

Principles of Macroeconomics: Unemployment

Class 9

Alex Houtz

September 22, 2025

University of Notre Dame

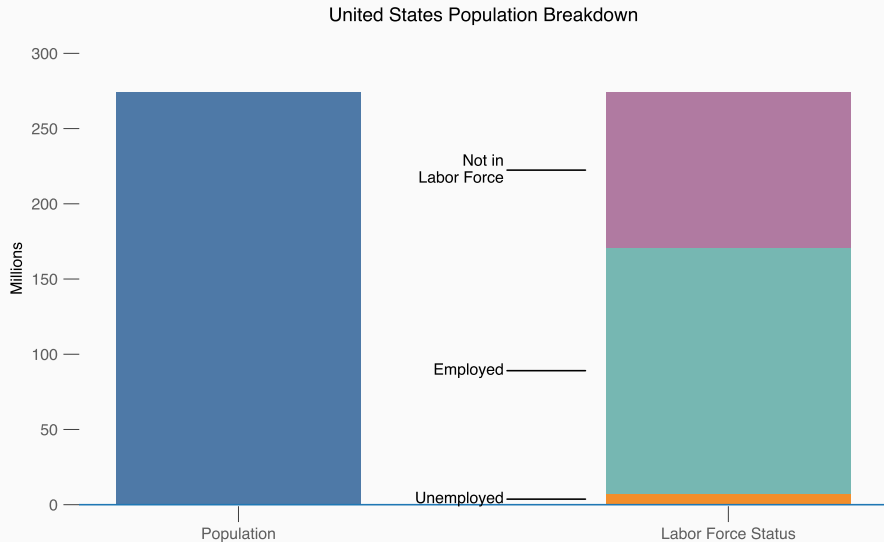
- ▶ Announcements:
 - LC 8, GH 8 due Friday at 11:59pm
- ▶ Topics:
 - Measuring the Labor Market
 - Unemployment
- ▶ Readings:
 - Chapters 8.1-8.2

Definitions to Know by the End of Class

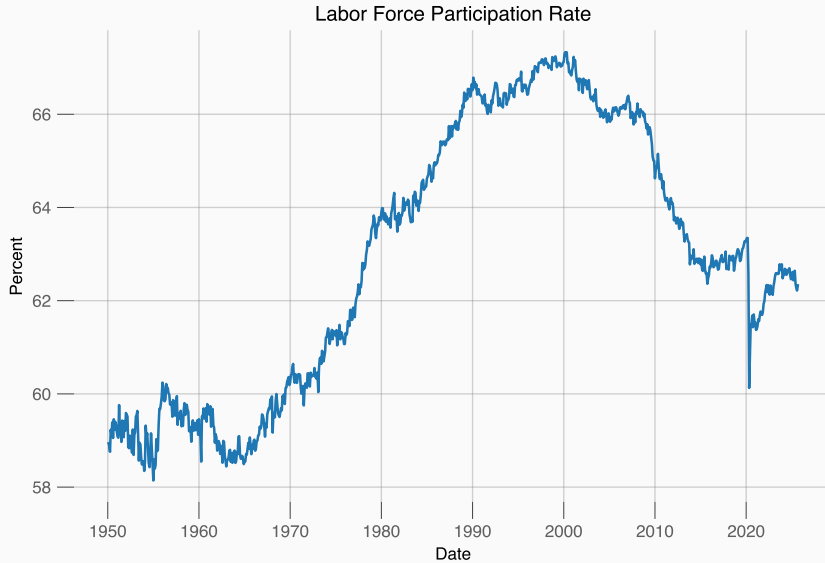
- ▶ Labor force
- ▶ Labor force participation rate
- ▶ Employment to population ratio
- ▶ Unemployment rate
 - Natural rate of unemployment
 - Frictional
 - Structural
 - Cyclical unemployment

- ▶ **Labor force** = employed + unemployed
- ▶ Unemployed \equiv persons not employed but are actively looking for work
- ▶ Who is NOT in the labor force? Retirees, stay-at-home parents, adults in school, those on Social Security Disability Insurance, active duty military
- ▶ **Labor Force Participation Rate** = $100 \times \frac{\text{Labor Force}}{\text{Population 16+}}$
 - Population 16+ is the “civilian non-institutional population” – excludes those incarcerated, in nursing homes, and active duty military

