Tutorial 2: Consumption and Goods Market

ECON 3123: Macroeconomic Theory I

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Example 1: Automatic Stabilizers

Chapter 3, Question 5 (a)(b) and Question 6 (b) in Blanchard, Olivier (2021), *Macroeconomics*, 8th ed., Pearson.
Consider the following behavioral equations:

$$\begin{aligned} C &= c_0 + c_1 Y_D \\ T &= t_0 + t_1 Y \\ Y_D &= Y - T \end{aligned}$$

where G and I are constants. Assume that $t_1 \in (0, 1)$.

1. Solve for the equilibrium output.
2. What is the multiplier? Does the economy respond more to changes in autonomous spending when $t_1 = 0$ or $t_1 > 0$? Explain.
3. Solve for taxes in equilibrium.

Example 2: Chain RGDP

Consider an economy characterized by the following behavioral equations:

$$C = c_0 + c_1 Y_D$$
$$Y_D = Y - T$$
$$T = t_1 Y + t_2 C$$

where $t_1, t_2 \in (0, 1)$. G and I are given. This is case when both income and consumption are taxed. The economy is now at its equilibrium.

1. Solve for the equilibrium output.
2. What is the multiplier? Does this form of tax stabilizes output changes when there is a change in c_0, comparing with exogenous tax? Discuss cases where it does and it does not based on the equilibrium in part (1).
3. Suppose that c_0 increases by 1 unit. In the new equilibrium, will consumption also increase by 1 unit? Discuss cases where it will and it will not based on the equilibrium in part (1).
4. Write equilibrium saving as a function of Y.
5. What is the MPS? Show that when c_0 increases by 1 unit, if $t_1 + t_2 = 1$, the new equilibrium saving will decrease by 1 unit.