UNEMPLOYMENT AND INFLATION

Chapter 9 (Unemployment)

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Chapter Outline

- **9.1** Measuring the Unemployment Rate, the Labor Force Participation Rate, and the Employment-Population Ratio
- **9.2** Types of Unemployment
- **9.3** Explaining Unemployment

Measuring Unemployment And Inflation

- Last chapter, we learned about how to measure total output—a critical first step in understanding the economy.
- In this chapter, we continue along these lines, learning about how to measure unemployment and inflation.
- These are very important and commonly used macroeconomic concepts; we want to solidify what they mean, so that we can talk intelligently about them. Both these economic variables, are key in understanding the health of an economy over time and comparing different economies at a point in time.
- High rates of unemployment and inflation indicate bad health of an economy; they are likely to be higher during recession. Recall, what recession means from Chapter 8.

The Household Survey

Each month, the U.S. Bureau of the Census conducts the *Current Population Survey* (a.k.a. the *household survey*).

- ~60,000 households selected to be "representative"
- Household members of "working age" (16+ years old)
- Asked about employment during "reference week"
- Also asked about recent job search activities

People are then classified as:

- **Employed**: Worked 1+ hours in reference week (or were temporarily away from their jobs).
- **Unemployed**: Someone who is not currently at work but who is available for work and who has actively looked for work during the previous month.
- *Not in the labor force*, if neither of the above apply

9.1 Measuring the Unemployment Rate, the Labor Force Participation Rate, and the Employment-Population Ratio

- There are more than 300 million people in the United States and monitoring and reporting on their activities regularly would be very difficult and costly.
- Instead, the U.S. Department of Labor reports *estimates* of employment, unemployment, and other statistics related to the *labor force* each month.
- **Labor force**: The sum of employed and unemployed workers in the economy.
- Of these statistics, the most watched is known as the **unemployment rate**: the percentage of the labor force that is unemployed.

Figure 9.1 The Employment Status of the Civilian Working-Age Population, August 2015 (1 of 3)

- The working-age population can be segregated according to the tree diagram on the right.
- **Discouraged workers:** People who are available for work but have not looked for a job during the previous four weeks because they believe no jobs are available for them.

