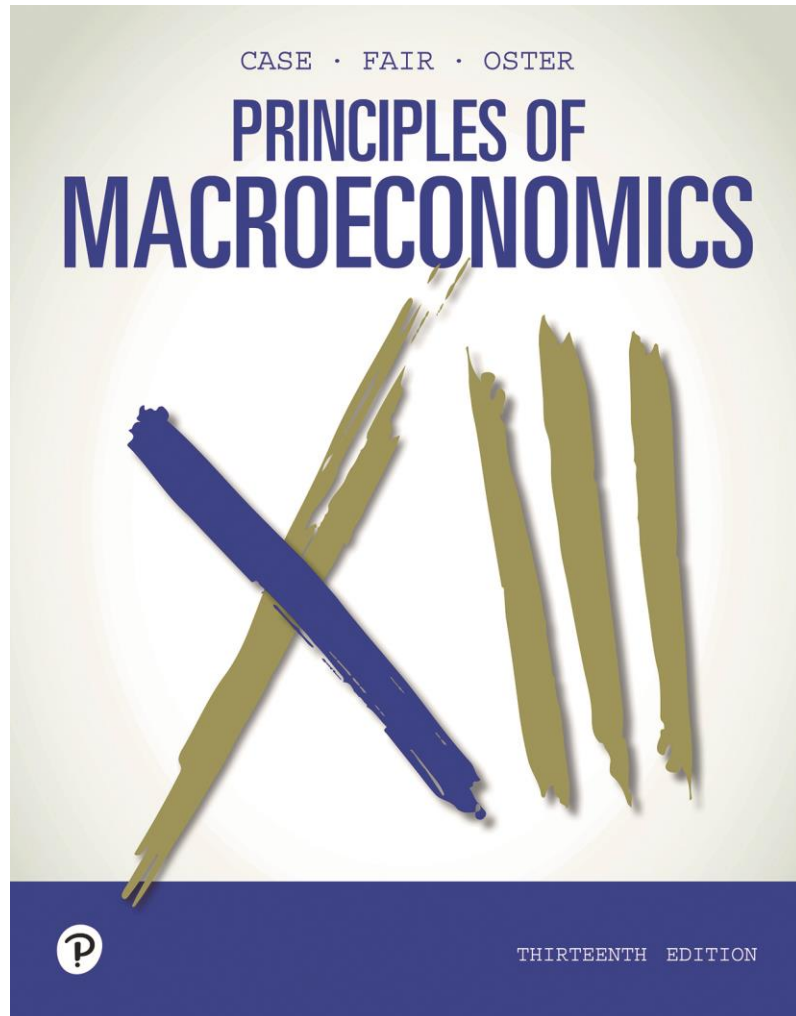


Principles of Macroeconomics

Thirteenth Edition



Chapter 13

The Labor Market in the
Macroeconomy

Chapter Outline and Learning Objectives (1 of 2)

13.1 The Labor Market: Basic Concepts

- Define fundamental concepts of the labor market.

13.2 The Classical View of the Labor Market

- Explain the classical view of the labor market.

13.3 Explaining the Existence of Unemployment

- Discuss four reasons for the existence of unemployment.

13.4 Explaining the Existence of Cyclical Unemployment

- Discuss four reasons for the existence of cyclical unemployment.

Chapter Outline and Learning Objectives (2 of 2)

13.5 The Short-Run Relationship between the Unemployment Rate and Inflation

- Analyze the short-run relationship between unemployment and inflation.

13.6 The Long-Run Aggregate Supply Curve, Potential Output, and the Natural Rate of Unemployment

- Discuss the long-run relationship between unemployment and output.

Chapter 13 The Labor Market in the Macroeconomy

We have learned that the labor market is key to understanding how and when government policy can be useful.

In this chapter, we begin with a review of the classical view of the labor market and then discuss why unemployment may exist.

The Labor Market: Basic Concepts

(1 of 3)

- The labor force (LF) is the number of employed plus unemployed people:

$$LF = E + U$$

- **unemployment rate** The number of people unemployed as a percentage of the labor force.

$$\text{unemployment rate} = U / LF$$

- When a person stops looking for work, he or she is considered out of the labor force and is no longer counted as unemployed.

The Labor Market: Basic Concepts (2 of 3)

- **frictional unemployment** The portion of unemployment that is due to the normal working of the labor market; used to denote short-run job/skill matching problems.
- **structural unemployment** The portion of unemployment that is due to changes in the structure of the economy that result in a significant loss of jobs in certain industries.
- **cyclical unemployment** The increase in unemployment that occurs during recessions and depressions.

The Labor Market: Basic Concepts (3 of 3)

- A decline in the demand for labor does not necessarily mean that unemployment will rise.
- The resulting excess supply of labor will cause the wage rate to fall, until a new equilibrium is reached, and everyone who wants a job at the lower wage rate will have one.

