

Due Date: Monday, October 31, 2011

1) Consider an economy described by the following equations:

$$Y = C + I + G$$

$$Y = 5000$$

$$G = 1000$$

$$T = 1000$$

$$C = 250 + 0.75(Y - T)$$

$$I = 1000 - 50r$$

$$NX = 500 - 500\varepsilon$$

$$r = r^* = 5$$

- a. In this economy, solve for national saving, investment, the trade balance, and the equilibrium exchange rate.
- b. Suppose now that G rises to 1250. Solve for national saving, investment, the trade balance, and the equilibrium exchange rate.
- c. Now suppose the world interest rate rises from 5 to 10 percent (G is again 1000). Solve for national saving, investment, the trade balance, and the equilibrium exchange rate.

- 2) The country of Leverett is a small open economy. Suddenly, a change in world fashions makes the exports of Leverett unpopular.
- a. What happens in Leverett to saving, investment, net exports, the interest rate, and the exchange rate?
 - b. The citizens of Leverett like to travel abroad. How will this change in the exchange rate affect them?

- 3) Suppose that some foreign countries begin to subsidize investment by instituting an investment tax credit.
- a. What happens to world investment demand as a function of the world interest rate?
 - b. What happens to the world interest rate, and how would this change affect investment, the trade balance and the real exchange rate of some small open economy?
- 4) In his State of the Union address, President Bush proposed increasing government spending for the war on terrorism and additional decreases in taxes.
- a. Explain what the long-run impact of this program would be on real GDP, public saving, private saving, and national saving.
 - b. Treating the United States as a small open economy with an initial trade deficit, graphically illustrate and state the long-run impact of these tax cuts and increases in government spending on national savings, investment, and the real interest rate.
 - c. On the appropriate graph, illustrate and state the effects of this program on the United States real exchange rate and net exports if the U.S. were a small open economy.
- 5) Suppose the price of a Big Mac hamburger is \$3.06 in the United States and 10.5 yuan in China. Furthermore, suppose the nominal foreign exchange rate is 8.06 yuan per dollar.
- a. Calculate the real exchange rate (make sure to label your answer – what is the unit of measurement?)
 - b. If the nominal prices of Big Macs remain unchanged in both countries, what would purchasing-power parity theory predict would happen to the real exchange rate? Explain. What about the nominal exchange rate? Explain.