UNIVERSITY OF JAMMU

SYLLABUS

Semester- IV **Course Code: UECTC: 401**

Title: Principles of Macro Economics-II **Credits: 6**

Preamble: This is a sequel to Principles of Macroeconomics-I. It analyses various aspects of macroeconomics in greater detail. It makes the student familiar with the concepts of BOT, BOPS and Foreign exchange rate. It also exposes the students to understand the concept of inflation, its relationship with unemployment and some basic concepts in an open economy.

Unit 1: IS-LM Analysis

The Goods Market and Money Market: Links between them; Goods Market Equilibrium: The Derivation of the IS Curve; Money Market Equilibrium: The Derivation of the LM Curve; Simultaneous Equilibrium in Goods and Money market; Shift in IS and LM curves and the general equilibrium

Unit 2 : Business Cycle

Business cycle: meaning, characteristics, phases; Hawtrey's monetary theory of business cycles, Hayek's over-investment theory of business cycle, Schumpeter's theory of business cycles, Policy measures to control business cycles- monetary and fiscal policies

Unit 3: Inflation

Concept of inflation; Types of inflation, Causes of demand pull and cost push Inflation; Effects of Inflation; Methods to control inflation, Concept of Deflation and Reflation

Unit 4: Unemployment

Meaning of unemployment. Types of unemployment; Effects of wage cut on employment; Various causes of unemployment in developing economics; Philips curve in the short run and long run (relationship between inflation and unemployment).

Unit 5: Foreign Exchange Rate & Balance of Payment

Foreign exchange market: meaning and kinds, Foreign exchange rate: meaning and concepts; Market Theory of Exchange rate determination, Purchasing Power Parity theory of exchange rate, Monetary Approach to Exchange rate determination.

UNIT :1 IS-LM ANALYSIS

INTRODUCTION

Origin

Articles in June 1936 by David Champernowne and W. Briam Reddaway were followed by three papers presented to an Econometric Society session at New College, Oxford on 26 September 1936 by Roy F. Harrod, James E. Meade and J. R. Hicks that gave birth to the IS-LM model. While all five articles reduced the aggregate demand analysis of John Maynard Keynes' General Theory of Employment, Interest, and Money to small systems of simultaneous equations, economics teaching was shaped by the diagram that Hicks labeled SI-LL which later Alvin Hanses relabeled as showing IS and LM curves in 1949. Although Hicks is credited with the invention of the IS-LM, it is also worth knowing that he was privy to Harrod's paper for the system of equations and Meade's paper for notation before writing his own.

Definition

The IS-LM (Investment Saving - Liquidity Preference Money Supply) model is a macroeconomic model that graphically represents two intersecting curves. The investment/saving (IS) curve is a variation of the income-expenditure model incorporating market interest rates (demand), while the liquidity preference/money supply equilibrium (LM) curve represents the amount of money available for investing (supply).

The model explains the decisions made by investors when it comes to investments with the amount of money available and the interest they will receive. Equilibrium is achieved when the amount invested equals the amount available to invest.

Despite many shortcomings, the IS-LM model has been one of the main tools for macroeconomic teaching and policy analysis. The IS-LM model describes the aggregate demand of the economy using the relationship between output and interest rates. In a closed economy, in the goods market, a rise in interest rate reduces aggregate demand, usually investment demand and/or demand for consumer durables. This lowers the level of output and results in equating the quantity demanded with the quantity produced. This condition is equal to the condition that

planned investment equals saving. The negative relationship between interest rate and output is known as the IS curve.

The second relationship deals with the money market, where the quantity of money demanded increases with aggregate income and decreases with the interest rate.

This chapter Integrates money interest and income into a general. equilibrium model of produces and money markets in the Hicks-Hansen diagrammatic framework. Known as the IS-LM model. The term IS is the shorthand expression of the equality of investment and saving which represents the product market equilibrium. On the other hand the term LM is the shorthand expression of the equality of money demand (L)) and money supply (M) and represents the money market equilibrium.

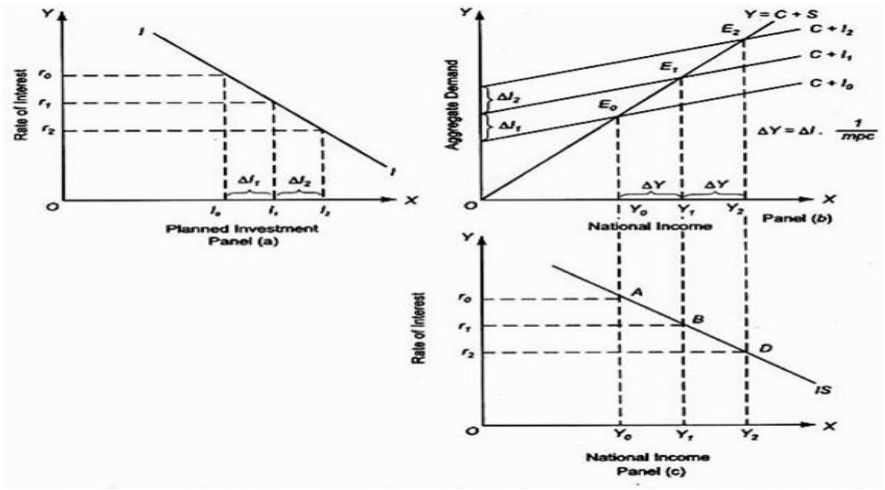
In order to analyse the general equilibrium of product and money markets, it is instructive to study the derivation of the IS and LM functions and their slopes for the understanding of this effectiveness of monetary and fiscal politics.

GOODS MARKET EQUILIBRIUM: DERIVATION OF THE IS CURVE

The IS-LM curve model emphasises the interaction between the goods and money markets. The goods market is in equilibrium when aggregate demand is equal to income. The aggregate demand is determined by consumption demand and investment demand. In the Keynesian model of goods market equilibrium we also now introduce the rate of interest as an important determinant of investment. With this introduction of interest as a determinant of investment, the latter now becomes an endogenous variable in the model. When the rate of interest falls the level of investment increases and vice versa. Thus, changes in the rate of interest affect aggregate demand or aggregate expenditure by causing changes in the investment demand. When the rate of interest falls, it lowers the cost of investment projects and thereby raises the profitability of investment. The businessmen will therefore undertake greater investment at a lower rate of interest. The increase in investment demand will bring about increase in aggregate demand which in turn will raise the equilibrium level of income.

In the derivation of the IS curve we seek to find out the equilibrium level of national income as determined by the equilibrium in goods market by a level of investment determined by a given rate of interest. Thus IS curve relates different equilibrium levels of national income with various

rates of interest. With a fall in the rate of interest, the planned investment will increase which will cause an upward shift in aggregate demand function (C + I) resulting in goods market equilibrium at a higher level of national income. The lower the rate of interest, the higher will be the equilibrium level of national income. Thus, the IS curve is the locus of those combinations of rate of interest and the level of national income at which goods market is in equilibrium. How the IS curve is derived is illustrated in Fig. . In panel (a) of Fig., the relationship between rate of interest and planned investment is depicted by the investment demand curve II. It will be seen from panel (a) that at rate of interest Or0the planned investment is equal to OI0. With OI0 as the amount of planned investment, the aggregate demand curve is C + I0 which, as will be seen in panel (b) of Fig. equals aggregate output at OY0 level of national income. Therefore, in the panel (c) at the bottom of the Fig. , against rate of interest Or0, level of income equal to OY0has been plotted. Now, if the rate of interest falls to Or1, the planned investment by businessmen increases from OI0 to OI1 [see panel (a)]. With this increase in planned investment, the aggregate demand curve shifts upward to the new position C + II in panel (b), and the goods market is in equilibrium at OY1 level of national income. Thus, in panel (c) at the bottom of Fig. the level of national income OY1 is plotted against the rate of interest, Or1. With further lowering of the rate of interest to Or2, the planned investment increases to OI2 [see panel (a)]. With this further rise in planned investment the aggregate demand curve in panel (b) shifts upward to the new position C +I2 corresponding to which goods market is in equilibrium at OY2 level of income. Therefore, in panel (c) the equilibrium income OY2 is shown against the interest rate Or2. By joining points A, B, D representing various interest-income combinations at which goods market is in equilibrium we obtain the IS curve. It will be observed from Fig. that the IS curve is downward sloping (i.e., has a negative slope) which implies that when rate of interest declines, the equilibrium level of national income increases. Why does IS Curve Slope Downward? What accounts for the downward-sloping nature of the IS curve.



As seen above, the decline in the rate of interest brings about an increase in the planned investment expenditure. The increase in investment spending causes the aggregate demand curve to shift upward and therefore leads to the increase in the equilibrium level of national income. Thus, a lower rate of interest is associated with a higher level of national income and vice versa. This makes the IS curve, which relates the level of income with the rate of interest, to slope downward. Thus, a lower rate of interest is associated with a higher level of national income and vice versa. This makes the IS curve, which relates the level of income with the rate of interest, to slope downward. Steepness of the IS curve depends on: (1) The elasticity of the investment demand curve, and (2) The size of the multiplier. The elasticity of investment demand signifies the degree of responsiveness of investment spending to the changes in the rate of interest. Suppose the investment demand is highly elastic or responsive to the changes in the rate of interest, then a given fall in the rate of interest will cause a large increase in investment demand which in turn will produce a large upward shift in the aggregate demand curve. A large upward shift in the aggregate demand curve will bring about a large expansion in the level of national income. Thus when investment demand is more elastic to the changes in the rate of interest, the investment demand curve will be relatively flat (or less steep).

Similarly, when investment demand is not very sensitive or elastic to the changes in the rate of interest, the IS curve will be relatively more steep. The steepness of the IS curve also depends on the magnitude of the multiplier. The value of multiplier depends on the marginal propensity to consume (mpc). It may be noted that the higher the marginal propensity to consume, the aggregate demand curve (C + I) will be more steep and the magnitude of multiplier will be large.

In case of a higher marginal propensity to consume (mpc) and therefore a higher value of multiplier, a given increment in investment demand caused by a given fall in the rate of interest will help to bring about a greater increase in equilibrium level of income. Thus, the higher the value of multiplier, the greater will be the rise in equilibrium income produced by a given fall in the rate of interest and this makes the IS curve flatter.

On the other hand, the smaller the value of multiplier due to lower marginal propensity to consume, the smaller will be the increase in equilibrium level of income following a given increment in investment caused by a given fall in the rate of interest. Thus, in case of smaller size of multiplier the IS curve will be more steep. Shift in IS Curve: It is important to understand what determines the position of the IS curve and what causes shifts in it. It is the level of autonomous expenditure which determines the position of the IS curve and changes in the autonomous expenditure cause a shift in it. By autonomous expenditure we mean the expenditure, be it investment expenditure, the Government spending or consumption expenditure, which does not depend on the level of income and the rate of interest. The government expenditure is an important type of autonomous expenditure. Note that the Government expenditure, which is determined by several factors as well as by the policies of the Government, does not depend on the level of income and the rate of interest.

Similarly, some consumption expenditure has to be made if individuals have to survive even by borrowing from others or by spending their savings made in the past year. Such consumption expenditure is a sort of autonomous expenditure and changes in it do not depend on the changes in income and rate of interest. Further, autonomous changes in investment can also occur. In the goods market equilibrium of the simple Keynesian model the investment expenditure is treated as autonomous or independent of the level of income and therefore does not vary as the level of income increases. However, in the complete Keynesian model, the investment spending is thought to be determined by the rate of interest along with marginal efficiency of investment. Following this complete Keynesian model, in the derivation of the IS curve we consider the level of investment and changes in it as determined by the rate of interest along with marginal efficiency of capital. However, there can be changes in investment spending autonomous or independent of the changes in rate of interest and the level of income. For instance, growing population requires more investment in house construction, school buildings, roads, etc., which

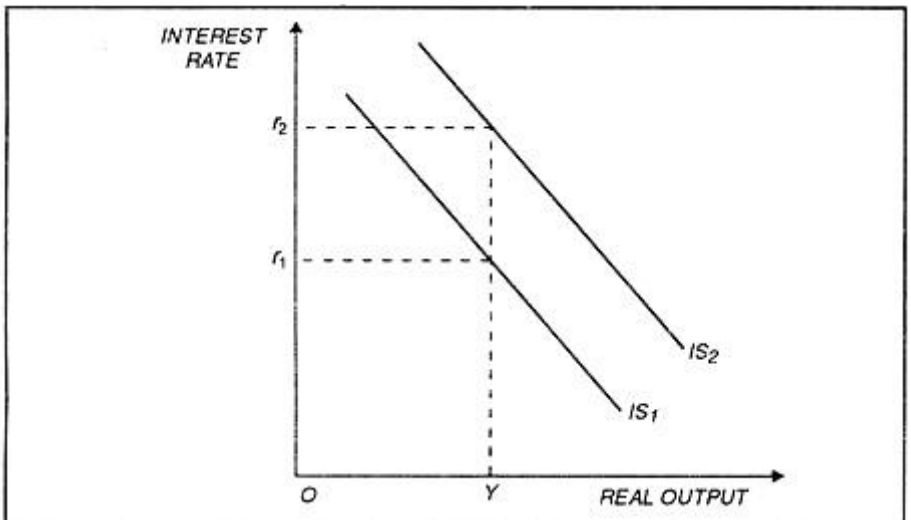
does not depend on changes in level of income or rate of interest. Further, autonomous changes in investment spending can also take place when new innovations come about, that is, when there is progress in technology and new machines, equipment, tools etc. have to be built embodying the new technology.

Besides, Government expenditure is also of autonomous type as it does not depend on income and rate of interest in the economy. As is well known, government increases its expenditure for the purpose of promoting social welfare and accelerating economic growth. Increase in Government expenditure will cause a rightward shift in the IS curve.

SHIFTS IN THE IS CURVE

The IS function shifts to the right with the reduction in saving. Reduction in saving may be the result of one or more factors leading to increase in consumption or investment. Consumers may like to buy a new product even by reducing saving. The community' s wealth may increases due to government's policy and the wealth holders do not like to save the same amount than before. Consumers may start buying more in anticipation of shortages or price rise thereby reducing saving. The IS function also shifts to the right by an autonomous increase in investment. The increase in investment may result from expectation of higher profits in the future, or from innovation, or from expectations concerning increase in future demand for product.

In the opposite case when investment falls or saving increases, the IS function will shift to the left and the equilibrium will be established at a lower level of income and interest rate. This situation can be explained by assuming IS, as the original curve.



MONEY MARKET EQUILIBRIUM: DERIVATION OF THE LM CURVE

The money market is the interaction among institutions through which money is supplied to individuals, firms, and other institutions that demand money. Money market equilibrium occurs at the interest rate at which the quantity of money demanded is equal to the quantity of money supplied.

