set up in 1935. **Functions of the Central Bank or the Reserve Bank of India:**

Besides credit control, there are four other functions which are associated with any central bank. They are:

1. **Monopoly of Note Issue:** In India except for the issue of one rupee notes, the Reserve Bank of India has the monopoly power to issue notes.
2. **Bankers’ Bank:** The central bank of a country plays the role of being a bank to the bankers. All the commercial banks maintain accounts with the central bank. This facilitates settlement of claims among banks. The central bank of a country usually plays the role of a clearing house.
3. **Banker to Government:** The central bank usually acts as a banker to the government. It advances money to the government and maintain the cash balances of the government. It also receives and makes payments for the government.
4. **The Lender of Last Resort:** Even the most well-run bank can run into difficulties if there is a sudden rush of demand for funds. The central bank of a country always come to the assistance of commercial banks whenever they are dire need of funds However, it is necessary that the commercial banks approach the central bank as a last resort.
5. **The Control of Credit:** The central bank usually regulates the amount and the availability of credit in the economy. The task is important to promote internal price stabilityhe general instruments are intended to regulate the total volume of credit. Two important instruments for credit control are CRR and SLR.
6. **Promotion of External Stability**: External stability means a stability in the rate of exchange of the domestic currency vis-à-vis the foreign currencies in the international market. It is the task of the central bank to maintain orderly exchange rates and avoid sharp fluctuations in these rates.
7. **Commercial Bank:**

A commercial bank is a financial intermediary which accepts deposit of money from the public and lends them with a view to make projects. The role of Commercial Bank is particularly important in developing countries.

**Functions of a Commercial Bank:**

A Commercial Bank generally perform the following functions:

* 1. **Collection of deposits:** It accepts deposits which are of various types like *current* savings, *recurring*and *fixed* deposits.
  2. **Loans and advances*:*** It grants credit in various forms such as loans and advances.
  3. **Making and receiving payments**: It collects cheques, drafts, bills and other instruments for its depositors.
  4. **Functioning as Agency Services:** It provides remittance facilities though drafts and telegraphic transfers. It provides facilities like travelers’ cheques, gift cheques and safe deposit vaults to its customers. On behalf of their clients, they pay pensions or even execute the will after the death of their agents.
  5. **Saving and investment:** A commercial bank acts like intermediaries between households and businesses.
  6. **Developmental Functions:** Commercial banks perform certain promotional or developmental roles. For example, they provide credit to the top priority sectors of the economy such as agriculture and small-scale and cottage industries.

1. **Non-Bank Financial Companies (NBFCs)**:

A non-bank financial intermediary (NBFI) is a financial **intermediary**  that does not have a full banking license or is not supervised by a national or international banking regulatory agency. A non-banking financial company (NBFC) is a company incorporated under the Companies Act, 1956, and conducts financial business as its principal business. These companies are just like banks since they perform the basic functions of attracting deposits from the public and making loans. But they cannot be regarded as banks as they need not follow cash reserve ratios, liquidity ratios, etc. NBFC cannot accept demand deposits A non-banking company may also undertake investment in securities, equipment leasing and hire purchase. The NBFC sector, as a whole, accounted for 17 per cent of bank assets and 0.26 per cent of bank deposits as on

**Companies under NBFCs*:*** The companies that will come under NBFC’s as per the definition of non-banking financial companies directions under Section 45 of RBI Act 1934, as amended in 1997 include :

1. Investment trusts or investment companies.

2. *Nidhis* or mutual benefit funds or mutual benefit finance companies.

3. Merchant banks.

4. Hire-purchase finance companies.

5. Lease finance companies or leasing or equipment leasing companies.

6. Housing finance institutions (companiesi.

7. Venture capital funds.

8. Factors or factoring companies.

**The Functions of NBFCs:**

The functions of NBFCs are the following:

1. They attract deposits of large accounts by offering attractive rates of interest and other incentives. Half of the deposits are below two years’ time period.
2. They provide loans to wholesale and retail merchants, small industries, self employment schemes.
3. They provide loans without security also Hence, they are able to charge 24 to 36 per cent interest rate.
4. They run chit funds discount *hundi*s, leasing finance merchant banking provide hire purchase etc.
5. These companies also invest their surplus money on various outlets. In the case of investment companies, their main function is to invest on principal securities and pass on the benefits to small investors.

