## Lesson – 26

## Consumption, Saving and Investment

### Summary

Production, consumption and capital formation are three basic economic activities of an economy. This lesson deals with the study of consumption and capital formation in the economy as a whole. It should be noted that 'capital formation' can be referred to as saving or investment depending on the context in which the term is being used. You have already gone through the study of consumption at a micro level in the lessons on utility analysis, indifference curve approach and demand analysis. The theory of consumption at micro level courses on consumption behaviour of the economy as a whole at an aggregate level.

### Consumption Function

The relationship between consumption and the level of income in called consumption function.

Consumption function tells that consumption is a function of income, or in other words, consumption depends on the level of income.

$$C = f(Y)$$

### Propensity to Consume

The proportion of total income that consumers tend to spend on goods and services is known as propensity to consume.

**APC (Average Propensity to Consume)**

APC is defined as the ratio of consumption to income.

$$APC = \frac{C}{Y}$$

### MPC (Marginal propensity to Consume)

MPC is the ratio of change in consumption to change in income between two time periods.

$$MPC = \frac{\Delta C}{\Delta Y}$$

**Psychological law of consumption**

According to this law, as income increases over time, consumption also increases, but at a slower rate as compared to that of income.

So increase in income is divided between increase in consumption and increase in saving. Symbolically, we can write that-

$$\Delta Y = \Delta C + \Delta S$$

### Equation of Consumption Function

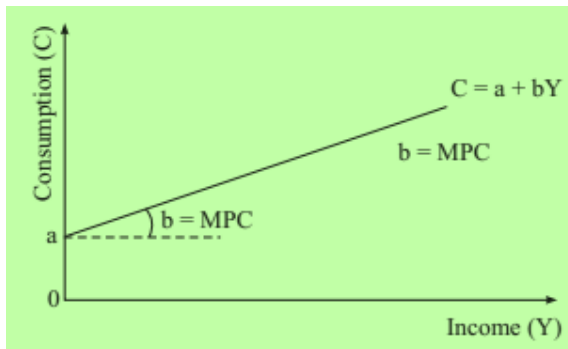According to Keynes equation of

consumption function can be written as -

$$C = a + MPC \times Y$$

Or $\qquad C = a + b \times Y$

Where, C = Consumption

Or, Y = Autonomous Consumption

**Diagram of consumption Function**



**Breakeven point**

Breakeven point is a situation where income becomes equal to consumption of an economy.

$$C = Y$$

**Tabular Presentation**

| Y | C | Remark |
|------|------|-------|
| **0** | 500 | C > Y |
| **500** | 750 | C > Y |
| **1000** | 1000 | C = Y |
| **1500** | 1250 | C < Y |
| **2000** | 1500 | C < Y |

**Determinants of propensity to consume**

- Rate of interest
- Wealth
- Distribution of Income
- Consumer credit

**Saving Function**

Saving function gives the relationship between saving and income in the economy. Saving can be defined as that part of income (or disposable income) which is not consumed. This follows from the psychological law of consumption stated earlier.

$$S = Y - C$$

Or

$$S = -a + (I - b) Y$$

**Propensity to Save**

Saving behaviour of people can be studied by calculating propensity to save in two ways.

**Average propensity to save (APS)**

APS is defined as the ratio of saving and income at any point of time. Symbolically –

$$APS = \frac{S}{Y}$$

**Marginal propensity to save (MPS)**

MPS is defined as the ratio of change in saving and change in income. Over a period of time. MPS is a rate of change in saving vis-a-vis income. Symbolically **–**
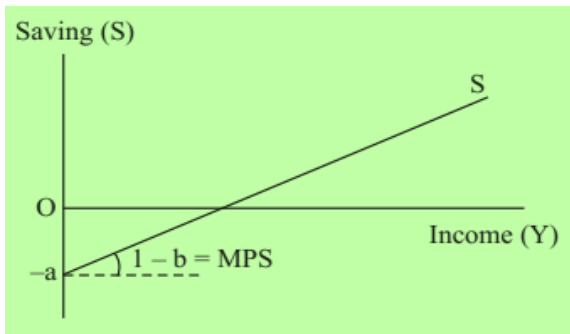
$$MPS = \frac{\Delta S}{\Delta Y}$$

**Relationship between propensity to consume and save**

$$APC + APS = 1$$

$$MPC + MPS = 1$$

## Diagram of Saving Function



## Investment

Investment is defined as addition to the existing capital stock. Capital stock include fixed assets such as land, building, machinery and equipment etc and change in stock.