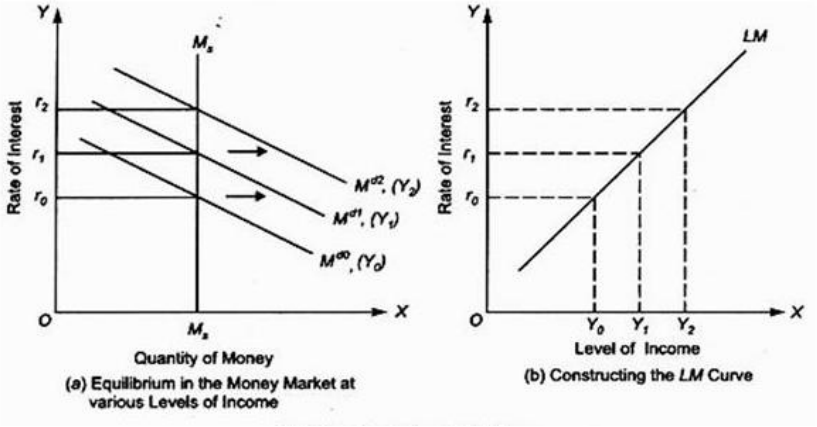
The LM curve can be derived from the Keynesian theory from its analysis of money market equilibrium. According to Keynes, demand for money to hold depends upon transactions motive and speculative motive. It is the money held for transactions motive which is a function of income. The greater the level of income, the greater the amount of money held for transactions motive and therefore higher the level of money demand curve.

The demand for money depends on the level of income because they have to finance their expenditure, that is, their transactions of buying goods and services. The demand for money also depends on the rate of interest which is the cost of holding money. This is because by holding money rather than lending it and buying other financial assets, one has to forgo interest.

Thus demand for money (Md) can be expressed as: Md = L(Y, r) where Md stands for demand for money, Y for real income and r for rate of interest.

Thus, we can draw a family of money demand curves at various levels of income. Now, the intersection of these various money demand curves corresponding to different income levels with the supply curve of money fixed by the monetary authority would gives us the LM curve.

The LM curve relates the level of income with the rate of interest which is determined by money-market equilibrium corresponding to different levels of demand for money. The LM curve tells what the various rates of interest will be (given the quantity of money and the family of demand curves for money) at different levels of income. But the money demand curve or what Keynes calls the liquidity preference curve alone rises. In Fig. (b) we measure income on the X-axis and plot the income level corresponding to the various interest rates determined at those income levels through money market equilibrium by the equality of demand for and the supply of money in Fig. (a).



Slope of LM Curve:

It will be noticed from Fig. (b) that the LM curve slopes upward to the right. This is because with higher levels of income, demand curve for money (Md) is higher and consequently the money- market equilibrium, that is, the equality of the given money supply with money demand curve occurs at a higher rate of interest. This implies that rate of interest varies directly with income. It is important to know the factors on which the slope of the LM curve depends. There are two factors on which the slope of the LM curve depends. First, the responsiveness of demand for money (i.e., liquidity preference) to the changes in income.

As the income increases, say from Y0 to Y1, the demand curve for money shifts from Md 0 to Md 1, that is, with an increase in income, demand for money would increase for being held for transactions motive, Md or L1 =f(Y). This extra demand for money would disturb the money market equilibrium and for the equilibrium to be restored the rate of interest will rise to the level where the given money supply curve intersects the new demand curve corresponding to the higher income level. It is worth noting that in the new equilibrium position, with the given stock of money supply, money held under the transactions motive will increase whereas the money held for speculative motive will decline. The greater the extent to which demand for money for transactions motive increases with the increase in income, the greater the decline in the supply of money available for speculative motive and, given the demand for money for speculative motive, the higher the rise in the rate of interest and consequently the steeper the LM curve, r = f (M2,

L2) where r is the rate of interest, M2 is the stock of money available for speculative motive and L2 is the money demand or liquidity preference function for speculative motive.

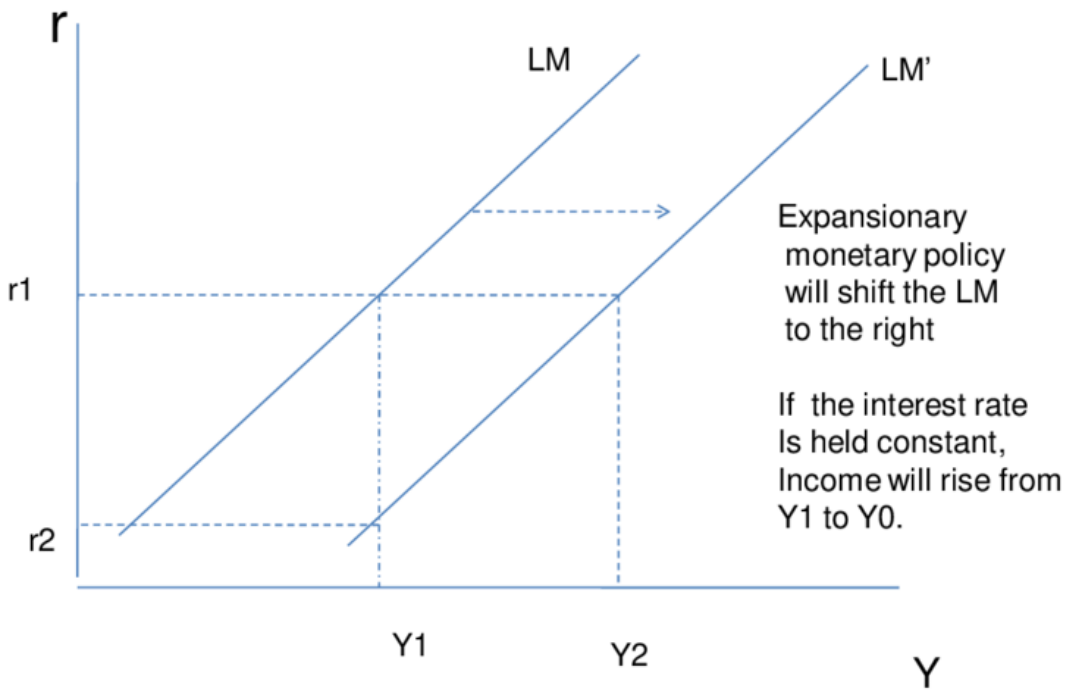
The second factor which determines the slope of the LM curve is the elasticity or responsiveness of demand for money (i.e., liquidity preference for speculative motive) to the changes in rate of interest. The lower the elasticity of liquidity preference for speculative motive with respect to the changes in the rate of interest, the steeper will be the LM curve. On the other hand, if the elasticity of liquidity preference (money demand function) to the changes in the rate of interest is high, the LM curve will be flatter or less steep. Shifts in the LM Curve: Another important thing to know about the IS-LM curve model is that what brings about shifts in the LM curve or, in other words, what determines the position of the LM curve. A LM curve is drawn by keeping the stock or money supply fixed. Therefore, when the money supply increases, given the money demand function, it will lower the rate of interest at the given level of income. This is because with income fixed, the rate of interest must fall so that demand for money for speculative and transactions motive rises to become equal to the greater money supply. This will cause the LM curve to shift outward to the right. The other factor which causes a shift in the LM curve is the change in liquidity preference (money demand function) for a given level of income. If the liquidity preference function for a given level of income shifts upward, this, given the stock of money, will lead to the rise in the rate of interest for a given level of income. This will bring about a shift in the LM curve to the left. It therefore follows from above that increase in the money demand function causes the LM curve to shift to the left. Similarly, on the contrary, if the money demand function for a given level of income declines, it will lower the rate of interest for a given level of income and will therefore shift the LM curve to the right.

SHIFTS IN THE LM CURVE

The LM function shifts to the right with the increase in the money supply, given the demand for money, or due to the decrease in the demand for money, given the supply of money. If the central bank follows an expansionary monetary policy, it will buy securities in the open market. As a result, the money supply with the public increases for both transactions and speculative purposes. The shifts the LM curve to the right.

A decrease in the demand for money means a reduction in the quantity of balances demanded at each level of income and interest rate. Such a decrease in the demand for money balances creates an excess of the money supplied over the money demanded.

Contrariwise, a decrease in the money supply or an increase in the demand for money will shift the LM function to the left such that a new equilibrium is established at a higher interest rate and lower income level. This case can be explained by assuming LM as the original curve.



SIMULTANEOUS EQUILIBRIUM OF GOODS MARKET AND MONEY MARKET

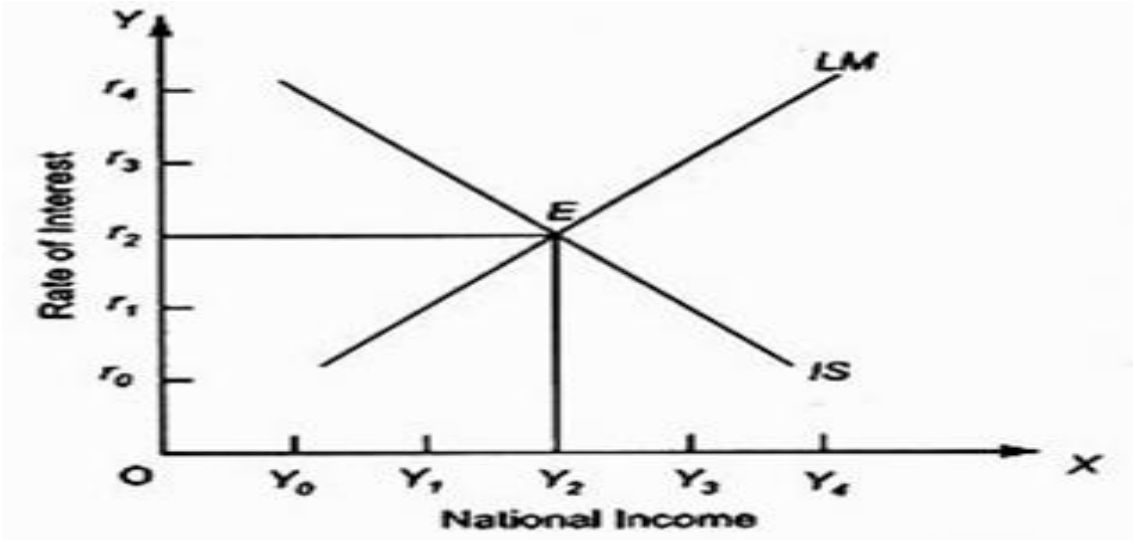
The IS and the LM curves relate the two variables.

(a) Income and

(b) The rate of interest.

Income and the rate of interest are therefore determined together at the point of intersection of these two curves, i.e., E in Fig. . The equilibrium rate of interest thus determined is Or_2 and the level of income determined is OY_2.

At this point income and the rate of interest stand in relation to each other such that (1) the goods market is in equilibrium, that is, the aggregate demand equals the level of aggregate output, and (2) the demand for money is in equilibrium with the supply of money (i.e., the desired amount of money is equal to the actual supply of money). It should be noted that LM curve has been drawn by keeping the supply of money fixed.



Thus, the IS-LM curve model is based on:

(1) The investment-demand function,

(2) The consumption function,

(3) The money demand function, and

(4) The quantity of money.

We see, therefore, that according to the IS-LM curve model both the real factors, namely, saving and investment, productivity of capital and propensity to consume and save, and the monetary factors, that is, the demand for money (liquidity preference) and supply of money play a part in the joint determination of the rate of interest and the level of income.

Any change in these factors will cause a shift in IS or LM curve and will therefore change the equilibrium levels of the rate of interest and income. The IS-LM curve model explained above has succeeded in integrating the theory of money with the theory of income determination. And by doing so, as we shall see below, it has succeeded in synthesizing the monetary and fiscal policies.

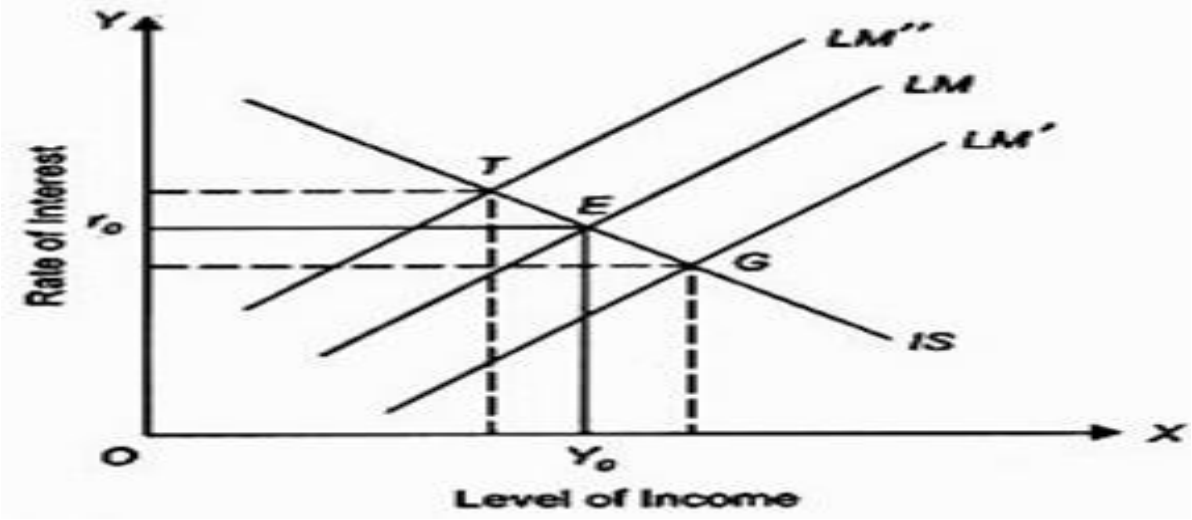
Further, with the IS-LM curve analysis, we are better able to explain the effect of changes in certain important economic variables such as desire to save, the supply of money, investment, demand for money on the rate of interest and level of income.

Effect of Changes in Supply of Money on the Rate of Interest and Income Level:

Let us first consider what will happen if the supply of money is increased by the action of the Central Bank. Given the liquidity preference schedule, with the increase in the supply of money, more money will be available for speculative motive at a given level of income which will cause the interest rate to fall.

As a result, the LM curve will shift to the right. With this rightward shift in the LM curve, in the new equilibrium position, rate of interest will be lower and the level of income greater than at point E. With the increase in the supply of money, LM curve shifts to the right to the position LM', and with IS schedule remaining unchanged, new equilibrium is at point G corresponding to which rate of interest is lower and level of income greater than at E.

Now, suppose that instead of increasing the supply of money, Central Bank of the country takes steps to reduce the supply of money. With the reduction in the supply of money, less money will be available for speculative motive at each level of income and, as a result, the LM curve will shift to the left of E, and the is curve remaining unchanged, in the new equilibrium position (as shown by point T in Fig. the rate of interest will be higher and the level of income smaller than before.



