

**Lecture 3**  
**3.3.2015**

# **Unemployment and Its Natural Rate**

# IDENTIFYING UNEMPLOYMENT

- Categories of Unemployment
  - The problem of unemployment is usually divided into two categories.
  - The long-run problem and the short-run problem:
    - The natural rate of unemployment
    - The cyclical rate of unemployment

# IDENTIFYING UNEMPLOYMENT

- *Natural Rate of Unemployment*
  - It is the amount of unemployment that the economy normally experiences.
  - The natural rate of unemployment is unemployment that does not go away on its own even in the long run.

# IDENTIFYING UNEMPLOYMENT

- *Cyclical Unemployment*
  - Cyclical unemployment refers to the year-to-year fluctuations in unemployment around its natural rate.
  - It is associated with with short-term ups and downs of the business cycle.

# Outline

- Determinants of an economy's natural rate of unemployment
  - How is unemployment measured?
  - Problems with interpreting unemployment statistics
  - Duration of unemployment
- 4 ways to explain unemployment in the long run
  - Frictional unemployment
  - Structural unemployment – minimum-wage laws, unions, and efficiency wages

# How Is Unemployment Measured?

- Unemployment is measured by the Bureau of Labor Statistics (BLS).
  - It surveys 60,000 randomly selected households every month.
  - The survey is called the Current Population Survey.

# How Is Unemployment Measured?

- Based on the answers to the survey questions, the BLS places each adult into one of three categories:
  - Employed
  - Unemployed
  - Not in the labor force

# How Is Unemployment Measured?

- The BLS considers a person an adult if he or she is over 16 years old.
- A person is considered employed if he or she has spent most of the previous week working at a paid job.
- A person is unemployed if he or she is on temporary layoff, is looking for a job, or is waiting for the start date of a new job.
- A person who fits neither of these categories, such as a full-time student, homemaker, or retiree, is not in the labor force.



# How Is Unemployment Measured?

- Labor Force
  - The *labor force* is the total number of workers, including both the employed and the unemployed.
  - The BLS defines the labor force as the sum of the employed and the unemployed.

# How Is Unemployment Measured?

- The *unemployment rate* is calculated as the percentage of the labor force that is unemployed.

$$\text{Unemployment rate} = \frac{\text{Number unemployed}}{\text{Labor force}} \times 100$$

