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Principles of Economics

Study Questions – Model 1 Again

An economy has consumption function $C = 200 + .8Y$ and investment function $I = 500$. There is no government or foreign trade in this economy, and prices and interest rates are fixed.

- a) Calculate equilibrium values of GDP, consumption, and personal savings.
- b) Calculate the investment multiplier
- c) Rising producer confidence causes I to rise by 20.5. Calculate the new levels of Y , C , and S .

Answers to Study Questions – Model 1 Again

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- Calculate the investment multiplier
- Rising producer confidence causes I to rise by 20.5. Calculate the new levels of Y , C , and S .

Answers:

a)

$$Y = C + I$$

$$Y = 200 + .8Y + 500$$

$$Y = 700 + .8Y$$

$$.2Y = 700$$

$$Y = 3500$$

$$C = 200 + .8(3500) = 3000$$

$$\text{Personal savings} = 3500 - 3000 = 500$$

$$\text{b) investment multiplier} = 1 / (1 - .8) = 1 / .2 = 5$$

$$\text{c) Change in } Y = \text{change in } I \times \text{investment multiplier}$$

$$\text{change in } Y = 20.5 \times 5$$

$$\text{change in } Y = 102.5$$

$$\text{New } Y = \text{old } Y + \text{change in } Y$$

$$\text{New } Y = 3500 + 102.5 = 3602.5$$

$$\text{New } C = 200 + .8(3602.5) = 3082$$

$$\text{New personal savings} = 3602.5 - 3082 = 520.5$$