

Macroeconomics Discussion Session Exercise #6

1. Explain the paradox of thrift and demonstrate it using a numerical example.

The attempt by an economy as a whole to save more, not only will not increase its savings, but may throw the economy into a recession. This is because when individuals try to save more, they consume less. The decline in consumption will lead to a fall in business sales, which causes producers to cut back production and lay people off, which leads to a fall in income, which causes consumption and savings to both decline. Another way of looking at it is the increase in the marginal propensity to save means a decrease in the marginal propensity to consume, and therefore a fall in the value of the multiplier. Given autonomous spending, the new macroeconomic equilibrium associated with the new value of the multiplier will be lower, meaning lower output, income, and employment. In both of these cases, savings will not have increased. In Keynes, since investment determines savings, the only way savings can change is if investment changes. Savings is not the source of growth, it is the result of growth.

Start with an economy in which $a = \$100$, $b = .8$, and $I = \$300$.

$$Y_e = 1/(1-.8) \times (100 + 300) \\ = 5 \times 400 = \$2000$$

$$C_e = 100 + .8(2000) = \$1700$$

$$S_e = -100 + (.2) 2000 = \$300$$

$$S_e = I = \$300$$

Now suppose the President announces we need to save more so the economy can grow, and people respond by saving a nickel more out of every dollar. So the mps rises from .2 to .25, meaning the mpc falls from .8 to .75. What happens to the economy as a whole?

$$Y_e = 1/(1-.75) \times (100 + 300) \\ = 4 \times 400 = \$1600$$

$$C_e = 100 + .75(1600) = \$1300$$

$$S_e = -100 + (.25) 1600 = \$300$$

$$S_e = I = \$300$$

Consumption falls from \$1700 to \$1300. Output and income fall from \$2000 to \$1600, meaning a recession (or depression). Saving is unchanged at \$300.

This is an example of the paradox of thrift, which is a case of the fallacy of composition: one individual can increase their saving, but that doesn't mean that if all individuals try to increase their saving, aggregate savings will rise. What is true for the individual part is not necessarily true for the whole. What is true for the individual consumer or individual household is not necessarily true for the economy as a whole. This is due to the two-sided nature of spending and saving, the interdependence of economic agents. My spending is your income, your spending is my income. Given income, if you increase your saving, you decrease your spending, so my income goes down, and so I spend and save less.

2. Outline Keynes's critique of the neoclassical theory of saving and investment (fully explain).

(See handout)