14.02 Problem Set 6
Due April 30

You will legibly write both your full name and section on your completed assignment.

Multiple Choice

1. A country's output is initially below its long run output level. The following policies help the economy to reach faster the long run output level:

a) An increase in taxes combined with a decrease in money supply.
b) An increase in government expenditures along with an increase in the money supply.
c) A change in regulation to increase the minimum wage.
d) A change in regulation to decrease the minimum wage.

2. Consider a country X which is an open economy with flexible exchange rate regime, increases in the output of the principal trade partner of country X lead to:

a) A deterioration of the trade balance and a decrease in country X income.
b) An improvement of the trade balance and an increase in country X income.
c) More likely to lead to a depreciation of the exchange rate than to an appreciation.
d) More likely to lead to an appreciation of the exchange rate than to a depreciation.

3. Under nominal fixed exchange rate regime:

a) Expected depreciation is always zero.
b) The central bank can effectively use monetary policy to increase economic activity.
c) Domestic inflation is the same as foreign inflation.
d) The real exchange rate is constant.

4. The neutrality of money implies that a one time increase in the money supply:

a) Under flexible exchange rate regime, it does not have short run effects on the trade balance.
b) Does not change the long run level of output.
c) Increases the short run level of output.
d) Does not change the long run inflation rate.

Problems

1. This question is based on a dynamic version of the AS-AD model. Consider an economy in which the (dynamic) aggregate supply is represented by:

$$\pi_t = \pi_{t-1} + \lambda(Y_t - Y_{LR})$$

And the (dynamic) aggregate demand is described by:

$$Y_t = Y_{t-1} + \varphi(m_t - \pi_t)$$

Where π represents the inflation rate, m is the growth rate of money supply, and Y_{LR} is the long run output. Assume that the economy is initially at the long run output level with $Y_{LR}=10$, $\lambda=0.4$, $\varphi=0.5$, $\pi = m = 4\%$.

a) Calculate the inflation rate and the output in the first 3 periods after an increase in the growth rate of money supply from 4% to 8%. (Hint: for the calculations use inflation rates and money growth rates in decimal notation, not in %, i.e. use 0.08 instead of 8%).

b) Based on your answer to part a), calculate the growth rate of output for the three periods. What can you say about the impact of the increase in the growth rate of money supply on output?

c) What does this tell you about the long run effects of increasing the growth rate of money supply?

2. Assume Landlockia is a small open economy with flexible exchange rate. Every household in this country consumes only baskets of tradeable goods. The international price of 1 basket is P* in terms of foreign currency. Denote Landlockia exchange rate as E (number of landpesos that you get for one unit of foreign currency). A representative household in Landlockia has an income of W landpesos. (Give some intuition for your answers).

a) Construct an indicator of the well being of a representative household (do not consider the dislike of labor).

b) The principal trade partner of Landlockia decreases its interest rate. What are the effects on Landlockia's exchange rate? What are the effects on the well being of representative households?

c) Now assume that Landlockia's Central Bank decides to change its exchange rate regime from flexible to fixed exchange rate. After the implementation of the fixed exchange rate, what kind of change in E will find support in the country and why?

d) What can you conclude from your answers? Specifically comment on the differences, if any, on the short term and long term effects of the policies described.