The Classical View of the Labor Market

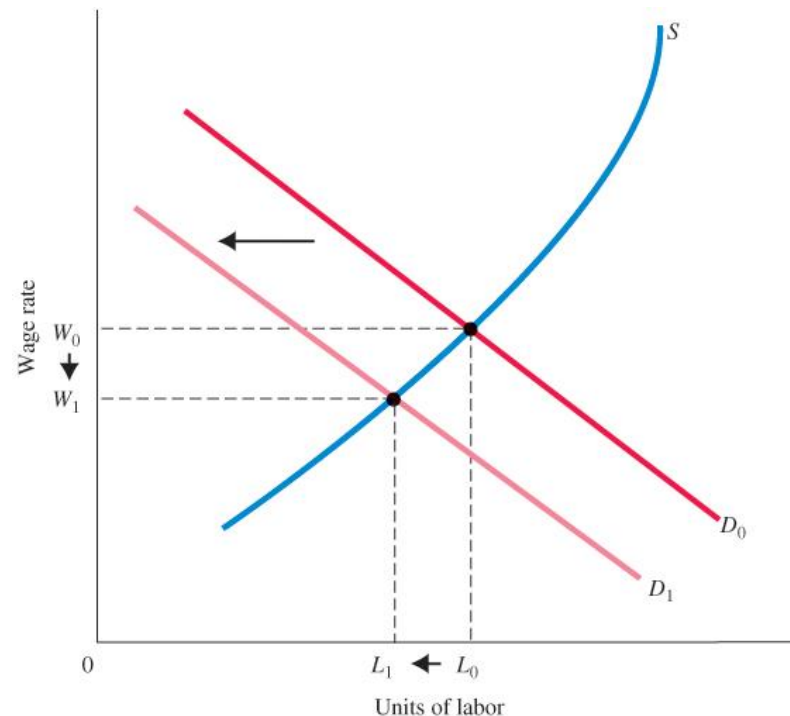
- Classical economists assumed that the wage rate adjusts to equate the quantity demanded with the quantity supplied, so unemployment does not exist.
- **labor demand curve** A graph that illustrates the amount of labor that firms want to employ at each given wage rate.
- **labor supply curve** A graph that illustrates the amount of labor that households want to supply at each given wage rate.
- At equilibrium, people who are not working have chosen not to work at that market wage, so there is always full employment.

The Classical Labor Market and the Aggregate Supply Curve

- The classical idea that wages adjust to clear the labor market is consistent with the view that wages respond quickly to price changes.
- In the absence of sticky wages, the *AS* curve will be vertical.
- In this case, monetary and fiscal policy will have no effect on real output.
- In this view, there is no unemployment problem to be solved!

Figure 13.1 The Classical Labor Market

- Classical economists believe that the labor market always clears.
- If the demand for labor shifts from D_0 to D_1 , the equilibrium wage will fall from W_0 to W_1 .
- Anyone who wants a job at W_1 will have one.



The Unemployment Rate and the Classical View

- Some economists argue that the unemployment rate is not a good measure of whether the labor market is working well.
- The economy is dynamic, and at any given time some industries are expanding and some are contracting.
- A positive unemployment rate does not necessarily indicate that the labor market is working poorly.
- Economists who view unemployment this way do not see it as a major problem.

Explaining the Existence of Unemployment

- There are three common arguments for the existence of frictional or structural unemployment:
 1. Efficiency wage theory
 2. Imperfect information
 3. Minimum wage laws

Efficiency Wage Theory

- **efficiency wage theory** An explanation for unemployment that holds that the productivity of workers increases with the wage rate. If this is so, firms may have an incentive to pay wages above the market-clearing rate.
- Potential benefits that firms receive from paying workers more than the market-clearing wage include lower turnover, improved morale, and reduced “shirking” of work.
- The efficiency wage theory predicts some unemployment, but it is unlikely to account for cyclical fluctuations in unemployment over time.

Imperfect Information

- Firms may not have enough information at their disposal to know what the market-clearing wage is.
- In this case, firms are said to have imperfect information.
- If firms have imperfect or incomplete information, they may simply set wages that do not clear the labor market.

Minimum Wage Laws

- **minimum wage laws** Laws that set a floor for wage rates—that is, a minimum hourly rate for any kind of labor.
- In 2018, the federal minimum wage was \$7.25 per hour. If some teenagers can produce only \$6.90 worth of output per hour, no firm will be willing to hire them.

Explaining the Existence of Cyclical Unemployment

Sticky Wages

- **sticky wages** The downward rigidity of wages as an explanation for the existence of unemployment.

Economics In Practice (1 of 2)

Evidence on Sticky Wages

- The Census Bureau in its Survey of Income and Program Participation followed 39,095 hourly workers during a low unemployment and high growth period 1996-2000.
- The probability of a within-job wage change was between 16 and 21 percent per quarter, meaning that wages remained unchanged for about a year.



