HW 10: Due on Nov. 14th before class.

1. (Textbook, 7th e, chapter 10, question 4)

Consider the impact of an increase in thriftiness in the Keynesian cross. Suppose the consumption function is

\[ C = \bar{C} + c(Y - T) \]

where \( \bar{C} \) is a parameter called autonomous consumption and \( c \) is the marginal propensity to consume.

a. What happens to equilibrium income when the society becomes more thrifty, as represented by a decline in \( \bar{C} \)?

b. What happens to equilibrium saving?

c. Why do you suppose this result is called the paradox of thrift?

d. Does this paradox arise in the classical model of chapter 3? Why or why not?

2. (Textbook, 7th e, chapter 11, question 2)

Use the IS-LM model to predict the effects of each of the following shocks on income, the interest rate, consumption, and investment. In each case, explain what the Fed should do to keep income at its initial level.

a. After the invention of a new high-speed computer chip, many firms decide to upgrade their computer systems.

b. A wave of credit-card fraud increases the frequency with which people make transactions in case.

c. A best-seller titled Retire Rich convinces the public to increase the percentage of their income devoted saving.

3. (Textbook, 7th e, chapter 11, question 3)

Consider the economy of Hicksonia.
a. The consumption function is given by \( C = 200 + 0.75(Y - T) \). The investment function is \( I = 200 - 25r \). Government purchases and taxes are both 100. For this economy, graph the IS curve for \( r \) ranging from 0 to 8.

b. The money demand function in Hicksonia is \( (M/P)^d = Y - 100r \). The money supply \( M \) is 1,000 and the price level is 2. For this economy, graph the LM curve for ranging from 0 to 8.

c. Find the equilibrium interest rate \( r \) and the equilibrium level of income \( Y \).

d. Suppose that government purchases are raised from 100 to 150. How much does the IS curve shift? What are the new equilibrium interest rate and level of income?

e. Suppose instead that the money supply is raised from 1,000 to 1,200. How much does the LM curve shift? What are the new equilibrium interest rate and level of income?

f. With the initial values for monetary and fiscal policy, suppose that the price level rises from 2 to 4. What happens? What are the new equilibrium interest rate and level of income?

4. (Textbook, 7th ed, chapter 11, question 4)

Explain why each of the following statements is true. Discuss the impact of monetary and fiscal policy in each of these special cases.

a. If investment does not depend on the interest rate, the IS curve is vertical.

b. If money demand does not depend on the interest rate, the LM curve is vertical.

c. If money demand does not depend on income, the LM curve is horizontal.

d. If money demand is extremely sensitive to the interest rate, the LM curve is horizontal.