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Unemployment and its Natural Rate

PRINCIPLES OF
MACROECONOMICS

FOURTH CANADIAN EDITION

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PowerPoint® Slides
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In this chapter, look for the answers to these questions:

- How is unemployment measured?
- What is the "natural rate of unemployment"?
- Why are there always some people unemployed?
- How is unemployment affected by unions and minimum wage laws?
- What is the theory of efficiency wages, and how does it help explain unemployment?

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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

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IDENTIFYING UNEMPLOYMENT

- *Natural Rate of Unemployment*
 - unemployment that does not go away on its own even in the long run.
 - the amount of unemployment that the economy normally experiences.
- *Cyclical Unemployment*
 - year-to-year fluctuations in unemployment around its natural rate.
 - associated with short-term ups and downs of the business cycle.

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IDENTIFYING UNEMPLOYMENT

- Describing Unemployment
 - Three Basic Questions:
 - How does government measure the economy's rate of unemployment?
 - What problems arise in interpreting the unemployment data?
 - How long are the unemployed typically without work?

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How Is Unemployment Measured?

- Unemployment is measured by Statistics Canada
 - It surveys 50,000 randomly selected households every month.
 - The survey is called the Labour Force Survey.

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How Is Unemployment Measured?

- Based on the answers to the survey questions, Statistics Canada places each adult (aged 15 and older) into one of three categories:
 - Employed
 - Unemployed
 - Not in the labour force

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How Is Unemployment Measured?

- Statistics Canada considers a person an adult if he or she is over 15 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 labour force.

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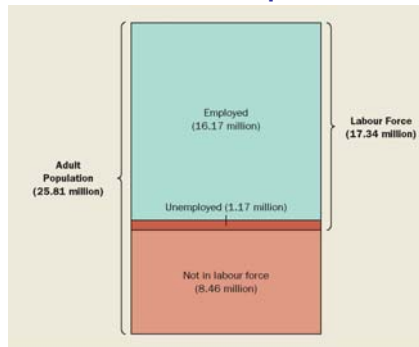
How Is Unemployment Measured?

- Labour Force
 - The **labour force** is the total number of workers, including both the employed and the unemployed.
 - Statistics Canada defines the labour force as the sum of the employed and the unemployed.

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The Breakdown of the Population in 2005



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How Is Unemployment Measured?

Unemployment rate ("u-rate"):

% of the labour force that is unemployed

$$\text{u-rate} = 100 \times \frac{\text{\# of unemployed}}{\text{labour force}}$$

labour force participation rate:

% of the adult population that is in the labour force

$$\text{labour force participation rate} = 100 \times \frac{\text{labour force}}{\text{adult population}}$$

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TABLE 9.1: The Labour-Market Experiences of Various Demographic Groups

Demographic Group	Unemployment Rate	Labour-Force Participation Rate
Both sexes, 15 years and over	6.8%	67.2%
Males, 15-24 years	14.2	66.1
Males, 25-44 years	6.1	92.3
Males, 45-64 years	5.3	80.2
Females, 15-24 years	10.6	65.8
Females, 25-44 years	6.0	81.8
Females, 45-64 years	5.2	67.0

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ACTIVE LEARNING 1: Calculate labour force statistics

Compute the labour force, u-rate, adult population, and labour force participation rate using this data:

Adult population by group, 2005	
# of employed	16.17 million
# of unemployed	1.17 million
not in labour force	8.47 million

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ACTIVE LEARNING 1: Answers

$$\begin{aligned}
 \text{labour force} &= \text{employed} + \text{unemployed} \\
 &= 16.17 + 1.17 \\
 &= 17.34 \text{ million}
 \end{aligned}$$

$$\begin{aligned}
 \text{U-rate} &= 100 \times (\text{unemployed})/(\text{labour force}) \\
 &= 100 \times 1.17/17.34 \\
 &= 6.8\%
 \end{aligned}$$

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ACTIVE LEARNING 1: Answers

$$\begin{aligned}
 \text{Population} &= \text{labour force} + \text{not in labour force} \\
 &= 17.34 + 8.47 \\
 &= 25.81
 \end{aligned}$$

$$\begin{aligned}
 \text{LF partic. rate} &= 100 \times (\text{labour force})/(\text{population}) \\
 &= 100 \times 17.34/25.81 \\
 &= 67.2\%
 \end{aligned}$$

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ACTIVE LEARNING 2: Exercise

In each of the following, what happens to the u-rate?
Does the u-rate give an accurate impression of what's happening in the labour market?