NBFCs business have undergone a qualitative change in recent years. They enjoy growth in size and better edge over commercial banks due to the following reasons:

1. They assume greater risk.
2. They are relatively quick in taking decisions.

**3.3 MONETARY POLICY**

**3.3.1 What is monetary policy?**

The term monetary policy refers to actions taken by central banks to affect monetary and other financial conditions in pursuit of the broader objectives of sustainable growth of real output, high employment, and price stability. The monetary policy refers to a regulatory policy whereby the central bank maintains its control over the supply of money to achieve the general economic goals.

**3.3.2 Objectives of Monetary Policy**

The objectives of monetary policy differ from country to country according to their economic conditions. The following are the main objectives of monetary policy :

1. **Control of inflation and deflation:** Inflation and deflation both are not suitable for the economy. If the price level is reasonable and there is an adjustment between the price and cost, rate of out put can increase. Monetary policy is used to coordinate the cost and price. So price stability is achieved through the monetary policy.
2. **Price stability:** Of the various objectives, price stability is perhaps the one that is pursued most effectively by monetary policy. In a developing country like ours, acceleration of investment activity in the context of supply shocks in the agricultural sector tends to be accompanied by pressures on prices and, therefore, monetary policy has much to contribute in the short-run economic management.
3. **Equal distribution of credit and other**s: Promoting growth through appropriate credit policy that should be equitable and purposeful, encouraging sectoral development according to plan priorities and supporting programmes aimed at social justice by influencing the cost, volume and direction of credit are all different and effective ways through which monetary policy contributes to the achievement of plan objectives.
4. **Exchange rate stability :** Monetary policy’s another objective is to achieve the stable foreign exchange rate. If the rate of exchange is stable it shows that economic condition of the country is stable.
5. **Control of fiscal deficit:** Deficit financing or created money is not a resource. It is only a means of transferring resources from one sector to another, which task it can accomplish if practiced in moderation. If price stability as an objective is to be achieved, fiscal deficits and, therefore, the borrowings from the Reserve Bank must be limited to levels consistent with the increase in money supply justified by the expected increase in output. Too much of it can, through price increase, cause distortions in the economy just as too little can hinder the smooth functioning.
6. **Economic development:** Monetary policy plays very effective role in promoting economic growth by providing adequate credit to productive sectors.
7. **Increase in the rate of employment:** Monetary policy another objective is to achieve full employment but without inflation.

**3.3.3 The Instrument of monetary policy**

The instrument available to central banks vary from country to country, depending on the institutional structure, political system, and stages of development. In India, the RBI , as the central bank of the country, basically use quantitative and qualitative instruments for credit control. Main instruments of the monetary policy are: Cash Reserve Ratio, Statutory Liquidity Ratio, Bank Rate, Repo Rate, Reverse Repo Rate, and Open Market Operations.

