Inflation

Chapter 9.1, 9.6-9.7

Outline

- Price Adjustment
- Combining Aggregate Demand and Price Adjustment
- How Fiscal Policy Affects the Shares of Output in the Long Run
- Money and Inflation in the Long Run

9.1 PRICE ADJUSTMENT

- Firms adjust their prices in response to conditions in their markets.
- If demand in the previous period is greater than potential output, then the price level *P* in this period is raised
- Firms also adjust their prices in response to expected inflation.

PRICE ADJUSTMENT

- The relation between inflation, the change in the price level, and its determinants is called the **Phillips curve**

$$\pi = \pi^{e} + f\,\frac{Y_{-1} - Y^{*}}{Y^{*}} \qquad (9.1)$$

If f is large, inflation responds quickly and the economy moves back to equilibrium rapidly

PRICE ADJUSTMENT

- The Phillips curve with the expectation term has an important property: If real GDP is above potential GDP on a permanent basis, then the rate of inflation never stops increasing.
- As actual inflation rises, expected inflation also begins to rise. Then, actual inflation must be even higher, because GDP can exceed potential only if actual inflation exceeds expected inflation. This property of the price adjustment equation is called the **natural rate property.**

What Determines Expected Inflation?

- The simplest idea is that expected inflation depends on past inflation. Equation 9.1 would then become

$$\pi = \pi_{-1} + f\,\frac{Y_{-1} - Y^{*}}{Y^{*}} \qquad (9.2)$$

COMBINING AGGREGATE DEMAND AND PRICE ADJUSTMENT

- Dynamic response of the economy to a change in economic conditions
- Short run (up to one year); output changes with fixed prices
- Long run; output returns to potential GDP; prices adjust

9.6 HOW FISCAL POLICY AFFECTS THE SHARES OF OUTPUT IN THE LONG RUN

- Long-run effects of fiscal policy on the *components*, or *shares*, of GDP.
  - The Income Identity:
  - $Y = C + I + X + G$
  - Divide both sides of the equation by Y:
  - $1 = C/Y + I/Y + X/Y + G/Y$

Interest-Rate Sensitivity of Consumption, Investment, and Net Exports

- What brings about a change in consumption, investment, and net exports in the long-run when the share of government purchases increases?
  - An increase in interest rates reduces investment, net exports, and consumption.
  - Investment and net exports are more sensitive than consumption to interest rates.
  - These changes in interest rates, which accompany changes in fiscal policy, are what bring about the changes in the non-government components of output.

How Does the Model Work in Practice?

- Compare GDP shares in the 1990s with those in the 1960s and 1980s
- Share of government purchases in GDP fell during the 1990s
- Large rise in the investment share
- Increase in consumption and investment shares greater than decrease in government purchases share, therefore, the net exports share fell.

9.7 Money and Prices in the Long Run

- Neutrality of money in the long run
  - The price level is proportional to the monetary stock
  - The money supply has no influence on output or the interest rate

Equilibrium in the Money Market

- Assume that the economy is on the long-run growth path; GDP is at potential Y^* and the interest rate is at the value R^*. Money demand is:
  - $M = (kY^* - hR^*)P$
  - When the Fed raises the money supply M by 10%, the price level rises by the same 10%