Changes in the Desire to Save or Propensity to Consume:

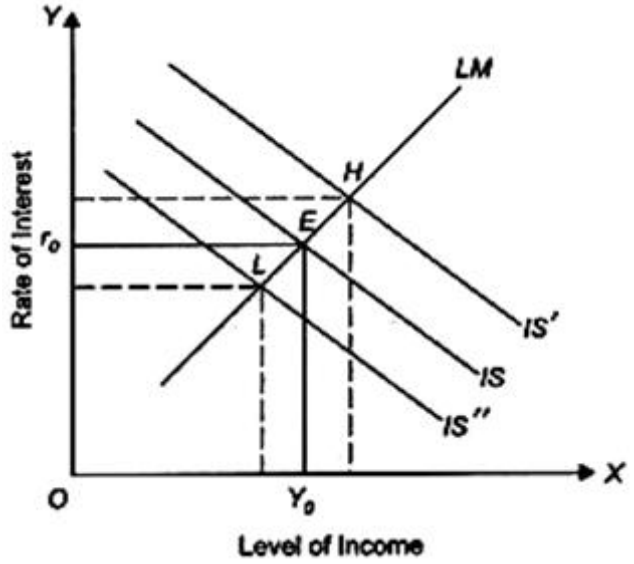
Let us consider what happens to the rate of interest when desire to save or, in other words, propensity to consume changes. When people's desire to save falls, that is, when propensity to consume rises, the aggregate demand curve will shift upward and, therefore, level of national income will rise at each rate of interest.

As a result, the IS curve will shift outward to the right. In Fig. Suppose with a certain given fall in the desire to save (or increase in the propensity to consume), the IS curve shifts rightward to the dotted position IS". With LM curve remaining unchanged, the new equilibrium position will be established at H corresponding to which rate of interest as well as level of income will be greater than at E.

Thus, a fall in the desire to save has led to the increase in both rate of interest and level of income. On the other hand, if the desire to save rises, that is, if the propensity to consume falls,

aggregate demand curve will shift downward which will cause the level of national income to fall for each rate of interest and as a result the IS curve will shift to the left.

With this, and LM curve remaining unchanged, the new equilibrium position will be reached to the left of E, say at point L corresponding to which both rate of interest and level of national income will be smaller than at E.



Changes in Autonomous Investment and Government Expenditure

Changes in autonomous investment and Government expenditure will also shift the curve. If either there is increase in autonomous private investment or Government steps up its expenditure, aggregate demand for goods will increase and this will bring about increase in national income through the multiplier process.

This will shift IS schedule to the right, and given the LM curve, the rate of interest as well as the level of income will rise. On the contrary, if somehow private investment expenditure falls or the Government reduces its expenditure, the IS curve will shift to the left and, given the LM curve, both the rate of interest and the level of income will fall.

Changes in Demand for Money or Liquidity Preference:

Changes in liquidity preference will bring about changes in the LM curve. If the liquidity preference or demand for money of the people rises, the LM curve will shift to the left. This is because, greater demand for money, given the supply of money, will raise the rate of interest

corresponding to each level of national income. With the leftward shift in the LM curve, given the IS curve, the equilibrium rate of interest will rise and the level of national income will fall.

On the contrary, if the demand for money or liquidity preference of the people falls, the LM curve will shift to the right. This is because, given the supply of money, the rightward shift in the money demand curve means that corresponding to each level of income there will be lower rate of interest. With rightward shift in the LM curve, given the IS curve, the equilibrium level of rate of interest will fall and the equilibrium level of national income will increase.

We thus see that changes in propensity to consume (or desire to save), autonomous investment or Government expenditure, the supply of money and the demand for money will cause shifts in either IS or LM curve and will thereby bring about changes in the rate of interest as well as in national income.

The integration of goods market and money market in the IS-LM curve model clearly shows that Government can influence the economic activity or the level of national income through monetary and fiscal measures.

Through adopting an appropriate monetary policy (i.e., changing the supply of money) the Government can shift the LM curve and through pursuing an appropriate fiscal policy (expenditure and taxation policy) the Government can shift the IS curve. Thus both monetary and fiscal policies can play a useful role in regulating the level of economic activity in the country.

A Critique of the IS-LM Curve Model:

The IS-LM curve model makes a significant advance in explaining the simultaneous determination of the rate of interest and the level of national income. It represents a more general, inclusive and realistic approach to the determination of interest rate and level of income.

Further, the IS-LM model succeeds in integrating and synthesizing fiscal with monetary policies, and theory of income determination with the theory of money. But the IS-LM curve model is not without limitations. Firstly, it is based on the assumption that the rate of interest is quite flexible, that is, free to vary and not rigidly fixed by the Central Bank of a country.

If the rate of interest is quite inflexible, then the appropriate adjustment explained above will not take place. Secondly, the model is also based upon the assumption that investment is interest-elastic, that is, investment varies with the rate of interest. If investment is interest-inelastic, then the IS-LM curve model breaks down since the required adjustments do not occur.

Thirdly, Don Patinkin and Milton Friedman have criticized the IS-LM curve model as being too artificial and over-simplified. In their view, division of the economy into two sectors – monetary and real – is artificial and unrealistic. According to them, monetary and real sectors are quite interwoven and act and react on each other.

Further, Patinkin has pointed out that the IS-LM curve model has ignored the possibility of changes in the price level of commodities. According to him, the various economic variables such as supply of money, propensity to consume or save, investment and the demand for money not only influence the rate of interest and the level of national income but also the prices of commodities and services.

Patinkin has suggested a more integrated and general equilibrium approach which involves the simultaneous determination of not only the rate of interest and the level of income but also of the prices of commodities and services.

UNIT 2

BUSINESS CYCLE

MEANING OF BUSINESS CYCLES

Business cycle or trade cycle is a part of the capitalist system. It refers to the phenomenon of cyclical booms and depressions. In a business cycle, there are wave-like fluctuations in aggregate employment, income, output and price level. The term business cycle has been defined in various ways by different economists.

Prof. Haberler's definition is very simple - "The business cycle in the general sense may be defined as an alternation of periods of prosperity and depression of good and bad trade." Keynes' definition in his Treatise of Money is more explicit-"A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentage, altering with periods of bad trade characterised by falling prices and high unemployment percentages."

Gordon's definition is precise

"Business cycles consist of recurring alternation of expansion and contraction in aggregate economic activity, the alternating movements in each direction being self-reinforcing and pervading virtually, all parts of the economy." The most acceptable definition is by Estey

"Cyclical fluctuations are characterised by alternating waves of expansion and contraction. They do not have a fixed rhythm, but they are cycles in that the phases of contraction and expansion recur frequently and in fairly similar patterns."

CHARACTERISTICS OR BUSINESS CYCLES

Business cycles possess the following characteristics:

1. Cyclical fluctuations are wave-like movements.

2 Fluctuations are recurrent in nature.

3. They are non-periodic or irregular. In other words, the peaks and roughs do not occur at regular intervals.

4. They occur in such aggregate variables as output, income, employment and prices.

5. These variables move at about the same time in the same direction but at different rates.

6. The durable goods industries experience relatively wide fluctuations in output and employment but relatively small fluctuations in prices. On the other hand, nondurable goods industries experience relatively wide fluctuations in prices but relatively small fluctuations in output and employment.

7. Business cycles are not seasonal fluctuations such as upswings in retail trade during Diwali or Christmas.

8. They are not secular trends such as long-run growth or decline in economic activity.

9. Upswings and downswings are cumulative in their effects.

This business cycles are recurrent fluctuations in aggregate employment, income, output and price level.

PHASES OF A BUSINESS CYCLE:

A typical business cycle has two phases expansion phase or upswing or peak and contraction phase or downswing or trough. The upswing or expansion phase exhibits a more rapid growth of GNP than the long run trend growth rate. At some point, GNP reaches its upper turning point and the downswing of the cycle begins. In the contraction phase, GNP declines.

At some time, GNP reaches its lower turning point and expansion begins. Starting from a lower turning point, a cycle experiences the phase of recovery and after some time it reaches the upper turning point the peak. But, continuous prosperity can never occur and the process of downhill starts. In this contraction phase, a cycle exhibits first a recession and then finally reaches the bottom—the depression.

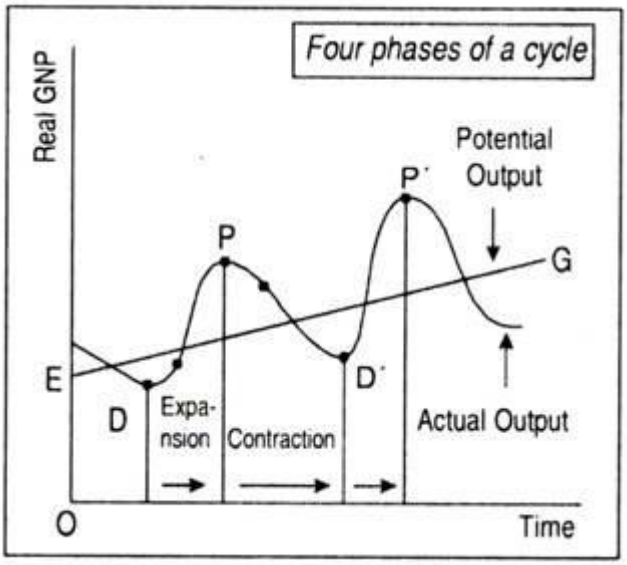
Thus, a trade cycle has four phases:
(i) depression,

(ii) revival,

(iii) boom, and

(iv) recession.

These phases of a trade cycle are illustrated in Fig. given below. In this figure, the secular growth path or trend growth rate of GNP has been labelled as EG. Now we briefly describe the essential characteristics of these phases of an idealised cycle.



1. Depression or Trough:

The depression or trough is the bottom of a cycle where economic activity remains at a highly low level. Income, employment, output, price level, etc. go down. A depression is generally characterized by high unemployment of labour and capital and a low level of consumer demand in relation to the economy's capacity to produce. This deficiency in demand forces firms to cut back production and lay-off workers.

Thus, there develops a substantial amount of unused productive capacity in the economy. Even by lowering down the interest rates, financial institutions do not find enough borrowers. Profits may even become negative. Firms become hesitant in making fresh investments. Thus, an air of pessimism engulfs the entire economy and the economy lands into the phase of depression. However, the seeds of recovery of the economy lie dormant in this phase.

2. Recovery:

Since trough is not a permanent phenomenon, a capitalistic economy experiences expansion and, therefore, the process of recovery starts.

During depression some machines wear out completely and ultimately become useless. For their survival, businessmen replace old and worn-out machinery. Thus, spending spree starts, of course, hesitantly. This gives an optimistic signal to the economy. Industries begin to rise and expectations tend to become more favourable. Pessimism that once prevailed in the economy now makes room for optimism. Investment becomes no longer risky. Additional and fresh investment leads to a rise in production.

Increased production leads to an increase in demand for inputs. Employment of more labour and capital causes GNP to rise. Further, low interest rates charged by banks in the early years of recovery phase act as an incentive to producers to borrow money. Thus, investment rises. Now plants get utilized in a better way. General price level starts rising. The recovery phase, however, gets gradually cumulative and income, employment, profit, price, etc., start increasing.

3. Prosperity:

Once the forces of revival get strengthened the level of economic activity tends to reach the highest point—the peak. A peak is the top .of a cycle. The peak is characterized by an all round optimism in the economy—income, employment, output, and price level tend to rise. Meanwhile, a rise in aggregate demand and cost leads to a rise in both investment and price level. But once the economy reaches the level of full employment, additional investment will not cause GNP to rise.

On the other hand, demand, price level, and cost of production will rise. During prosperity, existing capacity of plants is overutilised. Labour and raw material shortages develop. Scarcity of resources leads to rising cost. Aggregate demand now outstrips aggregate supply. Businessmen now come to learn that they have overstepped the limit. High optimism now gives birth to pessimism. This ultimately slows down the economic expansion and paves the way for contraction.

4. Recession:

Like depression, prosperity or pea, can never be long-lasting. Actually speaking, the bubble of prosperity gradually dies down. A recession begins when the economy reaches a peak of activity and ends when the economy reaches its trough or depression. Between trough and peak, the economy grows or expands. A recession is a significant decline in economic activity spread across the economy lasting more then a few months, normally visible in production, employment, real income and other indications.

During this phase, the demand of firms and households for goods and services start to fall. No new industries are set up. Sometimes, existing industries are wound up. Unsold goods pile up because of low household demand. Profits of business firms dwindle. Output and employment levels are reduced. Eventually, this contracting economy hits the slump again. A recession that is deep and long-lasting is called a depression and, thus, the whole process restarts.

The four-phased trade cycle has the following attributes:

(i) Depression lasts longer than prosperity,

(ii) The process of revival starts gradually,

(iii) Prosperity phase is characterized by extreme activity in the business world,

(iv) The phase of prosperity comes to an end abruptly.

The period of a cycle, i.e., the length of time required for the completion of one complete cycle, is measured from peak to peak (P to P') and from trough to trough (from D to D'). The shortest of the cycle is called 'seasonal cycle'.

HAWTREY'S THEORY OF BUSINESS CYCLE

Hawtrey, regards trade cycle as a purely monetary phenomenon. According to him, non-monetary factors like wars, strikes, earthquakes, crop failures, etc., may cause partial and temporary depression in particular sectors of the economy, but they cannot cause a full permanent depression involving general unemployment of the factors of production in the form of a business cycle.

Business cycles are caused by the expansion and contraction of bank credit. Hawtrey's business cycle theory is based on three important factors:

1. Traders play an important role in the economy. They are very sensitive to the change of rate of interest.

2. Money supply in the economy is affected by the level of consumer spending.

3. At the sudden crash of boom, banks suspend credit and call on the borrowers to return the loans.

According to Hawtrey the upward phase of the business cycle is brought about by an expansion of bank credit and also by an increase in the velocity of circulation of money. When the banks have excess reserves the rate of interest is lowered, producers and traders will be induced to borrow more from banks. It has already been pointed out that the business people are very sensitive to change in the rate of interest. Borrowing at low rate of interest lead to expansion in business activities and rise in the price level. Producers employ more people this leads to more income and more production. The income goes in the hands of the factors of production. The increased income is spent on consumer goods thus increase in demand of consumer goods. The increase demand leads to further expansion of demand of investment goods. In this way a cumulative expansion takes place during the prosperity. Banks grant more and more loans to business. The boom crashes when banks stop expansion of credit.

The downswing or Depression:

How the depression does develops according to this theory? As said above, the banks suddenly suspend their policy of credit expansion which they were following. Why do they do so? With the expansion of credit the banks reach at maximum point beyond which they cannot any more loans.

This may be because of the understanding that the peak has reached and that the economy may take a downturn in the immediate future. The scarcity of cash forces banks to raise the rate of interest and start withdrawing the short term and call loans from their clients. This comes as big shock to the businessmen who were enjoying the liberal policy of banks. The sudden call backs of loans forces businessmen to sell their stock at any price and repay the loans. This depresses

the market. Prices crashes and with every fall in prices the desire to dispose of the stocks leads to nervousness and collapse of the market. Once the downtrend starts it gathers the momentum with the lapse of time. There is an atmosphere of pessimism and gloom throughout the economy. This is depression.

Conditions for revival:

During the depression the rate of interest is low and banks have excess reserves. The conditions are favourable for revival. The low rate of interest induces businessmen to borrow and the excess reserves with banks induces banks to lend. The revival starts and because of its cumulative character leads to prosperity and boom conditions. In short it can be said that elastic money supply is the root cause of the operation of a trade cycle.