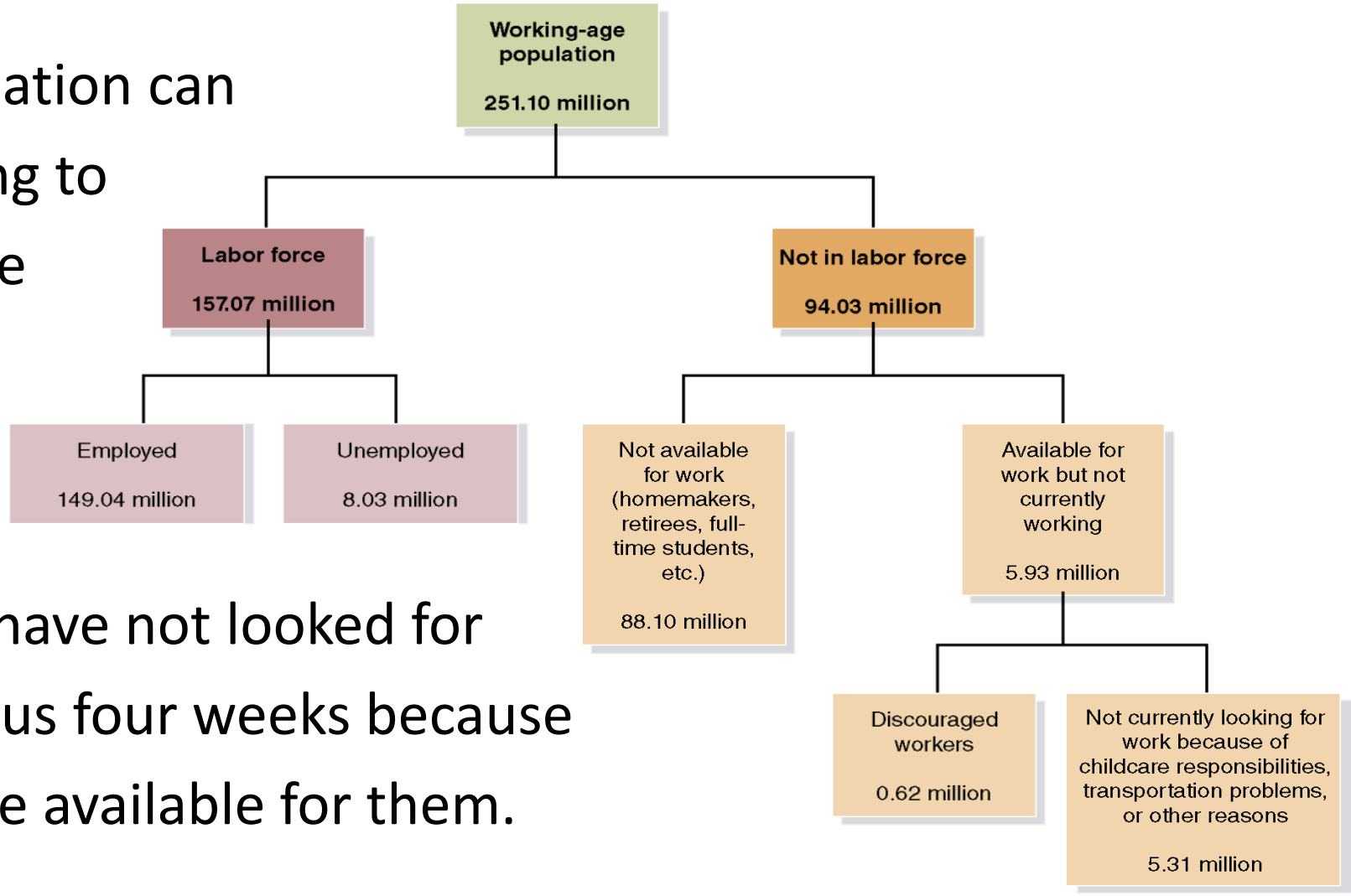
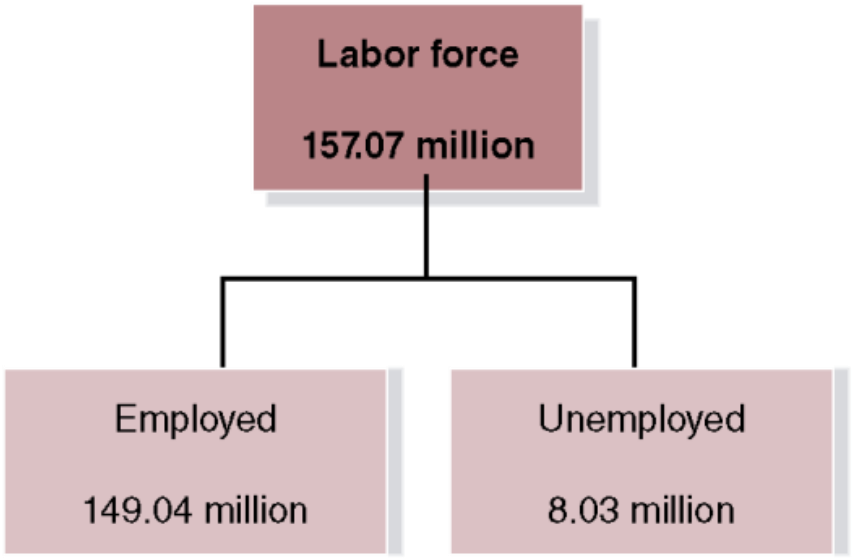


