Unit VIII: DETERMINATION OF INCOME AND EMPLOYMENT

MACRO ECONOMICS

Key concepts

- Aggregate demand and its components.
- Propensity to consume and propensity to save
- Short run fixed price in product market equilibrium output, investment or output
- multiplier and the multiplier mechanism.
- Meaning of full employment and involuntary unemployment.
- Problems of excess demand and deficient demand.
- Measures to correct excess demand and deficient demand.
- Change in government spending.
- Availability of credit.
- **Autonomous consumption**: The consumption which does not depend upon income. (Or) The amount of consumption expenditure when income is zero. C > 0. Even if income is zero consumption cannot be zero. Consumption will take place from past savings for survival.
- **Autonomous Investments**: It is Investment which is made irrespective of level of income. It is generally run by the government sector. It is income inelastic. The volume of autonomous investment is same at all level of income.

Key points

- Determination of income, output and employment is the core of the subject matter of
- macroeconomics.
- AD and AS together determine the level of income, output and employment.
- Aggregate demand is the total demand of goods and service in the economy.
- **The main components of AD are-**
    1. House hold consumption expenditure.

2. Investment expenditure.
3. Government consumption expenditure
4. Net export.

- **Household consumption expenditure** is the expenditure incurred by the household on the purchase of goods and services to satisfy their wants.
- **Investment expenditure** refers to the expenditure incurred by the private firms and government on the purchase of capital goods such as plant and equipment.
- **Government consumption** expenditure refers to the expenditure incurred by the government on the purchase of goods and services.
- **Net export** refers to the difference between export and import.
- **AD=C+I+G+(x-m).**
- In a two sector economy AD =C+I.
- Aggregate supply is the sum total of consumption expenditure and saving.

  AS=C+S

PROPENSITY TO CONSUME AND PROPENSITY TO SAVE.

- The relationship between consumption and income is called propensity to consume or consumption function.

  1. C=f(Y).
- Consumption function may be represented by an equation.

  C=a+b(Y)

  C=consumption, a =consumption at zero level of income b=MPC (slope of the consumption curve) Y=income.

  The consumption equation shows the level of consumption for various level of income.
- Propensity to consume is of two types

  A) Average propensity to consume (APC)

  B) Marginal propensity to consume (MPC).
- APC= ratio of total consumption to total income.

  APC=C/Y.

- MPC=ΔC/ΔY.
- Propensity to save indicates the tendency of the households to save at a given level of income. It shows the relation between saving and income.
- Propensity to save is also of two types.

  A. Average propensity to save (APC)

  B. Marginal propensity to save.(MPC)
- Average propensity to save is the ratio of saving to income

  APC=S/Y.
- Marginal propensity to save is the ratio of change in saving to change in income

  MPS=ΔS/ΔY.
- There is relationship between APC and APS.

  APC+APS=1

  APC=1-APS.
- There is relationship between MPC and MPS.

  MPC+MPS=1

  1-MPC=MPS.

Meaning of involuntary unemployment and full employment.

- Involuntary unemployment refers to a situation in which people are ready to work at prevailing wage rate, but do not find work.
- Full employment refers to a situation in which no one is unemployed i.e.…there is no involuntary unemployment.
- According to Keynes full employment signifies a level of employment where increase in aggregate demand does not lead to an increase in the level of output and
- employment.

  Increase in demand beyond full employment causes prices to go up.

DETERMINATION OF INCOME AND EMPLOYMENT.

- The determination of income and employment in the Keynesian theory depends on the level of AD and AS.

- Equilibrium level of income and output is determined where,

  1) AD=AS 2) Planned saving =planned investment.
- In a two sector economy Ad=C+I, AS=Y, Y=C+I.
- Suppose that C=40+0.75Y(CONSUMPTION FUNCTION) and I =Rs.60 (investment function)then the equilibrium level of income is obtained as

  Y=C+I

  Y=40+0.75Y=60

  Y-0.75Y=100

  0.25Y=100

  Y=10000/25

  Y=400crores.
- Investment multipliers and its working.
- Investment multiplier explains the relationship between increase in investment and the resultant increase in income.
- Investment multiplier is the ratio of change in income to change in investment.

