

## The Magic of the Money Multiplier

Two options for consumers: Spend or Save

Households spend a % of an increase in income and save a % an increase in income.

Together they can spend & save 100% of income. The two percentages added together will equal 1.

**Spending Multiplier:**  $1/(1-MPC)$  or  $1/MPS$  Example: 80% MPC.  $1/(1-MPC)$   $1/(1-.80)=1/.2=5$  or  $1/.20(MPS)=5$

If the government increases spending by \$100b and if the multiplier is 5 then the economic impact is  $\$100b \times 5 = \$500b$

NOTE: The government spending multiplier and the investment (Ig) multiplier are the same calculation

**Tax Multiplier:**  $-MPC/MPS$  The change in income (increase in taxes) is a negative. The spending and investment multiplier are STRONGER than the tax multiplier.

| MPC=<br>(1-mps) | MPS=<br>(1-mpc) | Spending/Investment<br>Multiplier (1/mps) | Tax Multiplier<br>(-mpc/mps) | Calculate: An increase in<br>spending of \$500b will =? | Calculate: An increase in<br>taxes of \$500b will =? |
|-----------------|-----------------|-------------------------------------------|------------------------------|---------------------------------------------------------|------------------------------------------------------|
| .95             | .05             | $1/.05=20$                                | $-.95/.05=-19$               | $\$500b \times 20 = \$10,000b$                          | $\$500b \times -19 = -\$9,500$                       |
|                 | .10             |                                           |                              |                                                         |                                                      |
| .80             |                 |                                           |                              |                                                         |                                                      |
| .75             |                 |                                           |                              |                                                         |                                                      |
|                 | .40             |                                           |                              |                                                         |                                                      |
| .50             |                 |                                           |                              |                                                         |                                                      |

FRQ:

(c) Assume instead that no fiscal policy action is taken. Suppose a change in investment spending causes real GDP to increase by \$200 billion. Calculate the minimum change in investment spending that could have caused this increase in real GDP if the marginal propensity to save is 0.25. Show your work.

Answer : SHOW YOUR WORK

Answer and show your work:

If the marginal propensity to save is 0.25,  
a \$15 billion increase in government spending  
will lead to an increase in national income by  
a maximum of

- (A) \$60 billion
- (B) \$45 billion
- (C) \$15 billion
- (D) \$11.25 billion
- (E) \$3.75 billion

An increase in government spending that is  
financed by an equal increase in taxes results  
in which of the following changes in aggregate  
demand (AD) and short-run aggregate supply  
(SRAS) curves?

AD Curve

- (A) Shifts to the right
- (B) Shifts to the left
- (C) Shifts to the right
- (D) Shifts to the left
- (E) No change

SRAS Curve

- Shifts to the right
- Shifts to the left
- No change
- No change
- No change