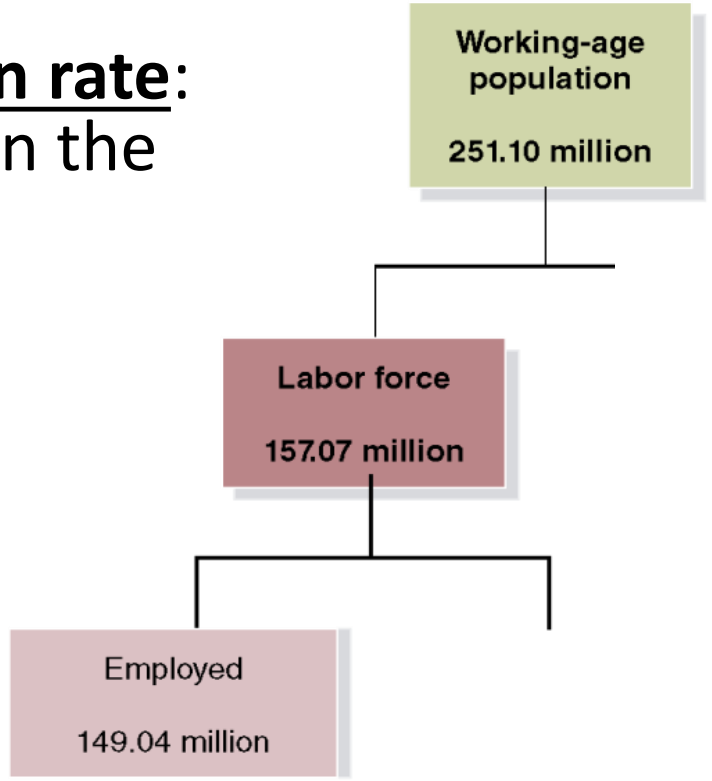
Figure 9.1 The Employment Status of the Civilian Working-Age Population, August 2015 (2 of 3)



- Based on the CPS estimates, we calculate several important *macroeconomic indicators*.
- The most watched is the unemployment rate:
- $\text{Unemployment rate} = \frac{\text{Number of unemployed}}{\text{Labor Force}} \times 100$
- $\frac{8.03 \text{ million}}{157.07 \text{ million}} \times 100 = 5.1\%$
- This most common measure of unemployment is known formally as BLS series U-3.

Figure 9.1 The Employment Status of the Civilian Working-Age Population, August 2015 (3 of 3)

- Also important are the **labor-force participation rate**: the percentage of the working-age population in the labor force…
- $\text{LFPR} = \frac{\text{Labor force}}{\text{Working-age population}} \times 100$
- $\frac{157.07 \text{ million}}{251.10 \text{ million}} \times 100 = 62.6\%$
- … and the **employment-population ratio**: the percentage of the working-age population that is employed:
- $\text{Employment-population ratio} = \frac{\text{Employment}}{\text{Working-age population}} \times 100$
- $\frac{149.04 \text{ million}}{251.10 \text{ million}} \times 100 = 59.3\%$