Investment by firms can be expressed in two ways:

- Gross investment and
- Net investment.

Gross investment is defined as sum of net investment and depreciation.

- Gross investment = net investment + Depreciation
- Gross investment – Net investment = Depreciation

### Nature of investment

In macro economics investment can be categorised as autonomous and induced.
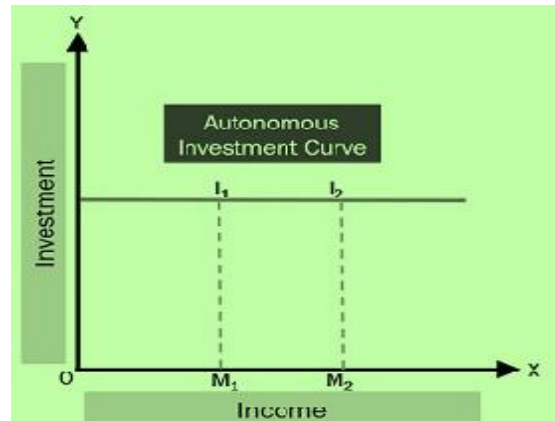
### Autonomous investment

Autonomous investment is that part of investment which is fixed and most needed to carry out production activity. It is independent of the level of income generated in the production process.

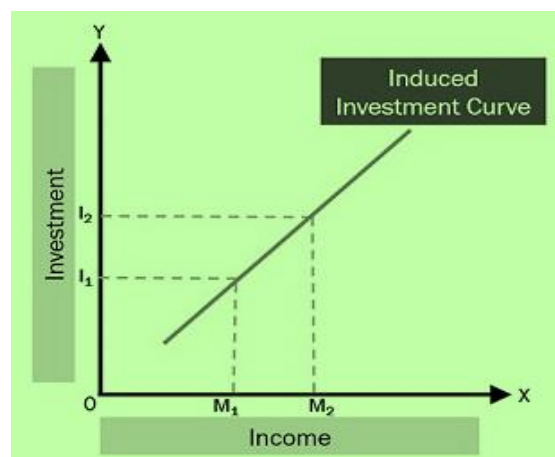Symbolically autonomous investment can be written as

$$I = I_0$$

where I = investment

$I_0$ = Autonomous investment which is constant



### Induced investment

Induced investment is that part of investment by firms which is influenced by the level of income and profit motive. It may so happen that when income of firm increases, the firm gets encouragement to increase its business activity and accordingly invest more in capital stock. Hence it is called induced investment.

## Relationship between propensity to consume and save

APC and APS are related in the following manner

The sum of APC and APC is unity.

I.e. APC + APS = 1

This implies that

$$APC = 1 - APS$$

$$APS = 1 - APC$$

Proof - $APC = \frac{C}{Y}$ And $APS = \frac{S}{Y}$

$$APC + APS$$

$$= \frac{C}{Y} + \frac{S}{Y}$$

$$= \frac{C+S}{Y} = \frac{Y}{Y} = 1 \qquad \text{(Proved)}$$

The sum of MPC and MPS in unity

i.e. MPC + MPS = 1

This means that

MPC = 1 – MPS        MPS = 1– MPC

Proof -

$MPC = \frac{\Delta C}{\Delta Y}$ And $MPS = \frac{\Delta S}{\Delta Y}$

$$MPC + MPS$$

$$= \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}$$

$$= \frac{\Delta C + \Delta S}{\Delta Y} = \frac{\Delta Y}{\Delta Y} = 1 \quad \text{(Proved)}$$

## Evaluate Yourself

Q. In an economy, the population spend Rs 500 crore on absolute necessities needed to sustain themselves. The current income is Rs 2500 crore and MPC is 0.5. What is the level of consumption?

Q. Distinguish between autonomous and induced investment.

Q. Prove that

a. APC =APS = 1

b. MPC + MPS = 1

Q. Briefly explain various determinants of propensity to consume