

Econ 3334 – Intermediate Macroeconomics

Problem Set #3

Due April 10th

All problems are from Mankiw's *Macroeconomics* (6th Ed.) unless otherwise noted.

1. (Chap 12, problem 1) Use the open economy IS/LM model to predict what would happen to aggregate income (Y), the exchange rate (e), and the trade balance (NX) under both floating and fixed exchange rates in response to each of the following shocks:
 - a. A fall in consumer confidence about the future induces consumers to spend less and save more. (The MPC falls)
 - b. The introduction of a stylish line of Toyotas makes some consumers prefer foreign cars over domestic cars (NX demand falls)
 - c. The introduction of ATMs reduces the demand for money (L falls)
2. (Chap 12, problem 3) The open economy IS/LM model takes the world interest rate (r) as given. Consider what happens when this world rate changes.
 - a. What might cause world interest rates to rise?
 - b. In the open economy IS/LM model with a floating exchange rate, what happens to aggregate income (Y), the exchange rate (e), and the trade balance (NX) when the world interest rate rises?
 - c. Answer part b again, except now with a fixed exchange rate.
3. (Chap 12, problem 4) Business executives and policymakers are often concerned about the “competitiveness” of American industry (the ability of U.S. industries to sell their goods profitably in world markets).
 - a. How would a change in the exchange rate affect competitiveness?
 - b. Suppose you wanted to make domestic industry more competitive but did not want to alter aggregate income (Y). According to the open economy IS/LM model, what combination of monetary and fiscal policies should you pursue?
4. (Based on Chap 11, problem 3 – with my own extensions) The economy is described by a closed economy IS/LM model.
 - a. Consumption is $C = 200 + 0.75(Y - T)$ and investment is $I = 200 - 25r$. $G = T = 0$. Solve for the IS curve (i.e. an equation for Y in terms of r).
 - b. Money demand is given by $L = Y - 100r$, the money supply is 1000 and the price level is P . Solve for the LM curve (i.e. an equation for Y in terms of r and P).
 - c. Find the equilibrium interest rate of r and the equilibrium level of income (i.e. solve for where the IS and LM curves cross)

- d. The LRAS curve is $Y^* = 975$. What is the price level at which output is exactly equal to this?
- e. Now the money supply increases to 1200. What is the new equilibrium level of income (i.e. solve the IS/LM problem again with $M = 1200$)?
- f. If prices remain at exactly the level you found in d), what is the new level of income? Does the increase in money supply cause an expansion or contraction in income?
- g. What would prices have to be so that income is exactly equal to $Y^* = 975$ again?