Unit 9
Labor Market in the Macroeconomy

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Learning Objectives

- Define fundamental concepts of the labor market.
- Explain the classical view of the labor market.
- Discuss four reasons for the existence of unemployment.
- Discuss the reasons for the existence of cyclical unemployment.
- Analyze the short-run relationship between unemployment and inflation.
- Discuss the long-run relationship between unemployment and output.

Contents

The Labor Market: Basic Concepts

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

$$LF = E + U$$

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

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

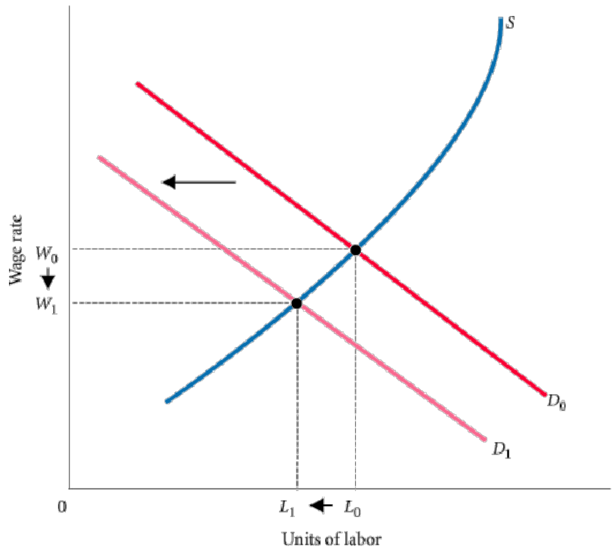
Types of Unemployment

- **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 Classical View of the Labor Market

- **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.

The Classical View of the 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.

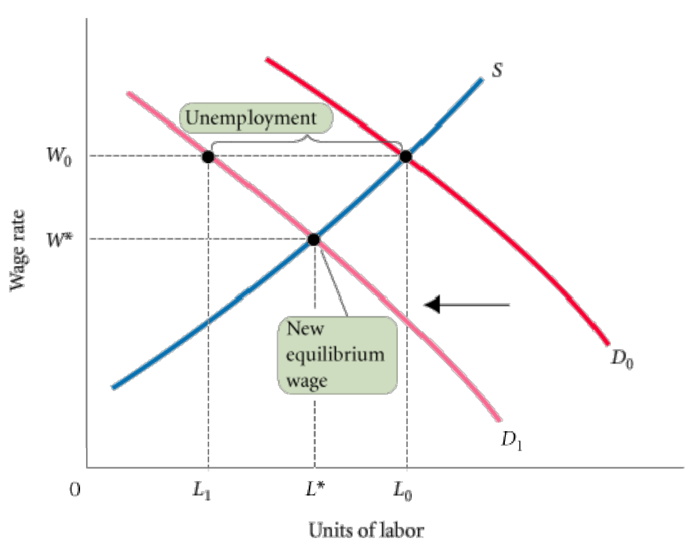
The Classical View of the Labor Market

- 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.
- Indeed, in this view, there is no unemployment problem to be solved!

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 as measured by the government does not necessarily indicate that the labor market is working poorly. The measured unemployment rate may sometimes *seem* high even though the labor market is working well.
- Economists who view unemployment this way do not see it as a major problem. There are other views of unemployment, as we will now see.

Explaining the Existence of Unemployment



- 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 $L_0 - L_1$.
- **sticky wages** The downward rigidity of wages as an explanation for the existence of unemployment.

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.

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.

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.
- Among some potential benefits that firms receive from paying workers more than the market-clearing wage are:
  - Lower turnover.
  - Improved morale.
  - Reduced "shirking" of work.
- Even though the efficiency wage theory predicts some unemployment, the behavior it is describing is unlikely to account for much of the observed large 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 wrong—wages that do not clear the labor market.

Minimum Wage Laws

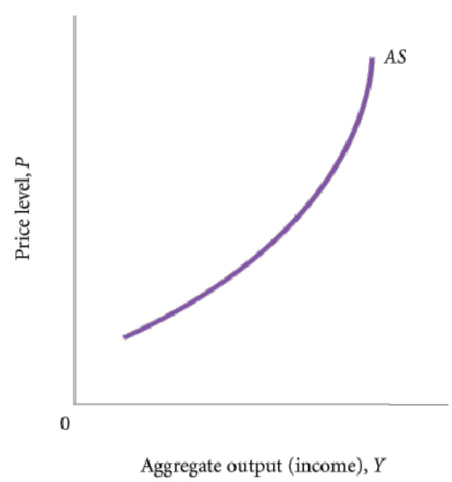
- **minimum wage laws** Laws that set a floor for wage rates—that is, a minimum hourly rate for any kind of labor.