Criticism of the Theory:

1. The theory is criticized for not furnishing a comprehensive explanation of the trade cycle.

2. The rate of interest alone may not affect business decisions.

3. It is also incorrect to say that business fluctuations are caused by the actions of the banks

4. It ignores non-monetary factors, several non-monetary factors, such as new investment demands,

cost structure, and expectations of businessmen, can also produce changes in economic activities.

5. Hawtrey's theory that businessmen are more sensitive to the interest rates that is true but they are influenced by future opportunities to earn profit.

HAYEK'S OVERINVESTMENT THEORY

The Monetary Over-Investment Theory posits that imbalance between the actual and desired investments, i.e. actual investments exceeding the desired investments, explain the fluctuations in the economic activities.

The monetary over-investment theory was proposed by Hayek, who stresses that in order to maintain economy's equilibrium the pattern of investments should correspond to the consumption pattern. And

in order to keep the economy in stable equilibrium, it is necessary to have the voluntary savings equal to the actual investments.

This theory asserts that total investments should be distributed among various industries in such a way that each industry produces only as much as the consumer demands. Thus, in every industry, the supply is equal to the demand. Given these equilibrium conditions, there will be no tendency to increase the consumption and hence the economy remains in the state of stable equilibrium.

The economic equilibrium and stability get disturbed by the changes in the money supply and saving-investment relations. The saving-investment relation might change due to the increase in the investment without a corresponding increase in the voluntary savings. The investment may increase due to several reasons, such as a fall in the interest rate, increase in the marginal efficiency of capital, optimism about the future business prospects, etc.

If the increased bank credit is used to finance the increased investments, then it will result in over-investment, specifically in capital goods industries. With new investments, the additional income gets generated and thereby additional consumer demands. Because of the time lag between the demand and supply, the excess demand causes inflation and will result in reduced purchasing power.

Thus, the real demand does not increase at the rate at which the investment is increasing. With the increase in the consumer demand, the existing rate of investment cannot be maintained. The consumer continues demanding due to the increase in the labor income and as a result, the price of consumer goods rises and surpasses the prices of the capital goods. Thus, the profitability of the consumer goods industries becomes higher than the capital goods industries. Due to this, there will be a shift in the investment from the capital goods to the consumer goods industry, i.e. the demand for bank credit increases in the consumer-goods industries.

But, however, the unwillingness and inability of the bankers to extend credit, even more, when there is a competitive demand for the fund from the capital goods industry, will lead to a financial crisis. This will result in the decline in the capital goods production because of a fall in the marginal efficiency of the capital and decline in the investments under the pressure of high cost. As a result, the unemployment prevails in the capital goods industries. This unemployment

so created is too rapid to be absorbed by the consumer goods industries, and therefore, it gets widespread. This marks the beginning of the depression.

Criticisms

The following are the major criticisms of monetary over-investment theory:

It is assumed that when the market rate is lower than the natural rate (at which the demand for and supply of goods is equated), the new bank credit is extended to the capital goods industries. This is possible only under the situation of full employment. But, however, the business cycles have occurred even when the resources are not completely employed.

This theory lays emphasis on the change in the interest rate as the major determinant of investment and ignores other important factors, such as cost of capital equipment, businessman's own expectations, etc.

An undue emphasis is laid on the imbalance between the investments in the capital goods and consumer goods as in the modern economy, such imbalances are self-correcting and do not result in serious depressions.

Despite these shortcomings, the monetary over-investment theory is widely applied and accepted in determining the economic equilibrium and stability.

SCHUMPETER'S THEORY OF INNOVATION

Schumpeter's Theory of Innovation is in line with the other investment theories of the business cycle, which asserts that the change in investment accompanied by monetary expansion are the major factors behind the business fluctuations, but however, Schumpeter's Theory posits that innovation in business is the major reason for increased investments and business fluctuations.

According to Schumpeter, the cyclical process is almost exclusively the result of innovation in the organization, both industrial and commercial. By innovation he means, the changes in the methods of production and transportation, production of a new product, change in the industrial organization, opening up of a new market, etc. The innovation does not mean invention rather it refers to the commercial applications of new technology, new material, new methods and new sources of energy.

Schumpeter has developed a model in two stages, i.e. first approximation, and second approximation, in order to further explain his business cycle theory of innovation. The first approximation lays emphasis on the primary impact of innovatory ideas while the secondary approximation deals with the subsequent responses obtained from the application of the innovations. Let's study these stages in detail:

First Approximation: This stage begins with the economic system in equilibrium in which there is no involuntary unemployment, firm's mc = mr (marginal cost is equal to marginal revenue) and price =Average Cost (AC). In the situation of complete equilibrium in the economy, if the firm decides to undertake a new technique of production, then the same needs to be financed through bank credit.

Since the economy is in equilibrium, there are no surplus funds to finance the new venture. With the additional funds from the banking system, the firm keeps on bidding higher prices for the inputs with a view to withdrawing them from the other less important uses. With an increased expenditure in the economy, the price begins to rise. This process further expands, when other firms try to imitate the innovation and raise additional funds from the banking system. As the innovation gets widely adapted the output begins to flow in the market. This marks the beginning of prosperity and expansion. But after a certain level, with an increase in the level of output the price and profitability decreases. This is because the further innovation does not come by quickly and thus, there will be no additional demand for the funds. Instead, the firms which borrowed the funds from the bank start paying it back. This results in the contraction in money supply and hence the prices fall further. The process of recession begins and remains until the equilibrium in the economy is restored.

Second Approximation: The second approximation deals with the waves generated by the first approximation. The speculation is the main element of second approximation. As the primary wave of expansion begins, the investor, particularly in capital goods industries, expects this upswing to remain permanent and hence borrows heavily.

Even the consumers expecting the prices to increase in future go into debt to acquire durable consumer goods. This heavy indebtedness turns out to be havoc when prices begin to fall. Both the investors and consumers find it difficult to meet their obligations, and this situation leads to a panic and then depression.

Criticisms

The Schumpeter's theory of innovation suffers from the following criticisms:

1. It is not only difficult but also unavailing to perform the objective evaluation of Schumpeter's theory of the business cycle because its arguments are more based on the sociological factors rather than the economic factors.

2. Schumpeter's theory is not basically different from the over-investment theory; it differs only in the respect of the cause of variation in investment when the economy is in stable equilibrium.

3. Like other theories of the business cycle, this theory also leaves out other factors that cause fluctuations in the economic activities. Innovation is not the sole factor, rather is only one of the factors that cause fluctuations in the economy.

In spite of these shortcomings Schumpeter's theory of innovation is widely acceptable in the modern economy and is used to determine the economic fluctuations.

Measures To Control Business Cycles Or Stabilization Policies:

Various measures have been suggested and put into practice from time to time to control fluctuations in an economy. They aim at stabilizing economic activity so as to avoid the ill-effects of a boom and a depression. The following three measures are adopted for this purpose.

1. Monetary Policy:

Monetary policy as a method to control business fluctuations is operated by the central bank of a

country. The central bank adopts a number of methods to control the quantity and quality of credit. To control the expansion of money supply during a boom, it raises its bank rate, sells securities in the open market, raises the reserve ratio, and adopts a number of selective credit control measures such as raising margin requirements and regulating consumer credit. Thus the central bank adopts a dear money policy. Borrowings by business and trade become dearer, difficult and selective. Efforts are made to control excess money supply in the economy.

To control a recession or depression, the central bank follows an easy or cheap monetary policy by increasing the reserves of commercial banks. It reduces the bank rate and interest rates of banks. It buys

securities in the open market. It lowers margin requirements on loans and encourages banks to lend more to consumers, businessmen, traders, etc.

2. Fiscal Policy:

Monetary policy alone is not capable of controlling business cycles. It should, therefore, be supplemented by compensatory fiscal policy. Fiscal measures are highly effective for controlling excessive government expenditure, personal consumption expenditure, and private and public investment during a boom. On the other hand, they help in increasing government expenditure, personal consumption expenditure and private and public investment during a depression.

Policy during Boom:

The following measures are adopted during a boom. During a boom, the government tries to reduce unnecessary expenditure on non-development activities in order to reduce its demand for goods and services. This also puts a check on private expenditure which is dependent on the government demand for goods and services. But it is difficult to cut government expenditure. Moreover, it is not possible to distinguish between essential and non-essential government expenditure. Therefore, this measure is supplemented by taxation. To cut personal expenditure, the government raises the rates of personal, corporate and commodity taxes.

The government also follows the policy of having a surplus budget when the government revenues exceed expenditures. This is done by increasing the tax rates or reduction in government expenditure or both. This tends to reduce income and aggregate demand through the reverse operation of the multiplier. Another fiscal measure which is usually adopted is to borrow more from the public which has the effect of reducing the money supply with the public. Further, the repayment of public debt should be stopped and postponed to some future date when the economy stabilizes.

Policy during Depression:

During a depression, the government increases public expenditure, reduces taxes and adopts a budget deficit policy. These measures tend to raise aggregate demand, output, income, employment and prices.

An increase in public expenditure increases the aggregate demand for goods and services and leads to increase in income via the multiplier. The public expenditure is made on such public works as roads, canals, dams, parks, schools, hospitals and other construction works.

They create demand for labour and the products of private construction industries and helps in reviving them. The government also increases its expenditure on such relief measures as unemployment insurance, and other social security measures in order to stimulate the demand for consumer goods industries. Borrowing by the government to finance budget deficits utilizes idle money lying with the banks and financial institutions for investment purposes.

3. Direct Controls:

The aim of direct controls is to ensure proper allocation of resources for the purpose of price stability. They are meant to affect strategic points of the economy. They affect particular consumers and producers. They are in the form of rationing licensing, price and wage controls, export duties, exchange controls, quotas, monopoly control, etc. They are more effective in overcoming bottlenecks and shortages arising from inflationary pressures.

Their success depends on the existence of an efficient and honest administration. Otherwise, they lead to black marketing, corruption, long queues, speculation, etc. Therefore, they should be resorted to only in emergencies like war, crop failures and hyper-inflation.

Conclusions:

Out of the various instruments of stabilizations policy, no single method is sufficient to control cyclical fluctuations. Therefore, all methods should be used simultaneously. This is because monetary policy is easy to apply but less effective while fiscal measures and direct controls are difficult to operate but are more effective.

UNIT 3

INFLATION

MEANING OF INFLATION

The situation of a steady and sustained rise in general prices is usually known as inflation.

In the words of the Paul Einzig distinguishes between "Money inflation" and "Price inflation". When the prices rise due to an expansion of the money supply, it is money inflation but in the later phase more and more money supply will have to be expanded and this is known as Price inflation.

According to Coulborn, "Inflation is too much money chasing too few goods.

TYPES OF INFLATION

There are several types of inflation observable in an economy. These can be classified as under:

(1) Creeping Inflation. When the price rise is very slow like the pace of a snail or creeper, it is called creeping inflation. It is the mildest type of inflation. The government has sometimes to resort to creeping inflation to make the economy dynamic. This type of inflation serves as a tonic for a backward and underdeveloped economy.

(2) Walking or Trotting Inflation. When prices rise moderately and the annual inflation is a single digit, it is called walking or trotting inflation. The rate of the increase of the price level acquires greater speed and rapidity under walking inflation. Roughly speaking, the price level under walking inflation rises approximately by 5% annually. If proper control is not exercised over walking inflation in time, it can easily assume the form of running inflation.

(3) Running Inflation. When the prices rise rapidly like the running of a horse at a rate of speed 10 to 20 per cent per annum, it is called running inflation. The rate of the increase of price level gets further accelerated under running inflation.

(4) Galloping Inflation or Hyperinflation. When prices rise very fast at double or triple digit rates from more than 20 to 100% per annum or even more, it is called hyper or

galloping inflation. In fact, this is the most dangerous type of inflation Under this type of inflation, the prices rise every minute and there is no upward limit to which the price level may rise in course of time.

(5) Comprehensive and Sporadic Inflation. Comprehensive type of inflation occurs when the prices of all commodities register a rise in the economy. It is comprehensive inflation. Normally speaking, inflation, when it takes place, is comprehensive inflation. The prices of almost all the commodities show an upward trend during a period of inflationary spiral. Sporadic inflation, on the other hand, is sectoral inflation Under this type of inflation, the prices of all the commodities do not register a rise. Only the prices of a few commodities show an upward trend. The prices of a few commodities may rise upwards on account of central physical bottlenecks which may impede any attempt to increase their production. For example, the prices of goodgrains may show an upward rise on account of the failure of crops, consequent upon the failure of rains. Hence, sporadic inflation is of a sectoral nature. It can be dealt with effectively if the government resorts to the imposition of direct price control on the sale of the affected commodities.

(6) Open Inflation. An inflation is said to be open when the government takes no steps to check the rise in the price level. Open inflation is allowed to continue unchecked without any attempt on the part of the government to hold the price line. Under open inflation, the market mechanism is allowed to work itself out fully without restrictions being imposed by the government.

(7) Repressed Inflation. An inflation may be said to be repressed inflation when the government actively intervenes to check the rise in the price level. The government may check the rising trend in the price level by resorting to price control and rationing of scarce items in the economy.

(8) Full Inflation and Partial Inflation. The increase in the supply of money after the point of full employment does not increase output and employment but leads to a sharp uninterrupted rise in the price level. Such a situation is referred to as the situation of full inflation.

Prof. Pigou has classified inflation into (i) full inflation, and (ii) partial inflation. According to Prof. Pigou, the price level consequent upon the expansion of money supply in the pre full employment stage is referred to as partial inflation.

(9) Peacetime, Wartime and Postwar Inflation.

(i) By peacetime inflation, we mean the rise in the price level during peacetime. This type of inflation is very often the result of increased governmental expenditure on ambitious developmental projects in the economy. Such an inflation very often occurs during a period of planned economic development in backward and underdeveloped economies.

(b) Credit Inflation Sometimes the government encourages an expansion of credit without expanding the supply of money in circulation. This is known as credit inflation.

CAUSES OF INFLATION

Causes of Inflation: There are various factors that cause the emergence of excess demand in the economy. The emergence of excess demand in the economy can be attributed to two main factors (1) increase in the demand for goods and services, and (11) decrease in the supply of goods and services.

FACTORS CAUSING AN INCREASE IN DEMAND

Following are the factors which cause an increase in the size of demand:

(1) Increase in public expenditure. An increase in the public expenditure consequent upon the outbreak of war or developmental planning invariably causes an increase in the demand for goods and services in the economy. In fact, this is an important cause giving rise to the emergence of excess demand in the country.

(2) Increase in private expenditure. An increase in private expenditure, consumption expenditure as well as investment expenditure, is an important cause of the emergence of excess demand in the economy. When business conditions are good, private entrepreneurs start investing more and more funds in new business enterprises, giving rise to an increase in the demand for the services of factors of production. This results in an increase in factor prices. When factor incomes increase, there is more and more of expenditure on consumption goods The ultimate effect of an increase in private expenditure is to push up the demand for commodities as well as factors of production.