1. **Bank rate** : The bank rate is the ( minimum) rate at which the central bank lends funds as a ‘lender of last resort’ to banks, against approved securities or eligible bills of exchange. This is also known as discount rate.
2. ***Cash Reserve Ratio* ( CRR)**: Banks are required to maintain a percentage of their deposits in the form of balances with the RBI. This minimum percentage which is determined by the central bank is known as CRR. The RBI has the power to vary this ratio. An increase in the CRR has the effect of reducing the banks’ excess reserves ( essentially the vault cash held by commercial banks) and thus curtails their ability to give credit.
3. ***Statutory Liquidity Ratio* ( SLR):** Apart from keeping a portion of deposits with the RBI, banks has to maintain a **specified percentage** of their net total demand and time liabilities in the form of designated liquid assets— gold , cash. This minimum percentage is called SLR. The RBI is vested with the power to determine the SLR for commercial banks.
4. **Open market operation( OMO ):** Open market operation (OMO) is the temporary or outright buying and selling of government securities or a repurchase agreement by the Central Bank from / to the public and banks. The sale of government securities to banks will have the effect of reducing their reserves. This directly reduces the bank’s ability to give credit and therefore decrease the money supply in the economy. In fact, OMOs are used to influence the monetary base. Successful conduct of OMO as a tool of monetary policy requires first that a well functioning securities market exists.
5. **Repo Rate and Reverse Repo Rate:** Repo rate is the rate at which RBI lends to commercial banks generally against government securities. Reduction in Repo rate helps the commercial banks to get money at a cheaper rate and increase in Repo rate discourages the commercial banks to get money as the rate increases and becomes expensive. Reverse Repo rate is the rate at which RBI borrows money from the commercial banks. The increase in the Repo rate will increase the cost of borrowing and lending of the banks which will discourage the public to borrow money and will encourage them to deposit. As the rates are high the availability of credit and demand decreases resulting to decrease in inflation. This increase in Repo Rate and Reverse Repo Rate is a symbol of tightening of the policy.
6. **Marginal standing facility:** The Reserve Bank of India in its monetary policy for 2011-12, introduced the marginal standing facility (MSF), under which banks could borrow funds from RBI at 8.25%, which is 1% above the liquidity adjustment facility-repo rate against pledging government securities. This measure has been introduced by RBI to regulate short-term asset liability mismatches more effectively.

**The key indicators are as of 2 June 2015,**

|  |  |
| --- | --- |
| **Indicator** | **Rate:** |
| Inflation | 8.00% |
| Bank rate | 8.25% |
| CRR | 4.00% |
| SLR | 21.50% |
| Repo rate | 7.25% |
| Reverse repo rate | 6.25% |
| Marginal Standing facility rate | 8.25% |

###### CREDIT CREATION

Commercial bank differs from other financial institutions because it can create credit.Bank credit means bank loans and advances. The banks create **passive deposits** when they open deposit accounts in the name of the customers who bring cash or cheques to be credited to their accounts.

The bank knows by business experience that all these primary deposits are not going to be withdrawn by the depositors at the same time or one time. A bank keeps a certain proportion of its deposits for meeting the demand of the depositors. This fraction/ ratio is called cash reserve ratio (CRR) and it is fixed by the central bank. The remaining part called excess reserve is lent out by the banks to earn income. **Derivative or active deposits** are created by the bank by opening a deposit account in the name of the person concerned who contacts bank to borrow money. Then the bank plays an active role in the creation of such deposits. This type of dealings is known as an active deposits. The bank loan is not paid out directly to the borrower bit is only credited in his account. Every bank loan creates an equivalent deposit in the bank. Thus credit creation means multiple expansion of bank deposits.

Process of credit creation :

We can explain the process of credit creation with an example :-

i) Let us suppose an individual deposits Rs. 1000 in his bank and CRR is 20%.It means that banks are required to keep Rs. 200 as cash reserve and may lend out Rs. 800.Let us suppose the banks lend Rs. 800.)Banks do not lend the money in cash. Rather, they open the accounts in the names of the borrowers who are free to withdraw the amount whenever they like.

ii) Suppose borrowers withdraw the entire amount of Rs. 800 for making payments.As all the transactions are rooted through banks, the entire amount of Rs. 800 comes back into the banks in the form of deposits.

iii)With new deposit of Rs. 800, banks keep 20% as cash reserve and lend 80% rupees i.e., Rs. 640.Borrowers use these loans to make payments which again comes back as deposits.

iv)The deposits keep on increasing in each round by 80% of the last round deposits and this process will go on as shown in the following table :-

|  |  |  |  |
| --- | --- | --- | --- |
|  | Deposit (Rs.) | Loans (Rs.) | Cash Reserve (Rs.)  (LRR = 20%) |
| Initial Deposit | 1,000 | 800 | 200 |
| Round I | 800 | 640 | 160 |
| Round I | 640 | 512 | 128 |
| ---- | ---- | ---- | ---- |
| ---- | ---- | ---- | ---- |
| ---- | ---- | ---- | ---- |
| Total | 5,000 | 4,000 | 1,000 |

It is seen from the above table that banks are able to create total deposit of Rs. 5,000 with the initial deposit of just Rs. 1000.It means that total deposits become five times of the initial deposits.The value 5 is called ‘money multiplier’ or ‘deposit multiplier’.

