Main concepts: Identifying unemployment, job search, minimum-wage laws, unions and collective bargaining, the theory of efficiency wages.
Assessment: Test 4. Unemployment and its natural rate

Introduction

Like GDP, unemployment ranks high as an indicator of economic well-being. This chapter starts by describing how unemployment is measured and, related to this measurement issue, why unemployment can sometimes be a misleading indicator of the true health of the economy.

Note, for example, that there is unemployment even during normal or good economic times.

Partly, for this reason, economists distinguish between two types of unemployment:

1. **The natural rate of unemployment** is the rate of unemployment that the economy experiences even during normal times, that is, even when the economy is not in a recession.
2. **Cyclical unemployment** refers to the additional unemployment that occurs during recession.

Alternatively, we can think about the natural rate of unemployment as the economy's **long-run** rate of unemployment and cyclical unemployment as **the shorter-run** fluctuations around the natural rate.

This chapter focuses mainly on **the determinants of the natural rate of unemployment**, leaving an analysis of cyclical unemployment for later. In particular, the chapter continues by describing four types of theories or sets of considerations that economists use to explain the economy's natural of unemployment: job search, minimum-wage laws, unions, and efficiency wages.

Outline

1. Identifying Unemployment
2. Job Search
3. Minimum-Wage Laws
4. Unions

5. Efficiency Wages

1. Identifying Unemployment

Data on unemployment in the US economy are assembled monthly by the Bureau of Labor Statistics (BLS), which is part of the Department of Labor.

Each month, the BLS compiles these data from a survey of about 60,000 households called the Current Population Survey.
Based on responses to survey questions, the BLS puts each adult aged 16 and over into one of three categories:

1) **Employed**. This category includes paid employee, both full-time and part-time, people who worked in their own business, and those who were temporarily absent from work because of illness or vacation.
2) **Unemployed**. This category includes people who were not employed, were available for work and had tried to find a job within the previous four weeks, as well as those who were temporarily laid off and waiting to be recalled.
3) **Not in the labor force**. This category includes everyone else: students, homemakers, retired people.

Figure 1 shows the breakdown of the US population in 2009 into these 3 categories.

BLS Household Survey, Feb 2013

	Unemployment Rate	Participation Rate
Adult Men (ages 20+)	7.1%	72.9%
Adult Women (ages 20+)	7.0%	58.9%
Teenagers (ages 16-19)	25.1%	34.7%

	Unemployed Workers	Discouraged Workers	Total Labor Force
February 2012	12.8 million	1.0 million	154.8 million
February 2013	12.0 million	0.9 million	155.5 million

The BLS then defines the labor force as the total number of workers, both employed and unemployed:

Labor Force = Number of Employed + Number of Unemployed

The unemployment rate as the percentage of the labor force that is employed,

Unemployment Rate = Number of Unemployed / Labor Force × 100

And the labor force participation rate as the percentage of the total adult population that is in the labor force,