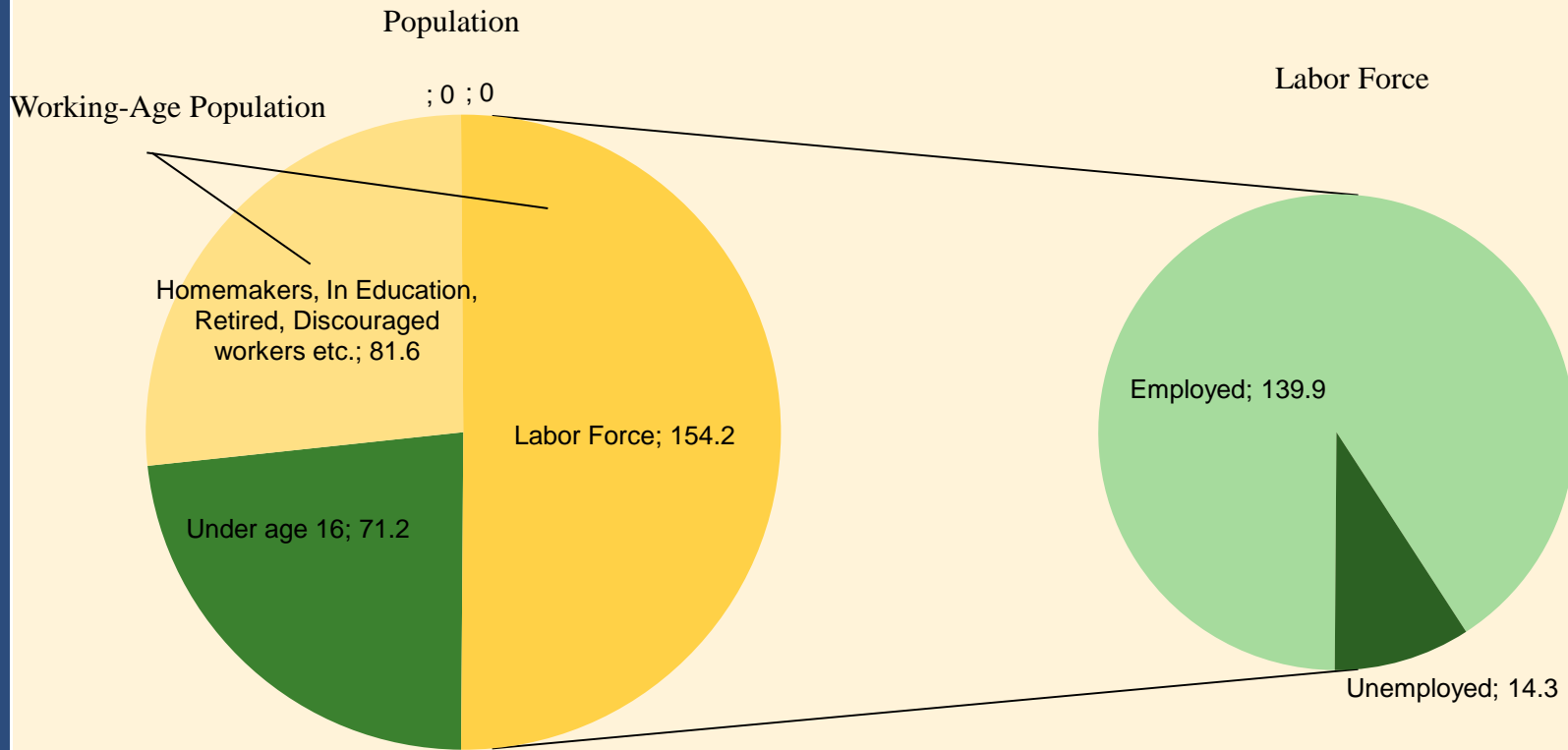
# How Is Unemployment Measured?

- The *labor-force participation rate* is the percentage of the adult population that is in the labor force.