Calculation of Deposit multiplier :-

Money multiplier or deposit multiplier measures the amount of money that the banks are able to create in the forms of deposits with every unit of money it keeps as reserves.

Let D = Deposits, CB = Cash of banks, b = CRR

From the process of deposit creation as shown in the table–

ΔD = ΔCb + (1-b) ΔCb + (1-b)2ΔCb + \_\_\_ … + (1-b)nΔCb

= ΔCb{(1 + (1-b) + (1-b)2 + \_\_\_ … + (1-b)n



So money multiplier/ deposit multiplier =



**Limits on deposit creation:-**

* Cash backage from banks :- Borrowers may take loan inform of cash which may not be return in banks.
* Lack of demand for loans: - It may happen that banks may not find borrowers.
* Holding of excess Reserves: - Banks may decide to keep excess reserves that is more that the minimum requirement.

###### INFLATION AND ITS CONTROL

**3.5.1 What is Inflation**?

Inflation is nothing but a general sustained rise in the price level which reduces the purchasing power of that country’s currency. It has been ascribed to increases in the money supply, excess demand, and rises in public expenditure (particularly in times of war), the behaviour of the labour market and changes in costs— in the case of the 1970s, oil price increases.

3.5.2 **Different types of inflation:**

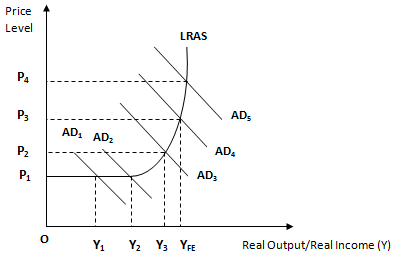
1. **Hyper inflation**: this occurs when the rate of inflation is extremely high.
2. **Runway Inflation**: In periods of inflation, the value of money is reduced. It is important to recognize that inflation may vary in severity. Runaway inflation wipes out the value of money quickly.
3. **Creeping Inflation**: this inflation erodes value of money gradually and slowly.
4. **Stagflation**: It is a situation where high unemployment and high inflation occur simultaneously - a combination of stagnation of production and inflation of prices.
5. **Wage Push Inflation**: Rising wages tend to cause inflation. In effect this is a combination of demand pull and cost push inflation. Rising wages increase cost for firms and so these are passed onto consumers in the form of higher prices. Also rising wages give consumers greater disposable income and therefore cause increased consumption and AD. In the 1970s, trades unions were powerful in the UK. This helped cause rising nominal wages; this was a significant factor in causing inflation.
6. **Profit push inflation:** It is caused by the use of monopoly power of the monopolistic and oligopolistic firm.
7. **Supply shock inflation:** It is generally caused by the unexpected decline in the supply of major consumer goods or key industrial inputs.
8. **Imported Inflation.**: A depreciation in the exchange rate will make imports more expensive. Therefore, the prices will increase solely due to this exchange rate effect. A depreciation will also make exports more competitive so will increase demand.
9. **Temporary Factors:** The inflation rate can also increase due to temporary factors such as increasing indirect taxes. If you increase VAT rate from 17.5% to 20%, all goods which are VAT applicable will be 2.5% more expensive. However, this price rise will only last a year. It is not a permanent effect.
10. ***Core Inflation:*** Core inflation is a measure of inflation which excludes certain volatile and seasonal prices. It is based on the Consumer price index (CPI) but excludes volatile prices such as: Petrol (subject to oil price variations) and Food ( subjection (subject to seasonal variations)

**3.5.3 Demand Pull Inflation and Cost Push Inflation**

There are two main theories of inflation or we may say there are two main explanations of why inflation occurs: ( a) demand-pull and ( b) cost-push.