(3) Increase in exports. An increase in the foreign demand for the country's products reduces the stock of commodities available for home consumption. It is evident that when more and more of

commodities are exported to foreign countries, less and less of them are available for domestic consumption. This naturally creates a situation of shortages in the economy, giving rise to inflationary pressures.

(4) Reduction in taxation. The reduction in taxation offered by the government can also be an important cause for the emergence of excess demand in the economy, When the government reduces taxes, it results in an increase in the purchasing power in the hands of the public. With increased purchasing power, the people are in a position to buy more and more of goods and services for private consumption.

(5) Repayment of past internal debts. When the government repays its past debts to the public it results in an increase of purchasing power which the latter uses for buying goods and services for consumption purposes. This naturally leads to an increase in aggregate demand in the economy.

(6) Rapid growth of population. A rapidly growing population has the effect of raising up the level of aggregate effective demand for goods and services in a country. This acts as an inflationary force and tends to raise the prices to higher levels.

(7) Black Money. The existence of huge amount of black money in the economy is also responsible for increase in demand. People spend such unearthed or easy money extravagantly on buildings, marriages, luxurious items etc., thereby creating demand for commodities

(8) Deficit Financing. In order to meet its mounting expenses, the government resorts to deficit financing by borrowing from the public and printing notes in the huge quantity. This raise aggregate demand in relation to aggregate supply

(9) Cheap Money Policy. Cheap money policy or the policy of credit expansion also leads to increase in the supply of money which raises the demand of goods and services.

(10) Increase in Consumer Spending. The demand of goods and services increases when the consumer spending increases. It may be due to easy availability of credit etc. It increases the demand of goods and services.

FACTORS CAUSING A DECREASE IN SUPPLY

Following are the factors which result in a reduction in the supply of goods and services:

(1) Shortage of supplies of factors of production. Occasionally. the economy of a country may be confronted with shortages of such factors as labour, capital equipment, raw materials, etc These shortages are bound to reduce the production of goods and services for consumption purposes. In fact, the shortage of productive factors is a serious obstacle to any effort to increase production in the country.

(2) Industrial Disputes. In countries where trade unions are strong, they help in curtailing inflation. Trade unions resort to strikes and if they happen to be unreasonable from employers' point of view and are unreasonably prolonged, they force the employers to declare lock-outs. In both causes industrial production falls thereby reducing supply of goods.

(3) Natural Calamities. Natural calamities like floods, droughts etc. adversely affect the supplies of agricultural products. The latter, in turn, create shortage of food products and raw materials, thereby helping inflationary pressures.

(4) Operation of Law of Diminishing Returns. In industries in the country which are using old and obsolete machines and outdated methods of production, the law of diminishing returns operates. This raises cost per unit of production, thereby raising the prices of products leading to inflation.

(5) Lop-sided Production. If the stress is placed on the production of comfort and luxury goods, thereby neglecting essential and consumer goods in the country, it creates shortage of goods in the market and hence causes inflation.

(6) Hoarding by traders. At a time of shortages and rising prices, there is a tendency on the part of traders and merchants to hoard essential commodities for profiteering purposes. The stocks of essential goods often go underground during a period of inflation and rising prices, causing further scarcity of these goods in the market.

(7) Hoarding by consumers. It is not only the traders and the merchants who resort to hoarding at a time of inflation. The individual consumers also hoard essential commodities to avoid payment

of higher prices in future. They also hoard essential commodities to ensure their uninterrupted availability for private consumption.

CAUSES OF DEMAND-PULL INFLATION

Demand Pull Inflation: According to the demand-pull theory. prices rise in response to an excess of aggregate demand over existing supply of goods and services. The demand-pull theorists point out that inflation (demand-pull) might be caused, in the first place, by an increase in the quantity of money, when the economy is operating at full employment level. As the quantity of money increases, the rate of interest will fall and, consequently, investment will increase. This increased investment expenditure will soon increase the income of the various factors of production. As a result, aggregate consumption expenditure will increase leading to an effective increase in the effective demand. With the economy already operating at the level of full employment, this will immediately raise prices, and inflationary forces may emerge. Thus, when the general monetary demand rises faster than the general supply, it pulls up price (commodity prices as well as factor prices, in general). Demand pull inflation, therefore, manifests itself when there is active cooperation, or passive collusion, or a failure to take counteracting measures by monetary authorities.

Demand pull or just demand inflation may be defined as a situation where the total monetary demand persistently exceeds total supply of real goods and services at current prices, so that prices are pulled upward shift of the aggregate demand function. By using the aggregate demand and supply curves.

However, demand-pull inflation can also occur without an increase in the money supply. This can happen when either the marginal efficiency of capital increases or the marginal propensity to consume rises, so that investment expenditures may rise, thereby leading to a rise in the aggregate demand which will exert its influence in raising prices beyond the level of full employment already attained in the economy.

According to the demand pull theorists, during the process of demand inflation, rise in wages accompanies or follows the price rise as a natural consequence. Under the condition of rising prices when the rate of profit is increasing, producers are inclined in general to increase

investment and employment, in that they bid against each other for labour, so that labour-prices (i.e wages) may rise.

In short, the inflationary process, described by the demand inflation theory, implies the following sequences. Increasing demand increasing prices-increasing costs-increasing income-increasing demand-increasing prices and so on.

It should be noted that the concept of demand-pull inflation is associated with a situation of full employment where increase in aggregate demand cannot be catered to by a corresponding expansion in the supply of real output. There can be many reasons for such excess monetary demand.

1. There may be an increase in the public expenditure (G) in excess of public revenue. This might have been made possible (or rendered necessary) through public borrowings from banks or through deficit financing, which implies an increase in the money supply.

2. There may be an increase in the autonomous investment (I) in firms, which is in excess of the current savings in the economy. Hence, the flow of total expenditure tends to rise, causing an excess monetary demand leading to an upward pressure on prices.

3. There may be an increase in the marginal propensity to consume (MPC), causing an excess monetary demand. This could be due to the operation of demonstration effect and such other reasons.

4. In an open economy, an increasing surplus in balance of payments also leads to an excess demand. Increasing exports also have an inflationary impact because there is a generation of money income in the home economy, due to export earnings but, simultaneously, there is reduction in the domestic supply of goods because products are exported. If an export surplus is not balanced by increased savings, or through taxation, domestic spending will be in excess of the value of domestic output, marketed at current prices.

5. A diversion of resources from the consumption goods sector either to the capital goods sector or the military sector (for producing war goods) will lead to an inflationary pressure because while the generation of income and expenditure continues, the current flow of real output decreases on account of high gestation period involved in these sectors. Again, the opportunity

cost of war goods is quite high in terms of the consumption goods meant for the civilian sector. This leads to an excessive monetary demand for the goods and services against their real supply, causing the prices to move up.

In fine, it is said that the demand-pull inflation can be averted through deflationary measures adopted by the monetary and fiscal authorities. Thus, passive policies are responsible for demand-pull inflation

CAUSES OF COST-PUSH INFLATION

Cost-Push Inflation: A group of economists hold the opposite view that the process of inflation is initiated not by an excess of general demand but by an increase in costs, as factors of production try increase their share of the total product by raising their prices. Thus, has been viewed that a rise in prices is initiated by growing factor costs Therefore, such a price rise is termed as "cost push" inflation as price are being pushed up by the rising factor costs.

Cost-push inflation, or cost inflation, as it is sometimes called, is induced by the wage-inflation process. It is believed that wages constitute nearly seventy per cent of the total cost of production. This is specially true for a country like India, where labour intensive techniques are commonly used. Thus, a rise in wages leads to a rise in the total cost of production and a consequent rise in the price level, because fundamentally, prices are based on costs. It has been said that a rise in wages causing a rise in prices may, in turn, generate an inflationary spiral because an increase would motivate the workers to demand higher wages. Indeed, any autonomous increase in costs, such as a rise in the prices of imported components or an increase in indirect taxes (excise duties, etc.), may initiate a cost-push inflation, Basically, however, it is wage-push pressures which tend to accelerate the rising price spiral.

Cost push inflation may occur either due to wage-push or profit push. Cost-push analysis assumes monopoly elements either, in the labour market or in the product market. When there are monopolistic labour organizations prices may rise due to wage-push. And, when there are monopolies in the product market, the monopolists may be induced to raise the prices in order to fetch high profits. Then, there is profit push in raising the prices.

However, the cost-push hypothesis rarely considers autonomous attempts to increase profits as an important inflationary element. Firstly, because profits are generally a small fraction of the

total price, a rise in profits would have only a slight impact on prices. Secondly, the monopolists generally hesitate to raise prices in absence of obvious demand-pull elements. Finally, the motivation for profit-push is weak since, at least in corporations, those who make the decision to raise prices are not the direct beneficiaries of the price increase.

Hence, cost-push is generally conceived as a synonymous with wage-push. When wages are pushed up, cost of production increases, to a considerable extent so that prices may rise. Since wages are pushed up by the demand for high wages by the labour unions, wage-push may be equated with union-push.

According to one variant of the cost-push theory, sectoral shifts in demand are prime movers in the inflationary process. Starting with an autonomous shift in demand, a rise in wages and prices could result in one sector and this rise could elicit further shifts of demand. This happens because there is a close link between different goods through inputs. One good serves as an input in the production of the other goods, and consequently, when the price of the input rises, the prices of output will also rise. For instance, when due to a rise in wages in the steel industry, price of steel may rise, and this will raise the prices of vehicles, machines, etc., using steel as input. The rise in the prices of vehicles may in turn raise the cost of transport and manufactured goods. Similarly, prices of tractors, etc. may increase due to high prices of steel so that costs of agriculture may rise, hence, food and raw material prices will also rise. All these ultimately raise the cost of living, leading to increase in wage rates. Thus, inflation once sets in motion due to the phenomenon of cost-push in one industry or sector spreads throughout the economy.

It is, however, to state whether demand-pull or cost push elements are the prime causes of an inflationary spiral. It rather seems that there may be a demand-cum-cost inflation as both entrepreneurs and workers use the mark-up technique of pricing. If demand-pull raises prices, the workers will mark up their wages to protect their share of total product. On the other hand, if wages rise, entrepreneurs will raise prices to adjust mark-up to the previous level of profits. Thus, demand pull inflation may generate cost-push elements of inflation (as workers will demand high wages in view of rising Cost of living index), and the cost-push inflation may in turn generate demand pull inflationary elements (as workers monetary demand for consumption goods will increase due to high wages-incomes). Normally, thus, it is difficult to be precise as to whether an inflation is cost-push or demand-pull.

A cost-push inflation is much more difficult to control than a demand pull type. A demand-pull inflation can be controlled by adopting restrictive monetary and fiscal policies so as to drain off excessive monetary demand. But cost-push inflation is not susceptible to direct controls. In order to check cost-push inflation, there is a strong need on the part of laborers and entrepreneurs for restraint in their wage and pricing policies.

EFFECTS AND METHODS TO CONTROL INFLATION

INTRODUCTION

Inflation produces a deep impact on the distribution of income and wealth in society. A prolonged period of persistent inflation results in redistribution of income and wealth in favour of the already richer and more affluent classes of society. The distributive share accruing to the business classes increases much more than that of wage-earning or rentier classes. Businessmen, traders, merchants, and speculators reap rich harvests on account of windfall profits accruing to them as a result of the inflationary rise in prices. Prices under the pressure of inflation rise much more than the production costs. There is always a time lag between the rise in production costs and the rise in the price level. This time lag brings rich profits to the business classes. Moreover, the stocks and inventories of businessmen invariably go up in value because of the constantly rising price level under the impact of inflation. The business classes, thus, make all-round gains during a period of inflation. The fact of the matter is that the flexible income groups, such as, businessmen, merchants and traders are always the gainers in a period of inflation while the fixed-income groups, such as, workers, salaried employees, teachers, pensioners, etc., are always the losers on account of the inflationary rise in prices. Inflation is always unjust. It is like a steeply regressive tax. Inflation throws the economic burden on the shoulders of those sections of the community who are the least able to bear it.

The concrete effects of inflation on various groups of society are as follows:

(1) Debtors and Creditors. During inflation, debtors are generally the gainers while the creditors are the losers. The reason is that the debtors had borrowed when the purchasing power of money was high and now return the loans when the purchasing power of money is low due to rising prices. In other words, the debtors while repaying their debts return less purchasing power to the

creditors than what they had actually borrowed. Since the creditors receive less in real terms, they are the losers during inflation.

(2) Wage and Salary Earners. Wage and salary earners mostly suffer during inflation because wages and salaries generally do not rise in the same proportion in which the cost of living rises. Then there is the time lag between the rise in the cost of living and the rise in wages and salaries. If the workers and salary earners are well-organized into powerful trade unions, they may not suffer much during inflation, but if they are unorganized or ill-organized, as they generally are, they may suffer much as their wages and salaries may not increase at all or may not increase in the proportion in which the cost of living increases.

(3) Fixed-income Groups. The fixed-income groups are the hardest hit during inflation because their incomes, being fixed, do not bear any relationship with the rising cost of living Persons who live on past savings, pensioners, interest and rent receivers suffer most during inflation as their incomes remain fixed while the prices soar high..

(4) Entrepreneurs. Inflation is a boon to the entrepreneurs whether they be manufacturers, traders, merchants or businessmen, because it serves as a tonic for business enterprise. They experience windfall gains as the prices of their inventories (stocks) suddenly go up. They also gain because their costs do not go up as rapidly as the prices of their products. The costs of labour, raw materials and equipment, etc, do not catch up with the rise in prices of products. Inflation converts the entrepreneurs into 'profiteers' who put the community to ransom through their profiteering and hoarding activities.

(5) Investors. Investors are generally of two types: (i) investors in equities (shares), and (ii) investors in fixed interest-yielding bonds and debentures. Inflation bestows favours on the former and is rather harsh on the latter. Dividends on equities increase with the increase in prices and corporate earnings and as such, the investors in equities are favourably affected. Incomes from bonds and debentures, however remain fixed and as such, investors in them are adversely affected. The small middle class investors generally invest in fixed interest-yielding bonds and securities and therefore, have much to lose during inflation. Frequently, they find their savings largely, if not completely, wiped out as a result of the depreciation in the value of money. The rich-class investors, on the other hand, invest in equities on which the dividends go up during inflation and are thus beneficially affected.

(6) Farmers. Farmers are generally the gainers during inflation. The prices of farm products go up while the costs incurred by them (the farmers) do not go up to the same extent. Further, there is generally a time lag between the rise in prices and the increase in costs. Moreover, the farmers are generally debtors and can repay their debts during inflation in terms of less purchasing power. It should, however, be remembered that small farmers do not gain as much from high prices as the big farmers do, because the former do not have a considerable surplus to dispose of in the market. Thus, inflation redistributes wealth and income in such a manner as to injure the interests of consumers, creditors, salary and wage earners. fixed-income groups, small investors, and to favour businessmen, merchants, traders and farmers. Socially, inflation is unjust and inequitous. It transfers wealth to those sections who have already too much of it.