Labor force participation rate

$$= \frac{\text{Labor force}}{\text{Adult population}} \times 100$$

# U.S. Labor Statistics (2009)

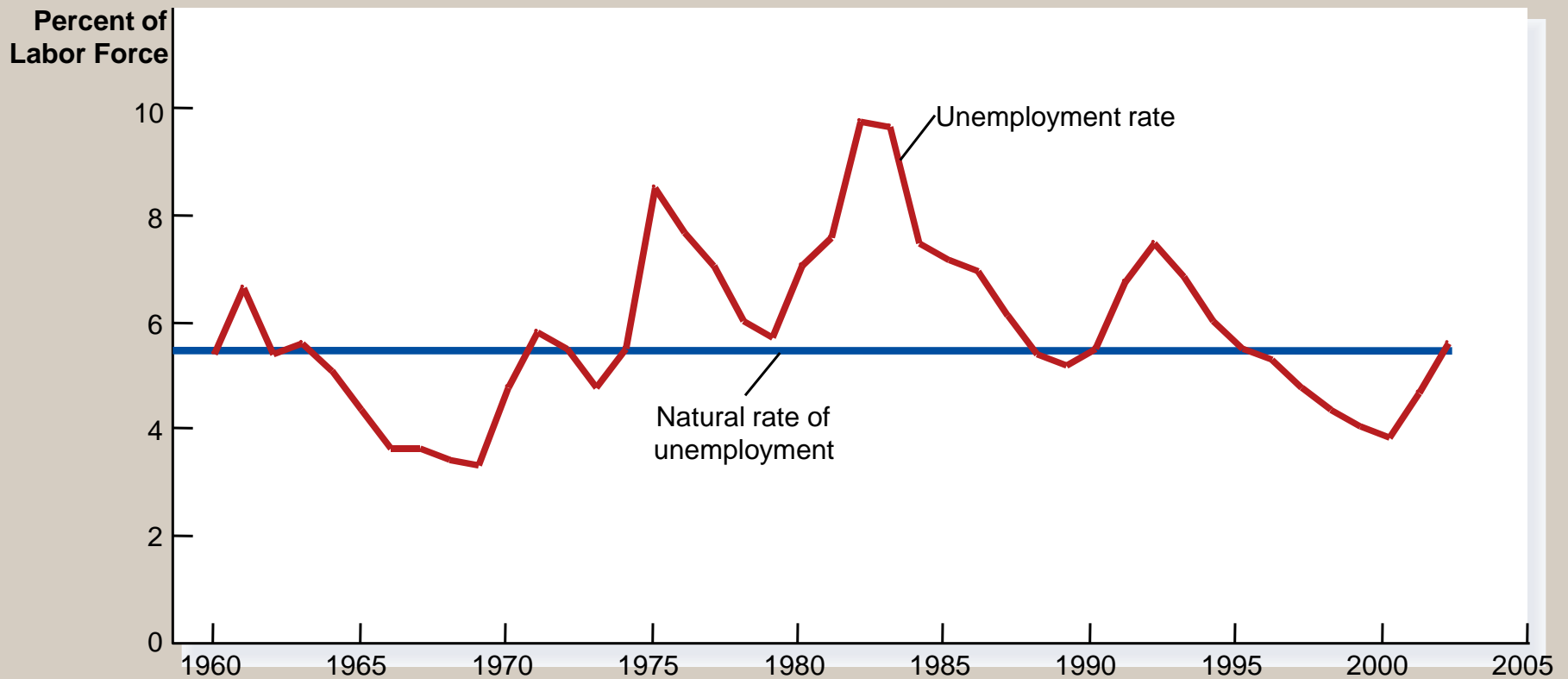


Millions, Source: Bureau of Labor Statistics

# Table 1 The Labor-Market Experiences of Various Demographic Groups (U.S. 2009)

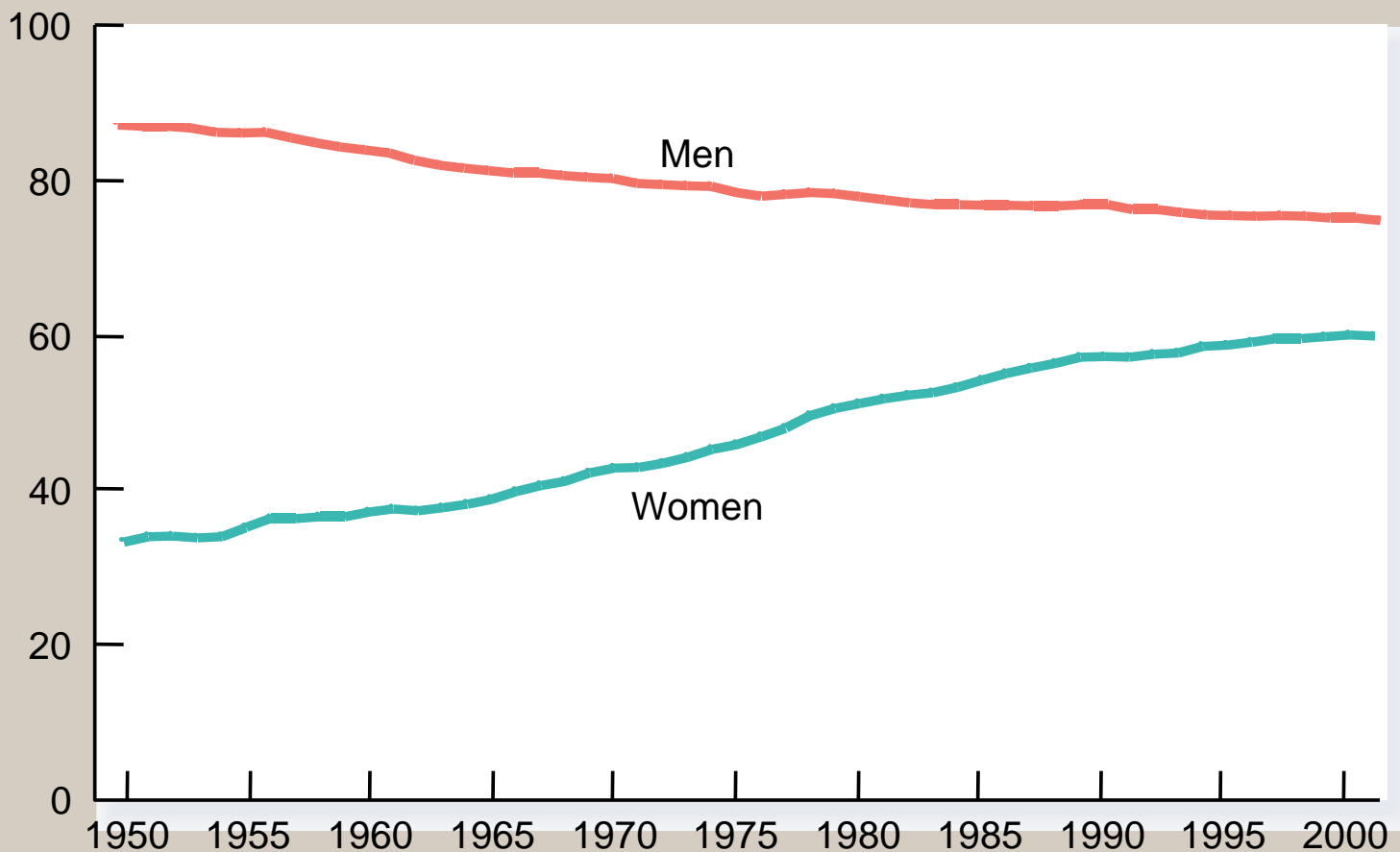
| Demographic Group                | Unemployment Rate | Labor-Force Participation Rate |
|----------------------------------|-------------------|--------------------------------|
| <b>Adults (ages 20 and over)</b> |                   |                                |
| White, male                      | 3.7%              | 76.8%                          |
| White, female                    | 3.6               | 50.2                           |
| Black, male                      | 8.0               | 72.1                           |
| Black, female                    | 7.0               | 65.4                           |
| <b>Teenagers (ages 16–19)</b>    |                   |                                |
| White, male                      | 13.8              | 54.1                           |
| White, female                    | 11.4              | 52.8                           |
| Black, male                      | 30.5              | 38.0                           |
| Black, female                    | 27.5              | 37.4                           |

