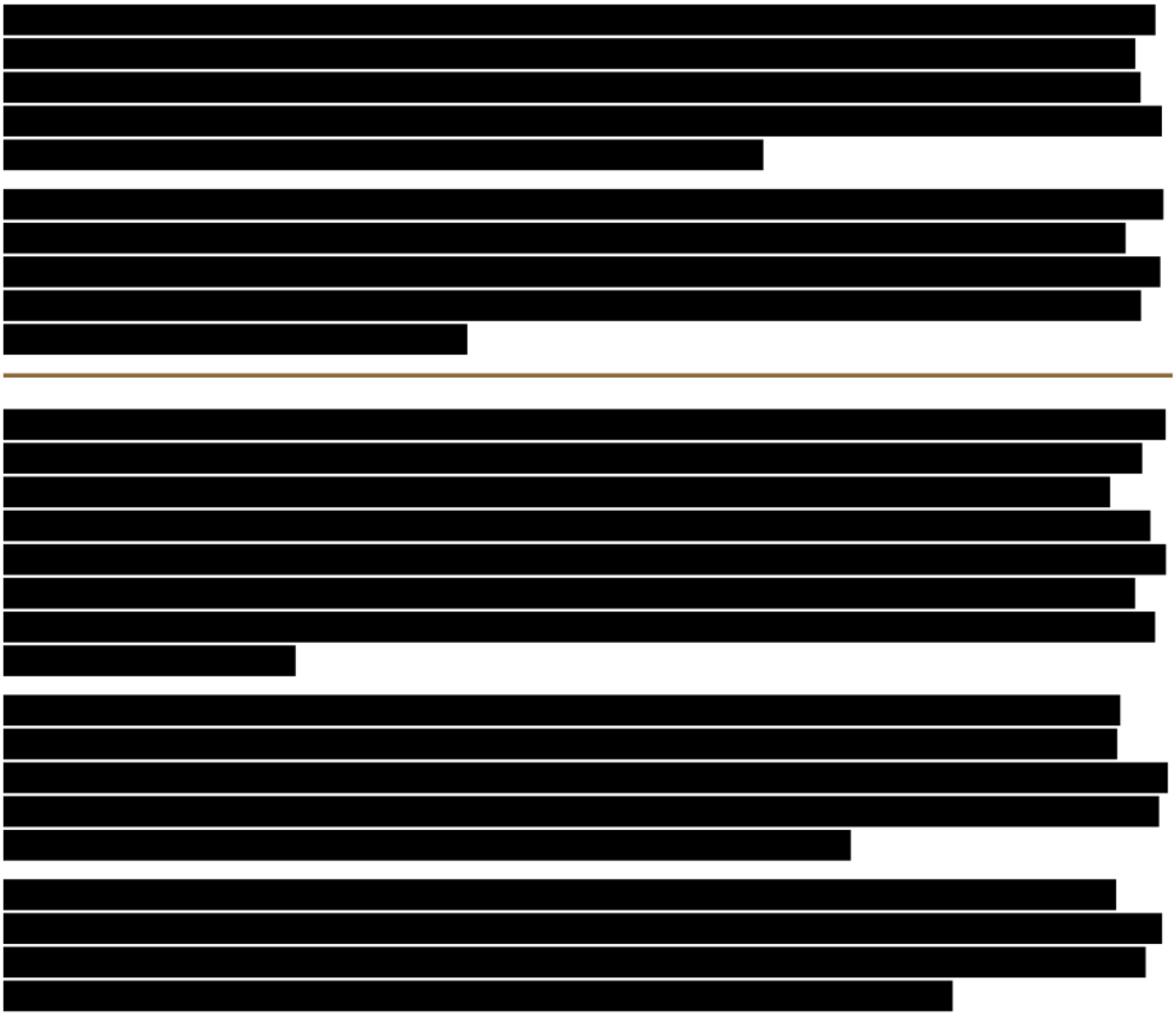

21.1 How Economists Define and Compute Unemployment Rate

LEARNING OBJECTIVES

By the end of this section, you will be able to:

- Calculate the labor force participation rate and the unemployment rate
- Explain hidden unemployment and what it means to be in or out of the labor force
- Evaluate the collection and interpretation of unemployment data

Newspaper or television reports typically describe unemployment as a percentage or a rate. A recent report might have said, for example, *from September 2021 to October 2021, the U.S. unemployment rate declined from 4.8% to 4.6%*. At a glance, the changes between the percentages may seem small. However, remember that the U.S. economy has about 162 million adults (as of the beginning of 2022) who either have jobs or are looking for them. A rise or fall of just 0.1% in the unemployment rate of 162 million potential workers translates into 160,000 people, which is roughly the total population of a city like Syracuse, New York, Brownsville, Texas, or Pasadena, California. Large rises in the unemployment rate mean large numbers of job losses. In April 2020, at the peak of the pandemic-induced recession, over 20 million people were out of work. Even with the unemployment rate at 4.2% in November 2021, about 7 million people who were looking for jobs were out of work.