US Labor Force, August 2025



Labor Force Participation Rate



Employment and Unemployment

- ▶ The Department of Labor conducts a survey called the Current Population Survey
 - Rotates through 60,000 households – each is surveyed once per month for 4 months, excluded for 8 months, then included again for a final 4 months
 - Questions ask for information about employment and job search activity
 - Employed: must have a job
 - Unemployed: must be trying to find a job over the last month
- ▶ Then calculate the employed and unemployed ratios:

$$\text{Employment to Population Ratio} = 100 \times \frac{\text{Employed Workers}}{\text{Pop 16+}}$$

$$\text{Unemployment Rate} = 100 \times \frac{\text{Unemployed Workers}}{\text{Labor Force}}$$

CPS Definitions

Employed: *In the Current Population Survey (CPS), people are classified as employed if, during the survey reference week, they meet any of the following criteria:*

- (1) worked at least 1 hour as a paid employee (see wage and salary workers)*
- (2) worked at least 1 hour in their own business, profession, trade, or farm (see self-employed)*
- (3) were temporarily absent from their job, business, or farm, whether or not they were paid for the time off (see with a job, not at work)*
- (4) worked without pay for a minimum of 15 hours in a business or farm owned by a member of their family (see unpaid family workers)*

For criteria 1 and 2, the work must be for pay or profit; that is, the individual receives a wage or salary, profits or fees, or payment in kind (such as housing, meals, or supplies received in place of cash wages). For the self-employed, this includes those who intended to earn a profit but whose business or farm produced a loss. See the definition of self-employed for further details.

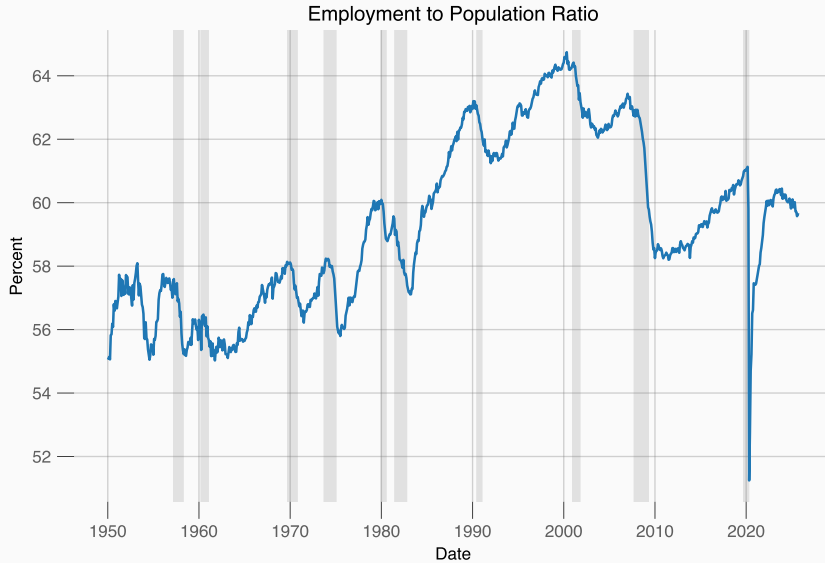
Each employed person is counted only once in aggregate employment statistics from the CPS, even if they hold more than one job.

Unemployed: *In the Current Population Survey, people are classified as unemployed if they meet all of the following criteria:*

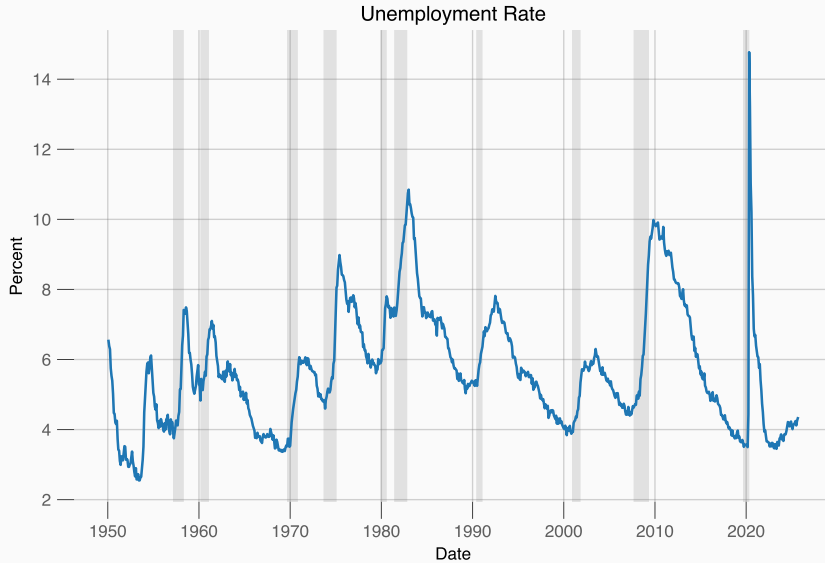
- (1) They were not employed during the survey reference week.*
- (2) They were available for work during the survey reference week, except for temporary illness.*
- (3) They made at least one specific, active effort to find a job during the 4-week period ending with the survey reference week (see active job search methods) OR they were temporarily laid off and expecting to be recalled to their job.*

