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Making Sense of Unemployment Data

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GLOSSARY

Cyclical unemployment: Unemployment associated with recessions in the business cycle.

Discouraged worker: Someone who is not working and is not looking for work because of a belief that there are no jobs available to him or her.

Employed: People 16 years and older who have jobs.

Frictional unemployment: Unemployment that results when people are new to the job market, including recent graduates, or are transitioning from one job to another.

Labor force: The total number of workers, including both the employed and the unemployed.

Labor force participation rate: The percentage of the working-age population that is in the labor force.

Natural rate of unemployment: The rate of unemployment that does not contain cyclical unemployment.

Recession: A period of declining real income and rising unemployment; significant decline in general economic activity extending over a period of time.

Structural unemployment: Long-term joblessness caused by a mismatch in the skills held by those looking for work and the skills demanded by those seeking workers.

Underemployed: Wanting a full-time job but having only a part-time job; being overqualified for a job and receiving less pay than would be earned at a job requiring a higher skill level.

Unemployed: People at least 16 years old who are without jobs and actively seeking work.

“Unemployment is like a headache or a high temperature—unpleasant and exhausting but not carrying in itself any explanation of its cause.”

—William Henry Beveridge, *Causes and Cures of Unemployment*

Job growth has been healthy for five years.¹ However, many people still express concern over the health of the overall labor market. For example, Jim Clifton, CEO of Gallup, states that the “official unemployment rate, as reported by the U.S. Department of Labor, is extremely misleading.”² He proposes the Gallop Good Jobs rate as a better indicator of the health of the labor market. At the heart of Clifton and others’ concern is what the official unemployment rate actually measures and whether it is a reliable indicator.

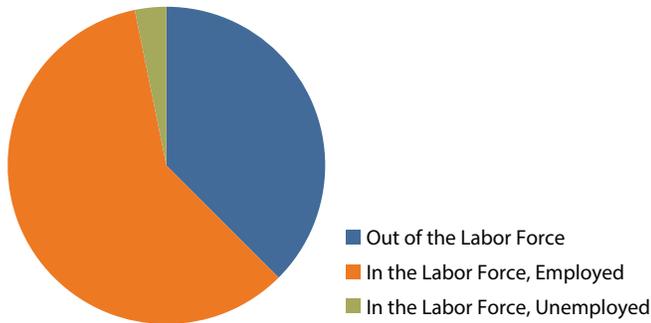
The Labor Force: Are You In or Out?

To measure the unemployment rate, the U.S. Bureau of Labor Statistics (BLS) surveys 60,000 households—about 110,000 individuals—which serve as a representative sample of the U.S. population. Survey respondents (16 years of age and older) answer a series of questions that classify them as either “in the **labor force**” or “not in the labor force.” Workers classified as *in* the labor force are those who are either employed or unemployed (Figure 1). The **employed** are those 16 years of age and older who have a job. Those considered employed might include the **underemployed**—people who work part-time but want a full-time job and those who are overqualified for the job they have and earn less pay than they would at a job consistent with their education and experience. The labor force also includes those who are **unemployed**—those who don’t have a job but have looked for work in the past four weeks. As of December 2015, there were 157,833,000 people in the labor force.³

Those classified as not in the labor force are not working and not looking for work. So, they are not employed and also *not* considered unemployed. For example, many full-time college students choose not to work so they can focus on their studies. Some parents choose to stay home to care for their young children. And many older adults retire because they saved and have enough financial resources and no longer have to work. In each

Figure 1

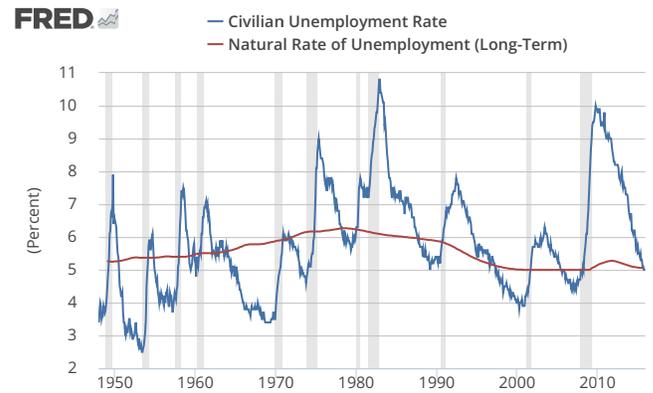
U.S. Employment Status, December 2015



NOTE: The BLS defines the labor force as persons 16 years of age and older either employed or unemployed and seeking work. BLS "Frequently Asked Questions"; http://www.bls.gov/dolfaq/bls_ques23.htm.

SOURCE: BLS Labor Force Statistics from the Current Population Survey; <http://www.bls.gov/web/empsit/cpseea01.htm>.