- A. Sue lost her job, and begins looking for a new one.
- B. Jon, a steelworker who has been out of work since his mill closed last year, becomes discouraged and gives up looking for work.
- C. Sam, the sole earner in his family of 5, just lost his \$80,000 job as a research scientist. Immediately, he takes a part-time job at McDonald's until he can find another job in his field.

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ACTIVE LEARNING 2: Answers

- A. Sue lost her job, and begins looking for a new one.

u-rate rises

A rising u-rate gives the impression that the labour market is worsening, and it is.

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ACTIVE LEARNING 2: Answers

- B. Jon has been out of work since last year, becomes discouraged, stops looking for work.

Discouraged workers

- would like to work but have given up looking for jobs
- classified as "not in the labour force" rather than "unemployed"

u-rate falls, because Jon is no longer counted as unemployed.

A falling u-rate gives the impression that the labour market is improving, but it is not.

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ACTIVE LEARNING 2: Answers

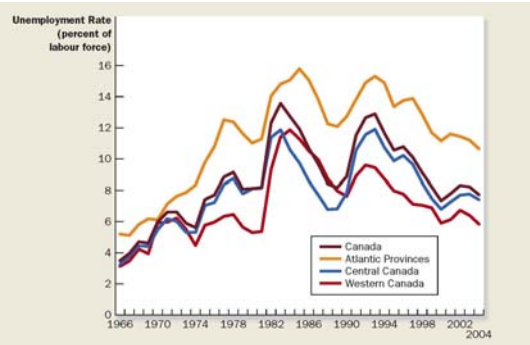
C. Sam lost his \$80,000 job, and takes a part-time job at McDonald's until he finds a better one.

u-rate unchanged, because a person is "employed" whether they work full or part time.

Things are worse, but the u-rate fails to show it.

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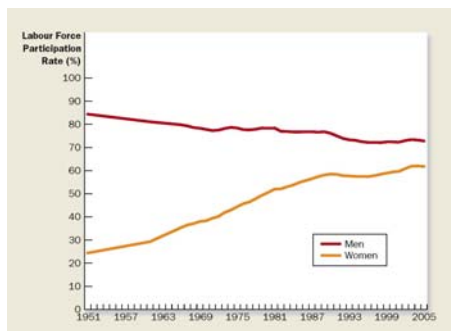
Canadian and Regional Unemployment Rates



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Labour-Force Participation Rates for Men and Women since 1951



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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 labour force.
- *Discouraged searchers*, 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.
- Economists and policymakers must be careful when interpreting data on unemployment and designing policies to help the unemployed
- Most people who become unemployed will soon find jobs.
- Policy solutions directed toward fixing the unemployment problem should be directed toward those suffering prolonged spells of unemployment

TABLE 9.2: Alternative Measures of Labour
Underutilization

Measure and Description	Percentage of the Labour Force
Unemployed 1 to 4 weeks	2.5%
Unemployed 5 to 13 weeks	1.9
Unemployed 14 to 25 weeks	1.0
Unemployed 26 to 52 weeks	0.8
Unemployed more than 52 weeks	0.6
Official Unemployment Rate	6.8
Discouraged searchers	0.1
Those awaiting recall	0.5
Involuntary part-time workers	1.5
Official rate + discouraged searchers + those awaiting recall + involuntary part-time workers	8.9

Why Are There Always Some People Unemployed?

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

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Why Are There Always Some People Unemployed?

- The *natural rate of unemployment* is the rate of unemployment to which the economy tends to return in the long run.
- In Canada, it is estimated that the natural rate of unemployment is currently between 6 and 8 percent.

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Why Are There Always Some People Unemployed?

- *Frictional unemployment*: 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.

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Why Are There Always Some People Unemployed?

- **Structural unemployment:**
 - unemployment that results because the number of jobs available in some labour markets is insufficient to provide a job for everyone who wants one.
 - occurs when the quantity of labour supplied exceeds the quantity demanded.
 - is often thought to explain longer spells of unemployment.

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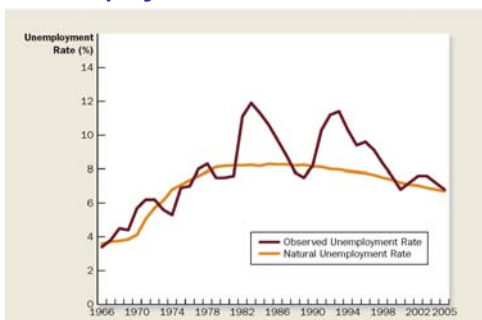
Why Are There Always Some People Unemployed?