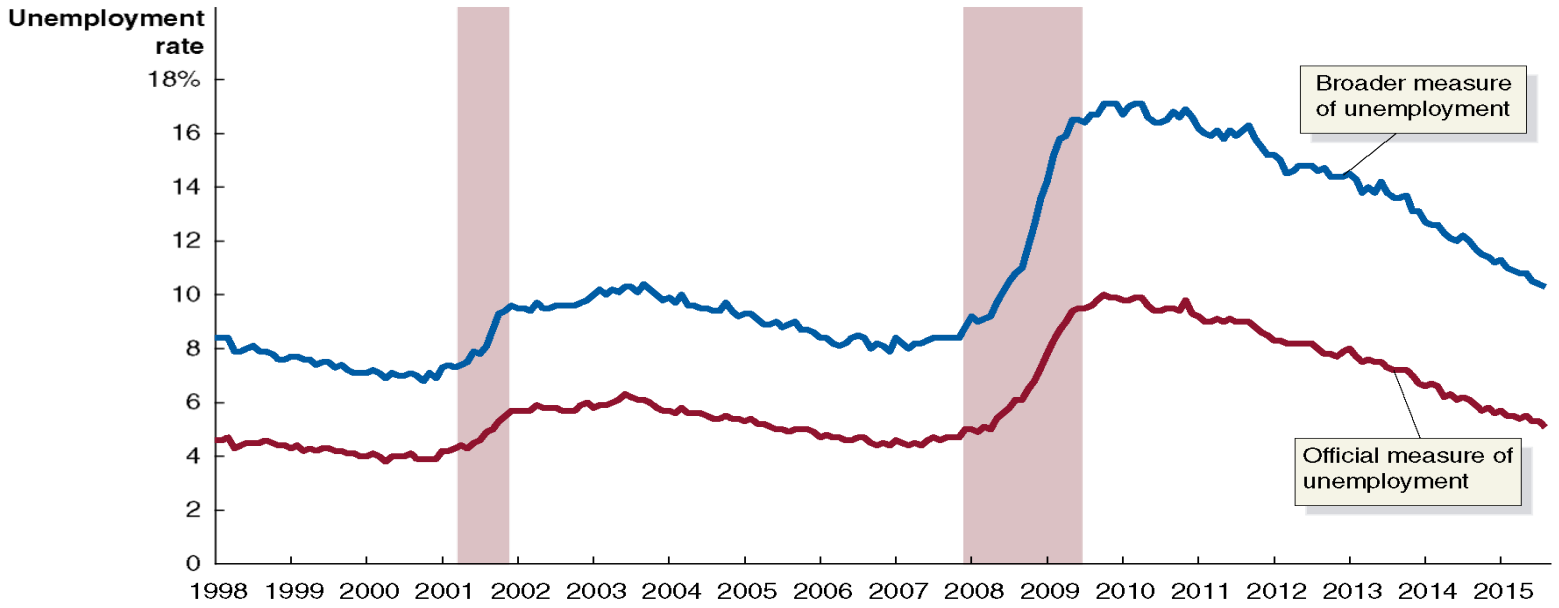


Problems with Measuring the Unemployment Rate

- The unemployment rate measured by the BLS is not a perfect measure of joblessness. Why?
- It may *understate* unemployment:
  - Distinguishing between people who are *unemployed* and *not in the labor force* requires judgment (should we exclude "discouraged workers?')
  - Only measures employment, not intensity of employment (full-time vs. part-time; some people are *underemployed*).

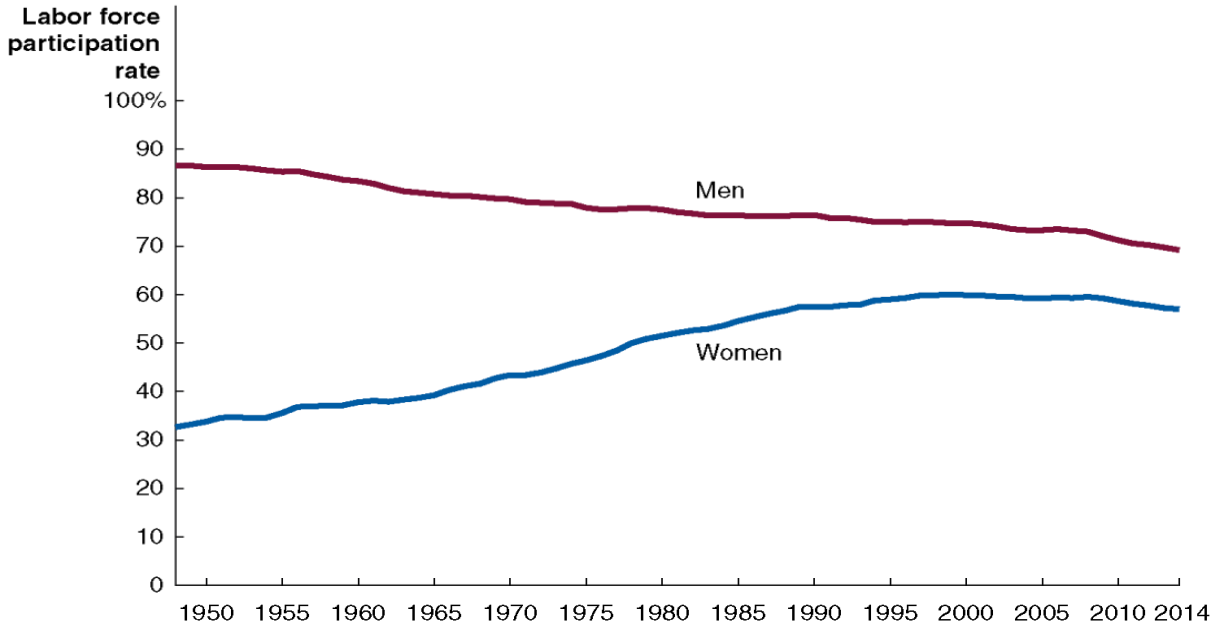
    Note: The US Department of Labor states 35-44 hours a week as a standard workweek. Anyone working less than that should be considered underemployed. This creates a problem because the underemployed are also considered as fully employed by the BLS.
- It may *overstate* unemployment:
  - People might claim falsely to be actively looking for work
  - May claim not to be working to evade taxes or keep criminal activity unnoticed

