14.02 Principles of Macroeconomics

Problem Set #6, Questions

Posted: Wednesday, November 26, 2003

Due Date: Wednesday, December 1, 2003

Please remember to write your TA's name and recitation time on the front page of your problem set.

Part I: True/False Questions: Decide whether each statement is true or false and justify your answer with a short argument.

1. The nominal interest rate (i) is equal real interest rate plus actual inflation rate.
2. If nominal inertest rate is equal to 5% and expected inflation rate is 6%, then real interest rate is negative.
3. While the nominal interest rate has declined considerably since the early 1980s, the real interest rate was actually higher in 2001 than it was then.
4. A productivity shock shifts price setting graph up and AS right-down, therefore, the NAIRU decreases while the natural GDP increases.
5. All countries should choose flexible exchange rate regions.
6. The aggregate demand curve is flatter in the open economy than in the closed economy.
7. In the medium run, a fixed nominal exchange rate region means a flexible real exchange rate.
8. Assume an open economy with a fixed exchange rate is in the short-run equilibrium. Then, the medium-run equilibrium will be reached at a lower real exchange rate.
9. Assume an open economy with a fixed exchange rate is in the short-run equilibrium. Then, the medium-run equilibrium can be reached by a one-time devaluation. In such a case, the real exchange rate will be at a lower level than the initial.
10. Assume an open economy with a fixed exchange rate is in the short-run equilibrium. The faster higher the difference between the domestic and foreign inflation rate is, the faster the convergence toward the medium-run equilibrium will be.

Part I. National Accounts

Consider an open economy as the one discussed in class (with the same notations).

1. Indicate what should be the sign of each question mark (?) in the following equation:

$Y = C(Y\text{-}T) + I(Y,\ i^* - \pi^e) + G + NX(Y,\ Y^*,\ EP^*/P)$

? ? ? ? ? ?

Provide the economic reasoning behind your answer.

2. Focus now on the effect of only three of the above variables: real exchange rate, government spending, and taxes. Rewrite the above equation as follows:

$Y = Y(EP^*/P,\ G,\ T)$

? ? ?

Indicate what should be the sign of each question mark (?) in the equation above and provide explanation.

3. Draw the AD curve for the open economy. Compare it with the AD curve of the closed economy.