(7) Social and Political Consequences of Inflation. Continuous inflation in a country creates a breeding ground for social and political upheavals. Inflation redistributes income and wealth in favour of the rich, and widens the gap of inequality, thereby aggravating social injustice. Inflation favours the rich and black marketers only. The standards of business morality, therefore, decline in times of inflation, because businessmen get ample chances of making profit through unfair means. Furthermore, inflation produces a seller's market and, since sellers can sell anything, the quality of goods produced often deteriorate and traders are inclined to adulterate products. These practices produce discontent among the vast sections of the community, who find that while unpatriotic people are being rewarded, the cautious and conservative people are penalised. Consequently, masses may lose their faith in the government. On the political front, inflation is a manifestation of the weakness in political discipline. The increasing grievances and hardships of the masses, in general, on account of inflation, may prepare them to revolt against society and the state. Inflation not only disrupts the economy but also prepares the ground for social and political upheavals.

Conclusion

In view of above we may conclude that apart from these general evils, inflation poses a serious danger to underdeveloped countries. As is well known, an under developed country needs huge capital resources for its speedy economic development. But inflation, by discouraging savings, slows down the process of capital accumulation in the economy. Inflation not only reduces domestic capital accumulation, it also discourages the inflow of foreign capital into the country.

METHODS TO CONTROL INFLATION

There are various methods/measures to control inflation, but the most important methods/measures are as under:

Inflation is a complex phenomenon. It should be attacked from various angles. The following are the broad categories of instruments commonly used in order to control inflation in modern economy: (1) Monetary policy, (2) Fiscal policy, (3) Direct control and (4) Miscellaneous measures.

1. Monetary Policy

Inflation is primarily a monetary phenomenon. Hence, the most logical solution to check inflation is to check the flow of money supply by devising appropriate monetary policy and carefully implementing monetary measures.

Broadly speaking to control inflation, it is necessary to control total cutlays because under conditions of full employment, increase in total outlays will be reflected in a general rise in prices that is, inflation Monetary policy used to control inflation is base on the assumption that a rise in prices (inflation) is due to excess of monetary demand for goods and services by the people because easy bank credit is available to them. Monetary policy, thus, pertains to banking and credit availability of loans to firms and households, interest rates, public debt and its management, and the" monetary standard.

Monetary management is aimed at the commercial banking system, and through this action, its effects are primarily felt in the economy as a whole. Monetary management, by directly affecting the volume of cash reserves of the banks, can regulate the supply of money and credit in the economy, thereby influencing the structure of interest rates and the availability of credit. Both these factors affect the components of aggregate demand (consumption plus investment) and the flow of expenditure in the economy.

The central bank's monetary management methods, the devices for decreasing or increasing the supply of money and credit for monetary stability is called monetary policy. Central banks generally use three quantitative weapons, namely: (i) bank rate policy, (ii) open market operations, and (iii) variable reserve ratio to control the volume of credit in an economy.

To curb inflationary pressures, a dear money policy is usually followed by using the quantitative methods, the total volume of credit is depleted. In this regard, (i) bank rate may be raised; (ii) open market sales operation may be undertaken; and (iii) in severe cases, the reserve requirement ratio may be increased.

2. Fiscal Measures

Fiscal policy is now recognized as an important instrument to tackle an inflationary situation. The major anti-inflationary fiscal measures are the following:

(a) Government Expenditure. During inflation, as is well known, effective demand increases far too much due to unregulated private spending. The increased private expenditure presses heavily against the limited supply of goods and services available in the market. To counteract increased private spending, the government should, at such a time, reduce its own expenditure to the minimum extent possible to help limit the aggregate demand.

(b) Taxation. Taxation acquires increased importance as an anti inflationary weapon during an inflationary boom. The problem during inflation is to reduce the size of disposable income in the hands of the general public in view of the limited supply of goods and services in the market. It is, therefore, necessary to take away the excess purchasing power from the public in the form of taxes. The rates of existing taxes should be steeply increased while new taxes should be imposed on commodities and services so as to leave less money supply with the public to spend. Perhaps the best anti-inflation tax is personal income tax with steep rates and high surcharges. This would reduce the spendable income in the hands of the public, and thus, help to curb inflationary pressures.

(c) Public Borrowing. Public borrowing is another anti-inflation weapon which is often utilized to contain inflationary pressures in the economy. The object of public borrowing is to take away from the public excess purchasing power which, if left free, would surely exert an upward pressure on the price level in view of the limited supplies of goods and services in the economy. Public borrowing may be voluntary or compulsory Ordinarily, public borrowing is voluntary, left to the free will of the individuals.

(d) Debt Management. The existing public debt should be managed in such a manner as to reduce the existing money supply and prevent further credit expansion. Anti-inflation debt

management usually requires the retirement or repayment of bank-held debt out of a budgetary surplus. The idea is that the government securities held by commercial banks should be retired by the government out of a budgetary surplus. This would check the power of commercial banks to encash their securities and add to their reserves for the purpose of credit expansion. There is, however, one snag here. At a time of inflation, despite its best efforts, the government may not succeed in having a budgetary surplus. Due to the excessive increase in expenditure, the government may actually be faced with a deficit budget.

(e) Overvaluation. An overvaluation of domestic currency in terms of foreign currencies will also serve as an anti-inflationary measure.

3. Direct Controls

Direct controls refer to the regulatory measures undertaken to convert an open inflation into a repressed one. Such regulatory measures involve the use of direct control on prices and rationing of scarce goods. The function of price control is to fix a legal ceiling, beyond which the prices of particular goods may not increase. When ceiling prices are fixed and enforced, it means prices are not allowed to rise further and so, inflation is suppressed. Under price control, producers cannot raise the price beyond a prevailing level, even though there may be a pressure of excessive demand forcing it up. Wartime price control is an example of such attempts to suppress inflation.

In view of the severe scarcity of certain goods, particularly. food grains, government may have to enforce rationing, along with price control. The main function of rationing is to divert consumption from those commodities whose supply needs to be restricted for some special reasons, say, in order to make the commodity available to a larger number of people as possible. Thus, rationing becomes essential when necessities, such as foodgrains, are relatively scarce, Rationing has the effect of limiting the variety of quantity of goods available for the good cause of price stability and distributive justice.

4. Miscellaneous Measures

Among other measures, it has been suggested that production of certain articles of necessity, at the expense of luxury goods, can also serve as an anti-inflationary measure, since they will help to keep prices from rising rapidly.

Control of wages also often becomes necessary in order to stop a wage-price spiral. During galloping inflation, it may be necessary to apply a wage profit freeze. Ceilings on wages and profits keep on disposable income and, therefore, the total effective demand for goods and services. An appropriate income policy should be devised.

In certain cases, relaxation of restrictions on imports may also help to increase supplies of essential commodities and ease the inflationary pressure. This, however, is possible only to a limited extent, depending upon the balance of payments situation. Similarly, exports may also be reduced to increase the availability of the domestic supply of essential commodities so that inflation is eased. But a country with a deficit balance of payments cannot dare to cut exports and increase imports. because, in that case, the remedy will be worse than the disease itself.

In an overpopulated country like India, it is also essential to check the growth of the population through an effective family planning programme, because this will help in reducing the increasing pressure on the general demand for goods and services. Again, the/supply of real goods should be increased by producing more. Without increasing production, inflation just cannot be controlled.

Conclusion

In view of the above may say that all the above points of discussion suggest that an anti-inflationary policy should involve a many-sided programme, and cannot exclusively depend on a particular type of measures only

MEANING OF DEFLATION

Deflation is the opposite of inflation. In the words of Prof. Crowther, "Deflation is that state of economy where the value of money is rising or the prices are falling." This definition is not free from defects. From this definition, it appears that every fall in the price level is deflation but actually this may not be so. Sometimes, the price level starts failing down without any contraction in the supply of money. Now such a fall in the price level cannot be called deflation.

There is still another definition of deflation. According to this definition, deflation may refer to that state of the economy where the supply of money at a particular time is less than its demand.

In other words, the supply of money in the economy is not sufficient to meet business requirements of the economy. Deflation is bound to result in such a state of the economy. The prices of goods and services will fall and the value of the money will start rising. This definition has one important defect in so far as it does not tell us how to make an accurate estimate of the money requirements of the economy.

According to Prof. Pigou, "Deflation is that state of falling prices which occurs at that time when the output of goods and services increases more rapidly than the volume of money income in the economy." Thus, according to Pigou, every fall in the price level is not deflation. Deflation occurs at that time when the output of goods and services increases at a faster rate than the money income. A fall of prices in the following situations may be termed deflationary according to Pigou: (a) If the money income diminishes but the output remains constant. (b) If the money income and the output both diminish, but the money income -diminishes much more rapidly than the output, (c) If the volume of output increases but the money income remains constant. (d)) If the volume of output and money income both increase, but the output increases faster than the money income. (e) If the volume of output increases but the volume of money income diminishes. In each of these cases, the fall in prices will be deflationary

From the above definitions, we may say that a contraction in the supply of money causes a fall in the price level, or the fall in the money supply leads to a fall in the price level. This may, however, he not wholly true. The fall in the price level is not only the result of the fall in money supply, it can also be the cause of the contraction in the supply of money. If the prices continuously go on falling, the economy may not need as much money supply as before. Thus, the falling price level is both the result as well as the cause of the fall in the supply of money. From this point of view, Prof. Paul Einzig's definition appears to be the best definition of deflation. Deflation, according to Einzig. "is a state of disequilibrium in which a contraction of purchasing power tends to cause, or is the effect of, a decline of the price level.

Reflation: Reflation is a situation marked by rising prices and expansion of money supply. Reflation is deliberately undertaken by the government to relieve a depression. As a result of this policy, income, output and employment continue to increase till the economy reaches the point of full employment.

Inflation is different from reflation in exactly the same manner as deflation is different from disinflation. According to G.D.H. Cole, "Reflation may be defined as inflation deliberately undertaken to relieve a depression".

Inflation and Reflation resemble each other in two respects:

1. In both, money supply increases.

2. Both lead to a rise in the price level.

But still there are some basic differences between inflation and reflation. Such as

1. Inflation causes a serious problem of rising prices without any increase in output and employment, reflation does not create such problem. It rather saves the already shattered deflation from the problem of deflation.

2. Inflation may be due to natural factors or may be the result of deliberate policy of the government. But, reflation is always adopted by the government as a deliberate policy.

3. Inflation occurs after the level of full employment, whereas, reflation occurs before the level of full employment.

4. Prices rise very rapidly under inflation, while they rise very slowly under reflation.

UNIT 4: UNEMPLOYMENT

MEANING OF UNEMPLOYMENT

Unemployment takes place when people have no jobs and they are willing and seeking for work. Some People give importance to the number of unemployed individuals but Economists focus on rate of unemployment which can be measure as dividing unemployed workers divided by all individuals in the labor force.

Unemployment Rates = Unemployed Workers /Total Labour Force

The International Labor Organization (ILO) describes 4 different methods for calculation of unemployment rate.

1. Labour Force Sample Surveys

2. Official Estimates

3. Social Insurance Statistics

4. Employment Office Statistics

TYPES OF UNEMPLOYMENT

Below are the types of unemployment

1 Normal, Transitional Unemployment

2. Casual and Seasonal Unemployment

3. Frictional Unemployment

4. Structural Unemployment

5. Cyclical Unemployment

6. Voluntary Unemployment

7. Involuntary Unemployment

8. Disguised Unemployment

1. Normal, Transitional Unemployment: According to economists this exists at all times at a rate of 2-3 percent and harms no one. For individuals or groups, it lasts for a few months when people move from job to job for better wages of wait for better opportunities.

2. Casual and Seasonal Unemployment: Some occupations are adversely affected by weather conditions and workers in these trades expect a certain amount of casual unemployment Seasonal unemployment often occurs in agriculture, dockyard hotels. restaurants and construction business. unemployment is inevitable and tends to be overcome by casual labour.

3. Frictional Unemployment: This type of unemployment exists because of friction in the labour market. Jobs may exists but people do not go to take up jobs away from home for domestic reasons such as children's education, family and friendly ties and, housing problem in a new place.

4. Structural Unemployment: It is caused by a change in the demand for the products of a given industry. The closing of the particular industry may cause structural changes in the nation's industry as a whole. If labour is specific, it is immobile between industries and unemployment results. The pace of modem technology is so fast that it makes past techniques obsolete. causing unemployment in old industries.

5. Cyclical Unemployment: Both external and internal factors such as wars, strikes, population changes, political disturbances. floods, droughts, changes in consumption patterns, investment, savings, spending, supply of credit, business outlook etc, bring about this type of unemployment. This type of unemployment was a serious problem before the Second World War. Now it has been largely mastered by Government activity to control the development of cycles.

6. Involuntary Unemployment: It is economic condition situation in which the people the working age group willing to work at the existing wage rate but could not find job.

7. Voluntary Unemployment: This occurs when the unemployed choose not to take a job at the going wage rate (e.g. wrong job, benefits too high etc.) They could be counted as unemployed because they are still seeking a job (they just don't want to take one they are offered.

8. Disguised unemployment: It is that economic situation in which the workers are physically engaged in a job but their marginal productivity is zero or their contribution to the out put is nil. It is applicable in the agriculture sector.

CAUSES OF UNEMPLOYMENT IN INDIA

The following are the main causes of unemployment:

(1) Caste System: In India caste system is prevalent. The work is prohibited for specific castes in some areas. In many cases, the work is not given to the deserving candidates but given to the person belonging to a particular community. So this gives rise to unemployment.

(ii) Slow Economic Growth: Indian economy underdeveloped and role of economic growth is very slow. This slow growth fails to provide enough unemployment opportunities to the increasing population.

(iii) Increase in Population: Constant increase in population has been a big problem in India. It is one of the main causes of unemployment. The rate of unemployment is 11.1% in 10th Plan.

(iv)Agriculture is a Seasonal Occupation: Agriculture is underdeveloped in India. It provides seasonal employment. Large part of population is dependent on agriculture. But agriculture being seasonal provides work for a few months. So this gives rise to unemployment.

(v)Joint Family System: In big families having big business, many such persons will be ava ilable who do not do any work and depend on the joint income of the family Many of them seem to be working but they do not add anything to production. So they encourage disguised unemployment.

(vi) Fall of Cottage and Small industries: The industrial development had adverse effect on cottage and small industries. The production of cottage industries began to fall and many artisans became unemployed.

(vii) Slow Growth of Industrialization: The rate of industrial growth is slow. Though emphasis is laid on industrialization yet the avenues of employment created by industrialization are very few.

(viii) Less Savings and Investment: There is inadequate capital in India. Above all, this capital has been judiciously invested. Investment depends on savings. Savings are inadequate. Due to shortage of savings and investment, opportunities of employment have not been created.

(ix) Causes of Under Employment: Inadequate availability of means of production is the main cause of under employment. People do not get employment for the whole year due to shortage of electricity, coal and raw materials.

(x) Defective Planning: Defective planning is the one of the cause of unemployment. There is wide gap between supply and demand for labour. No Plan had formulated any long term scheme for removal of unemployment.

(xi) Expansion of Universities: The number of universities has increased manifold. There are 385 universities. As a result of this educated unemployment white collar or unemployment has increased.