CRITICAL THINKING

1. Why do you think wages are sticky even during high growth periods?

Sticky Wages (1 of 2)

Social, or Implicit, Contracts

- **social, or implicit, contracts** Unspoken agreements between workers and firms that firms will not cut wages.
- **relative-wage explanation of unemployment** An explanation for sticky wages (and therefore unemployment): If workers are concerned about their wages relative to other workers in other firms and industries, they may be unwilling to accept a wage cut unless they know that all other workers are receiving similar cuts.

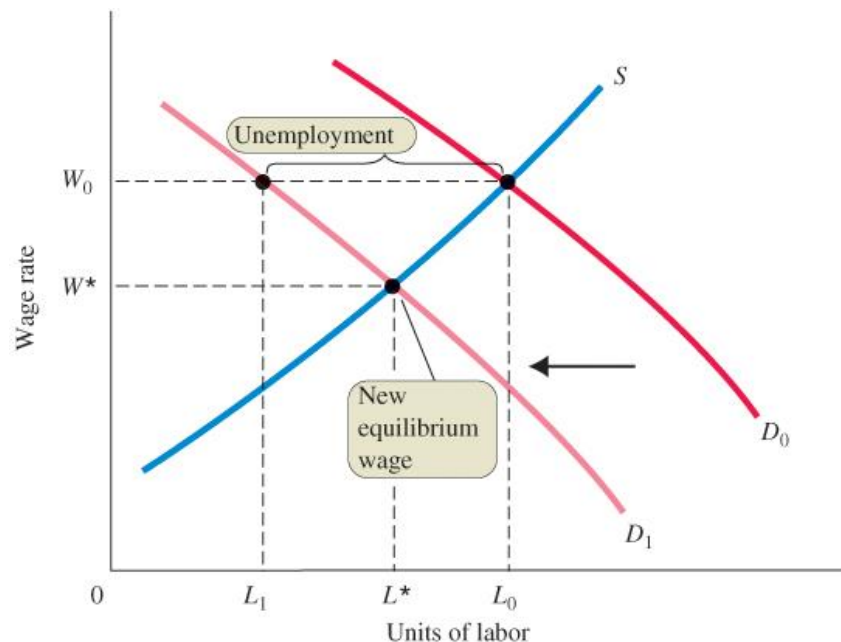
Sticky Wages (2 of 2)

Explicit Contracts

- **explicit contracts** Employment contracts that stipulate workers' wages, usually for a period of 1 to 3 years.
- **cost-of-living adjustments (COLAs)** Contract provisions that tie wages to changes in the cost of living. The greater the inflation rate, the more wages are raised.

Figure 13.2 Sticky Wages

If wages “stick” at W_0 instead of falling to the new equilibrium wage of W^* following a shift of demand from D_0 to D_1 , the result will be unemployment equal to $L_0 - L_1$.



Economics In Practice (2 of 2)

The Longer You are Unemployed, the Harder It Is to Get a Job

Some researchers conducted an experiment to find out what long-term unemployment does to one's eventual job prospects.

They sent out fictitious job resumes to real job postings. Fictitious job applicants were randomly assigned unemployment durations of 1 to 36 months.

The result? Call backs decreased dramatically as a response to unemployment duration.

CRITICAL THINKING

1. What does this result tell us about how easy it is for firms to see worker quality?



An Open Question

- The aggregate labor market is very complicated, and there are no simple answers to why there is unemployment.
- Which argument or arguments will win out in the end is an open question.

The Short-Run Relationship between the Unemployment Rate and Inflation

- The unemployment rate (U) and aggregate output (Y) are negatively related: When Y rises, U falls, and when Y falls, U rises.
- The relationship between aggregate output and the overall price level is positive: When P increases, Y increases, and when P decreases, Y decreases.
- **inflation rate** The percentage change in the price level.
- **Phillips Curve** A curve showing the relationship between the inflation rate and the unemployment rate.

Figure 13.3 The Aggregate Supply Curve

- The AS curve shows a positive relationship between the price level (P) and aggregate output (income) (Y).