# Figure 2 Unemployment Rate Since 1960

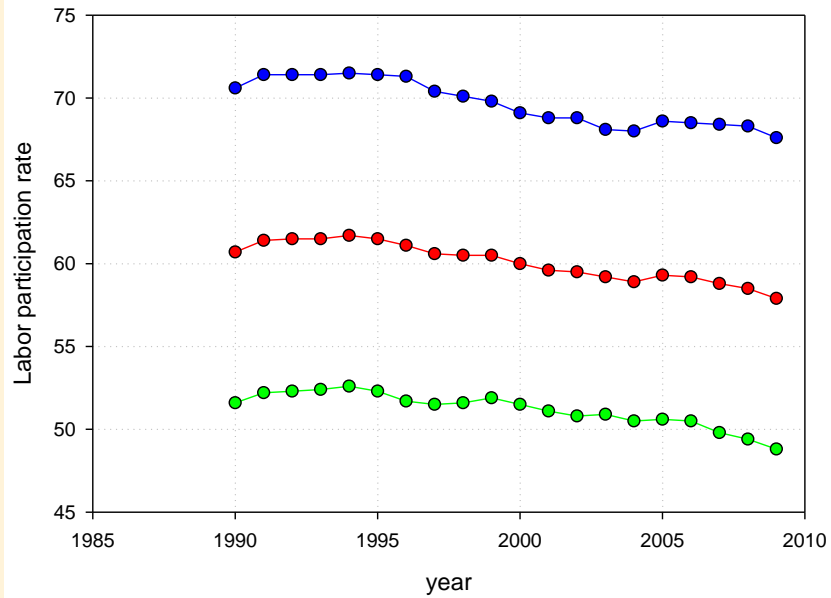


# Figure 3 Labor Force Participation Rates for Men and Women Since 1950

Labor-Force  
Participation  
Rate (in percent)

