The Principle of Effective Demand: Aggregate Demand and Aggregate Supply

Introduction:

The logical starting point of Keynes's theory of employment is the principle of effective demand.

In a capitalist economy, the level of employment depends on effective demand. Thus unemployment results from a deficiency of effective demand and the level of employment can be raised by increasing the level of effective demand.

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1. Effective Demand:

In ordinary parlance, demand means desire. It becomes effective when income is spent in buying consumption goods and investment goods. Keynes used the term 'effective demand' to denote the total demand for goods and services at various levels of employment. Different levels of employment represent different levels of aggregate demand. But there can be a level of employment where aggregate demand equals aggregate supply.

This is the point of effective demand. In Keynes's words, "The value of D (Aggregate Demand) at the point of Aggregate Demand function, where it is intersected by the Aggregate Supply function, will be called the effective demand." Thus according to Keynes, the level of employment is determined by effective demand which, in turn, is determined by aggregate demand price and aggregate supply price.

Aggregate Demand Price:

"The aggregate demand price for the output of any given amount of employment is the total sum of money or proceeds, which is expected from the sale of the output produced when that amount of labour is employed."

Thus the aggregate demand price is the amount of money which the entrepreneurs expect to get by selling the output produced by the number of men employed. In other words, it refers to the expected revenue from the sale of output produced at a particular level of employment. Different aggregate demand prices relate to different levels of employment in the economy.

A statement showing the various aggregate demand prices at different levels of employment is called the aggregate demand price schedule or aggregate demand function. "The aggregate demand function," according to Keynes, "relates any given level of employment to the expected proceeds from that level of employment." Table I shows the aggregate demand schedule.

The table reveals that with the increase in the level of employment proceeds expected rise and at lower levels of employment decline. When 45 lakh people are provided employment the aggregate demand price is Rs 280 crores and when 25 lakh people are provided jobs, it is Rs 240 crores. According to Keynes, the aggregate demand function is an increasing function of the level of employment and is expressed as D = F (AO, where D is the proceeds which entrepreneurs expect from the employment of N men.

The aggregate demand curve can be drawn on the basis of the above schedule. It slopes upward from left to right because as the level of employment increases aggregate demand price also rises, shown as AD curve in Figure 1.

Table I: Aggregate Demand Schedule

L ve.' of Employment(N) (in Lakhs)	*Aggregate Demand Price(D)* (Rs Crores)
20	230
25	240
30	250
35	260
40	270
45	280
50	290

Aggregate Supply Price:

When an entrepreneur gives employment to certain amount of labour, it requires certain quantities of co-operant factors like land, capital, raw materials, etc. which will be paid remuneration along with labour. Thus each level of employment involves certain money costs of production including normal profits which the entrepreneur must cover.

“At any given level of employment of labour aggregate supply price is the total amount of money which all the entrepreneurs in the economy, taken together, must expect to receive from the sale of the output produced by that given number of men, if it is to be just worth employing them.”

In brief, the aggregate supply price refers to the proceeds necessary from the sale of output at a particular level of employment. Thus each level of employment in the economy is related to a particular aggregate supply price and there are different aggregate supply prices for different levels of employment.

A statement showing the various aggregate supply prices at different levels of employment is called the aggregate supply price schedule or aggregate supply function. In the words of Prof. Dillard, "The aggregate supply function is a schedule of the minimum amounts of proceeds required to induce varying quantities of employment." Table II shows the aggregate supply schedule.

Table II: Aggregate Supply Schedule

Level of Employment(N) (in lakhs)	*Aggregate Supply Price(Z)* (Rs crores)
20	215
25	230
30	245
35	260
40	275
40	290
40	305

The above table reveals that the aggregate supply price rises with the increase in the level of employment. If entrepreneurs are to provide employment to 20 lakh workers, they must receive Rs 215 crores from the sale of the output produced by them.

It is only when they expect to receive the minimum amounts of proceeds (Rs 230 crores, Rs 245 crores and Rs 260 crores) that they will provide employment to more workers (25 lakhs, 30 lakhs and 35 lakhs respectively).

But when the economy reaches the level of full employment (at 40 lakh workers) the aggregate supply price (Rs 275,290 and 305 crores) continues to increase but there is no further increase in employment. According to Keynes, the aggregate supply function is an increasing function of the level of employment and is expressed as $Z = \phi N$, where Z is aggregate supply price of the output from employing N men.

The aggregate supply curve can be drawn on the basis of the schedule. It slopes upward from left to right because as the necessary expected proceeds increase, the level of employment also rises. But when the economy reaches the level of full employment, the aggregate supply curve becomes vertical. Even with the increase in the aggregate supply price, it is not possible to provide more employment as the economy has attained the level of full employment.

Determination of Effective Demand:

We have studied the two determinants of effective demand separately and now are in a position to analyse the process of determining the level of employment in the economy. The level of employment is determined at the point where the aggregate demand price equals the aggregate supply price.

In other words, it is the point where what entrepreneurs expect to receive equals what they must receive and their profits are maximised. This point is called the effective demand and here entrepreneurs earn normal profits.