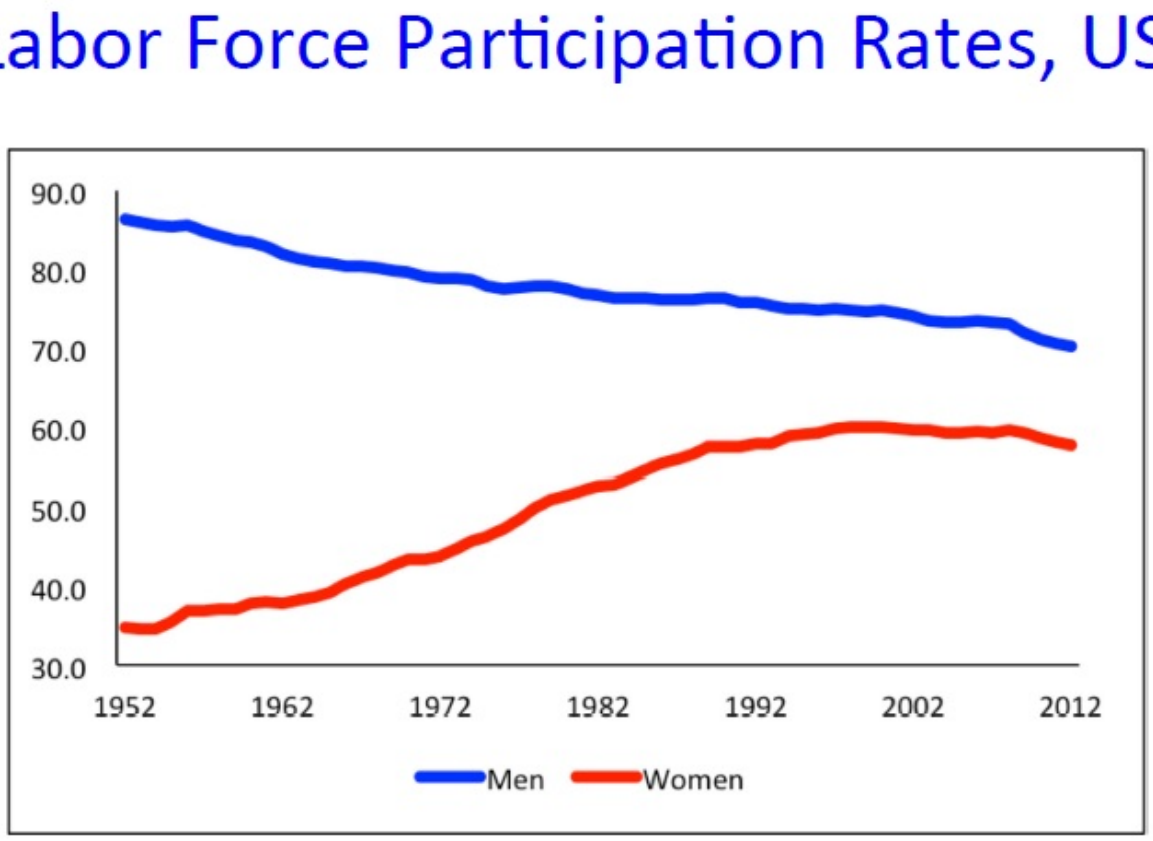
Labor Force Participation Rate = Labor Force / Adult Population × 100

Let's use the numbers from figure 1 to compute these statistics for 2009:

- Number of employed = 139.9 million.
- Number of unemployed = 14.3 million.
- Not in the labor force = 81.7 million.
- Labor force = 139.9 + 14.3 = 154.2 million.

- Unemployment rate = 14.3 / 154.2 * 100 = 9.3 %
- Labor force participation rate = (139.9 + 14.3) / (139.9 +14.3 +81.7) = 154. 2 / 235.9 = 65.4 percent.