- 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.

Short-Run Relationship between the Unemployment Rate and Inflation

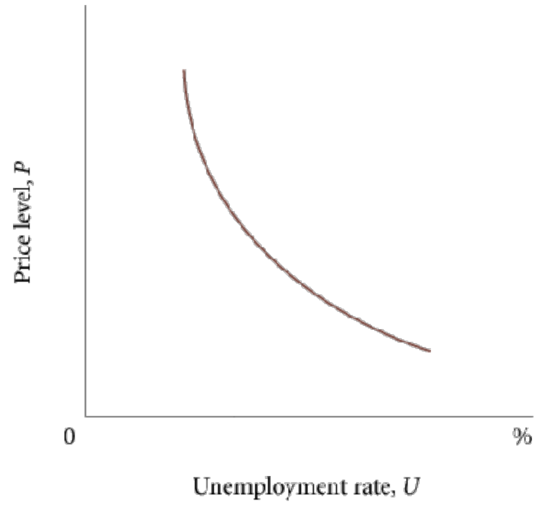
- The unemployment rate (*U*) and aggregate output (income) (*Y*) are *negatively* related: when *Y* rises, the unemployment rate falls, and when *Y* falls, the unemployment rate rises.

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

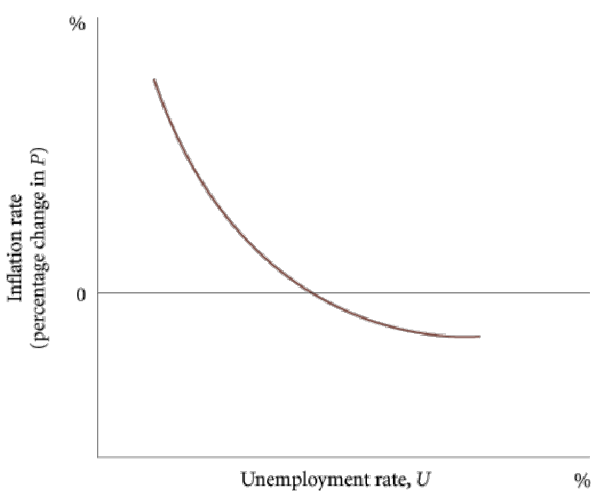


Short-Run Relationship between the Unemployment Rate and Inflation

- 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.