So long as the aggregate demand price is higher than the aggregate supply price, the prospects of getting additional profits are greater when more workers are provided employment. The proceeds expected (revenue) rise more than the proceeds necessary (costs).

This process will continue till the aggregate demand price equals the aggregate supply price and the point of effective demand are reached. This point determines the level of employment and output in the economy. The point of effective demand is, however, not necessarily one of full employment but of underemployment equilibrium.

If the entrepreneurs try to provide more employment after this point, the aggregate supply price exceeds the aggregate demand price indicating that the total costs are higher than the total revenue and there are losses. So the entrepreneurs will not employ workers beyond the point of effective demand till the aggregate demand price rises to meet the aggregate supply price at the new equilibrium point which may be one of full employment.

If the aggregate demand price is raised still further, it will lead to inflation because no increase in employment and output is possible beyond the level of full employment. The following table explains the determination of the point of effective demand.

Table III shows that so long as the aggregate demand price is higher than the aggregate supply price, it is profitable for entrepreneurs to employ more workers, when they expect to receive Rs 230 crores, Rs 240 crores and Rs 250 crores than the proceeds necessary amounting to Rs 215 crores, Rs 230 crores and Rs 245 crores, they will provide increasing employment to 20 lakh, 25 lakh and 30 lakh workers respectively.

But when the proceeds necessary and proceeds expected equal Rs 260 crores the level of employment rises to 35 lakhs. This is the point of effective demand. If we assume the level of full employment to be 40 lakh workers in the economy, it will necessitate the drawing up of a new aggregate, demand price schedule as shown in Table III last column.

As a result, the new point of effective demand is 40 lakh workers because both the aggregate demand price and the aggregate supply price equal Rs 275 crores. Beyond this point there is no change in the level of employment which is steady at 40 lakh workers.

Table III: Schedule of Aggregate Demand and Aggregate Supply Prices

Level of Employment(N) (in lakhs)	*Aggregate supply Price(Z)* (Rs crores)	*Aggregate Demand Price(D)* (Rs crores)	
		Old	New
20	215	230	235
25	230	240	245
30	245	250	255
35	260	260	265
40	275	270	275
40	290	280	285
40	305	290	295

Figure 1 illustrates the determination of effective demand where AD is the aggregate demand function and AS the aggregate supply function. The horizontal axis measures the level of employment in the economy and the vertical axis the proceeds expected (revenue) and the proceeds necessary (costs).

The two curves AD and AS intersect each other at point E. This is effective demand where ON workers are employed. At this point, the entrepreneurs' expectations of profits are maximised. At any point other than this, the entrepreneurs will either incur losses or earn subnormal profits.

At ON_1 level of employment, the proceeds expected (revenue) are more than the proceeds necessary (costs), i.e., $RN_1 > CN_1$. This indicates that it is profitable for the entrepreneurs to provide increasing employment to workers till ON level is reached where the proceeds expected and necessary equal at point E.

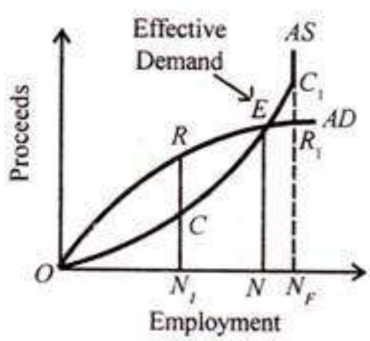

Fig. 1.

It would not be, however, profitable for the entrepreneurs to increase employment beyond this to N_F level because the proceeds necessary (costs) exceed the proceeds expected (revenue), i.e., $C_1N_F > R_1N_F$ and they incur losses. Thus E, the point of effective demand, determines the actual level of employment in the economy which is of underemployment equilibrium.

Of the two determinants of effective demand, Keynes regards the aggregate supply function to be given because it depends on the technical conditions of production, the availability of raw materials, machines etc. which do not change in the short run.

It is, therefore, the aggregate demand function which plays a vital role in determining the level of employment in the economy. According to Keynes, the aggregate demand function depends on the consumption function and investment function.

The cause of unemployment may be a fall in either consumption expenditure or investment expenditure, or both. The level of employment can be raised by increasing either consumption expenditure or investment expenditure, or both. Thus, it is the aggregate demand function which is the "effective" element in the principle of effective demand. Prof. Dillard regards this as the core of the principle of effective demand.

It follows that to raise the economy to the level of full employment requires the raising of the point of effective demand by increasing the aggregate demand. This is illustrated in Figure 2, where E is the point of effective demand which determines ON level of employment.

If ON_F is the level of full employment for the economy, it requires the raising of the point of effective demand. This is possible by raising the aggregate demand curve to AD_1 (last column of Table III) where it intersects aggregate supply curve AS at E_1.

This is the new point of effective demand which provides an optimum level of employment ON' to the economy. If the aggregate demand function is raised beyond this point the economy will experience inflation because all the existing resources are fully employed and their supply cannot be increased during the short run, as is apparent from the vertical portion of the AS curve in Figure 2.