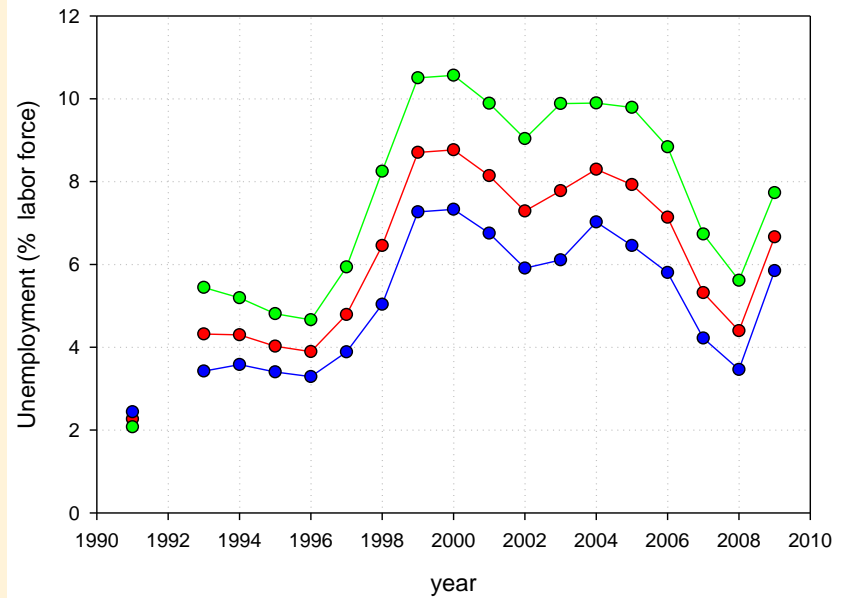


Czech Republic 1990-2009



- Labor participation rate, total (% of total population ages 15+)
- Labor participation rate, male (% of male population ages 15+)
- Labor participation rate, female (% of female population ages 15+)

Czech Republic 1990-2009



- Unemployment, total (% of total labor force)
- Unemployment, male (% of male labor force)
- Unemployment, female (% of female labor force)



# Does the Unemployment Rate Measure What We Want It To?

- It is difficult to distinguish between a person who is unemployed and a person who is not in the labor force.
- *Discouraged workers*, people who would like to work but have given up looking for jobs after an unsuccessful search, don't show up in unemployment statistics.
- Other people may claim to be unemployed in order to receive financial assistance, even though they aren't looking for work.

# How Long Are the Unemployed without Work?

- Most spells of unemployment are short.
- Most unemployment observed at any given time is long-term.
- Most of the economy's unemployment problem is attributable to relatively few workers who are jobless for long periods of time.

# Why Are There Always Some People Unemployed?

- In an ideal labor market, wages would adjust to balance the supply and demand for labor, ensuring that all workers would be fully employed.

# Why Are There Always Some People Unemployed?

- *Frictional unemployment* refers to the unemployment that results from the time that it takes to match workers with jobs. In other words, it takes time for workers to search for the jobs that are best suit their tastes and skills.

# Why Are There Always Some People Unemployed?

- *Structural unemployment* is the unemployment that results because the number of jobs available in some labor markets is insufficient to provide a job for everyone who wants one.

# JOB SEARCH

- *Job search*
  - the process by which workers find appropriate jobs given their tastes and skills.
  - results from the fact that it takes time for qualified individuals to be matched with appropriate jobs.

# JOB SEARCH

- This unemployment is different from the other types of unemployment.
  - It is not caused by a wage rate higher than equilibrium.
  - It is caused by the time spent searching for the “right” job.

# Public Policy and Job Search

- Government programs can affect the time it takes unemployed workers to find new jobs.
- These programs include the following:
  - Government-run employment agencies
  - Public training programs
  - Unemployment insurance



# Public Policy and Job Search

- Unemployment insurance is a government program that partially protects workers' incomes when they become unemployed.
  - Offers workers partial protection against job losses.
  - Offers partial payment of former wages for a limited time to those who are laid off.

# Public Policy and Job Search

- *Unemployment insurance* increases the amount of search unemployment.
- It reduces the search efforts of the unemployed.
- It may improve the chances of workers being matched with the right jobs.

# Public Policy and Job Search

- Structural unemployment occurs when the quantity of labor supplied exceeds the quantity demanded.
- Structural unemployment is often thought to explain longer spells of unemployment.

