5 Keynesian Theory of Employment

◆ 1. What is Keynesian Theory of Employment?

Eminent economist of the twentieth century, **Lord J.M. Keynes** has, in his book *'The General Theory of Employment, Interest and money'* (1936), propounded modern Theory of Employment. According to Lord Keynes, there is not always full employment in a developed capitalist economy. As a matter of fact, there can be unemployment in every economy. The main reason for this unemployment is deficiency of Aggregate Demand. Unemployment can be removed and full employment can be restored by increasing the aggregate demand. These views of Lord Keynes are based on his experience of the Great Depression. The year 1930 witnessed Great Depression in almost all capitalist economies. It brought in its wake widespread unemployment. The main cause of unemployment was fall in aggregate demand compared to aggregate supply. Many countries like America, France etc. adopted all such measures to remove unemployment as were recommended by classical theory of employment, viz. reduction of money-wage, fall in the rate of interest etc. But these measures failed to remove unemployment. Lord Keynes analysed deeply the problem of unemployment and concluded that the main cause of unemployment was deficiency of aggregate demand. He, therefore, suggested that unemployment could be removed by increasing the aggregate demand. According to him aggregate demand comprised of demand for two types of goods: (1) demand for consumption goods and (2) demand for investment goods. In short period, consumption remains more or less constant. Hence, aggregate demand can be increased by increasing investment. During the period of depression the expectation of profit is remote. Consequently, private sector will not feel induced to increase investment. Hence, to achieve the objective of full employment, investment by government was called for. Lord Keynes was of the opinion that to remove unemployment and to achieve full employment, government interference in the economy is imperative. Prior to Lord Keynes, famous classical economist **Malthus** had also opined that the main cause of fall in employment was deficiency of effective demand. But **Malthus** could not explain the reason behind deficiency of effective demand.

◆ 2. Assumptions

Keynes' Theory of Employment is based on the following assumptions:

(1) Short Period: Keynesian Theory of Employment holds good in the short period. Lord Keynes firmly believed that the problem of unemployment in developed countries was a short-run problem, because "in the long-run we are all dead." In the short period, aggregate supply remains constant. As such, level of employment can be increased and unemployment removed by increasing aggregate demand.

(2) Perfect Competition: Keynesian theory of employment, like classical theory, is based on the assumption of perfect competition.

(3) Closed Economy: Keynesian theory is based on the assumption that a developed capitalist economy is a closed economy, where level of income and employment remain unaffected by the foreign trade.

(4) Ignores the role of the Government as a Spender or a Taxer: Keynes' General Theory ignores the role of government as a spender or a taxer. Keynes has ignored the effect of government sector on aggregate demand.

(5) Diminishing Marginal Productivity: Another assumption of Keynesian Theory of Employment is that, as more and more units of labour are employed, their marginal productivity goes on diminishing. It means that production is subject to law of diminishing marginal returns.

(6) Labour is the only factor of production: It is also the assumption of Keynesian Theory that in the short-period labour alone is the variable factor of production. It means that with increase in the number of labourers there is increase in output.

(7) Labour has Money Illusion: Keynesian Theory of Employment assumes that labourers have an illusion that value of money remains constant. In other words, they believe that real wages will also increase in the same ratio as the money wages do. Thus, labourers ignored the effect of change in prices on the money wages.

(8) Money also acts as a store of value: Keynesian Theory also assumes that money does not serve as medium of exchange alone, it also performs an important function of store of value.

(9) No Time Lag: Another assumption is that different economic factors get adjusted without any loss of time. The period in which income increases is the period in which consumption and investment also increase.

(10) Under-employment Equilibrium: Keynes assumes that equilibrium is possible even when there is under- employment.