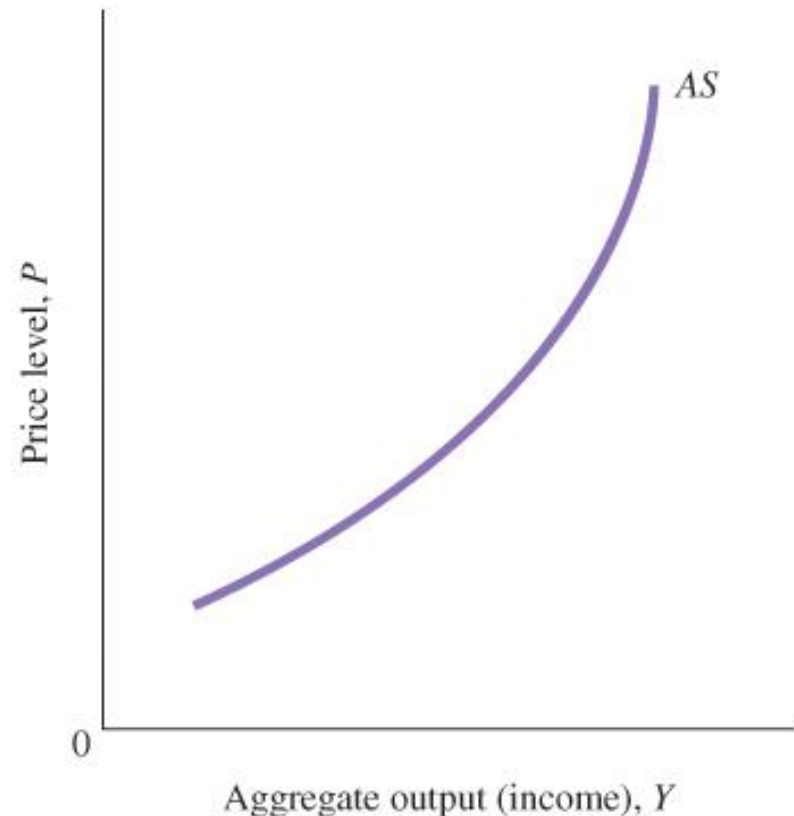
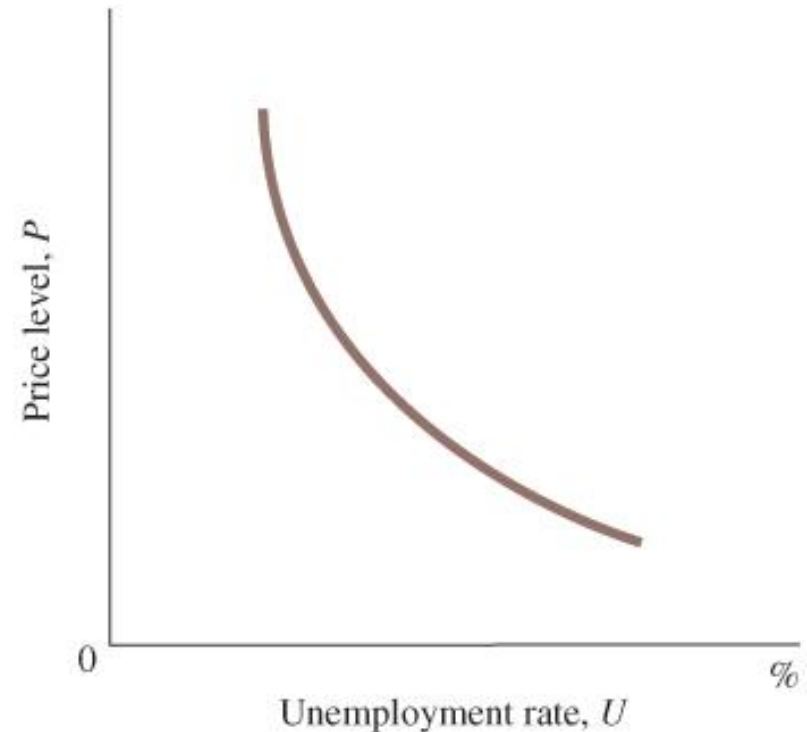


Figure 13.4 The Relationship between the Price Level and the Unemployment Rate

- This curve shows a negative relationship between the price level (P) and the unemployment rate (U).
- As the unemployment rate declines in response to the economy's moving closer and closer to capacity output, the price level rises more and more.



The Phillips Curve: A Historical Perspective

Figure 13.5 The Phillips Curve

- The Phillips Curve shows the relationship between the inflation rate and the unemployment rate.