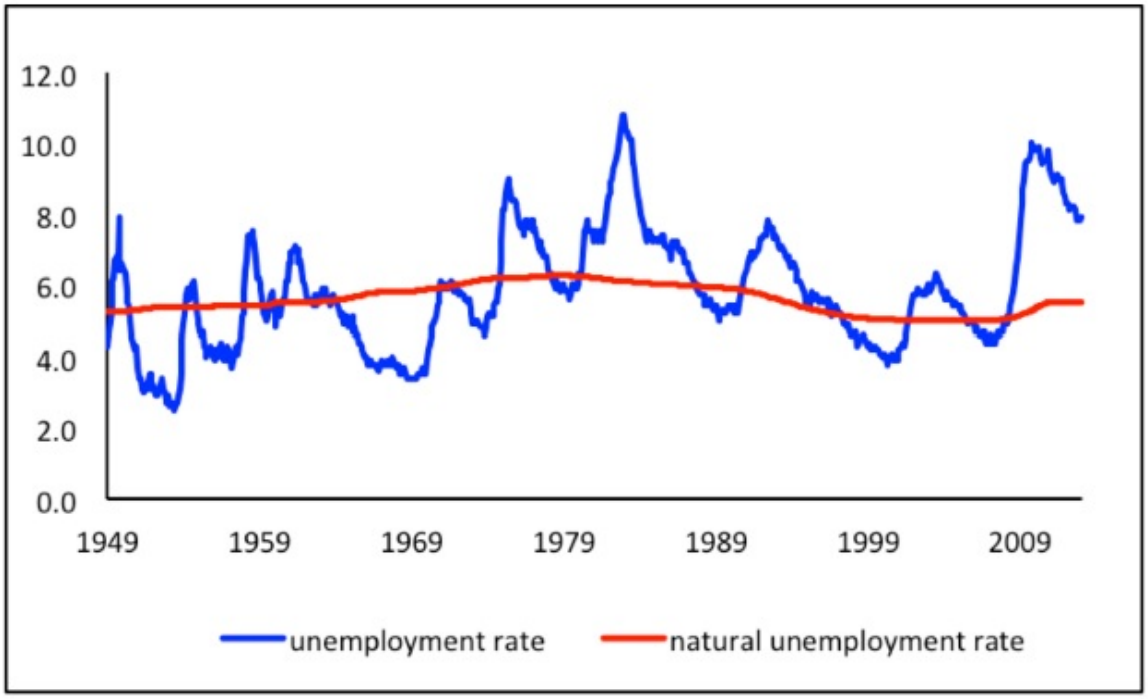
Table 1 show how the unemployment and labor force participation rates varied across demographic groups in 2009. Figure 3 show labor force participation rates have varied over time men and women.



What factors might explain women's rising labor force participation? What factors might explain men's falling labor force participation?

Figure 2 shows how the unemployment rate fluctuates about long-run average, or natural, rate, of around 5%.

Unemployment Rate, US



Updating the data shown in figure 2, the congressional Budget Office now estimates the natural rate of unemployment to be 5.2 percent.

Even during good economic times, there is some unemployment in the US economy. It is this natural rate of unemployment that the theories described in this chapter seek to explain.

The most difficult part of measuring the unemployment rate entails determining who is unemployed versus who is out of the labor force:

Suppose an employed worked loses his or her job, and starts looking for a new one. What happens to the unemployment rate: it rises, since the number of unemployed workers goes up while the labor force stays the same.

But suppose that after a while, that same person becomes a discouraged worker: someone who would like to work but has given up looking for a job. Maybe that person decides to go back to school or maybe he or

she just stays at home and doesn't bother looking for a job. Either way, the number of unemployment workers goes down, and while the labor force goes down as well, **net effect is to decrease the rate of unemployment**.

Symmetrically, what happens if the economy starts to look better, so that a discouraged worked starts to look for a job? Now the number of unemployed workers rises, and while the labor force also gets bigger, **the net effect is to increase the unemployment** rate.

So changes in the unemployment rate don't always accurately reflect whether economic conditions are improving or deteriorating.

Another set of facts pertains to the duration of unemployment spells: most spells of unemployment are short, even though most unemployment observed at any given point in time is long term.

How can both of these facts hold true? A simple example shows how:

- Suppose that 55 people each year are unemployed.
- Each week, one person loses his job, but finds a new job at the end of that week.
- But three workers lose their jobs at the beginning of year and stay unemployment for the full year.
- Then 52 out of 55 unemployment spells last only one week.
- But, at any given point in time, three out of the four unemployed workers have spells that last for one full year.

What explains the natural rate of unemployment? In other words, why are their unemployed workers even during good times?

- One explanation is that it takes time for workers to find jobs that are best-suited for them. This type of unemployment is often called **frictional unemployment**.
- A second set of explanations focus on why there might not be enough jobs to employ everyone who wants one. This type of unemployment is often called **structural unemployment.**
- So the essence of frictional unemployment is that **there are jobs out there**, it just takes time and effort for workers to find them.

The essence of structural unemployment is that there are **just not enough jobs out there** for everyone who wants one.

2. Job Search

Job search is the process by which workers find appropriate jobs given their tastes and skills.