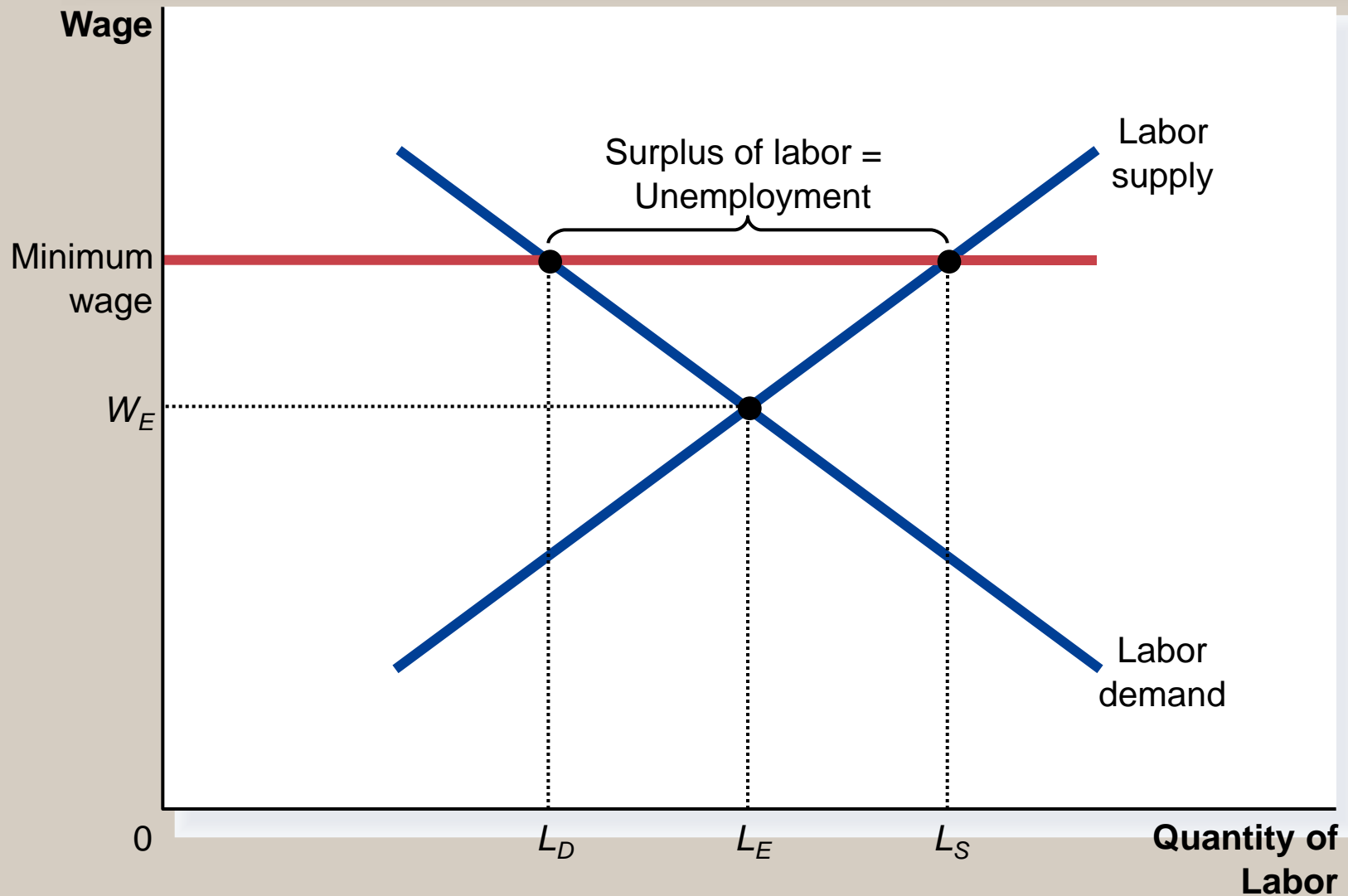
# Public Policy and Job Search

- Why is there Structural Unemployment?
  - Minimum-wage laws
  - Unions
  - Efficiency wages

# MINIMUM-WAGE LAWS

- When the minimum wage is set above the level that balances supply and demand, it creates unemployment.

# Figure 4 Unemployment from a Wage Above the Equilibrium Level



# Minimum wage can cause involuntary unemployment



# UNIONS AND COLLECTIVE BARGAINING

- A *union* is a worker association that bargains with employers over wages and working conditions.
- In the 1940s and 1950s, when unions were at their peak, about a third of the U.S. labor force was unionized.
- In these cases, wages are not determined by the equilibrium of supply and demand in competitive labor markets.