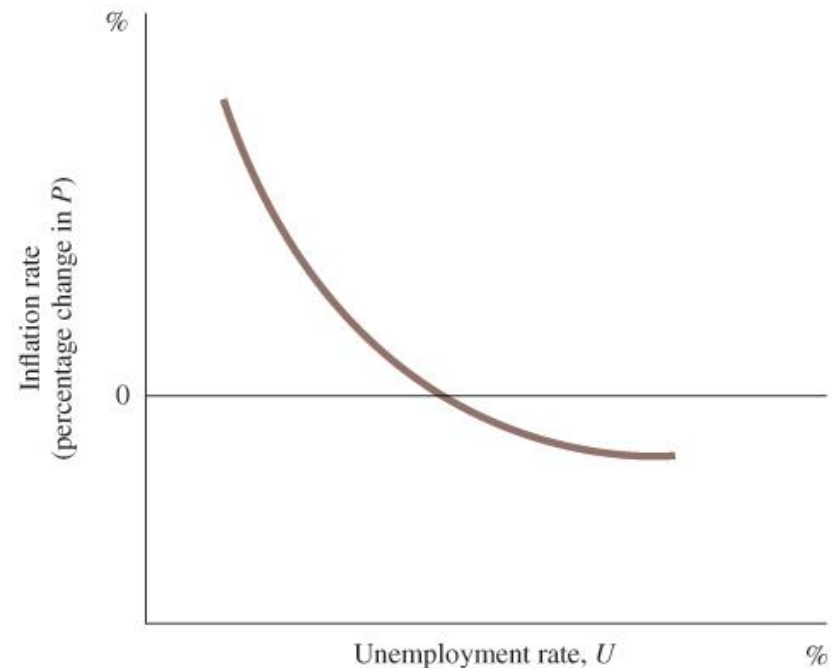


Figure 13.6 Unemployment and Inflation, 1960–1969

- During the 1960s, there seemed to be an obvious trade-off between inflation and unemployment.
- Policy debates during the period revolved around this apparent trade-off.

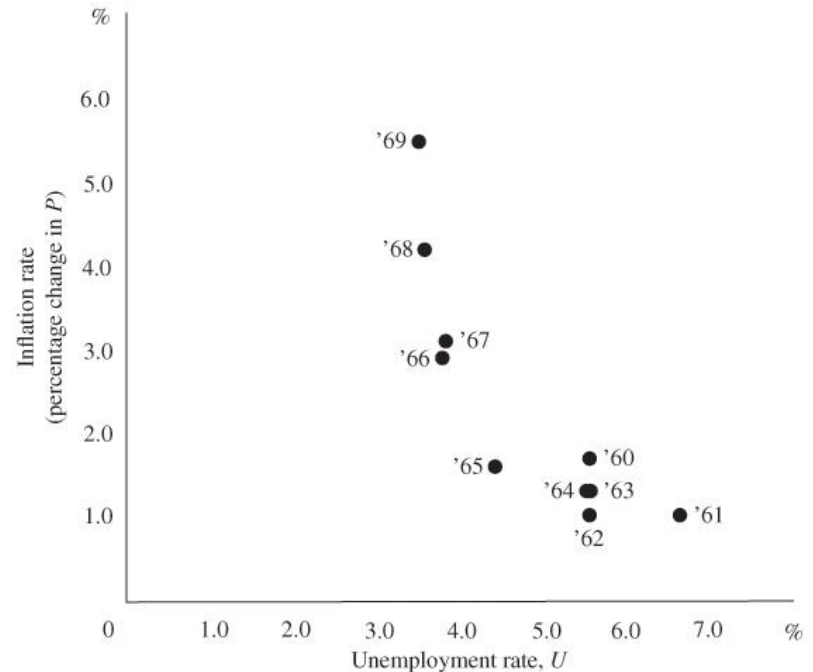
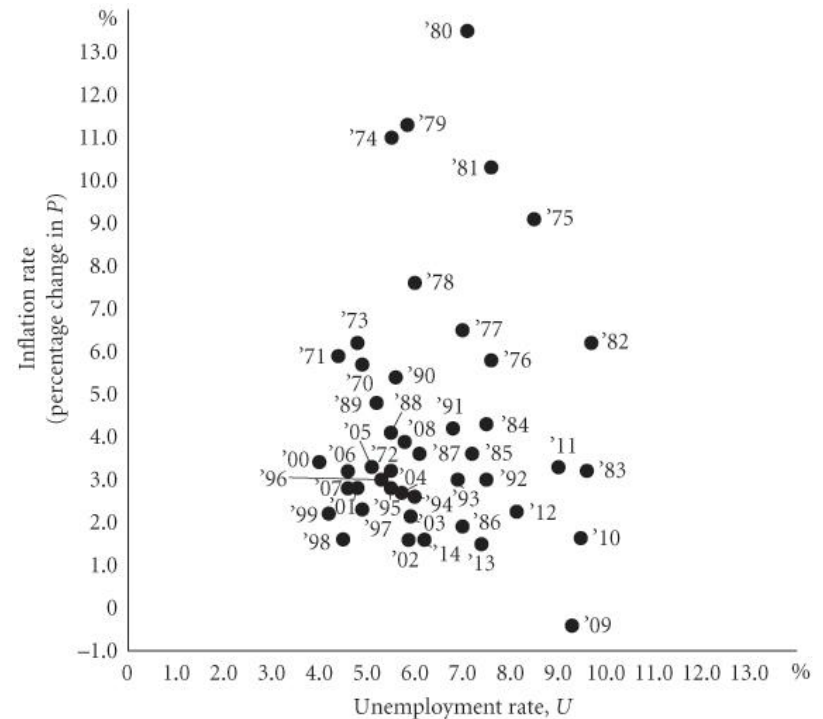