The process of job search can explain why there always some frictional unemployment:

- Suppose that in the market for laptop computer and PCs, Dell takes market share away from Hewlett-Packard. HP lays off workers; Dell hires new ones. In the interim there is a period of unemployment in the industry.
- Similarly, if the price of oil rises, energy exploration companies hire more workers, while auto manufacturers and airlines lay off workers. Because of these sectorial shifts, unemployment arises.

A certain amount of frictional unemployment is inevitable, simply because the economy is always changing.

A century ago, the four industries with largest employment in the IS were cotton goods, woolen goods, men's clothing, and lumber. Today the largest industries by employment are autos, aircraft, communications, and electoral components. The overall US economy has grown very much. But along the way some industries have declined or even disappeared altogether, causing workers to have to find new jobs.

However, government training and re-training programs can help reduce the amount of frictional unemployment.

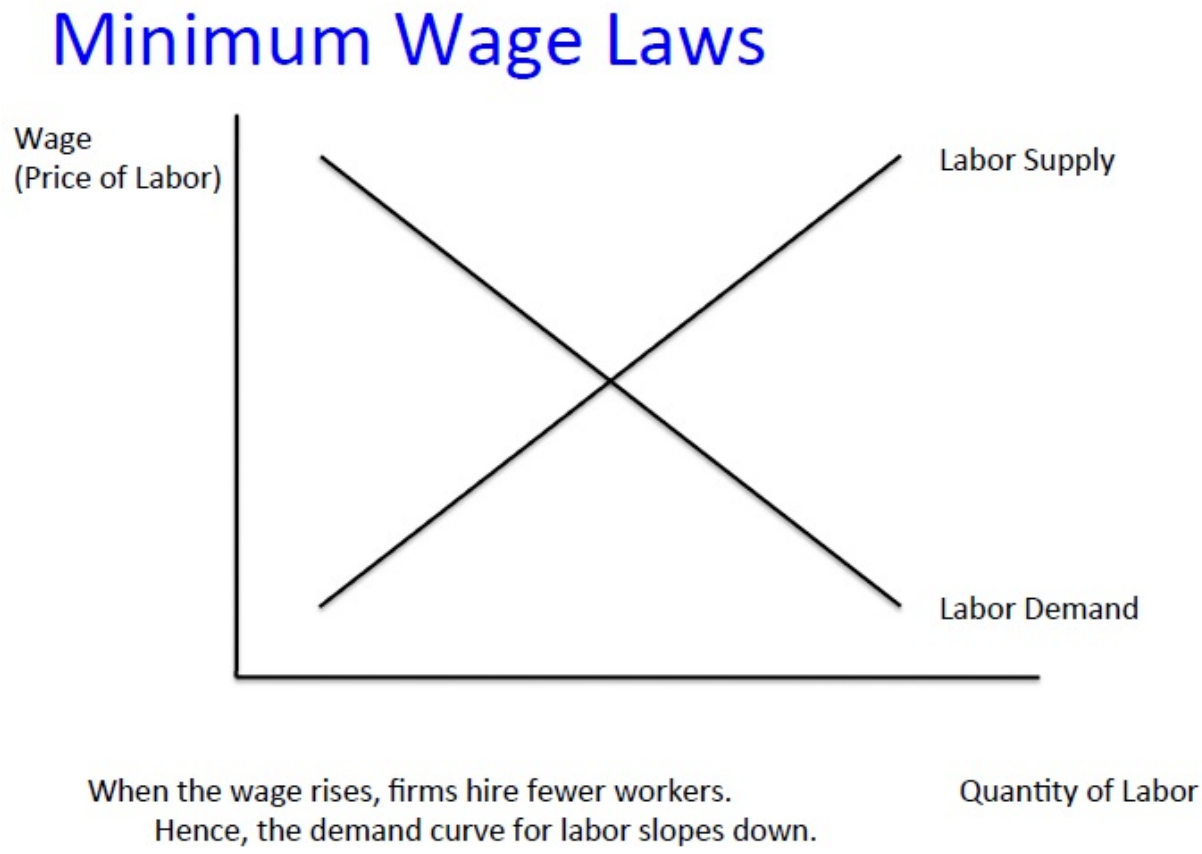
Through unemployment insurance programs, the government partially protects workers' incomes when they become unemployed.