[redacted]

Who's In or Out of the Labor Force?

Should we count everyone without a job as unemployed? Of course not. For example, we should not count children as unemployed. Surely, we should not count the retired as unemployed. Many full-time college students have only a part-time job, or no job at all, but it seems inappropriate to count them as suffering the pains of unemployment. Some people are not working because they are rearing children, ill, on vacation, or on parental leave.

The point is that we do not just divide the adult population into employed and unemployed. A third group exists: people who do not have a job, and for some reason—retirement, looking after children, taking a voluntary break before a new job—are not interested in having a job, either. It also includes those who do want a job but have quit looking, often due to discouragement due to their inability to find suitable employment. Economists refer to this third group of those who are not working and not looking for work as **out of the labor force** or not in the labor force.

The U.S. unemployment rate, which is based on a monthly survey carried out by the U.S. Bureau of the Census, asks a series of questions to divide the adult population into employed, unemployed, or not in the labor force. To be classified as unemployed, a person must be without a job, currently available to work, and actively looking for work in the previous four weeks. Thus, a person who does not have a job but who is not currently available to work or has not actively looked for work in the last four weeks is counted as out of the labor force.

Employed: currently working for pay

Unemployed: Out of work and actively looking for a job

Out of the labor force: Out of paid work and not actively looking for a job

Labor force: the number of employed plus the unemployed

Calculating the Unemployment Rate

Figure 21.2 shows the three-way division of the 16-and-over population. In November 2021, about 61.8% of the adult population was "in the labor force"; that is, people are either employed or without a job but looking for work. We can divide those in the labor force into the employed and the unemployed. Table 21.1 shows those values. The **unemployment rate** is not the percentage of the total adult population without jobs, but rather the percentage of adults who are in the labor force but who do not have jobs:

$$\text{Unemployment rate} = \frac{\text{Unemployed people}}{\text{Total labor force}} \times 100$$

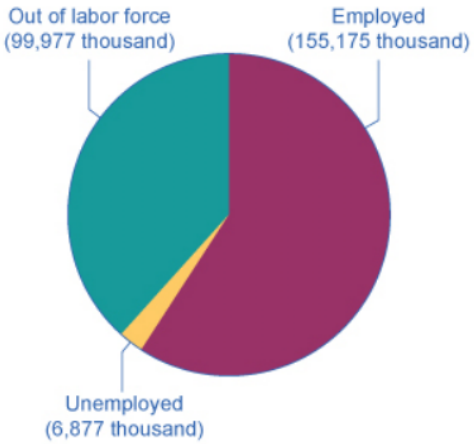

FIGURE 21.2 Employed, Unemployed, and Out of the Labor Force Distribution of Adult Population (age 16 and older), November 2021 The total adult, working-age population in November 2021 was 262.029 million. Out of this total population, 155.175 million were classified as employed, and 6.877 million were classified as unemployed. The remaining 99.977 million were classified as out of the labor force. As you will learn, however, this seemingly simple chart does not tell the whole story. As you will learn, however, this seemingly simple chart does not tell the whole story.

Total adult population over the age of 16	262.029 million
In the labor force	162.052 million (61.8%)
Employed	155.175 million
Unemployed	6.877 million
Out of the labor force	99.977 million (38.2%)

TABLE 21.1 U.S. Employment and Unemployment, November 2021
(Source: https://data.bls.gov)

In this example, we can calculate the unemployment rate as 6.877 million unemployed people divided by 162.052 million people in the labor force, which works out to a 4.2% rate of unemployment. The following Work It Out feature will walk you through the steps of this calculation.

WORK IT OUT

Calculating Labor Force Percentages

How do economists arrive at the percentages in and out of the labor force and the unemployment rate? We will use the values in Table 21.1 to illustrate the steps.

To determine the percentage in the labor force:

Step 1. Divide the number of people in the labor force (165.052 million) by the total adult (working-age) population (262.029 million).

Step 2. Multiply by 100 to obtain the percentage.

$$\text{Percentage out of the labor force} = \frac{162.052}{262.029} = 0.6184 = 61.8\%$$

To determine the percentage out of the labor force:

Step 1. Divide the number of people out of the labor force (99.977 million) by the total adult (working-age) population (262.029 million).

Step 2. Multiply by 100 to obtain the percentage.

$$\text{Percentage in the labor force} = \frac{99.977}{262.029} = 0.3815 = 38.2\%$$

To determine the unemployment rate:

Step 1. Divide the number of unemployed people (6.877 million) by the total labor force (165.052 million).