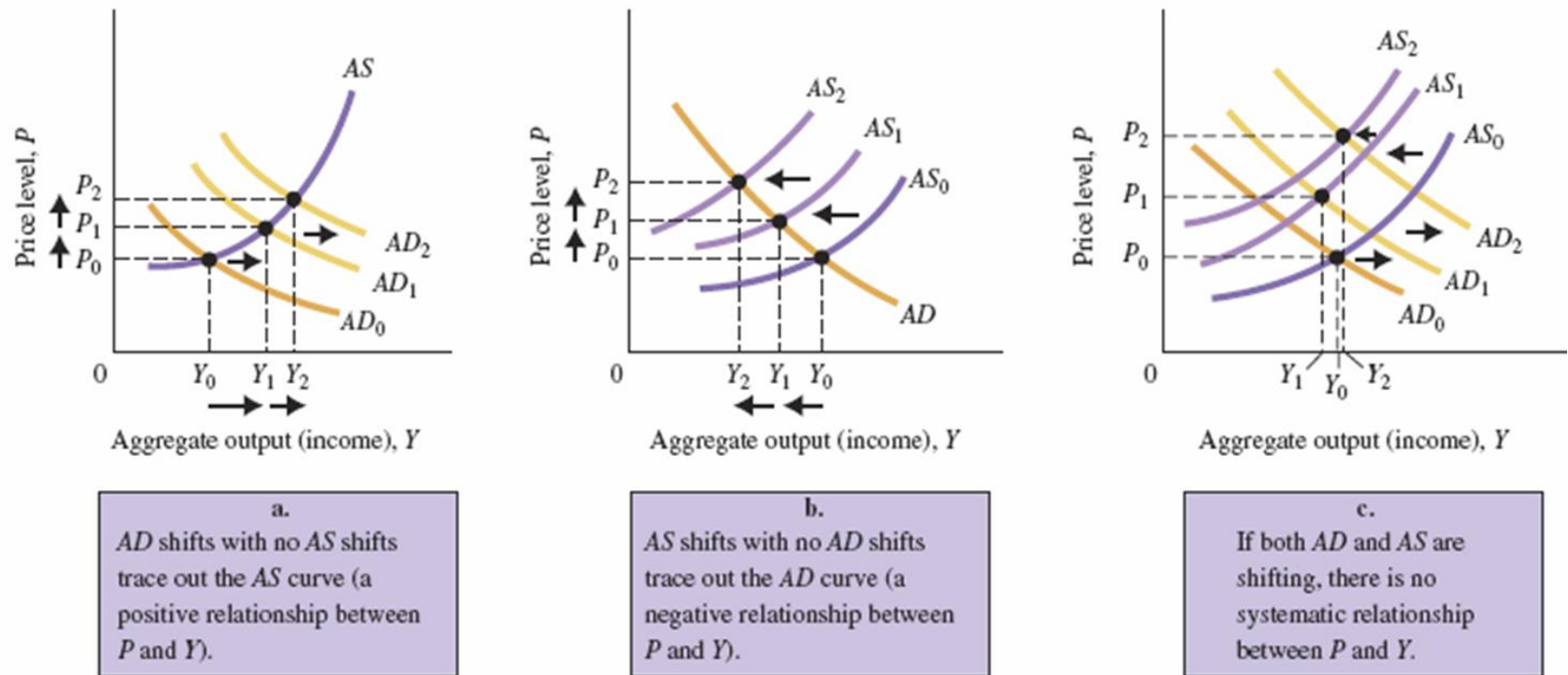
Figure 13.7 Unemployment and Inflation, 1970–2017

- From the 1970s, it became clear that the relationship between unemployment and inflation was anything but simple.