Just like automobile and homeowners insurance, unemployment insurance makes risk-averse workers better off.

But it can also lead to higher levels of frictional unemployment, by making it possible for unemployed workers to search longer for the right job.

3. Minimum-Wage Laws

Figure 4 shows how unemployment results from minimum wage laws.



This type of unemployment is structural as opposed to frictional, in that there are workers who want to work at the minimum wage, but who will not be able to find those jobs even after extensive search.

This type of unemployment **affects low-wage workers, particularly teenagers**.

But the same line of reasoning shown in figure 4 implies that any factor or set of factors that raises the actual wage above the **equilibrium wage would equate supply and demand** will cause structural unemployment.

4. Unions and Collective Bargaining

A labor union is an association of workers that bargains with employers over wages, benefits, and working conditions through a process of **collective bargaining**. If the two sides can't agree, the union can organize **a strike**, the organized withdrawal of labor from the firm.

In the 1940s and 1950s, about one third of US workers were unionized. Now, that number is only about 12 percent.

Studies show that through collective bargaining, union can increase the wages that their members receive by 10 to 20 percent.

The overall effects of unions on wages and unemployment therefore resemble the effects of minimum wage laws:

- **Insiders**, or union members, benefits from the higher wages.
- But **outsiders** are hurt because at higher wages, fewer workers are hired.

5. The Theory of Efficiency Wages

Like minimum wage laws and union collective bargaining, the theory of efficiency wages explains structural unemployment by appealing to wages that are above the level that equates supply and demand.

But whereas the "above equilibrium" wage resulting from minimum wage laws comes from government actions, and the above market equilibrium

resulting from unions comes from worker's collective action, **efficiency wage theory stresses that employers might want** to pay their worker above equilibrium wages **to raise worker productivity?**

Why might an employer voluntarily want to pay above equilibrium wages?

Why might higher wages raise worker productivity?

1. **Worker health**. Better-paid workers will be healthier and therefore more productive. This factor is probably not relevant in US, but certainly could be in developing countries.
2. **Worker turnover**. It's costly for the firm **to hire and train new workers**; hence it's in a firm's interest to try to retain existing workers. It can do this by paying them higher wages.
3. **Worker quality.** Suppose that a firm wants to fill and open job and advertises a lower wage. Since the only people who will apply are those who can't earn a higher wage elsewhere, it runs the risk of having to hire someone **with less experience or lower skills**. Conversely, by **offering a higher wage**, the **firm can attract even the very best applicants**.
4. **Work effort**. If a firm's workers are happy because they feel that they are well treated, they will be willing to work harder. Also, if they know that they won't be able to find as good a job elsewhere, they will work harder to keep their exiting job. (SAMSUNG)

In 1914, Henry Ford offered his workers $5 per day, about twice what they could get at other jobs. Worker turnover and absenteeism fell. Ford called the **decision to raise wages "one of the finest cost cutting moves we ever made**"

6. Conclusion

After discussing how the unemployment rate is actually measured, this chapter goes on to identify a number of explanations for **the natural rate of unemployment**, that is, is the long-run rate of unemployment that prevails even outside of recession.

These explanations fall under two broad headings: theories that explain **frictional unemployment** and theories that explain **structural unemployment**.

Before closing, let's ask:

1. The government raises the minimum wage. What does this do to the natural rate of unemployment? Do these effects arise by changing the amount of frictional unemployment or b changing the amount of structural unemployment?
2. The internet makes it easier for firms to advertise job openings and makes it easier for workers to find job openings. What does this do to the natural rate of unemployment? Do these effects arise by changing the amount of frictional unemployment?
3. Unions in the US have become considerably weaker and less prevalent since the 1950s. What did this do to the natural rate of unemployment? Did these effects arise by changing the amount of frictional unemployment or by changing the amount of structural unemployment?
4. Music downloading puts traditional stores selling records and cds out of business. What does this do to the natural rate of unemployment? Do these effects arise by changing the amount of frictional unemployment or by changing the amount of structural unemployment?