

Consumption Demand
Additional Homework Problems
ECON 3133
Dr. Keen

Answers

1.

- a. $C_2 = 220 + 0.9 \times Y_p = 220 + 0.9 \times [0.5 \times (Y_{d,2} + Y_{d,1})] = 3,820.$
- b. $C_3 = 220 + 0.45 \times (5,000 + 4,000) = 4,270.$
 C_4 (and C of all the future years) $= 220 + 0.45 \times (5,000 + 5,000) = 4,720.$
- c. Initially, the \$1,000 rise in disposable income in period 3 (i.e., $Y_{d,3} - Y_{d,2}$) causes consumption in period 3 to rise by \$450 (i.e., $C_3 - C_2$). Thus, the short-run MPC = $\Delta C / \Delta Y_d = 450 / 1,000 = 0.45$. In the long run, the \$1,000 rise in disposable income causes consumption to rise by \$900 (i.e., $C_i - C_2$ for $i = 4, \dots, \infty$). Thus, the long-run MPC = $900 / 1,000 = 0.90$.
- d. People seek to smooth out their consumption expenditures over time. Therefore, they base their consumption expenditure plans on a long-run average of income, or permanent income, rather than on the more variable annual income.

2.

- a.
$$\text{IS: } R = 0.8558 - 0.000133 \times Y.$$

The coefficient multiplied by Y in the old IS equation was -0.000188 . Therefore, the new IS curve is flatter. It is flatter because as interest rates fall, consumption expenditures increase in addition to investment and net exports. Thus, a larger increase in output is required to restore spending balance.

- b. Finding the point of the intersection on the new IS and the old LM curves gives the equation of the new AD curve to be

$$\text{AD: } Y = 2,924.64 + 3,076.02/P.$$

The equation of the old AD curve was

$$\text{AD: } Y = 3,401.59 + 2,598.93/P.$$

3.

- a. The IS curve must be shifted up and to the right so that it intersects the LM curve at Y^* .
- b. For a given tax cut, the extent to which the IS curve shifts out will depend on the extent to which individuals regard the tax cut as temporary. It is difficult, therefore, for the government to know exactly how much to reduce taxes.

4. A lower interest rate will lower savings given a constant level of output. But savings also depend on output. On balance the increase in output leads savings to rise despite the interest rate effect.

5.
 - a. The MPC does not depend on the magnitude of the income change.
 - b. The longer the planning horizon, the smaller the MPC, since the income change must be spread over more periods.
 - c. The greater the rate of interest, the greater the MPC given that consumption is to be equal in all periods. The intuition is that a given amount of savings now will generate more consumption in the future with a higher interest rate.

6. Consumption demand would fall, but not by nearly as much as if individuals thought that the tax increase was permanent. Individuals would choose to borrow more or save less between 2014 and 2016 and repay the debt (or save more) after taxes started falling again.