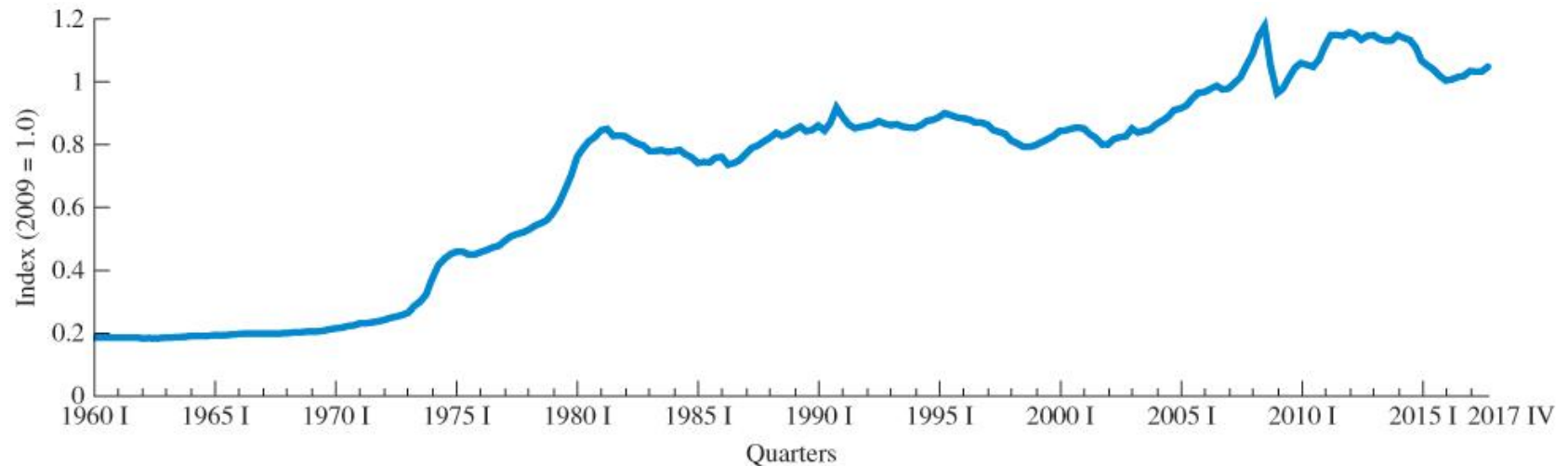
Aggregate Supply and Aggregate Demand Analysis and the Phillips Curve

Figure 13.8 Changes in the Price Level and Aggregate Output Depend on Shifts in Both Aggregate Demand and Aggregate Supply



The Role of Import Prices Figure 28.9

The Price of Imports, 1960 I–2017 VI



- The price of imports changed very little in the 1960s and early 1970s.
- It increased substantially in 1974 and again in 1979–1980.
- Between 1981 and 2002, the price of imports changed very little.
- It generally rose between 2003 and 2008, fell somewhat in late 2008 and early 2009, rose slightly in 2011, and then remained flat.

Expectations and the Phillips Curve

- The Phillips Curve will shift to the right if inflationary expectations increase, leading to an increase in inflation while the unemployment rate may not have changed.
- The Phillips Curve will shift to the left if inflationary expectations decrease, leading to less inflation at any given level of the unemployment rate.

