

Problem Sets 3

1. Measuring employment, unemployment, and labor force participation

Consider a small economy composed of six people: Sean, Yvette, Bob, Cho, Ginny, and Eric. Each person's employment status is described in the following table. Based on the criteria used by the Bureau of Labor Statistics (BLS), identify each person's status as employed, unemployed, "not in the labor force" (if not in the civilian labor force but still part of the adult population), or "not in the adult population" if not in the civilian adult population.

- 1) Sean is a 25-year-old professional tennis player. When he's not competing, he works as a coach at a local tennis club.
- 2) Yvette is a 42-year-old autoworker who was just laid off by her employer. She is trying to find any kind of job to help make ends meet.
- 3) Bob is a 78-year-old retired professor. He enjoys volunteering at the local public library.
- 4) Ginny is a 26-year-old who lost her job as a copy editor for a local newspaper. She has spent the past few weeks out of work and interviewing for other editing jobs. She is thinking about going back to grad school if her job search doesn't succeed after a few more weeks.
- 5) Eric is a 17-year-old who just graduated from high school. He is taking it easy this summer, relaxing by the pool with his friends and family, and volunteering part-time at the local nursing home.
- 6) Cho is a 10-year-old student at Southside Middle School. She babysits her younger sister and does other chores, so her parents give her an allowance of \$25 per week.
- 7) What is the labor force participation rate of this economy of six people?
- 8) What is the unemployment rate of this economy of six people?

2. The following table contains U.S. employment information from June 2019.

| Civilian Population (Persons 16 years old and over) | Employed (Persons) | Unemployed (Persons) | Discouraged (Persons) |
|--|-----------------------|-------------------------|--------------------------|
| 259,037,000 | 157,005,000 | 5,975,000 | 425,000 |

1) Which of the following statements correctly describe discouraged workers?

- They are counted as part of the labor force by the Bureau of Labor Statistics.
- They are dissatisfied with their current jobs and are considering quitting.
- They have not looked for a job in 4 weeks (or longer), but they would like a job and are available for work.
- They are employed workers who want to earn higher wages.

2) What is the Official Unemployment Rate? What is the U-4 Measure of Labor Underutilization?

The Bureau of Labor Statistics has several measures of joblessness in addition to the official unemployment rate. One alternative is the U-4 measure of labor underutilization, which is calculated as follows: $U-4 = 100 \times (\text{Unemployed} + \text{Discouraged}) / (\text{Labor Force} + \text{Discouraged})$

3) The official unemployment rate and the U-4 measure of labor underutilization are two different measures of joblessness in the economy. If the Bureau of Labor Statistics were to include discouraged workers in the official unemployment rate, what would happen to the reported unemployment rate?

3. Types of unemployment

The people described in the following are categorized as unemployed by the Bureau of Labor Statistics. Identify each person in the table as structurally, frictionally, or cyclically unemployed.

- 1) Megan is a physician who has decided to relocate to California to be closer to her family. She is currently interviewing with several prestigious hospitals in the San Francisco Bay Area.
- 2) Larry left his job as a plumber when his wife took a position in another region. The quantity of plumbing services demanded is considerably lower in the new region, in part because of high union-negotiated wages. He would like to work at the high union wage but remains unemployed due to a lack of plumbing jobs.
- 3) A recent recession has reduced the number of visitors to a local theme park. The park has had to lay off many of its employees, including Susan.
- 4) The following table shows data on frictional, cyclical, structural, and total unemployment for an economy. Is this economy currently at its natural rate of unemployment? Explain.

| Unemployment Type | Rate (Percent) |
|--------------------|----------------|
| Frictional | 3.3 |
| Cyclical | 0.0 |
| Structural | 1.0 |
| Total unemployment | 4.3 |

4. Sectoral shifts, frictional unemployment, and job searches

Suppose the world price of cotton falls substantially. What will happen to the demand for labor among cotton-producing firms in Texas? What will happen to the demand for labor among textile-producing firms in South Carolina, for which cotton is an input?

The temporary unemployment resulting from such sectoral shifts in the economy is best described as _____ unemployment (structural/frictional/cyclical). Suppose the government wants to reduce this type of unemployment. Which of the following policies would help achieve this goal?

- 1) Improving a widely used job-search website so that it matches workers to job vacancies more effectively
- 2) Extending the number of weeks for which unemployed workers are eligible for unemployment insurance benefits from the government
- 3) Establishing government-run employment agencies to connect unemployed workers to job vacancies