1. **Demand Pull Inflation**

Demand-pull inflation is that inflation which occurs when, aggregate demand increases more rapidly than aggregate supply, thereby causing higher and higher price levels.

 **Fig 5.1: Demand Pull Inflation**

Let us suppose an increase in government spending leads to increase in AD. A shift in the AD curve from AD2 to AD3 will increase real output (from Y2 to Y3) but the price level will also rise (from P1 to P2). The result is similar if AD rises to AD4. At this stage, the economy is approaching the full employment level of real output, so some industries still have some spare capacity but others will be at full capacity, resulting in price rises in some industries, and so a rise in the average price level when AD rises. A further increase in AD when the economy is at full employment (AD level AD4) will simply result in a price rise with no increase in the level of real output.

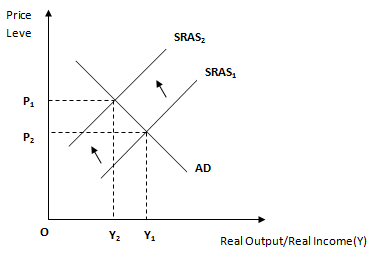
The diagram shows that increases in the level of demand in an economy cause inflation. The rising level of demand is 'pulling' the price level up, hence the name 'demand-pull' inflation. The best example of this happening in the UK economy was the consumer boom of the late 80s. Excessive demand in the economy forced the inflation rate up to 10%.

Demand-pull inflation may be caused by other factors. For example, it may be due to a high rate of growth of government spending or to successive tax cuts. Economists agree, however, that inflation cannot continue indefinitely, without increases in the money supply.

1. **Cost Push Inflation:**

According to Cost–push theory of inflation, inflation is due to the monopolistic actions of some economic groups, labour unions and firms, in society. Cost-push inflation is associated with rises in the costs of an industry, or the economy generally. The main reasons why costs might rise are i) increases in wages and salaries (the biggest cost of production economy wide); ii) increases in the cost of raw materials; iii) increases in the price of imported goods (either as finished goods, semi-finished manufactures or raw materials) due to a fall in the value of the £ or price rises in the country of origin; iv) increases in indirect taxes (or reductions in government subsidies). Any of these factors will have the following effect :

**Fig 5.2: Cost Push Inflation**

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Short run aggregate supply (SRAS) curves have been used, but the analysis could be applied to LRAS curves. Quotes simply, an increase in the costs of an economy will shift the SRAS curve to the left (from SRAS1 to SRAS2 ) causing the price level to rise to P2 and the level of real output to fall to Y2.

The oil price shocks of the mid 1970s and late 80s are good examples of large increases in costs causing inflation. The militant trade unions made things worse by insisting on above inflation play rises to make up for the price rises plus any predictable future rises in the price level.

This brings us onto an important subsequent effect of cost-push inflation, namely**,** *wage-price spirals*. During the price rises of the mid 70s, caused unions ( being powerful bodies in those days) would press for higher wages. Firms were forced to raise their prices to maintain profit levels.. These further increases in the price level caused more demands for higher wages from the trade unions. If successful, firms would raise their prices again, and so on.

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1. **Difference between Demand-Pull and Cost-Push Inflation**

|  |  |
| --- | --- |
| **Demand-Pull Inflation** | **Cost-Push Inflation** |
| Demand-Pull Inflation is ‘driven’ by stimulative fiscal and monetary policies. If an economy overheats because of a case of overstimulation, the appropriate policy can be prescribed. In this sense, inflation can be ‘managed’ by macroeconomic policy. | In the Cost-Push Inflation, the inflation is caused by exogenous factors, such as, oil crises, terrorists shocks and weather-related events. |
| Since rates of change in inflation and the output move in the “same” direction, the demand pull inflation is said to be pro-cyclical. | It results in an overall decline in national output productivity, which translates to a leftward shift in the AS (aggregate supply) curve |
| Possible causes of demand pull inflation:  Fiscal stimulus, monetary stimulus, depreciation in the exchange rate. | Possible causes of demand pull inflation:  Increase in component costs, rising labour cost, higher indirect taxes, a fall in the exchange rate |