Figure 9.2 The Official Unemployment Rate and a Broad Measure of the Unemployment Rate, 1998-2015



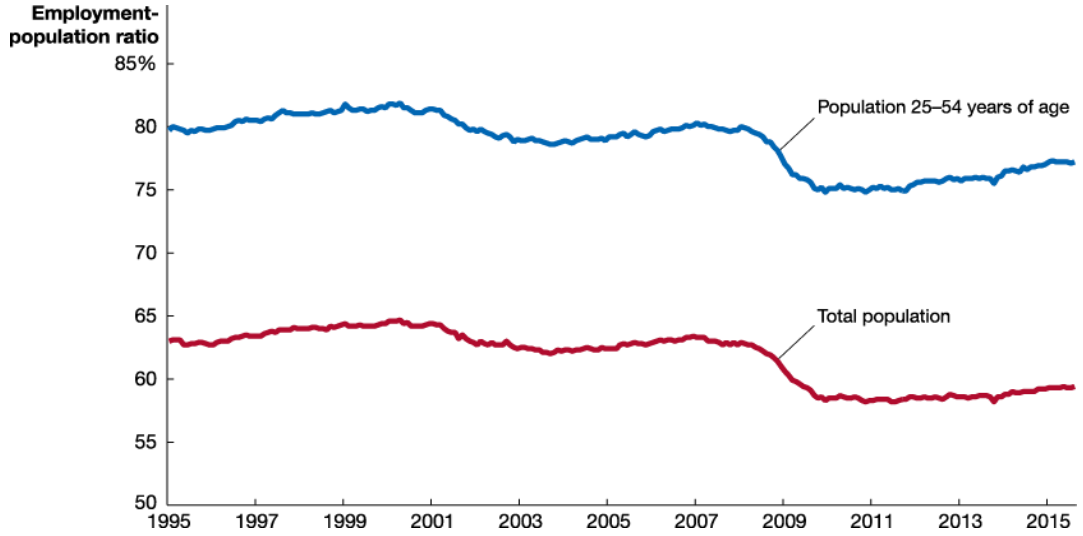
- Some people suggest that we should include discouraged workers and underemployed workers in the unemployment statistics, to create a broader measure of unemployment.
- The BLS measures this, calling it BLS series U-6.

Figure 9.3 Trends in the Labor Force: Participation Rates of Adult Men and Women since 1948



- The labor force participation rate of adult men has declined gradually since 1948…
- … but it has increased significantly for adult women, making the overall rate higher today than it was then.
- Recently, the rate for women has declined also.