People waiting to start a new job must have actively looked for a job within the last 4 weeks in order to be classified as unemployed. Otherwise, they are classified as not in the labor force.

Employment to Population Ratio



Unemployment Rate



(1) Alternative Measures of Unemployment

- Discouraged workers
- Other marginally attached workers
- Involuntary part-time workers

(2) Differences in Unemployment

- By demographic groups
- By education
- By location

Discouraged Workers

Discouraged workers are a subset of people marginally attached to the labor force, and also part of the broader group of people not in the labor force. They are not classified as unemployed because they have not actively searched for work in the last 4 weeks.

When asked, “What is the main reason you were not looking for work during the last 4 weeks,” these individuals indicate some type of discouragement about their job prospects. Their specific responses vary, but common ones include the following:

- (1) There are no jobs available, or none for which they would qualify.*
- (2) They have been unable to find work in the past.*
- (3) They lack the education, training, or experience needed for available jobs.*
- (4) Employers think that they are too young or too old, or they are subject to some other type of discrimination.*

Other Marginally Attached Workers

Other people marginally attached to the labor force are a subset of people not in the labor force. With discouraged workers, they make up the subgroup of people not in the labor force known as marginally attached to the labor force.

When asked, “What is the main reason you were not looking for work during the last 4 weeks,” these individuals gave a reason other than discouragement about their job prospects.

Common reasons for no recent job search given by people in this group include:

- (1) family responsibilities*
- (2) in school or training*
- (3) ill health or disability*
- (4) childcare problems*

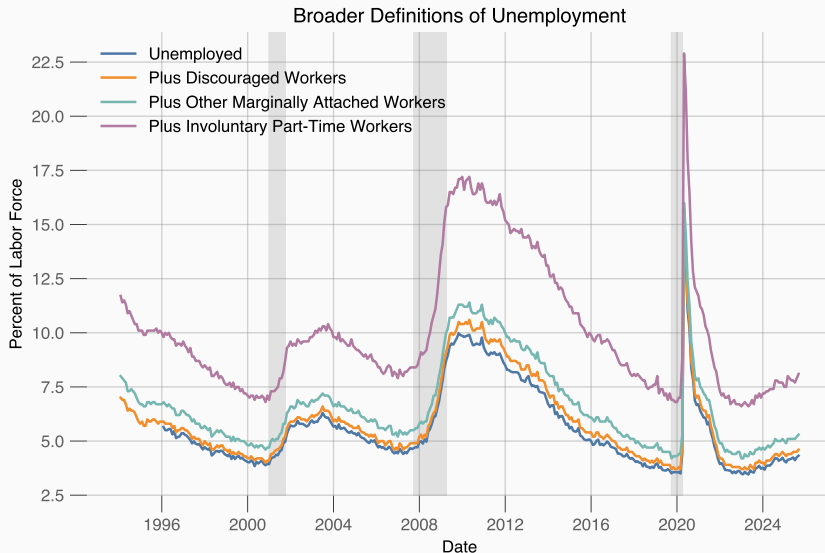
Involuntary Part-Time Workers

This category includes people who gave an economic reason when asked why they worked 1 to 34 hours during the reference week. Their usual hours of work may be either full or part time. Economic reasons include the following:

- (1) slack work*
- (2) unfavorable business conditions*
- (3) inability to find full-time work*
- (4) seasonal declines in demand*

People who usually work part time and were at work part time during the reference week must indicate that they want and are available for full-time work to be classified as part time for economic reasons.