(11) Saving and Investment Function: Keynes' Theory is based on the assumption that saving is a function of income **i.e., S = f (y).** On the other hand, investment is a function of rate of interest, **i.e., I = f (r).**

(12) Interest is a Monetary Phenomenon: According to Keynesian Theory, interest is a monetary phenomenon, meaning thereby that it is determined by the demand for and supply of money. Demand for money is expressed by liquidity preference which in its turn depends on transaction, precautionary and speculative motives.

◆ 3. Explanation of Keynesian Theory

According to Keynesian Theory of Income or Employment, in a capitalist economy, in short period, total output or national income depends on the level of employment. Level of employment depends on effective demand. Effective demand refers to that level of aggregate demand at which it is equal to aggregate supply. Thus, according to **Ackley Gardner,** the basic concept of Keynesian Theory is that the level of employment in a country is determined by the aggregate demand and aggregate supply. Effective demand refers to the equilibrium between aggregate demand and aggregate supply. It means that only that level of aggregate demand which is equal to aggregate

supply in the country, is called effective demand. Supposing by employing one lakh labourers in a country at any given time the aggregate supply is worth Rs. 100 crore and the aggregate demand at that very time is also Rs. 100 crore, then in that situation aggregate demand price will be equal to aggregate supply price. According to Keynesian Theory of Employment, aggregate demand price of Rs. 100 crore can be explained in the following manner:

$$Y = f(N)$$

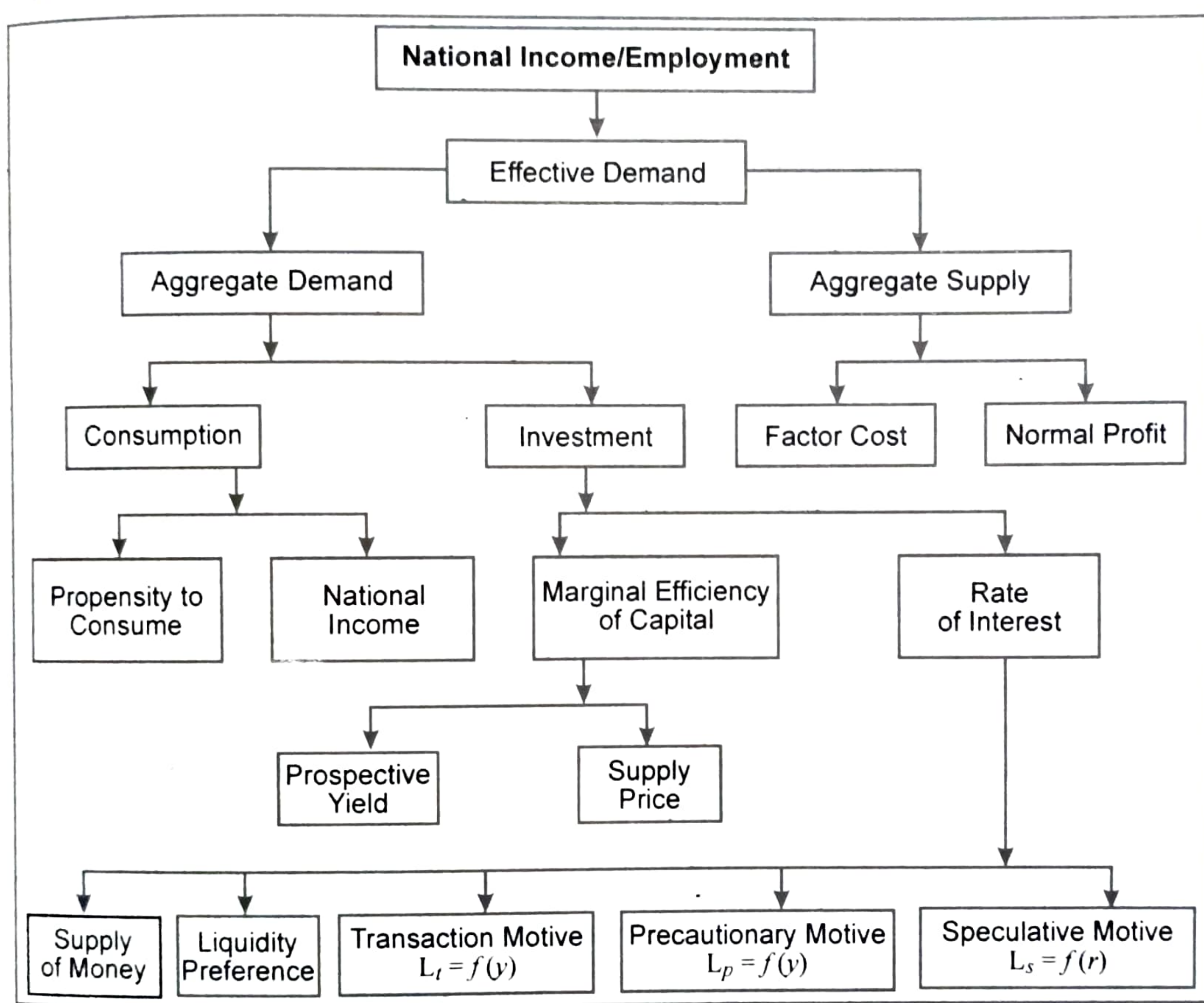
National Income or Output (Y) is a function (f) of level of employment (N)