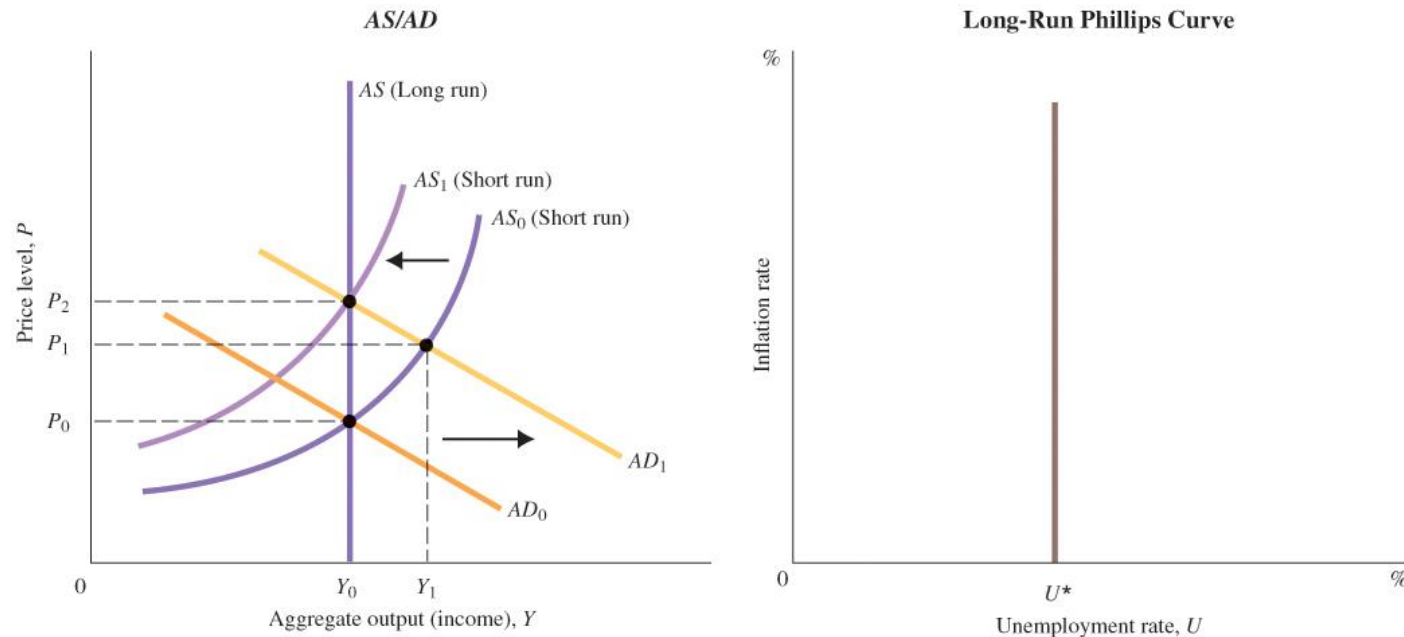
Inflation and Aggregate Demand

- Inflation is affected by more than just aggregate demand.
- Where inflation depends on both the unemployment rate and cost variables, there will be no stable Phillips Curve unless the cost variables are not changing.
- Therefore, the unemployment rate can have an important effect on inflation even though this will not be evident from a plot of the Phillips Curve.

The Long-Run Aggregate Supply Curve, Potential Output, and the Natural Rate of Unemployment

- Economists who believe that the *AS* curve is vertical in the long run at potential output also believe that the Phillips Curve is vertical in the long run.
- **natural rate of unemployment** The unemployment that occurs as a normal part of the functioning of the economy. Sometimes taken as the sum of frictional unemployment and structural unemployment.

Figure 13.10 The Long-Run Phillips Curve: The Natural Rate of Unemployment

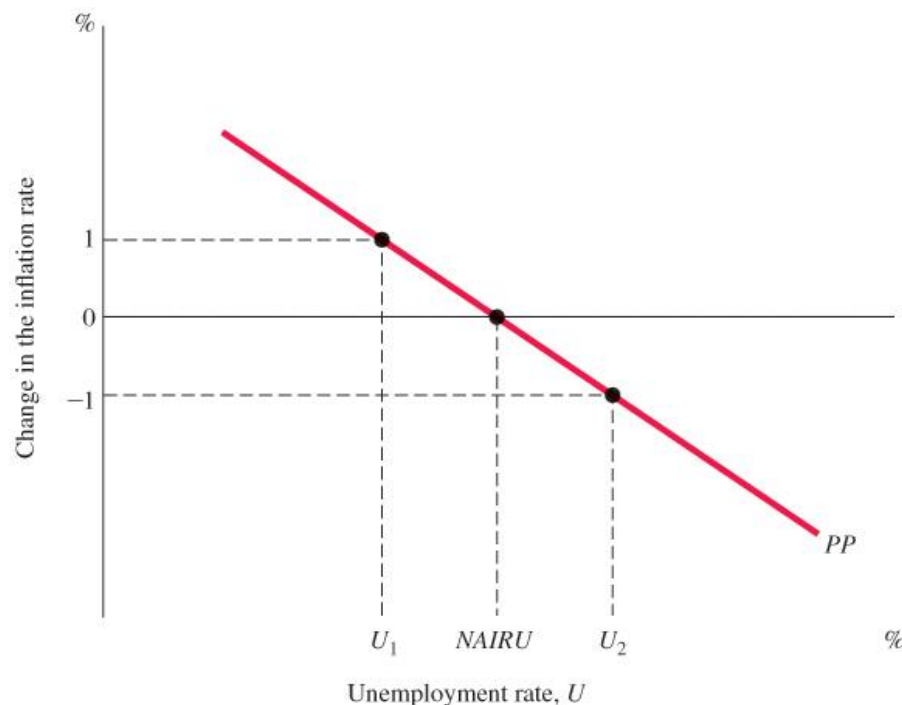


- If the AS curve is vertical in the long run, so is the Phillips Curve.
- In the long run, the Phillips Curve corresponds to the natural rate of unemployment—that is, the unemployment rate that is consistent with the notion of a fixed long-run output at potential output.
- U^* is the natural rate of unemployment.

The Nonaccelerating Inflation Rate of Unemployment (NAIRU)

- In the long run, with a long-run vertical Phillips Curve, the actual unemployment rate moves to U^* because of the natural workings of the economy.
- **NAIRU** The nonaccelerating inflation rate of unemployment.
- If the actual unemployment rate is below (above) the NAIRU, the change in the inflation rate will be positive (negative).

Figure 13.11 The NAIRU Diagram



- At an unemployment rate below the NAIRU, the price level is accelerating (positive changes in the inflation rate); at an unemployment rate above the NAIRU, the price level is decelerating (negative changes in the inflation rate).
- Only when the unemployment rate is equal to the NAIRU is the price level changing at a constant rate (no change in the inflation rate).

Review Terms and Concepts

- cost-of-living adjustments (COLAs)
- cyclical unemployment
- efficiency wage theory
- explicit contracts
- frictional unemployment
- inflation rate
- labor demand curve
- labor supply curve
- minimum wage laws
- NAIRU
- natural rate of unemployment
- Phillips Curve
- relative-wage explanation of unemployment
- social, *or* implicit, contracts
- sticky wages
- structural unemployment
- unemployment rate

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