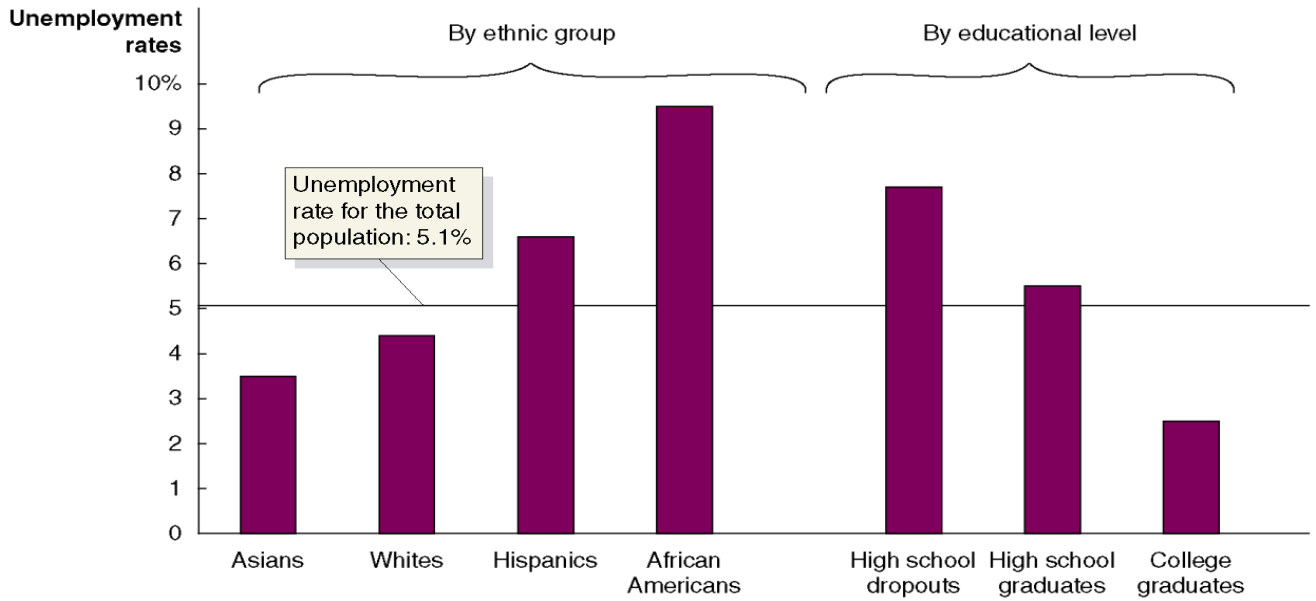
Making the Connection: Eight Million Workers Are Missing!



While the unemployment rate returned to “normal” after the 2007-2009 recession, the employment-population ratio did not. Why?

- Aging population (baby boomers reaching retirement)
- Long-term unemployment leading to skill deterioration
- Affordable Care Act making access to health care easier

Figure 9.4 Unemployment Rates in the United States, August 2015



- Unemployment rates vary by ethnic group…
- … and by education level.
- These two observations are statistically related.

How Long Are People Typically Unemployed?

- Long periods of unemployment are bad for workers, as their skills decay and they risk becoming discouraged and depressed.
- Workers, after long periods of joblessness, often become **permanently unemployed** due to loss of skills.
- During the Great Depression of the 1930s, some people were unemployed for years at a time.
- Since World War II, average lengths of unemployment have been relatively low, but that changed dramatically with the 2007-2009 recession.
- The average length of unemployment more than doubled, from 4 months to 10 months.

The Establishment Survey

- In addition to the household survey, the BLS also uses the *establishment survey*, (a.k.a. the *payroll survey*).
- This survey samples around 300,000 *establishments*, or places of employment, about their employees (those on company payroll). Disadvantages include:
- Self-employed people not surveyed (not on a company payroll)
- Newly opened firms often omitted
- Information on employment only, not unemployment
- Numbers fluctuate depending on establishments included, often requiring large frequent revisions

However, a big advantage is that the data are determined by real payrolls, not self-reporting like the household survey. Self-reported data is often inaccurate.

Comparison

Even if all surveys are truthfully and accurately answered, we do not expect the numbers to be identical between the two surveys because:

- Different groups are measured
- All surveys have measurement errors
- We get a more complete picture by considering both surveys.