$$N = f(ED)$$

Level of employment (N) is a function (f) of effective demand (ED)

$$ED \rightarrow (AD = AS)$$

Effective Demand (ED) expresses equality between aggregate demand (AD) and aggregate supply (AS).



On the basis of the above chart, Keynesian Theory of **Employment can** be **explained** as follows:

(1) The national income depends on the level of employment.

(2) Level of employment depends on **effective demand (ED). Effective demand is the level of demand at which aggregate supply is equal to aggregate demand.**

(3) Effective demand depends on aggregate demand and aggregate supply. That level of aggregate demand is called effective demand where it is equal to aggregate supply.

(4) Aggregate Supply: In order to understand the concept of aggregate supply, it is necessary to comprehend the difference between **aggregate** supply price and aggregate supply schedule or aggregate supply. **Aggregate** supply price refers to **the** total amount that all the producers must receive by selling the output produced at a given level of employment. **Under perfect competition, aggregate supply price is equal to total cost of production. It can also be called national income.** On the contrary, aggregate supply schedule or aggregate supply refers to a schedule showing aggregate supply price received at different levels of employment. In the short-period, **aggregate** supply remains constant.

(5) Aggregate Demand: Aggregate demand price refers to that total amount which all the producers expect to receive by selling the output produced at a given level of employment. On the contrary, aggregate demand schedule or aggregate demand refers to a schedule **showing** aggregate demand price received at different **levels** of **employment**.

According to Keynes, aggregate demand **can** be **divided into two parts**, Consumption and Investment,i.e.,

$$\boxed{AD = C + I}$$

(a) Consumption Expenditure: Consumption expenditure is an important constituent of aggregate demand. Increase in consumption expenditure leads to increase in total income. Consumption expenditure depends mainly on two factors (i) Propensity to consume and (ii) National Income.

(i) Propensity to Consume: Propensity to consume refers to the ratio of consumption expenditure to different levels of income. It is of two types (a) **Average Propensity to Consume.** It is estimated by dividing total consumption expenditure by total income, viz. $APC = \frac{C}{Y}$. It is through average propensity to consume that the share of total consumption in aggregate demand can be known. Supposing, under equilibrium condition, aggregate demand or aggregate income is Rs. 100 crore **and** average propensity to consume (APC) is 60 percent. It shows that consumption expenditure is Rs. 60 crore. (b) **Marginal Propensity to Consume.** It is the ratio of change in aggregate consumption to change in aggregate income viz. $MPC = \frac{\Delta C}{\Delta Y}$. Supposing total income increases from Rs. 100 crore to Rs. 120 crore and consumption expenditure increases from Rs. 50 crore to Rs. 60 crore. Change in income ΔY = Rs. 120 crore – Rs. 100 crore = Rs. 20 crore and change in consumption ΔC = Rs. 60 crore – Rs. 50 crore = Rs. 10 crore.

