EC 201: Principles of Macroeconomics

In class exercise: AD-AS Model

Fall 2021

Q1. There were two major shocks to the U.S. economy in 2007, leading to the severe recession of 2007–2009. One shock was related to oil prices; the other was the slump in the housing market. This question analyzes the effect of these two shocks on GDP using the AD–AS framework we just learned.

1. Draw typical aggregate demand and short-run aggregate supply curves. Label the horizontal axis "Real GDP" and the vertical axis "Aggregate price level." Label the equilibrium point E_1, the equilibrium quantity Y_1, and equilibrium price P_1.

2. Data taken from the Department of Energy indicate that the average price of crude oil in the world increased from \$54.63 per barrel on January 5, 2007, to \$92.93 on December 28, 2007. Would an increase in oil prices cause a demand shock or a supply shock? Redraw the diagram from part a to illustrate the effect of this shock by shifting the appropriate curve.

3. The Housing Price Index, published by the Office of Federal Housing Enterprise Oversight, calculates that U.S. home prices fell by an average of 3.0% in the 12 months between January 2007 and January 2008. Would the fall in home prices cause a supply shock or demand shock? Redraw the diagram from part 2 to illustrate the effect of this shock by shifting the appropriate curve. Label the new equilibrium point E_3, the equilibrium quantity Y_3, and equilibrium price P_3.

4. Compare the equilibrium points E_1 and E_3 in your diagram for part 3. What was the effect of the two shocks on the aggregate price level (increase, decrease, or indeterminate)? Are you able to tell how much each of these shocks affected real GDP?

Q2. Using AD, SRAS, and LRAS curves, consider the process by which the following economic events will move the economy from one long-run macroeconomic equilibrium to another. What are the short-run and long-run effects on the aggregate price level and aggregate output of the following?

1. There is a decrease in households' wealth due to a decline in the stock market.

2. There is an increase in government spending.

Q3. True or false: An increase in health care insurance premiums would likely cause a decrease in short-run aggregate supply and shift the short-run aggregate supply curve to the left. Assume that employers pay the premiums for workers.

Q4. What kind of policies should government follow in the following situations?

- Economy is facing a recessionary gap.

- Economy is facing an inflationary gap.

Q5. Assume that economy is at the long run equilibrium. Imagine you are a renowned economist. One day someone asks you which economic shock you would prefer the most and the least. What would you say and why? Can you explain your answers using graphs?