Alternative Measures All-Together



► By demographic group – can look across:

- Age
- Sex
- Race/Ethnicity
- Marital Status
- Veteran Status
- Foreign vs. Domestic born
- Those with a disability

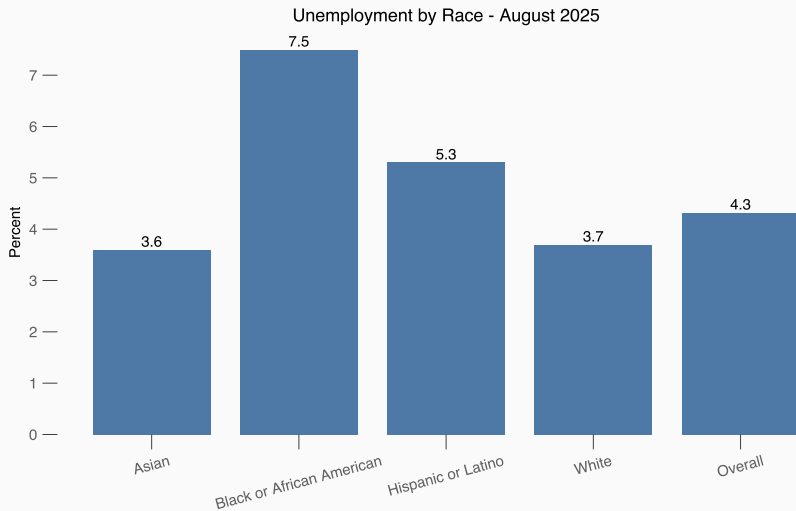
► By education

- Less than high school
- High school
- Some college
- 4 year degree or higher

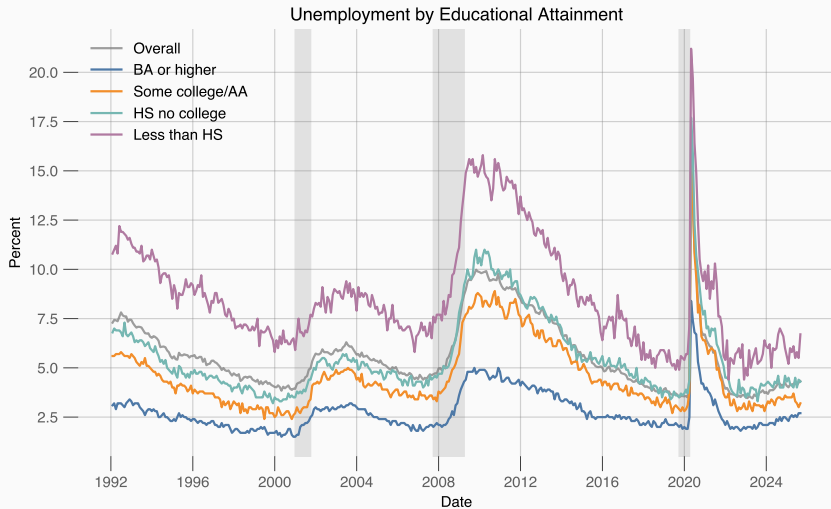
► By location

- At least at the state level, sometimes finer

By Race

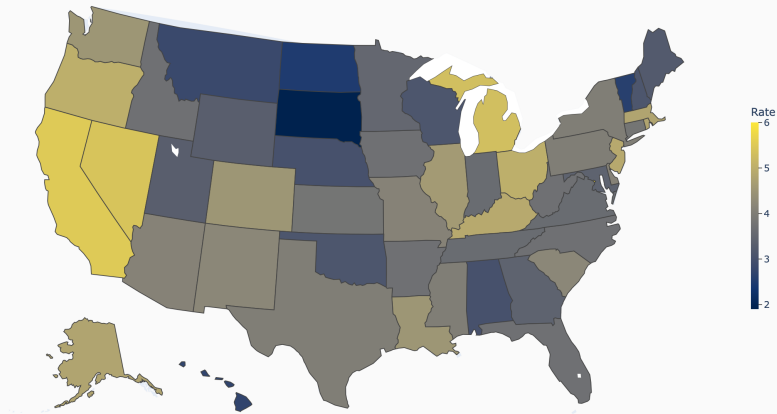


By Education



By State

Unemployment rate by state — July 2025



Determinants of Unemployment

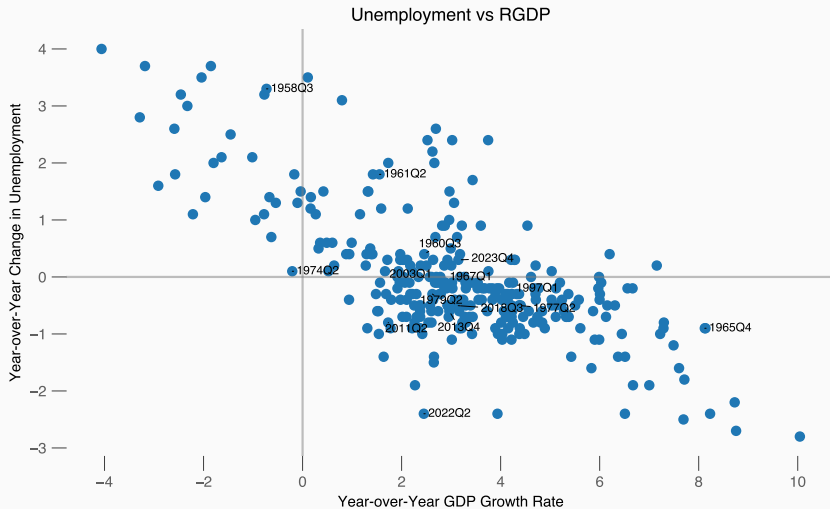
► Natural Unemployment

- Frictional
- Structural

► Cyclical Unemployment

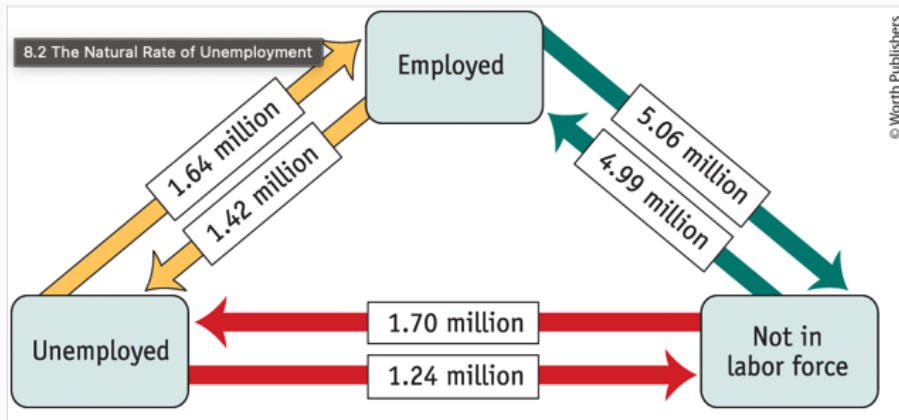
$$\text{unemployment} = \text{natural unemployment} + \text{cyclical unemployment}$$

Cyclical Unemployment



Frictional Unemployment

- ▶ Jobs are always being created and destroyed
 - If a job is destroyed → worker laid off
 - It takes time for the worker to search and find new employment
 - If a job is created → vacancy at the firm
 - It takes time for firms to screen applicants and fill openings
 - The firm could hire either a previously employed person or an unemployed person
 - Search frictions make this process slow – there are unmatched workers and jobs at any given time
- ▶ We call the unemployment generated from this process **frictional** unemployment



Structural Unemployment

- ▶ Frictional unemployment will happen, but in a good job market it should be low
- ▶ Structural unemployment is a bigger issue
 - **Structural unemployment** is a persistent surplus of labor relative to labor demand
 - Intuition: in the market for labor, there is a market clearing wage. Suppose the prevailing wage is above that wage
 - Then markets will not clear and labor supply will be greater than labor demand
 - Why might this happen?
 - Minimum wages
 - Unionized wage bargaining
 - Efficiency wages
 - Unemployment benefits
 - Skill mismatches
 - Location mismatches

Summary

- ▶ Lots of different ways to measure and think about the labor market
- ▶ Unemployment is a fact of life – some is not bad
- ▶ But we want to eliminate structural unemployment if we can
- ▶ Remember: homework due Friday night
- ▶ Read chapters 8.1-8.2