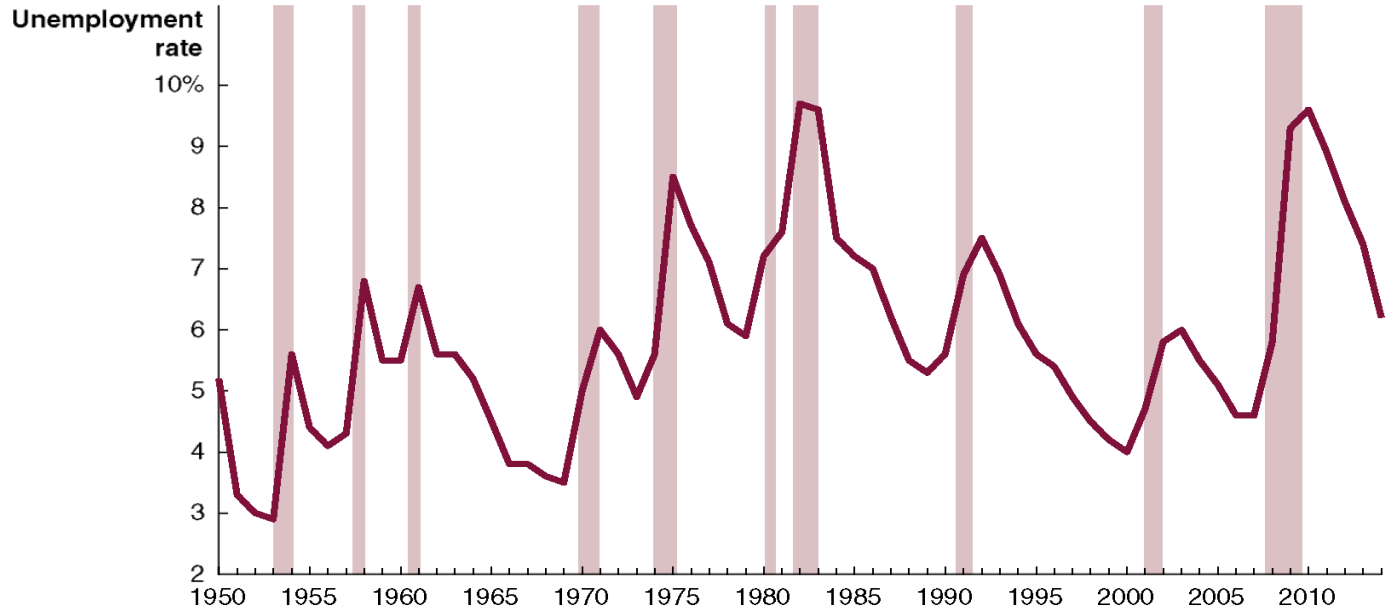
Job Creation and Job Destruction over Time

- Jobs are continually being created and destroyed in the U.S. economy.
- In 2014, about 29.1 million jobs were created, while about 26.1 million jobs were destroyed.
- This is a natural and normal process for the economy.
- The BLS reports ***net changes*** in the number of people employed and unemployed; because, this figure is so much smaller than the gross increases or decrease, it does not fully represent how dynamic the U.S. job market really is.

Types Of Unemployment

- The three types of unemployment are:
- **Frictional unemployment**: Short-term unemployment that arises from the process of matching workers with jobs.
- **Structural unemployment**: Unemployment that arises from a persistent mismatch between the skills and attributes of workers and the requirements of jobs.
- **Cyclical unemployment**: Unemployment causes by a business cycle recession.
- We will examine each in turn over the coming slides.

Figure 9.6 The Annual Unemployment Rate in the United States, 1950-2014



- Unemployment rates rise when the economy is faltering or declining and fall when the economy is doing well. But they never fall to zero.
- The *types of unemployment* can help us to understand why.

Frictional Unemployment

- **Frictional unemployment**: Short-term unemployment that arises from the process of matching workers with jobs.
- Frictional unemployment occurs mostly because of *job search*: entering or re-entering the labor force or being *between jobs*.
- It also occurs because of *seasonal unemployment*: some jobs fluctuate in availability due to seasonal demand, like ski instructor or farm work.
- To control for this, the BLS releases raw and *seasonally-adjusted* employment figures.
- Some frictional unemployment actually *increases* economic efficiency by allowing for better job matches. Why?

Structural Unemployment

- **Structural unemployment**: Unemployment that arises from a persistent mismatch between the skills and attributes of workers and the requirements of jobs. e.g. factories producing automobiles expand production and adopt a technology that would ensure more efficient production. Workers, who are unable to cope up with this technology, become unemployed and stay unemployed until they learn this new skill.
- Structural unemployment is associated with longer spells of unemployment.
- Workers who are structurally unemployed may require retraining in order to obtain “modern” jobs.