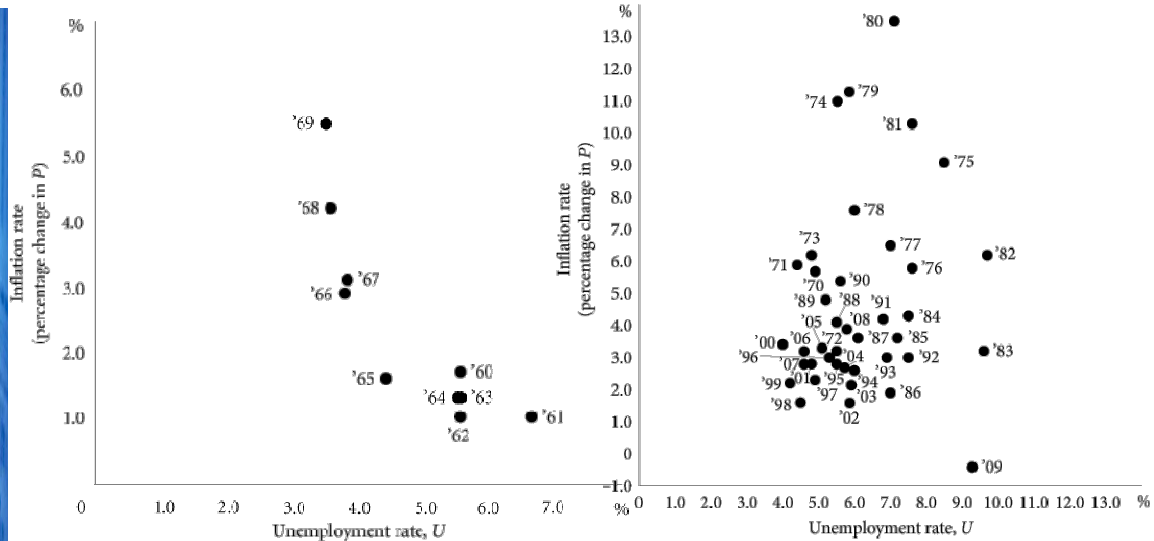


Short-Run Relationship between the Unemployment Rate and Inflation

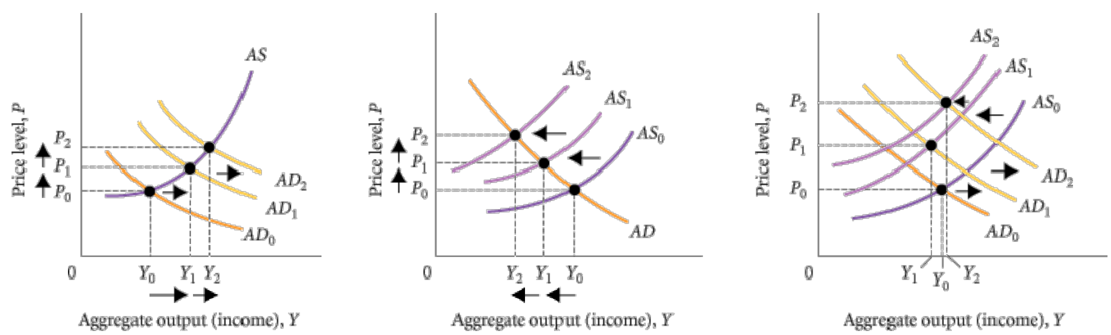


- The Phillips Curve shows the relationship between the inflation rate and the unemployment rate.
- **inflation rate** The percentage change in the price level.

The Phillips Curve: A Historical Perspective



AS – AD Analysis and the Phillips Curve



a. *AD* shifts with no *AS* shifts trace out the *AS* curve (a positive relationship between *P* and *Y*).

b. *AS* shifts with no *AD* shifts trace out the *AD* curve (a negative relationship between *P* and *Y*).

c. If both *AD* and *AS* are shifting, there is no systematic relationship between *P* and *Y*.

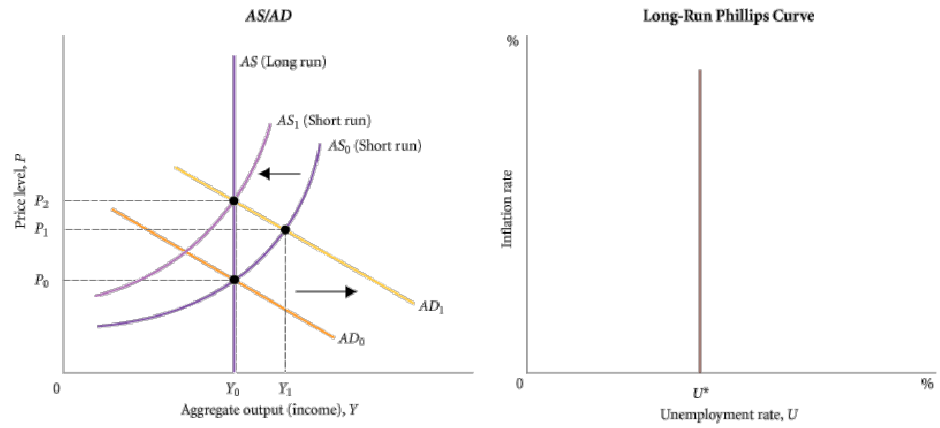
Short-Run Relationship between the Unemployment Rate and Inflation

- Expectations and the Phillips Curve
  - If inflationary expectations increase, the result will be an increase in the rate of inflation even though the unemployment rate may not have changed. In this case, the Phillips Curve will shift to the right.
  - If inflationary expectations decrease, the Phillips Curve will shift to the left—there will be 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 inflation against the unemployment rate—that is, from the Phillips Curve.

Short-Run Relationship between the Unemployment Rate and Inflation

- Is There a Short-Run Trade-Off between Inflation and Unemployment?
  - There is a short-run trade-off between inflation and unemployment, but other factors besides unemployment affect inflation. Policy involves more than simply choosing a point along a nice smooth curve.

The Long-Run Aggregate Supply Curve, Potential Output, and 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.

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.
- Call: U*

The Nonaccelerating Inflation Rate of Unemployment (NAIRU)

- To the left of the NAIRU, the price level is accelerating (positive changes in the inflation rate);
- To the right of 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).