

Principles of Economics

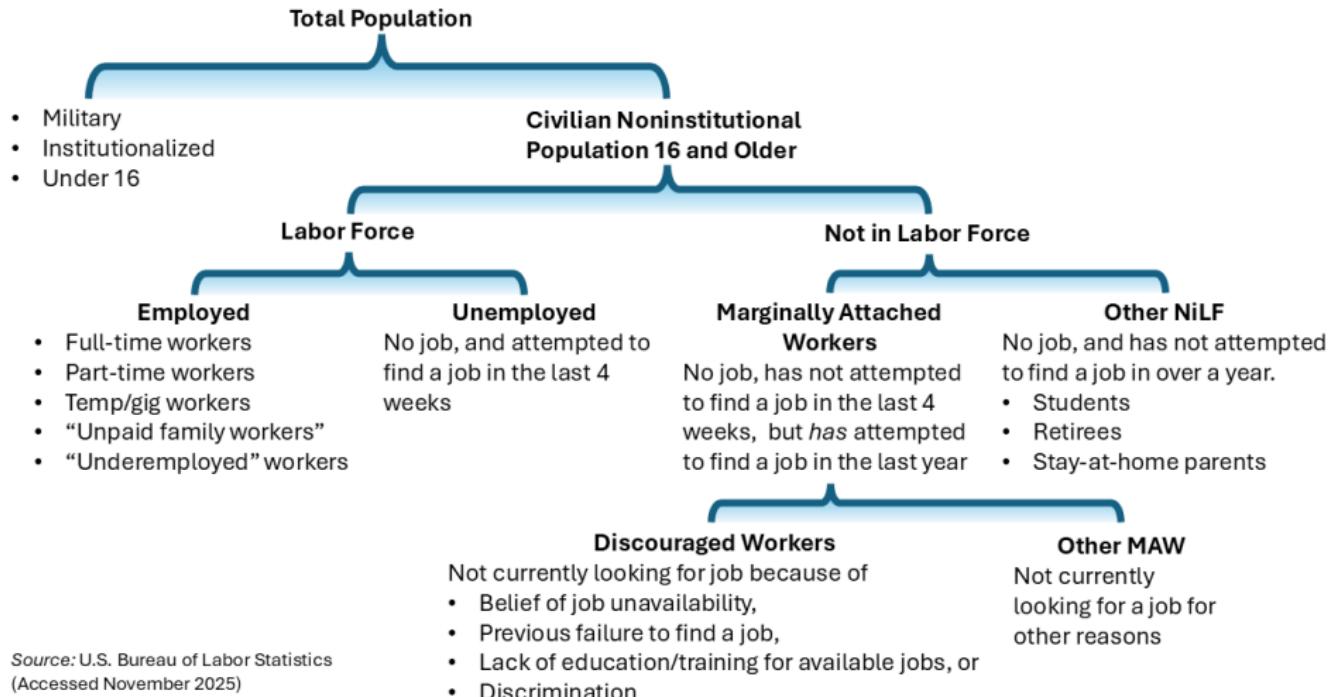
Discussion Session 11: (Un)employment

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Classifying the Population



Source: U.S. Bureau of Labor Statistics
(Accessed November 2025)

Exercise 1: Classifying Workers

For each of the following scenarios, decide if the subject is

- A Employed
- B Unemployed
- C Not in the Labor Force
- D Other

- ① Elena worked 40 hours last week as a sales manager for a beverage company.
- ② Steve lost his job when the local aircraft manufacturing plant closed down. Since then, he has been contacting other businesses in town trying to find a job.
- ③ Linda is a stay-at-home mother. She neither holds a job nor looks for one.
- ④ John was fired in September and gave up looking for work in October because jobs in his area require more experience.
- ⑤ Timmy is 17 years old and works 15 hours a week for no pay at his parents' diner.
- ⑥ Cindy is 9 years old and attends elementary school.