Thus, MPC $= \frac{\Delta C}{\Delta Y} = \frac{10}{20} = \frac{1}{2}$. Marginal Propensity to Consume indicates how much aggregate consumption expenditure increases with increase in the income of the consumers.

(ii) Size of National Income: Keynes assumes that consumption is a function of income i.e., C = f(Y). Increase in income causes increase in consumption. However, the ratio of increase in consumption is less than the increase in income. It testifies that when national income or aggregate supply increases then, because of less proportionate increase in aggregate consumption than increase in national income, aggregate demand falls short of aggregate supply. Consequently, firms reduce their output causing unemployment. Hence, to remove unemployment, aggregate demand must be increased. With a view to increasing aggregate demand, it is not possible to increase aggregate consumption (C) because the latter depends on such subjective factors as taste, fashion, habit and objective factors as distribution of income etc. which remain constant in the short run. Hence, according to Keynesian theory of employment, there is greater scope of increase in aggregate demand if its other component i.e. investment (I), is increased.

(b) Investment: It refers to that expenditure which leads to addition in the total stock of capital assets. It is an important constituent of aggregate demand. According to Keynes, investment mainly depends on two factors: (i) Rate of interest and (ii) Marginal Efficiency of Capital.

(i) Rate of Interest: According to Keynes, investment increases with fall in the rate of interest and decreases with rise in the rate of interest. Rate of interest is determined by demand for and supply of money. Demand for money depends on liquidity preference. People prefer to hold their money in cash form (liquid) due to three motives viz. (i) Transaction Motive (ii) Precautionery Motive and (iii) Speculative Motive.

(ii) Marginal Efficiency of Capital: Marginal Efficiency of Capital refers to rate of profit. Addition made to the total profit by applying one more unit of capital asset is called marginal efficiency of capital. Marginal efficiency of capital depends on two factors **(a) Prospective Yield** : The amount of profit expected per unit of capital per annum is called prospective yield. **(b) Supply Price:** Supply price means that price of a machine which is paid for a similar new machine. An entrepreneur compares the rate of interest with the marginal efficiency of capital, at the time of making investment. If the marginal efficiency of capital is more than the rate of interest, the investment will take place. On the other hand, if the marginal efficiency of capital is less than the rate of interest, no investment will be undertaken. If both are equal, it will be difficult for the entrepreneur to decide whether to go in for investment or not.

In short, the above discussion testifies that according to the theory of employment as propounded by Keynes, developed capitalist economies can be afflicted with unemployment deficiency of aggregate demand. Aggregate demand is composed of consumption and investment. In the short period, consumption expenditure remains more or less constant. Hence, there is greater possibility of increasing aggregate demand by increasing investment.

◆ 4. Determination of Employment

In the short period aggregate supply remains constant,as such, effective demand and level of employment can be increased by changing aggregate demand. In a closed economy, aggregate demand depends upon consumption, national income and propensity to consume. Propensity to

