Week 10 Homework: Expenditure Multiplier

ECO 120: Global Macroeconomics

Expenditure Multiplier Problems

1. Suppose the marginal propensity to save is 0.05 and the marginal propensity to import is 0.20. Suppose an increase in consumer confidence leads to a $380 billion increase in consumer spending. What is the change in real GDP?
2. Suppose U.S. consumers become more cautious, and as a precautionary measure, increase their saving and decrease their demand for final goods and services by $750bn. Suppose the marginal propensity to consume is 0.80 and the marginal propensity to import is 0.20. Compute the immediate change in real GDP in the United States.
3. Suppose an increase in income in Europe causes an increase in demand for U.S. exports to Europe by $500bn, leading workers and business owners in the United States to experience an increase in income. Suppose empirical evidence revealed that when consumers received a $600 stimulus check, they increased their expenditures by $480 and imports by $80. Compute the immediate change in real GDP from the increase in exports.

4. Suppose the marginal propensity to consume is 80% and the marginal propensity to import is 10%. The economy is in a recession. Real GDP is $21 trillion, and at full employment real GDP would be $22 trillion. Congress and the president decide to increase government spending in an effort to push real GDP to potential GDP. How much should government spending be increased by?

5. What happens to the expenditure multiplier if MPS increases? Does a lower or higher MPS give the government greater power to influence GDP? Does a lower or higher MPS create a less volatile economy (i.e. smaller fluctuations in real GDP)?

Federal Pell Grant Program

6. Describe the short-run economic impact to the cities where Pell Grant recipients go to school. Be specific on the magnitude of the multiplier effect and describe intuitively what that means.
7. Suppose there is an expansion of the program which is not funded with an increase in taxes and no matching decrease in other government expenditures. Describe the impact on the government budget deficit, and describe and illustrate the impact on the equilibrium level of investment and interest rate.
8. Suppose over time, after Pell Grant recipients graduate college that they go on to earn higher salaries, and therefore pay more in taxes, save more, and consume more. Describe and illustrate the impact on the equilibrium level of investment and interest rate.
9. Describe and illustrate the impact that the program can have on labor productivity and real GDP per capita.