Objectives

After studying this chapter, you will be able to

- Distinguish between inflation and a one-time rise in the price level
- Explain how demand-pull inflation is generated
- Explain how cost-push inflation is generated
- Describe the effects of inflation
- Explain the short-run and long-run relationships between inflation and unemployment
- Explain the short-run and long-run relationships between inflation and interest rates
From Rome to Rio de Janeiro

Inflation is a very old problem and some countries even in recent times have experienced rates as high as 40% per month.

The United States has low inflation now, but during the 1970s the price level doubled.

Why does inflation occur, how do our expectations of inflation influence the economy, is there a tradeoff between inflation and unemployment, and how does inflation affect the interest rate?
Inflation and the Price Level

**Inflation** is a process in which the price level is rising and money is losing value.

Inflation is a rise in the price level, not in the price of a particular commodity.

And inflation is an ongoing process, not a one-time jump in the price level.
Figure 12.1 illustrates the distinction between inflation and a one-time rise in the price level.
Inflation and the Price Level

The inflation rate is the percentage change in the price level.

That is, where $P_1$ is the current price level and $P_0$ is last year’s price level, the inflation rate is

$$\left[\frac{(P_1 - P_0)}{P_0}\right] \times 100$$

Inflation can result from either an increase in aggregate demand or a decrease in aggregate supply and be

- Demand-pull inflation
- Cost-push inflation
Demand-Pull Inflation

**Demand-pull inflation** is an inflation that results from an initial increase in aggregate demand.

Demand-pull inflation may begin with any factor that increases aggregate demand.

Two factors controlled by the government are increases in the quantity of money and increases in government purchases.

A third possibility is an increase in exports.
Demand-Pull Inflation

Initial Effect of an Increase in Aggregate Demand

Figure 12.2(a) illustrates the start of a demand-pull inflation. Starting from full employment, an increase in aggregate demand shifts the $AD$ curve rightward.
Real GDP increases, the price level rises, and an inflationary gap arises. The rising price level is the first step in the demand-pull inflation.
Demand-Pull Inflation

Money Wage Rate Response

Figure 12.2(b) illustrates the money wage response. The higher level of output means that real GDP exceeds potential GDP—an inflationary gap.
Demand-Pull Inflation

The money wages rises and the SAS curve shifts leftward.

Real GDP decreases back to potential GDP but the price level rises further.
Demand-Pull Inflation

A Demand-Pull Inflation Process

Figure 12.3 illustrates a demand-pull inflation spiral.

Aggregate demand keeps increases and the process just described repeats indefinitely.
Demand-Pull Inflation

Although any of several factors can increase aggregate demand to start a demand-pull inflation, only an ongoing increase in the quantity of money can sustain it.

Demand-pull inflation occurred in the United States during the late 1960s and early 1970s.
Cost-Push Inflation

Cost-push inflation is an inflation that results from an initial increase in costs.

There are two main sources of increased costs:

- An increase in the money wage rate
- An increase in the money price of raw materials, such as oil.
Cost-Push Inflation

Initial Effect of a Decrease in Aggregate Supply

Figure 12.4 illustrates the start of cost-push inflation. A rise in the price of oil decreases short-run aggregate supply and shifts the SAS curve leftward.
Cost-Push Inflation

Real GDP decreases and the price level rises—a combination called stagflation.

The rising price level is the start of the cost-push inflation.
Cost-Push Inflation

Aggregate Demand Response

The initial increase in costs creates a one-time rise in the price level, not inflation.

To create inflation, aggregate demand must increase.
Cost-Push Inflation

Figure 12.5 illustrates an aggregate demand response to stagflation, which might arise because the Fed stimulates demand to counter the higher unemployment rate and lower level of real GDP.
Cost-Push Inflation

The increase in aggregate demand shifts the $AD$ curve rightward. Real GDP increases and the price level rises again.
A Cost-Push Inflation Process

Figure 12.6 illustrates a cost-push inflation spiral.
Cost-Push Inflation

If the oil producers raise the price of oil to try to keep its relative price higher, and the Fed responds with an increase in aggregate demand, a process of cost-push inflation continues.