consume depends upon many *subjective* and *objective* factors which remain constant in the short period. It is therefore, not possible to increase consumption in the short period. The other determinant of aggregate demand is *investment*. It depends upon rate of interest and marginal efficiency of capital. Rate of interest is determined by the interaction of the demand for and supply of money. Demand for money is reflected in liquidity preference. Preference to hold wealth in cash is called liquidity preference. People hold their wealth in liquid from for three motives: (i) Transaction motive (ii) Precautionary motive (iii) Speculative motive. Demand for cash for transaction and precautionary motives depends on the level of income while that for speculative motive depends on the rate of interest. At high rate of interest people will be living to give more money on loan and at low rate they will lend less. Marginal Efficiency of capital, in fact, refers to the rate of profit. It (MEC) is also governed by two factors. (i) Supply price of capital asset and (ii) Prospective yield. An entrepreneur compares rate of interest with marginal efficiency of capital, before making investment. When MEC is greater than rate of interest, new investment is made. If MEC is less than rate of interest no new investment takes place. In the short period, investment can be increased by lowering the rate of interest. If investment made by the private sector is not enough, government can increase it by making autonomous (public) investment. Hence, keynes in his General Theory stated that unemployment could be removed by increasing effective demand. In order to increase effective demand, aggregate demand must be increased. To increase aggregate demand, consumption demand (C) and investment demand and (I) must increase. But in the short period consumption remains constant. Hence, it is by increasing investment that aggregate demand can be increased. As a result of it, employment will increase. Keynes was of the opinion that due to increase in investment, income and employment both will increase many times on account of multiplier effect. In short, the objective of full employment through increase in effective demand and investment.

Determination of level of employment is explained with the help of Table 1 and Fig. 1 below:

Table 1. Determination of Employment

Employment (N) (in lakhs)	Aggregate supply (Rs.crore)	Aggregate demand (Rs. crores)	Trends in Employment
0	0	60	Rise
10	60	100	Rise
20	90	120	Rise
30	120	140	Rise
40	150	160	Rise
50	**180**	**180**	**Equilibrium**
60	210	190	Fall
70	240	200	Fall

Under perfect competition, employment will be determined at that level of aggregate demand at which it is equal to aggregate supply. Such a level is called equilibrium level or effective demand. In the words of Keynes, **"The volume of employment is given by the point of intersection between the aggregate demand function and aggregate supply function."**

Above table explains that:

(i) When the level of employment is zero even then aggregate demand is Rs. 60 crore and aggregate supply is zero. It is so because even unemployed persons do spend some amount on consumption.

(ii) As employment increases to 40 lakh, there is increase in aggregate demand alongwith increase in aggregate supply, although aggregate demand is more than aggregate supply. As such, the producers will continue to produce more. As a result of it, more labourers will be employed.

(iii) When 50 lakh persons get employment, aggregate demand becomes equal to aggregate supply, viz., Rs. 180 crores. It will be a position of equilibrium in the economy. It is at this point that equilibrium level of employment will be determined. However, in the economy 70 lakh persons are willing to work. Consequently, 20 lakh persons will remain unemployed in this position of equilibrium. It implies that unemployment is possible even when economy is in equilibrium. Such an equilibrium has been referred to as under-employment equilibrium in Keynesian Theory of Employment.

(iv) Beyond 50 lakh persons, as more persons are employed, aggregate demand falls short of aggregate supply. Hence, it will not be worth-while for the entrepreneurs to give work to more than 50 lakh persons.

It is evident from Table 1 above that equilibrium level of employment will be determined at that point where aggregate demand is equal to aggregate supply. In Fig. 1, income and employment are shown on OX-axis and Expenditure/Expected Receipts on OY-axis. AS is aggregate supply curve and AD is aggregate demand curve. At point E where aggregate demand curve intersects aggregate supply curve, 50 lakh persons get employment. **Thus, point E is an equilibrium point.** If the level of employment is reduced to 40 lakh, then aggregate demand as shown by point B will be Rs. 160 crore and aggregate supply as shown by point A will be Rs. 150 crore In other words, aggregate demand will be more than aggregate supply by AB. Aggregate demand being more than aggregate supply, producers will produce more. As a result, level of employment will go on increasing till it reaches 50 lakh. At this level of employment aggregate demand will be equal to aggregate supply and this situation will be indicative of equilibrium. If, however, the level of employment rises to 60 lakh, then aggregate demand as shown by point C will be Rs. 190 crore while aggregate supply as shown by point D will be Rs. 210 crore In other words, aggregate demand will be less than aggregate supply. It will cause loss to the producers and they will reduce production. Less production will result into fall in employment, till it once again comes down to the level of 50 lakh, where AD is equal to AS.

