

Chapter 8: Income Determination and Multiplier

Question 1

Calculate multiplier if MPC is : (i) 0.75 (ii) 0.90

Solution:

$$(i) \text{ Multiplier } (k) = \frac{1}{1-MPC} = \frac{1}{1-0.75} = \frac{1}{0.25} = 4$$

$$(ii) \text{ Multiplier } (k) = \frac{1}{1-MPC} = \frac{1}{1-0.90} = \frac{1}{0.10} = 10$$

Question 2

Calculate the value of multiplier if the MPS is: (a) 0.40 (b) Equal to MPC

Solution:

$$(a) \text{ Multiplier } (k) = \frac{1}{MPS} = \frac{1}{0.40} = 2.5$$

(b) If MPS = MPC, then MPS = 0.5

$$\text{Multiplier } (k) = \frac{1}{MPS} = \frac{1}{0.5} = 2$$

Question 3

In an economy, income generated is four times the increase in investment expenditure. Calculate the values of MPC and MPS

Solution:

Multiplier 4

$$(a) \text{ Multiplier } (k) = 1/1-MPC$$

$$4 = 1/1-MPC$$

$$1-MPC = 1/4$$

$$MPC = 0.75$$

$$MPS = 1 - MPC$$

$$= 1 - 0.75$$

$$MPS = 0.25$$

Question 4

In a two-sector economy, the saving function is given as $S = -10 + 0.2Y$ and investment function is expressed as $I = -3 + 0.1Y$. Calculate the equilibrium level of income?

Solution: Equilibrium level of income (Y) is attained when $S = I$. It means:

$$-10 + 0.2Y = -3 + 0.1Y$$

$$0.2Y - 0.1Y = -3 + 10$$

$$0.1Y = 7$$

$$Y = 70$$

Equilibrium level of income = 70

Question 5

What are the two approaches for determining the equilibrium?

Solution: The two approaches for determining the equilibrium are :

1. AD (or $C+I$) and AS approach: Equilibrium is achieved when planned expenditure of the economy (AD) is equal to the planned availability of goods and services (AS), i.e., when $AD = AS$
2. Saving and Investment Approach: Equilibrium level of income is determined at the level where planned saving is equal to planned investment. I.e., when $S = I$

Question 6

What are the approaches for determining the equilibrium level of income?

Solution: The two approaches to determining the equilibrium level of income are.

- AD (or $C+I$) and AS approach
- Saving and investment approach