Step 2. Multiply by 100 to obtain the rate.

$$\text{Unemployment rate} = \frac{6.877}{165.052} = 0.0416 = 4.2\%$$

Hidden Unemployment

Even with the "out of the labor force" category, there are still some people who are mislabeled in the categorization of employed, unemployed, or out of the labor force. There are some people who have only part time or temporary jobs, and they are looking for full time and permanent employment that are counted as employed, although they are not employed in the way they would like or need to be. Additionally, there are individuals who are **underemployed**. This includes those who are trained or skilled for one type or level of work but are working in a lower paying job or one that does not utilize their skills. For example, we would consider an individual with a college degree in finance who is working as a sales clerk underemployed. They are, however, also counted in the employed group. All of these individuals fall under the umbrella of the term "hidden unemployment." **Discouraged workers**, those who have stopped looking for employment and, hence, are no longer counted in the unemployed also fall into this group

Labor Force Participation Rate

Another important statistic is the **labor force participation rate**. This is the percentage of adults in an economy who are either employed or who are unemployed and looking for a job. Using the data in Figure 21.2 and Table 21.1, those included in this calculation would be the 162.052 million individuals in the labor force. We calculate the rate by taking the number of people in the labor force, that is, the number employed and the number unemployed, divided by the total adult population and multiplying by 100 to get the percentage. For the data from November 2021, the labor force participation rate is 61.8%. Historically, the civilian labor force participation rate in the United States climbed beginning in the 1960s as women increasingly entered the workforce, and it peaked at just over 67% in late 1999 to early 2000. Since then, the labor force participation rate has steadily declined, slowly to about 66% in 2008, early in the Great Recession, and then more rapidly during and after that recession. The labor force then climbed slowly during the 2010s but declined again during the pandemic in March–April 2020 and remained lower than pre-pandemic levels as of early 2022.

The Establishment Payroll Survey

When the unemployment report comes out each month, the Bureau of Labor Statistics (BLS) also reports on the number of jobs created—which comes from the establishment payroll survey. The payroll survey is based on a survey of about 147,000 businesses and government agencies throughout the United States. It generates payroll employment estimates by the following criteria: all employees, average weekly hours worked, and average hourly, weekly, and overtime earnings. One of the criticisms of this survey is that it does not count the self-employed. It also does not make a distinction between new, minimum wage, part time or temporary jobs and full time jobs with "decent" pay.

How Does the U.S. Bureau of Labor Statistics Collect the U.S. Unemployment Data?

The unemployment rate announced by the U.S. Bureau of Labor Statistics on the first Friday of each month for the previous month is based on the Current Population Survey (CPS), which the Bureau has carried out every month since 1940. The Bureau takes great care to make this survey representative of the country as a whole. The country is first divided into 3,137 areas. The U.S. Bureau of the Census then selects 729 of these areas to survey. It divides the 729 areas into districts of about 300 households each, and divides each district into clusters of about four dwelling units. Every month, Census Bureau employees call about 15,000 of the four-household clusters, for a total of 60,000 households. Employees interview households for four consecutive months, then rotate them out of the survey for eight months, and then interview them again for the same four months the following year, before leaving the sample permanently.

Based on this survey, state, industry, urban and rural areas, gender, age, race or ethnicity, and level of education statistics comprise components that contribute to unemployment rates. A wide variety of other information is available, too. For example, how long have people been unemployed? Did they become unemployed because they quit, or were laid off, or their employer went out of business? Is the unemployed person the only wage earner in the family? The Current Population Survey is a treasure trove of information about employment and unemployment. If you are wondering what the difference is between the CPS and EPS, read the following Clear it Up feature.

CLEAR IT UP

What is the difference between CPS and EPS?

The United States Census Bureau conducts the Current Population Survey (CPS), which measures the percentage of the labor force that is unemployed. The Bureau of Labor Statistics' establishment payroll survey (EPS) is a payroll survey that measures the net change in jobs created for the month.

Criticisms of Measuring Unemployment

There are always complications in measuring the number of unemployed. For example, what about people who do not have jobs and would be available to work, but are discouraged by the lack of available jobs in their area and stopped looking? Such people, and their families, may be suffering the pains of unemployment. However, the survey counts them as out of the labor force because they are not actively looking for work. Other people may tell the Census Bureau that they are ready to work and looking for a job but, truly, they are not that eager to work and are not looking very hard at all. They are counted as unemployed, although they might more accurately be classified as out of the labor force. Still other people may have a job, perhaps doing something like yard work, child care, or cleaning houses, but are not reporting the income earned to the tax authorities. They may report being unemployed, when they actually are working.

Although the unemployment rate gets most of the public and media attention, economic researchers at the Bureau of Labor Statistics publish a wide array of surveys and reports that try to measure these kinds of issues and to develop a more nuanced and complete view of the labor market. It is not exactly a hot news flash that

economic statistics are imperfect. Even imperfect measures like the unemployment rate, however, can still be quite informative, when interpreted knowledgeably and sensibly.