# UNIONS AND COLLECTIVE BARGAINING

- The process by which unions and firms agree on the terms of employment is called *collective bargaining*.

# UNIONS AND COLLECTIVE BARGAINING

- A *strike* will be organized if the union and the firm cannot reach an agreement.
- A strike refers to the organized withdrawal of labor from the firm.

# UNIONS AND COLLECTIVE BARGAINING

- A strike makes some workers better off and other workers worse off.
- Workers in unions (insiders) benefit from collective bargaining, while workers not in the union (outsiders) bear some of the costs.

# Are Unions Good or Bad for the Economy?

- Critics argue that unions cause the allocation of labor to be inefficient and inequitable.
  - Wages above the competitive level reduce the quantity of labor demanded and cause unemployment.
  - Some workers benefit at the expense of other workers.

# Are Unions Good or Bad for the Economy?

- Advocates of unions contend that unions are a necessary antidote to the market power of firms that hire workers.
- They claim that unions are important for helping firms respond efficiently to workers' concerns.

# THE THEORY OF EFFICIENCY WAGES

- *Efficiency wages* are above-equilibrium wages paid by firms in order to increase worker productivity.
- The theory of efficiency wages states that firms operate more efficiently if wages are above the equilibrium level.

# THE THEORY OF EFFICIENCY WAGES

- A firm may prefer higher than equilibrium wages for the following reasons:
  - Worker Health: Better paid workers eat a better diet and thus are more productive.
  - Worker Turnover: A higher paid worker is less likely to look for another job.

# THE THEORY OF EFFICIENCY WAGES

- A firm may prefer higher than equilibrium wages for the following reasons:
  - Worker Effort: Higher wages motivate workers to put forward their best effort.
  - Worker Quality: Higher wages attract a better pool of workers to apply for jobs.



# Example – efficiency wage

## Henry Ford doubled wage to \$5-a-day

H. Ford “one of the finest cost-cutting moves we ever made.”

Turnover fell, absenteeism  
fell, and productivity rose

Is it a good strategy for every firm?



**Motor Kings Who Share Profits With Worker**



**DOUBLES PAY OF 25,000 IN AUTO WORKS**

Motor King and Congress Launch World's Biggest Profit Sharing Scheme as "Act of Social Justice" and for Sake of Life.

**GRANT EIGHT-HOUR DAY AT \$5 WAGE**

Two Shifts of Nine Hours Changed to Three of Eight, 4,000 Unemployed to Be Taken In—Jobs on Farms Arranged During Slack Season.

The Ford Motor Co. will give to its employees during the year of 1914 the sum of \$10,000,000 in addition to their wages.

This will not be a wage increase, but a distribution of profits. It will be added, however, automatically, to the pay envelopes of the men. In 1913, the distribution might be more or less than \$10,000,000, dependent on business conditions.

A minimum wage of \$7 a day will be established by the addition of the profit distribution to wages. The present minimum wage in the great motor car factory is \$2.50. From next Monday to the end of the year, every the hardest laborer and the man who merely sweeps the floors, will get about \$7 a day.

Business the Motor Co. is instituted, to reward the

assembly lines - worker turnover,  
effort and quality more important

# Summary

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- The unemployment rate is the percentage of those who would like to work but don't have jobs.
- The Bureau of Labor Statistics calculates this statistic monthly.
- The unemployment rate is an imperfect measure of joblessness.

# Summary

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- In the U.S. economy, most people who become unemployed find work within a short period of time.
- Most unemployment observed at any given time is attributable to a few people who are unemployed for long periods of time.

# Summary

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- One reason for unemployment is the time it takes for workers to search for jobs that best suit their tastes and skills.
- A second reason why our economy always has some unemployment is minimum-wage laws.
- Minimum-wage laws raise the quantity of labor supplied and reduce the quantity demanded.

# Summary

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- A third reason for unemployment is the market power of unions.
- A fourth reason for unemployment is suggested by the theory of efficiency wages.
- High wages can improve worker health, lower worker turnover, increase worker effort, and raise worker quality.