(xii) Inadequate Irrigation Facilities: Even after the completion of 9th five plans, 39% of total cultivable area could get irrigation facilities. Due to lack of irrigation, large area of land can grow only one crop in a year. Farmers remain unemployed for most time of the year.

(xiii) Immobility of labour: Mobility of labour in India is low. Due to attachment to the family, people do not go to far off areas for jobs. Factors like language, religion, and climate are also responsible for low mobility. Immobility of labour adds to unemployment.

EFFECTS OF WAGE CUT ON EMPLOYMENT

The relationship between wages and employment is a highly controversial issues between Keynes and classical economists. According to classical economists that a cut in money wages would increase employment and help in removing unemployment. But on the other hand Keynes pointed out that workers would strongly resist any attempt to cut money wages, though they might be prepared to agree to cuts in real wages caused by rise in prices. Therefore, according to him, money wages remain rigid and any cut in money wages for the purpose of promoting employment was not a practical policy proposal. However, though wag cuts may not be practically possible, it is important to know whether it is a theoretically valid proposition that wage cuts or downward wage-flexibility will promote employment and help in removing

unemployment. We will discuss the views of classical economists & Keynes about the relationship between wage-price flexibility and employment.

Classical View on wage cut and unemployment

The analysis of wage reduction on employment is important because, according to classical economists, wage flexibility provides the economy wit a self-adjusting mechanism that worked to restore full employment equilibrium when there is recession and involuntary unemployment. Wage rigidity, according to them, was to blame for any prevailing unemployment. The classical view was simple, if there was an excess supply of labour (i.e. involuntary unemployment), wage rate must be too high and if unemployment was to be eliminated, wage rate must fall.

For analysing the effect of wage cuts on employment the classical economists applied partial or micro-economic analysis to the macro level. They argued that if wages fell, the prices of products made by labour would also fall. The price of products will fall because reduction in wages causes reduction in marginal costs of production. Since they used partial equilibrium analysis they assumed that the demand for output of an industry would remain unaffected when cut in wages was made. They argued that with a fall in price of the product of industry consequent to the cut in wages, the amount of product produced would increase and the new price - output equilibrium will be established at a lower price and larger quantity of the product. The expansion in output of the products will lead to the increase in employment of labour and other inputs. The extent of expansion in output (and therefore increase in employment) following the cut in wages and consequent fall in the price of the product depends on the elasticity of demand for output made by labour. On the basis of this partial equilibrium analysis of the impact of wage cut on price, output and employment in an industry the classical economists applied this result to the impact of all-round cut in wages on the increase in output and employment in the economy.

Keynes's view on wage cut & unemployment

Keynes challenged the classical viewpoint regarding the impact of all round cut in money wage on output and employment of labour. According to him, while in case of analysis of price and output determination of an individual industry, it is justified to assume that a cut a wages by the industry would not significantly affect the demand for the product of that industry because most

of the demand for the product of that industry comes from the workers and persons employed in other industries. However, to assume that demand curve for output of all industries will remain unchanged when cut in wages in all industries together is made is not valid. In other words, to apply the result of partial equilibrium analysis of the determination of price, output and employment of the economy as a whole is quite misleading and invalid This is because wages are not only costs from the viewpoint of individual industries, they also constitute incomes of the workers and these incomes determines the demand for the products of various industries. When all-round cut in wages is made in all industries, it will reduce the aggregate demand for the products because workers would have now less incomes and therefore would spend less on goods and services. With reduced demand for the products of industries smaller output will be produced. Therefore, smaller amount of labour will be demanded and employed. To quote Stonner and Hague, "When there is general unemployment a general unemployment, a general cut in wages in all industries cannot be assumed to leave demand unchanged, for part of that demand results from spending out of wages. It is thus quite clear that a general cut in wages will merely cause a reduction and will not in itself remove unemployment". Thus, we see that classical economists neglected the adverse effect of all-round cut in wages on the level of aggregate demand. Instead, Keynes argued that unemployment had come into existence due to fall in aggregate demand.

The Phillips Curve: Relation between Unemployment and Inflation

The Phillips curve examines the relationship between the rate of unemployment and the rate of money wage changes. Known after the British economist A.W. Phillips who first identified it, it expresses an inverse relationship between the rate of unemployment and the rate of increase in money wages.

Basing his analysis on data for the United Kingdom, Phillips derived the empirical relationship that when unemployment is high, the rate of increase in money wage rates is low. This is because “workers are reluctant to offer their services at less than the prevailing rates when the demand for labour is low and unemployment is high so that wage rates fall very slowly.”

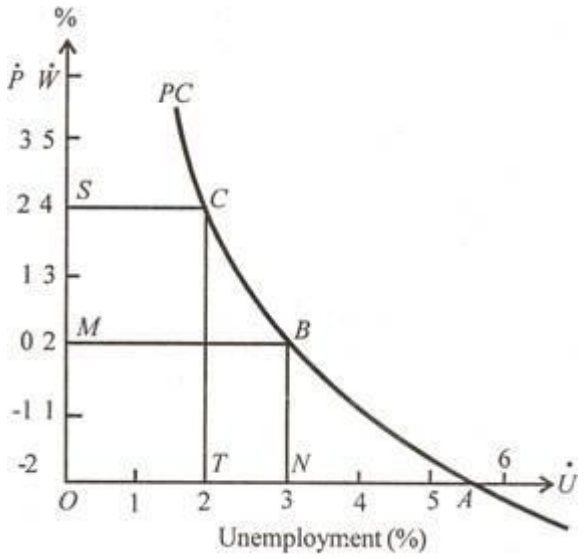
On the other hand, when unemployment is low, the rate of increase in money wage rates is high. This is because, "when the demand for labour is high and there are very few unemployed we should expect employers to bid wage rates up quite rapidly."

The second factor which influences this inverse relationship between money wage rate and unemployment is the nature of business activity. In a period of rising business activity when unemployment falls with increasing demand for labour, the employers will bid up wages.

Conversely in a period of falling business activity when demand for labour is decreasing and unemployment is rising, employers will be reluctant to grant wage increases. Rather, they will reduce wages. But workers and unions will be reluctant to accept wage cuts during such periods.

Consequently, employers are forced to dismiss workers, thereby leading to high rate of unemployment. Thus when the labour market is depressed, a small reduction in wages would lead to large increase in unemployment.

Phillips concluded on the basis of the above arguments that the relation between rates of unemployment and a change of money wages would be highly non-linear when shown on a diagram. Such a curve is called the Phillips curve.



The PC curve in Figure given above is the Phillips curve which relates percentage change in money wage rate (W) on the vertical axis with the rate of unemployment (U) on the horizontal axis. The curve is convex to the origin which shows that the percentage change in money wages rises with decrease in the employment rate.

In the figure, when the money wage rate is 2 per cent, the unemployment rate is 3 per cent. But when the wage rate is high at 4 per cent, the unemployment rate is low at 2 per cent. Thus there is a tradeoff between the rate of change in money wage and the rate of unemployment. This means that when the wage rate is high the unemployment rate is low and vice versa.

The original Phillips curve was an observed statistical relation which was explained theoretically by Lipsey as resulting from the behaviour of labour market in disequilibrium through excess demand. Several economists have extended the Phillips curve analysis to the trade-off between the rate of unemployment and the rate of change in the level of prices or inflation rate by assuming that prices would change whenever wages rose more rapidly than labour productivity.

If the rate of increase in money wage rates is higher than the growth rate of labour productivity, prices will rise and vice versa. But prices do not rise if labour productivity increases at the same rate as money wage rates rise.

This trade-off between the inflation rate and unemployment rate is explained in Figure 10 where the inflation rate (P) is taken along-with the rate of change in money wages (W). Suppose labour productivity rises by 2 per cent per year and if money wages also increase by 2 per cent, the price level would remain constant.

Thus point B on the PC curve corresponding to percentage change in money wages (M) and unemployment rate of 3 per cent (AO equals zero (O) per cent inflation rate (P) on the vertical axis. Now assume that the economy is operating at point B. If now, aggregate demand is increased, this lowers the unemployment rate to OT (2%) and raises the wage rate to OS (4%) per year.

If labour productivity continues to grow at 2 per cent per annum, the price level will also rise at the rate of 2 per cent per annum at OS in the figure. The economy operates at point C. With the movement of the economy from B to C, unemployment falls to T (2%). If points B and C are connected, they trace out a Phillips curve PC.

Thus money wages rate increase which is in excess of labour productivity leads to inflation. To keep wage increase to the level of labour productivity (OM) in order to avoid inflation. ON rate of unemployment will have to be tolerated.

The shape of the PC curve further suggests that when the unemployment rate is less than 5 per cent (that is, to the left of point A), the demand for labour is more than the supply and this tends to increase money wage rates.

On the other hand, when the unemployment rate is more than 5½ per cent (to the right of point A), the supply of labour is more than the demand which tends to lower wage rates. The implication is that the wage rates will be stable at the unemployment rate OA which is equal to 5½ per cent per annum. It is to be noted that PC is the "conventional" or original downward sloping Phillips curve which shows a stable and inverse relation between the rate of unemployment and the rate of change in wages.

FRIEDMAN'S VIEW: THE LONG-RUN PHILLIPS CURVE:

Economists have criticised and in certain cases modified the Phillips curve. They argue that the Phillips curve relates to the short run and it does not remain stable. It shifts with changes in expectations of inflation. In the long run, there is no trade-off between inflation and unemployment. These views have been expounded by Friedman and Phelps in what has come to be known as the "accelerationist" or the "adaptive expectations" hypothesis.

According to Friedman, there is no need to assume a stable downward sloping Phillips curve to explain the trade-off between inflation and unemployment. In fact, this relation is a short-run phenomenon. But there are certain variables which cause the Phillips curve to shift over time and the most important of them is the expected rate of inflation.

So long as there is discrepancy between the expected rate and the actual rate of inflation, the downward sloping Phillips curve will be found. But when this discrepancy is removed over the long run, the Phillips curve becomes vertical.

In order to explain this, Friedman introduces the concept of the natural rate of unemployment. In represents the rate of unemployment at which the economy normally settles because of its structural imperfections. It is the unemployment rate below which the inflation rate increases,

and above which the inflation rate decreases. At this rate, there is neither a tendency for the inflation rate to increase or decrease.

Thus the natural rate of unemployment is defined as the rate of unemployment at which the actual rate of inflation equals the expected rate of inflation. It is thus an equilibrium rate of unemployment toward which the economy moves in the long run. In the long run, the Phillips curve is a vertical line at the natural rate of unemployment.

This natural or equilibrium unemployment rate is not fixed for all times. Rather, it is determined by a number of structural characteristics of the labour and commodity markets within the economy. These may be minimum wage laws, inadequate employment information, deficiencies in manpower training, costs of labour mobility, and other market imperfections. But what causes the Phillips curve to shift over time is the expected rate of inflation.

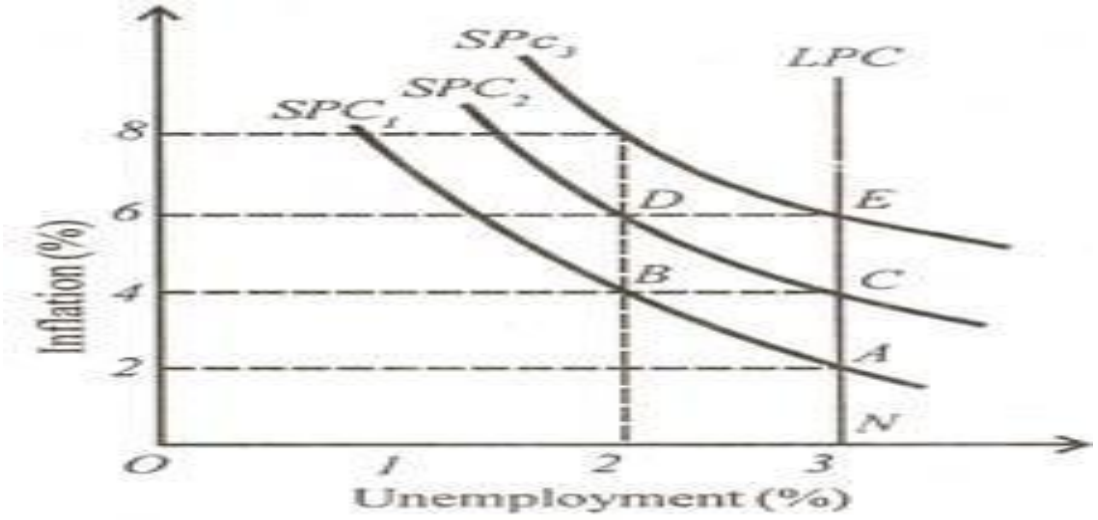
This refers to the extent the labour correctly forecasts inflation and can adjust wages to the forecast. Suppose the economy is experiencing a mild rate of inflation of 2 per cent and a natural rate of unemployment (N) of 3 per cent. At point A on the short-run .2 4 Phillips curve SPC_1 in Figure given below, people expect this rate of inflation to continue in the future. Now assume that the government adopts a monetary-fiscal programme to raise aggregate demand in order to lower unemployment from 3 to 2 per cent.

The increase in aggregate demand will raise the rate of inflation to 4 per cent consistent with the unemployment rate of 2 per cent. When the actual inflation rate (4 per cent) is greater than the expected inflation rate (2 per cent), the economy moves from point A to B along the SPC_1 curve and the unemployment rate temporarily falls to 2 per cent. This is achieved because the labour has been deceived.

It expected the inflation rate of 2 per cent and based their wage demands on this rate. But the workers eventually begin to realise that the actual rate of inflation is 4 per cent which now

becomes their expected rate of inflation. Once this happens the short-run Phillips curve SPC_1 shifts to the right to SPC_2. Now workers demand increase in money wages to meet the higher expected rate of inflation of 4 per cent.

They demand higher wages because they consider the present money wages to be inadequate in real terms. In other words, they want to keep up with higher prices and to eliminate fall in real wages. As a result, real labour costs will rise, firms will discharge workers and unemployment will rise from B (2%) to C (3%) with the shifting of the SPC_1 curve to SPC_2. At point C, the natural rate of unemployment is re-established at a higher rate of both the actual and expected inflation (4%).



If the government is determined to maintain the level of unemployment at 2 per cent, it can do so only at the cost of higher rates of inflation. From point C, unemployment once again can be reduced to 2 per cent via increase in aggregate demand along the SPC_2 curve until we arrive at point D. With 2 per cent unemployment and 6 per cent inflation at point D, the expected rate of inflation for workers is 4 per cent.

As soon as they adjust their expectations to the new situation of 6 per cent inflation, the short-run Phillips curve shifts up again to SPC_3, and the unemployment will rise back to its natural level of

3 per cent at point E. If points A, C and E are connected, they trace out a vertical long-run Phillips curve LPC at the natural rate of unemployment.

