

Responding to Economic Fluctuations

Additional Homework Problems

ECON 3133

Dr. Keen

1. Suppose the economy is initially described by the following equations.

$$\begin{aligned}Y &= C + I + G + (X - IM) \\C &= 220 + 0.63 \times Y \\I &= 1,000 - 2,000 \times R \\(X - IM) &= 525 - 0.1 \times Y - 500 \times R \\M^S &= (0.1583 \times Y - 1,000 \times R) \times P \\ \pi &= 1.2 \times [(Y_{-1} - 6,000) / 6,000]\end{aligned}$$

The money supply is equal to \$900 billion, government spending is \$1,200 billion, and output is at its potential level of \$6,000 billion with a price level of 1. Then there is a money demand shock. The new money demand equation is given by

$$M^S = (0.1583 \times Y - 2,000 \times R) \times P$$

- In the year of the shock, compute the value of GDP, the price level, interest rates, and the real money supply.
 - Using aggregate demand curves, illustrate the economy's path in the year of the shock and in subsequent years.
 - Calculate the new long run equilibrium values for income, prices, interest rates, and the real money supply.
2. Suppose that the economy is initially in equilibrium and that there is a permanent increase in money demand. The following year the money supply increases so that prices, income, and interest rates return to their old equilibrium levels.
- Illustrate the shock and the Fed's reaction to it with an aggregate demand graph. Use arrows on the graph to sketch the economy's transition from the short-run to the long-run.
 - What happens to prices, income, and interest rates in the year of the shock, the year immediately following the shock, and all subsequent years?
 - Whose views of countercyclical stabilization policy does this example illustrate?
3. Explain the following statement: The reason that price shocks pose a dilemma for policymakers is that they cannot directly control the price level. Contrast this situation to the case of aggregate demand shocks.