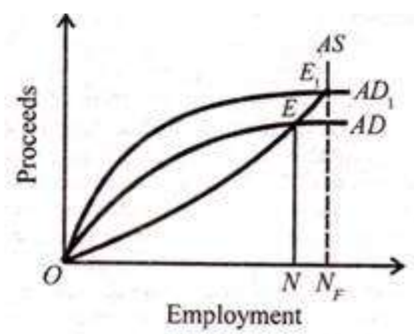

Fig. 2.

2. Importance of Effective Demand:

The principle of effective demand is the most important contribution of Keynes. It is the soul of the Keynesian theory of employment. Dr Klein attributes the Keynesian revolution solely to the development of a theory of effective demand.

1. Determinant of Employment:

Effective demand determines the level of employment in the economy. When effective demand increases, employment also increases, and a decline in effective demand decreases the level of employment. Thus unemployment is caused by a deficiency of effective demand.

Effective demand represents the total expenditure on the total output produced at an equilibrium level of employment. It indicates the value of total output which equals national income. National income equals national expenditure. National expenditure consists of expenditure on consumption goods and investment goods.

Thus the main determinants of effective demand and the level of employment are consumption and investment. In brief, Effective Demand = Value of National Output = Volume of Employment = National Income = National Expenditure = Expenditure on consumption goods + Expenditure on investment goods.

In the Keynesian analysis of effective demand, consumption and investment expenditures relate to the private sector because Keynes considers government expenditure as autonomous. But the post-Keynesian economists include government expenditure as a component of effective demand. Thus, Effective Demand (D) = Private consumption expenditure (C) + Private investment (I) + Government expenditure (G) on both.

We may conclude that the importance of the principle of effective demand lies in pointing out the cause and remedy of unemployment. Unemployment is caused by a deficiency of effective demand and it can be removed by an increase in consumption expenditure or/and investment expenditure and in case the private expenditures are insufficient and ineffective in bringing about the required level of employment, the same can be achieved by government expenditure. Thus the principle of effective demand is the basis of the theory of employment.

2. Repudiation of Say's Law and Full Employment Thesis:

The principle of effective demand repudiates Say's law of markets that supply creates its own demand and that full employment equilibrium is a normal situation in the economy. This principle points out that underemployment equilibrium is a normal situation and full employment equilibrium is accidental.

In a capitalist economy, supply fails to create its own demand because the whole of the earned income is not spent on the consumption of goods and services. Moreover, the decisions to save and invest are made by different people. As a result, the existence of full employment is not a possibility and the point of effective demand at any time represents underemployment equilibrium.

The Pigovian view that full employment can be achieved by a reduction in money wage-cut is also repudiated by this principle. A money wage-cut will bring about a reduction in expenditure on goods and services leading to a fall in effective demand and hence in the level of employment. Thus the importance of this principle lies in repudiating Say's Law and the classical thesis of full employment equilibrium.

3. Role of Investment:

The principle of effective demand highlights the significant role of investment in determining the level of employment in the economy. The two determinants of effective demand are consumption and investment expenditures.

When income increases consumption expenditure also increases but by less than the increase in income. Thus there arises a gap between income and consumption which leads to decline in the volume of employment. This gap can be bridged by an increase in either consumption expenditure or investment expenditure in order to achieve full employment level of effective demand in the economy.

Since the propensity to consume is stable during the short run, it is not possible to raise the consumption expenditure. Therefore, the level of effective demand and hence of employment can be raised by an increase in investment. In this lies the importance of investment.

4. The Paradox of Poverty in the midst of Potential Plenty:

The importance of effective demand lies in explaining the paradox of poverty in the midst of potential plenty in modern capitalism. Effective demand is mainly determined by the aggregate demand function. Which is composed of consumption expenditure and investment expenditure?

A fundamental principle is that when income increases consumption also increases but less than proportionately (i.e., the marginal propensity to consume is less than one). This creates a gap between income and consumption which must be filled up by the required investment expenditure. If the appropriate investment is not forthcoming to fill this gap, it leads to a deficiency of effective demand resulting in unemployment.

It follows that in a poor community, the gap between income and consumption is small because the marginal propensity to consume is high. It will, therefore, have little difficulty in employing all its resources by filling the gap through small investment expenditure.

On the contrary, in a wealthy community the gap between income and consumption is very large because the marginal propensity to consume is low. It will, therefore, require large investment expenditure to fill the gap between income and consumption in order to maintain a high level of income and employment.

But in a rich community investment demand is not adequate to fill this gap and there emerges a deficiency of aggregate demand resulting in widespread unemployment. When the aggregate demand falls, the potential wealthy community will be forced to reduce its actual output until it becomes so poor that the excess of output over consumption will be reduced to the actual amount of investment.

Further, in such a community there is an accumulated stock of capital assets which weakens the inducement to invest because every new investment competes with an already existing large supply of old capital assets.

This inadequacy of investment demand reacts in a cumulative manner on the demand for consumption and will, in turn, lead to a further fall in employment, output and income. Thus as Keynes said, "The richer the community, the more obvious and outrageous the defects of the economic system that lead to unemployment on a mass scale in the midst of potential plenty because of the deficiency of effective demand."