Exercise 1: Classifying Workers

Solution:

- ① A, Elena is *employed*.
- ② B, Steve is *unemployed*.
- ③ C, Linda is not in the *labor force* and is not *marginally attached*.
- ④ C, John is not in the *labor force*. He is *marginally attached* and *discouraged*.
- ⑤ A, Timmy is *employed*. He is an *unpaid family worker*.
- ⑥ D, Cindy is not in the *Civilian Noninstitutional Population 16 and Older* because she is under 16.

Unemployment and Labor Force Participation Rates

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

$$\text{Labor Force Participation Rate} = \frac{\text{Labor Force}}{\text{Civilian Noninstitutional Population 16 and Older}}$$

- The **Unemployment rate** gives a measure of the health of the national labor market.
- But when an unemployed person stops searching for jobs for 4 weeks, he is moved out of the labor force.
 - This causes the unemployment rate to fall, even though nobody gained employment.
- The **Labor Force Participation Rate** accounts for this by giving a measure of the size of the labor force.

Exercise 2: Unemployment and Labor Force Participation Rates

For each of the two scenarios, find the unemployment rate and the LFP rate:

- ① Suppose there are
 - 3 full-time workers,
 - 1 part-time worker,
 - 2 unemployed workers,
 - 2 soldiers,
 - 1 college student, and
 - 2 retirees.

- ② Suppose one of the unemployed workers has not looked for work in 4 weeks and becomes discouraged. Everyone else stays where they are.

Exercise 2: Unemployment and Labor Force Participation Rates

Solution:

- Unemployed = 2
 - Labor force = 3 full time + 1 part time + 2 unemployed = 6
 - Civilian Noninstitutional Population 16 and Older =
3 full time + 1 part time + 2 unemployed + 1 student + 2 retirees = 9
- ① UR = Unemployed/LF = 2/6 = 33%
- $$\text{LFPR} = \text{LF/CNP16O} = 6/9 = 67\%$$
- ② If an unemployed worker becomes discouraged, then *Unemployed* goes down by 1 and *LF* goes down by 1.
- $$\text{UR} = \text{Unemployed/LF} = 1/5 = 20\%$$
- $$\text{LFPR} = \text{LF/CNP16O} = 5/9 = 56\%$$

Types of Unemployment

- **Frictional Unemployment** is the short-term unemployment due to the time-consuming process of matching workers with employers.
 - E.g. someone who is unemployed for a short time between college and their first job.
 - Always present and not indicative of an unhealthy economy.
- **Structural Unemployment** is due to a shift in the economy that creates a difference between the skills workers have and the skills employers need.
 - E.g. the introduction of China to the WTO in 2001 caused US companies to shift manufacturing overseas, eliminating US manufacturing jobs.
 - Painful in the short-run, but typically a sign of economic or technological development.
- **Cyclical Unemployment** is due to an economy-wide economic downturn.
 - E.g. the 2008 financial crisis caused a fall in nationwide aggregate demand, which forced many firms to close or lay off workers.
 - In standard theory, this is just bad. Policy-makers will do their best to avoid cyclical unemployment.

Exercise 3: Types of Unemployment

For each of the following scenarios, decide if the unemployment is

- A Frictional
 - B Structural
 - C Cyclical
- 1 The development of the automobile causes horseshoe makers to lose their jobs.
 - 2 The Great Depression sweeps across the United States and causes mass unemployment.
 - 3 Artificial intelligence is a cheaper ECON1101 TA than a human, so the PhD students lose their stipends.
 - 4 George moves from Boston to Florida for the weather, and it takes him a few months to find a new job.
 - 5 The legalization of online sports gambling causes a contraction of the brick-and-mortar casino industry, so casino employees lose their jobs.

Exercise 3: Types of Unemployment

Solution:

- ① *B*, structural.
- ② *C*, cyclical.
- ③ *B*, structural.
- ④ *A*, frictional.
- ⑤ *B*, structural.