On this curve, there is no trade-off between unemployment and inflation. Rather, any one of several rates of inflation at points A, C and E is compatible with the natural unemployment rate of 3 per cent. Any reduction in unemployment rate below its natural rate will be associated with an accelerating and ultimately explosive inflation. But this is only possible temporarily so long as workers overestimate or underestimate the inflation rate. In the long-run, the economy is bound to establish at the natural unemployment rate.

There is, therefore, no trade-off between unemployment and inflation except in the short run. This is because inflationary expectations are revised according to what has happened to inflation in the past. So when the actual rate of inflation, say, rises to 4 per cent in Figure 11, workers continue to expect 2 per cent inflation for a while and only in the long run they revise their expectations upward to 4 per cent. Since they adapt themselves to the expectations, it is called the adaptive exceptions hypothesis.

According to this hypothesis, the expected rate of inflation always lags behind the actual rate. But if the actual rate remains constant, the expected rate would ultimately become equal to it. This leads to the conclusion that a short-run trade off exists between unemployment and inflation, but there is no long run trade-off between the two unless a continuously rising inflation rate is tolerated.

It's Criticisms:

The accelerationist hypothesis of Friedman has been criticised on the following grounds:

1. The vertical long-run Phillips curve relates to steady rate of inflation. But this is not a correct view because the economy is always passing through a series of disequilibrium positions with

little tendency to approach a steady state. In such a situation, expectations may be disappointed year after year.

2. Friedman does not give a new theory of how expectations are formed that would be free from theoretical and statistical bias. This makes his position unclear.

3. The vertical long-run Phillips curve implies that all expectations are satisfied and that people correctly anticipate the future inflation rates. Critics point out that people do not anticipate inflation rates correctly, particularly when some prices are almost certain to rise faster than others.

There are bound to be disequilibria between supply and demand caused by uncertainty about the future and that is bound to increase the rate of unemployment. Far from curing unemployment, a dose of inflation is likely to make it worse.

4. In one of his writings Friedman himself accepts the possibility that the long-run Phillips curve might not just be vertical, but could be positively sloped with increasing doses of inflation leading to increasing unemployment.

5. Some economists have argued that wage rates have not increased at a high rate of unemployment.

6. It is believed that workers have a money illusion. They are more concerned with the increase in their money wage rates than real wage rates.

7. Some economists regard the natural rate of unemployment as a mere abstraction because Friedman has not tried to define it in concrete terms.

8. Saul Hyman has estimated that the long-run Phillips curve is not vertical but is negatively sloped. According to Hyman, the unemployment rate can be permanently reduced if we are prepared to accept an increase in inflation rate.

UNIT 5: FOREIGN EXCHANGE RATE & BALANCE OF PAYMENT

MEANING OF FOREIGN EXCHANGE MARKET

The foreign exchange market is the marketplace in which participants are able to sell, purchase, exchange and theorize on currencies. Foreign exchange markets are made up of investment management firms, banks, central banks, hedge funds, commercial companies and investors and retail forex brokers.

The major participants involved in the foreign exchange market are forex brokers, commercial banks, and other legitimized dealers and monetary authorities. It is important to note that although participants may possess their own trading centres, the market in itself is spread worldwide. There is close and continuous contact between the trading centres, and there is more than one market where the participants can deal.

Demand for Foreign Exchange

People demand foreign exchange because, they want to buy commodities and services from other nations; they want to send presents abroad and they want to buy financial assets of a particular nation.

Supply of Foreign Exchange

Foreign currency flows into the host nation due to the following reasons:

Exports by a nation lead to the buy its domestic commodities and services by the foreigners send presents or make transfers

The assets of a host nation are bought by the foreigners

Types Of Foreign Exchange Market

The foreign exchange market, also known as the forex market, is a global marketplace for trading in currencies. It is a decentralised market that allows you to buy and sell foreign exchange. The market is an over-the-counter market and the foreign exchange rates will be dictated by it. It involves the buying, selling and exchanging of currencies at the market rate.

With regard to trade rate, forex is the largest in the world. Let us take a look at different types of foreign exchange markets.

1. The Spot Market

In the spot market, transactions involving currency pairs take place. It happens seamlessly and quickly. The transactions require instant payment at the prevailing exchange rate which is also known as the spot rate. The traders in the spot market are not exposed to the uncertainty of the market, which can lead to an increase or decline in the price between the agreement and trade.

2. Futures Market

The transactions in the futures market require future payment and distribution at a previously agreed upon exchange rate which is known as the future rate. The transaction or agreement is more formal in nature which ensures that the terms of the transaction are set in stone and cannot be altered. Traders who conduct the majority of the transactions enjoy a consistent return on the assets. Regular traders prefer a future market transaction.

3. Forward Market

The third type of foreign exchange market is the forward market where deals are similar to future market transactions. In this case, the parties will negotiate the terms of the transactions and the terms agreed-upon can be negotiated and altered as per the needs of the concerned parties. The forward market has higher flexibility as compared to the futures market.

4. Swap Market

When there is a simultaneous borrowing and lending of two types of currencies between two investors, it is known as a swap transaction. Here, one investor borrows a currency and in turn, pays in the form of a second currency to the second investor. The transaction is done to pay off their obligations without having to deal with a foreign exchange risk.

5. Option Market

In the options market, the currency of exchange from one denomination to the other is agreed upon by the investor at a specific rate and on a specific date. The investor has a right to convert the currency on a future date but there is no obligation to do so.

Foreign Exchange Rate

Foreign Exchange Rate is defined as the price of the domestic currency with respect to another currency. The purpose of foreign exchange is to compare one currency with another for showing their relative values.

Foreign exchange rate can also be said to be the rate at which one currency is exchanged with another or it can be said as the price of one currency that is stated in terms of another currency.

Exchange rates of a currency can be either fixed or floating. Fixed exchange rate is determined by the central bank of the country while the floating rate is determined by the dynamics of market demand and supply.

Factors Affecting the Exchange Rate

Exchange rate is impacted by some factors which can be economic, political or psychological as well. The economic factors that are known to cause variation in foreign exchange rates are inflation, trade balances, government policies.

Political factors that can cause a change in the foreign exchange rate are political unrest or instability in the country and any kind of political conflict.

Psychological factors that impact the forex rate is the psychology of the participants involved in foreign exchange.

Types of Exchange Rate Systems

There are three types of exchange rate systems that are in effect in the foreign exchange market and these are as follows:

1. Fixed exchange rate System or Pegged exchange rate system: The pegged exchange rate or the fixed exchange rate system is referred to as the system where the weaker currency of the two currencies in question is pegged or tied to the stronger currency.

Fixed exchange rate is determined by the government of the country or central bank and is not dependent on market forces.

To maintain the stability in the currency rate, there is purchasing of foreign exchange by the central bank or government when the rate of foreign currency increases and selling foreign currency when the rates fall.

This process is known as pegging and that's why the fixed exchange rate system is also referred to as the pegged exchange rate system.

Advantages of Fixed Exchange Rate System

Following are some of the advantages of fixed exchange rate system

1. It ensures stability in foreign exchange that encourages foreign trade.
2. There is a stability in the value of currency which protects it from market fluctuations.
3. It promotes foreign investment for the country.
4. It helps in maintaining stable inflation rates in an economy.

Disadvantages of Fixed Exchange Rate System

Following are some of the disadvantages of the fixed exchange rate system

1. There is a constant need for maintaining foreign reserves in order to stabilise the economy.

2. The government may lack the flexibility that is required to bounce back in case an economic shock engulfs the economy.

2. Flexible Exchange Rate System: Flexible exchange rate system is also known as the floating exchange rate system as it is dependent on the market forces of supply and demand.There is no intervention of the central banks or the government in the floating exchange rate system.

Advantages of Floating Exchange Rate System

Following are the advantages of the floating exchange rate system

1. There is no need to maintain foreign reserves in this exchange system.

2. Any deficiencies or surplus in Balance of Payment is automatically corrected in this system.

Disadvantages of Floating Exchange Rate System

Following are some of the disadvantages of the floating exchange rate system

1. It encourages speculation that may lead to fluctuations in the exchange rate of currencies in the market.

2. If the fluctuations in exchange rates are too much it can cause issues with movement of capital between countries and also impact foreign trade.

3. It will discourage any type of international trade and foreign investment.

3. Managed floating exchange rate system: Managed floating exchange rate system is the combination of the fixed (managed) and floating exchange rate systems. Under this system the central banks intervene or participate in the purchase or selling of the foreign currencies.

FUNCTIONS OF FOREIGN EXCHANGE MARKET

The foreign exchange market performs the following important functions:

1. Transfer Function. The basic function of the foreign exchange market is to transfer purchasing power between countries, i.e., to facilitate the conversion of one currency into another. The transfer function is performed through the credit instruments like, foreign bills of exchange, bank draft and telephonic transfers.

2. Credit Function. Another function of foreign exchange market is to provide credit both national and international, to promote foreign trade. Bills of exchange used in the international payments normally have a maturity period of three months. Thus, credit is required for that period to enable the importer to take possession of goods, sell them and obtain money to pay off the bill.

3. Hedging Function. In a situation of exchange risks, the foreign exchange market performs the hedging function. Hedging is the act of equating one's assets and liabilities in foreign currency to avoid the risk resulting from future changes in the value of foreign currency. In a free exchange market, when the value of foreign currency vanes, there may be a gain or loss to the traders concerned To avoid or reduce this exchange risk, the exchange market provides facilities for hedging anticipated actual claims or liabilities through forward contracts ii exchange. Forward contract is a contract of buying or selling foreign currency at some fixed date m future at a price agreed upon now. Thus, without transferring any currency, the forward contract makes it

possible to ignore the likely change in the exchange rate and avoid the possible losses from such change.

PURCHASING POWER PARITY THEORY

The purchasing power parity theory was propounded by Professor Gustav Cassel of Sweden. According to this theory, rate of exchange between two countries depends upon the relative purchasing power of their respective currencies

Suppose in the USA one dollar purchases a given collection of commodities. In India, same collection of goods cost 60 rupees. Then rate of exchange will tend to be $ 1 = 60 rupees.

One is absolute purchasing parity theory and second is relative purchasing parity theory

1. Absolute version of the theory

According to this version of the purchasing power parity theory, the rate of exchange should normally reflect the relation between the internal purchasing power of the different national currency units.

As we know that the absolute version of the purchasing power parity theory is, no doubt, quite simple and elegant, yet it has certain shortcomings. Firstly, this version of determining exchange rate is of little use as it attempts to measure the value of money in absolute terms. In fact, the purchasing power is measured in relative terms.

2 Relative version

It shows the changes in exchange rate. It relates the changes in the equilibrium rate of exchange to changes in the purchasing power parities of currencies.

Criticisms of PPP theory

1.This theory assumes a direct functional relation between the purchasing powers of two currencies and the exchange rate. In practice, there is no such precise link between the purchasing power of the currency and the rate of exchange. Apart from the purchasing power, the rate of exchange is influenced by several other factors such as capital flows, BOP situation, speculation, tariff structures etc.

2.The PPP theory suggests that the change in price level is the cause and the change in exchange rate is an effect. The changes in prices induce the changes in exchange rates. The theory repudiates that changes in exchange rates can cause changes in price level. In fact Depreciation in exchange rate can stimulate exports and restrict imports. The reduced supplies for domestic market are likely to push up prices in the home country. In foreign country the prices are likely to fall. Thus the exchange rate changes may induce the changes in price level.

3.This theory assumes that there are no structural changes in the factors such factors include changes in tastes or preferences, productive resources, technology etc. Which is clearly unrealistic but the exchange rate is bound to be affected by the changes in these factors.

4.This theory rests on the assumptions of free international trade and laissez faire. It means the government does not resort to tariff or non-tariff restrictions upon trade. Even these assumptions do not hold valid in actual reality.

5. The PPP theory can be considered relevant only in the long period when the disturbances are of purely monetary character.

MONETARY APPROACH TO EXCHANGE RATE DETERMINATION

The monetary approach postulates that the rates of exchange are determined through the balancing of the total demand and supply of the national currency in each country. The demand for money depends upon the level of real income, the general price level and the rate of interest.

As we all know that the demand for money is the direct function of the real income and the level of prices. On the other hand, it is an inverse function of the rate of interest. As far as supply of money is concerned, it is determined autonomously by the monetary authorities of different countries.

It is assumed that initially the foreign exchange market is in equilibrium. It is further supposed that the monetary authority in the home country increases the supply of money. This will lead to a proportionate increase in price level in the home country in the long run. It will also cause depreciation in the home currency as explained by the PPP theory. For instance, if the Reserve Bank of India increases the supply of money by 20 percent, it may cause a 20 percent rise in price level and 20 percent depreciation of rupee relative to, say dollar, over the long period.

The rate of interest, given the demand for money, is however likely to fall. Because there is inverse relationship between rate of interest and supply of money. The decline in the rate of interest in India can result in increased Indian financial investments in the U.S.A. This is likely to cause an immediate depreciation of rupee.

Subsequently, as prices in the United States rise relative to India over time, there will be an appreciation of rupee by an extent such that excessive depreciation in India that occurred soon after the increase in money supply and consequent fall in rate of interest in India gets neutralized.

It's all about monetary approach to the exchange rate determination.

The monetary approach to exchange rate determination has certain shortcomings.....

1. The monetary approach has laid an excessive emphasis upon the role of money and has given very little importance to trade as the determinant of foreign exchange rate.

2. This approach holds that domestic and foreign financial assets such as bonds are perfect substitute which is not totally true.

3. The monetary approach to the determination of exchange rate has not performed well empirically. The estimated parameters have been found either insignificant or they have the wrong signs.

4. The monetary exchange rate models have not fared well also in respect of their forecasting ability. The tests on market efficiency have tended to reject this approach.

BALANCE OF PAYMENTS THEORY

According to this approach, foreign exchange rate is determined by independent factors no related to international price levels, and the quantity of money has asserted by the purchasing power parity theory. According to this theory, an adverse balance of payment, lead to the fall or depreciation of the rate of foreign exchange while a favorable balance of payments, by strengthening the foreign exchange, causes an appreciation of the rate of foreign exchange. When the balance of payments is adverse, it indicates a situation in which a demand for foreign exchange exceeds its supply at a given rate of exchange consequently, its price in terms of domestic currency must rise i.e., the external value of the domestic currency must depreciate. Conversely, if the balance of payment is favorable it means that there is a greater

demand for domestic currency in the foreign exchange market that can be met by the available supply at any given rate of foreign exchange. Consequently, the price of domestic currency in terms of foreign currency rises i.e., the rate of exchange moves in favor of home currency, a unit of home currency begins to command larger units of the foreign currency than before.

Balance of Payment theory, also known as the Demand and Supply theory, holds that the foreign exchange rate, under free market conditions is determined by the conditions of demand and supply in the foreign exchange market. According to this theory, the price of a commodity that is , exchange rate is determined just like the price of any commodity is determined by the free play of the force of demand and supply.

> "When the Balance of Payment is equilibrium, the demand and supply for the currency are equal. But when there is a deficit in the balance of payments, supply of the currency exceeds its demand and causes a fall in the external value of the currency. When there is a surplus, demand exceeds supply and causes a rise in the external value of the currency."