- **Cyclical unemployment:** arises due to short-run economic fluctuations.

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FIGURE 9.4: Observed and Natural Unemployment Rates, 1966–2005



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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.

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Why Some Frictional Unemployment is Inevitable

- Search unemployment is inevitable because the economy is always changing.
- Changes in the composition of demand among industries or regions are called sectoral shifts.
- It takes time for workers to search for and find jobs in new sectors.

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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—give out information about job vacancies in order to match workers and jobs more quickly.
 - Public training programs—aim to ease the transition of workers from declining to growing industries and to help disadvantaged groups escape poverty.

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Employment Insurance

- Employment Insurance program intended to ease the burden of those who find themselves unemployed by temporarily providing them with income.
- Economists believe that the EI program has reduced the incentive to work and has increased the natural rate of unemployment
- Yet economists disagree whether economic well-being would be enhanced or diminished by eliminating the program

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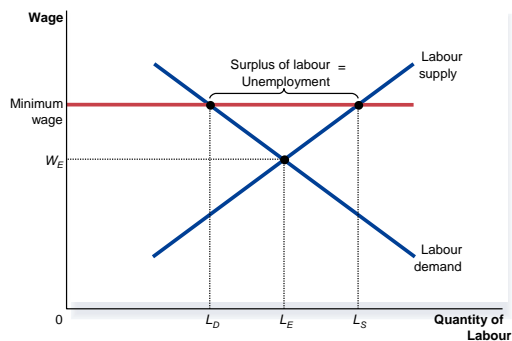
MINIMUM-WAGE LAWS

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

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Unemployment from a Wage Above Equilibrium Level



UNIONS AND COLLECTIVE BARGAINING

- A *union* is a worker association that bargains with employers over wages and working conditions.
- As of 2005, 25 percent of all Canadian workers belonged to unions.
- In the 1940s and 1950s, union membership as a fraction of the labour force was considerably smaller, at just 10 percent in 1941 and 20 percent in 1951.
- A union is a type of cartel attempting to exert its market power.

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UNIONS AND COLLECTIVE BARGAINING

- The process by which unions and firms agree on the terms of employment is called *collective bargaining*.
- A *strike*
 - refers to when the union organizes a withdrawal of labour from the firm.
 - will be organized if the union and the firm cannot reach an agreement.

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UNIONS AND COLLECTIVE BARGAINING

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

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UNIONS AND COLLECTIVE BARGAINING

- By acting as a cartel with ability to strike or otherwise impose high costs on employers, unions usually achieve above-equilibrium wages for their members.
- Union workers earn 10 to 20 percent more than nonunion workers.

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Are Unions Good or Bad for the Economy?

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

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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.

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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.

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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.
 - 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.

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CHAPTER SUMMARY

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

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CHAPTER SUMMARY

- In the Canadian economy, most people who become unemployed find work within a short period of time.
- Public policy solutions to the unemployment problem should be directed toward providing help to those experiencing long bouts of unemployment.

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CHAPTER SUMMARY

- 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 labour supplied and reduce the quantity demanded.

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CHAPTER SUMMARY

- 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.

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ACTIVE LEARNING 3: Exercise

Which of the following would be most likely to reduce frictional unemployment?

- A. The govt eliminates the minimum wage.
- B. The govt increases unemployment insurance benefits.
- C. A new law bans labour unions.
- D. More workers post their resumes at Monster.com, and more employers use Monster.com to find suitable workers to hire.
- E. Sectoral shifts become more frequent.

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ACTIVE LEARNING 3: Answers

Which of the following would be most likely to reduce frictional unemployment?

- A. The govt eliminates the minimum wage.
- C. A new law bans labour unions.

*These are likely to reduce
structural unemployment,
not frictional unemployment.*

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ACTIVE LEARNING 3: Answers

Which of the following would be most likely to reduce frictional unemployment?

- B. The govt increases unemployment insurance benefits.
- E. Sectoral shifts become more frequent.

*These are likely to increase
frictional unemployment, not reduce it.*

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ACTIVE LEARNING 3:
Answers

Which of the following would be most likely to reduce frictional unemployment?

- D.** More workers post their resumes at Monster.com, and more employers use Monster.com to find suitable workers to hire.

Likely to speed up the process of matching workers & jobs, which would reduce frictional unemployment.

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End: Chapter 9

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