**3.5.4 Effects of Inflation:**

**(a) Positive effects of inflation**

The rate of economic growth depends primarily on the rate of capital formation which again depends on the rate of saving. First, some economists argue that during the period of inflation, output prices rise first before the rise of the input prices which is called the wage lag. Wage lag enhances profit margin which provides incentives for investment leading to higher production capacity and higher level of output. Secondly, inflation redistributes income in favour of higher income groups who have higher propensity to save. Higher saving leads to lower interest rates inducing higher investment and higher output. However, there does not some to be a clear evidence of positive relationship between inflation and economic growth. Economists generally agree that a moderate rate of inflation is conducive to economic growth.

**(b) Harmful effects of inflation:**

The harmful social effects of inflation are both grave and wide-ranging. We sum them up very briefly below:

1. Inflation accentuates inequalities in the distribution of income. Inflation has definite impacts on the incomes of different sections of the society like wage earners, producers, fixed income class and Government. Because of wage lag, wage earners generally lose and the producers gain. The fixed income class like fixed wage earners, house owners getting fixed rent are generally net losers during the period of inflation. In general, borrowers gain and lenders lose during the period of inflation. The Government may be the net gainer during the period of inflation because of increase in tax yield from personal income tax.
2. Inflationary expectations encourage speculation activities.
3. Employment expansion suffers as capital-intensive techniques of production are over-encouraged in comparison with the labour-intensive industries.
4. Investment also suffers when inflation squeezes profit margins too much in some industries, because, at industry level, prices of capital goods, intermediates and labour may rise more than product prices.
5. Inflation may render planning fruitless, as it makes wrong all estimates of financial resources, allocations, and project costs.
6. Inflation (a higher rate of domestic inflation in relation to inflation abroad) creates balance-of-payments problems by reducing the competitiveness of exports abroad and encouraging imports into the country.
7. A section of the society holing large physical assets ( like land, building, gold) and financial assets ( like bonds, shares etc) may gain during inflation.
8. Inflation may breed large-scale social unrest in the country.

**3.5.5 Policies to control inflation**

The various measures suggested for controlling inflation can be classified as: (i) fiscal measures, (ii) monetary measures, (iii) price and wage control, (iv) indexation

1. **Fiscal measures**

Government use fiscal policy as a prime means of controlling inflation. If the inflation is demand–pull nature, then reducing the level of aggregate demand in the economy will reduce inflationary pressures. Aggregate demand can be reduced through fiscal measures like by cutting down government expenditure, reducing public public borrowing and/or increasing taxation. In case of very high rate of persistent inflation, government may simultaneously cut down spending and increase the rate of taxation, which is called the policy of surplus budgeting.

1. **Monetary measures**

The second solution for inflation comes from the monetarists’ idea of monetary rule or adopting a tighter monetary policy. Since monetarists believe that too much money chasing too few goods is the only probable way to describe inflation, the solution for inflation lies in putting brakes on the flow of money supply generated by the monetary policy. The supply of money can be controlled through various credit control instruments like CRR, repo rate, open market operation etc. If inflation is caused by monetary factors like excess money supply, then monetary policy would be more effective. If inflation is caused by real factors ( like high househpld demand), then fiscal policy may be more effective.

1. **Price and wage control**

Price and wage control are direct control measures. Under price control method, a maximum retail price is fixed for goods and services. The primary objective of price control is to prevent the rise of prices of essential goods and services. Under wage control method, ceiling is imposed on the wage incomes in both private and public sector.

1. **Indexation**

Some economists argue that adverse effects of inflation on different sections of society can be minimized by the method of indexation. Indexation of prices, wages and contractual obligations may be used to compensate those who lose their real incomes due to inflation.

1. **Supply-side policies**

The aim of the Supply-side policies is to increase the long term competitiveness and productivity. As an example, privatisation and deregulation of an economy would make firms more productive and competitive. So, supply-side policies can help to reduce inflationary pressures in the long run.