  Multiplier (k) $=\Delta y/\Delta I$.
- The value of multiplier depends on the value of marginal propensity to consume (MPC).
- There is direct relationship between k and MPC.
- Multiplier also depends on the marginal propensity to save
- There is inverse relationship between multiplier and MPS.

IMPORTANT FORMULAE.

- AD=C+I (two sector economy).
- APC=C/Y.
- APS=S/Y.
- APC+APS=1
- $MPC=\Delta C/\Delta Y$
- $MPS=\Delta S/\Delta Y$
- MPS+MPC=1 AND 1-MPC=MPS

- $K=\Delta Y/\Delta C$ or $K=1/MPS$ or $K=I/I-MPC$
- $C=\bar{c}+b(Y)$
- $S=-a+(1-b)Y$

  c= autonomous consumption

  a= negative saving

  (1-b)=MPS

SHORT RUN FIXED PRICE ANALYSIS

Basic Concept

Assumption

1) Fixed Price :

In the short period price is fixed (constant) and elasticity of supply is infinite i.e., supply curve is perfectly elastic. It means the suppliers are willing to supply whatever amount of goods, consumer will demand at that price.

2) Fixed Interest Rate : Interest rate remains constant.

3) Aggregate supply is perfectly elastic at this price.

Under these circumstances equilibrium output will be determined by aggregate demand at this price in the economy. At a fixed price the value of ex-ante aggregate demand for final goods is the sum of ex-ante consumption expenditure C and ex-ante investment expenditure I on final goods.

$$AD=C+I$$

Consumption function $C=\bar{c}+b(Y)$

$\bar{c}$ = Autonomous consumption

b= marginal propensity to consume due to unit increase in income

In the short period, price and rate of interest remaining constant i.e., ex-ante Investment expenditure is uniform i.e. same amount every year.

Hence, I = I

I = Autonomous Expenditure

we also assume that Aggregate Supply at this cost price is determined by aggregate demand which is known as Effective demand principle. The level of AD required to achieve full employment equilibrium is called effective demand. (or) AD at the point of equilibrium is called Effective demand.

AD = C+I (By substituting the value of consumption function)

$AD = \bar{C} + \bar{I} + bY$

When final good market is in equilibrium, quantity demanded = quantity supplied

AD = AS

$Y = \bar{C} + \bar{I} + by$

$Y = \bar{A} + bY$ ($\bar{A} = \bar{C} + \bar{I}$ showing total autonomous expenditure

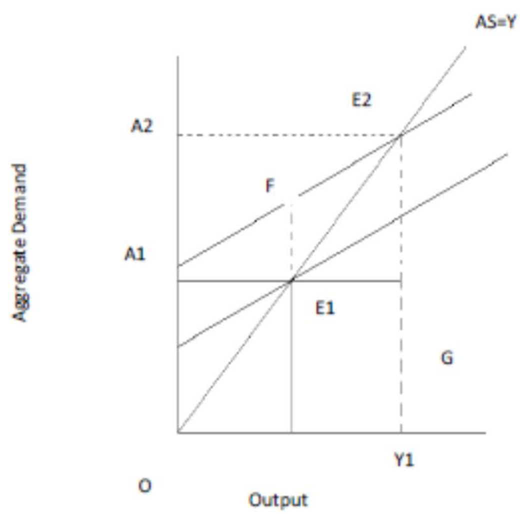
$Y - bY = \bar{A}$

$Y(l - b) = \bar{A}$

$Y = \bar{A} / \overline{l - b}$

Y depends upon A (C (or) I) or MPC.

Effects of an autonomous change on equilibrium in the product market.



The line AD1 and AD2 correspond to the values of A, via A1 and A2 respectively

AS is the 45° line is equal to one

The 45° line represents point at which AD and output are equal.

The AD1 line intersects the 45° line at point E1.

At equilibrium point the equilibrium values of output and aggregate demand are OY1 and AD1.

When autonomous investment increases the AD1 line shifts upwards and assumes the position AD2.

The value of aggregate demand at output OY1 is Y1F which is greater than the value of output OY1 = Y1E1 by an amount E1F

- E1F measures the amount of excess demand that emerges in the economy as a result of the increase in autonomous expenditure: The new AD2 intersects the 45° line at point E2 at the new equilibrium output and AD2 have increased by an amount E2G which is greater than the initial increment in autonomous expenditure E1F.