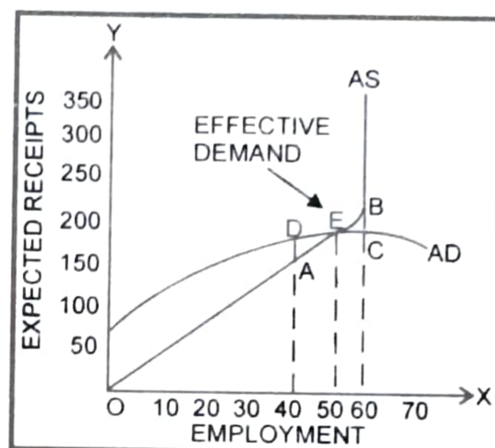


Fig. 1

◆ 5. Achievement of Full Employment

It is clear from the above account that equilibrium is possible in an economy even with unemployment. It is called **under-employment equilibrium.** With a view of removing

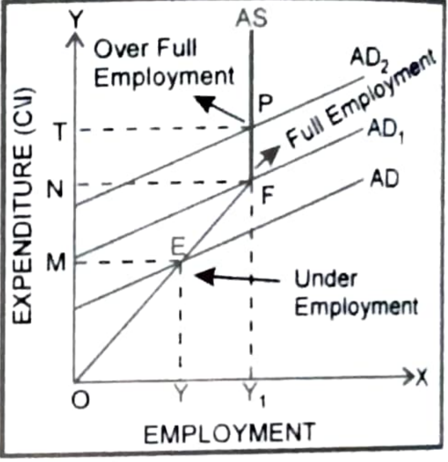


Fig. 2

unemployment and achieving full employment, it is **essential** to increase aggregate demand. According to Keynes, in order to increase aggregate demand in short-period investment must be increased, because in the short-run consumption remains more or less constant. As a result of increase in investment the aggregate demand curve will shift upwards. The new demand curve will intersect the supply curve at full employment level. The equilibrium so established will be called full-employment equilibrium. The position of full-employment equilibrium can be explained diagrammatically by Fig. 2. In this diagram it is shown that when aggregate demand is AD, the economy is in equilibrium at point E, where aggregate supply curve AS intersects it. Although economy is in equilibrium yet YY_1 lakh persons unemployed. **Hence, it is an under- employment equilibrium.** If, as a result of increase in investment, there is increase in aggregate demand, then the new demand curve will shift upwards as shown by AD_1. The new demand curve AD_1 intersects aggregate supply curve AS at point F, which will indicate new equilibrium position. In the new equilibrium all OY_1 workers will get employment. **Hence, it will be called full- employment equilibrium.** If investment increases still more there will be further increase in aggregate demand and aggregate demand curve will shift further upwards as shown by AD_2. This new demand curve intersects aggregate supply curve at point P which will be the new equilibrium point. In this situation there will be no increase in employment and output, as the economy has already been reached the level of full employment. Hence, after the attainment of full employment situation if aggregate demand continues to increase it will simply lead to rise in prices. Such a situation is referred to as **over full employment** situation.

◆ 5.1 Determination of Income or Output

According to Keynes, Income or Output depends on the level of Employment. Income or output can be determined with the help of following equation:

$$Y = C + I$$
$$C = C_0 + bY$$
$$I = \bar{I}$$

$$\boxed{Y = C_0 + bY + \bar{I}}$$

(Here, Y = Income ; C = Consumption ; I = Investment ; C_0 = Autonomous Consumption ; b = Marginal Propensity to consume Or $\frac{\Delta C}{\Delta Y}$; $\bar{I}$ = Autonomous Investment)

Supposing, in an economy in the initial stage there is the following situation:

$Y = 0$

C_0 = Rs. 25 crore

$b = 0.75$

$\bar{I}$ = Rs. 75 crore