Cyclical Unemployment and the Natural Rate of Unemployment

- **Cyclical unemployment**: Unemployment caused by a business cycle recession.
- In normal recoveries after a recession, unemployment due to cyclical factors will fall.
- When all unemployment is due to frictional and structural factors, we say that the economy is at ***full employment***. This means there will always be ***some*** unemployment in the economy.
- Economists call this the **natural rate of unemployment**: The normal rate of unemployment, consisting of frictional unemployment and structural unemployment.
- The general consensus of economists is that the U.S. natural rate of unemployment is somewhere between 5 percent and 5.5 percent.

Making the Connection: How Should We Categorize Unemployment at JPMorgan Chase?

- In 2015, JPMorgan Chase announced it was laying off 5,000 employees, averaging two tellers per branch.
- These tellers were unneeded due to technological change; they are likely structurally unemployed.
- Chase also decided to exit certain lines of business, including student loans.
- Other institutions could still make student loans; these laid-off workers, until they found jobs in the other institutions, are likely to be frictionally unemployed.
- Given that the economy was expanding in 2015, it is likely that there was no cyclical unemployment.

9.3 Explaining Unemployment

- Governments often attempt to directly influence unemployment.

Example: The federal government's Trade Adjustment Assistance *program offers training to workers whose firms laid them off as a result of competition from foreign firms. This would reduce structural unemployment.*

- Other policies try to reduce frictional unemployment, for example by subsidizing new hires.

However some other government policies probably *increase* unemployment, such as

- Unemployment insurance, and
- Minimum wage laws

Unemployment Insurance

These are payments from the government aimed at sustaining a worker's livelihood during an unemployment spell. Suppose you have just lost your job. You want to find another and have two main options:

- Take a new low-paying job immediately or
- Search for a better job
- If *unemployment insurance payments* are available to you, you will probably be more likely to choose the second option.
- In the U.S., unemployment insurance payments are typically not very generous, compared with other high-income countries; and there are relatively short time limits.
- Unemployment benefits are more generous, and unemployment rates higher, in western European countries.
- *Do you think these facts are related?*

Minimum Wage Laws (MWL)

- **Minimum Wage Law:** When the government prohibits employers from paying their employees an hourly wage below a minimum.
- Federal minimum wage law was introduced in 1938: $0.25/hour.
- Today, the federal minimum wage is $7.25/hour.
- Many states and cities have higher minimum wages e.g. New York has a $15-minimum-wage. Follow this link for the MWL in Kentucky:

  https://www.minimum-wage.org/kentucky
- Studies suggest a 10 percent increase in the minimum wage reduces teenage employment by about 2 percent. Overall effect on unemployment rate is small at current levels.

Labor Unions

- Labor unions are organizations of workers that bargain with employers for higher wages and better working conditions.
- The idea behind labor-union-induced-unemployment is that as wages rise due to bargaining, cost of production of a typical firm increases. Under these circumstances, they are likely to hire fewer workers leading to rise in unemployment.
- Unions are probably not a significant cause of unemployment in the United States. While they raise the wage, only about 9 percent of private sector workers are unionized, limiting the effect that unions have on the wider economy.

Efficiency Wages

- **Efficiency wage**: An above-market wage that a firm pays to increase workers' productivity.
- Firms want to get the best performance they can out of their workers.
- Sometimes monitoring workers is difficult or costly; an alternative is to pay them a relatively high wage, making them motivated to perform well in order to keep their job.
- These above-market wages are probably another reason why unemployment exists even when cyclical unemployment is zero. Higher wages prevent firms from employing more workers in order to maintain costs.

THE END

“It is well known that unemployment benefits raise unemployment durations.” – Raj Chetty

“The minimum wage is the black teenage unemployment act. It is the guaranteed way of holding the poor, the minorities and the disenfranchised out of the mainstream is if you price their original services too high.” – Arthur Laffer