Figure 2



NOTE: In December 2015, the unemployment rate (blue line) was 5 percent. The 2015:Q4 estimated natural rate of unemployment (red line) was 5.05 percent. Gray bars indicate recessions as determined by the National Bureau of Economic Research (NBER).

SOURCE: BLS Civilian Unemployment Rate [UNRATE] and U.S. Congressional Budget Office Natural Rate of Unemployment (Long-Term) [NROU]. Retrieved from FRED® (Federal Reserve Economic Data), Federal Reserve Bank of St. Louis, January 8, 2016; <https://research.stlouisfed.org/fred2/graph/?g=34VS>.

case, these people have excluded themselves from the labor force because they do not wish to be employed. Even though they do not have jobs, they are *not* considered unemployed. Another group classified as not in the labor force is **discouraged workers**. These are people who do not have a job and are no longer looking for work because they think there are no jobs available to them. Such discouragement is likely to occur during a **recession** as people lose jobs and then have difficulty finding another one. They likely will not start looking for work until they see signs that the labor market has improved. Because they are neither employed nor actively seeking employment, they are not counted as part of the labor force.

To calculate the unemployment rate, the BLS divides the number of people who are unemployed by the total number of people in the labor force (and then multiplies by 100). For example, an unemployment rate of 5 percent indicates that 95 percent of those in the labor force are employed.

Economists classify unemployment into three categories: frictional, structural, and cyclical. **Frictional unemployment** results when people are temporarily unemployed, either because they are new to the job market or are searching for a better job. **Structural unemployment** is caused by a mismatch in the skills held by those looking for work and the skills demanded by those seeking

workers. For example, when an auto assembly plant is moved to another city, the skills held by the plant's former workers may no longer be in demand in the workers' current location. They may have to relocate to cities with auto assembly plants or learn new job skills. Because workers are always entering the labor force and switching jobs, a certain amount of frictional unemployment is inevitable. Likewise, changes in technology and preferences guarantee that economies also suffer from structural unemployment. As such, a certain amount of unemployment is considered *natural*. Fittingly, the **natural rate of unemployment** is the sum of frictional and structural unemployment. **Cyclical unemployment** is associated with jobs lost due to recession; it is the deviation from the natural rate of unemployment.

What Is the Unemployment Benchmark?

A "benchmark" provides a standard or point of reference to help judge the level of similar things. For example, is a baseball player with a .125 batting average a good hitter? In 2015, the batting average for professional Major League Baseball players was .254.⁴ So, professional players who batted above that .254 benchmark in 2015 were above-average hitters. Because the natural rate of

Alternative Measures of Labor Utilization

The BLS calculates six measures of unemployment to provide additional information on the health of the labor market. The official unemployment rate is the U-3 measure. Some people argue that U-3 alone does not fully communicate the health of the labor market, so the BLS has developed several alternative measures of labor market conditions and publishes them every month. Comparing the U-6 rate with the U-3 rate can provide another piece of valuable data (Figure 4). The U-6 unemployment rate includes the unemployed (as does the U-3 measure), but also includes those marginally attached (which include discouraged workers), plus those working part-time for economic reasons (and considered underemployed). The December 2015 U-6 rate was 9.9 percent, while the U-3 rate was 5.0 percent.

BLS Unemployment Measure	Description	December 2015 (%)
U-1	Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	2.1
U-2	Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	2.4
U-3	Total unemployed, as a percent of the civilian labor force (official unemployment rate)	5.0
U-4	Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	5.4
U-5	Total unemployed, plus discouraged workers, plus all other persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force	6.1
U-6	Total unemployed, plus all persons marginally attached to the labor force, plus total employed part-time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force	9.9

SOURCE: BLS. "Household Data: Table A-15. Alternative Measures of Labor Underutilization." Last modified date: December 4, 2015; <http://www.bls.gov/news.release/empst15.htm>.

unemployment defines "full employment," it is often used as an unemployment benchmark. The current estimate of the natural rate of unemployment is about 5 percent,⁵ and the current unemployment rate (using the U-3 measure; see the boxed insert) is also 5 percent (Figure 2). Based on these two measures, many economists suggest that labor markets are now fairly healthy. Federal Reserve Bank of St. Louis President James Bullard recently commented that "U.S. labor markets have largely normalized."⁶

Filling in the Details with Other Data

Thinking again about baseball, in assessing a baseball player, team managers likely consider statistics beyond

batting average alone. For example, considering the on-base percentage and slugging percentage in addition to batting average might provide a more complete assessment of a player's batting skills. Likewise, there are other useful indicators of the health of the labor market. The **labor force participation rate** measures the labor force as a percentage of the civilian noninstitutional population.⁷ Labor force participation rose from 58.1 percent in 1954 to a high of 67.3 percent in 2000 and then started a downward trend (Figure 3). The labor force participation rate as of December 2015 was 62.6 percent. Economists explain that the increase and more recent decrease in the labor force participation rate are largely due to demographic changes. They attribute the increase in the labor

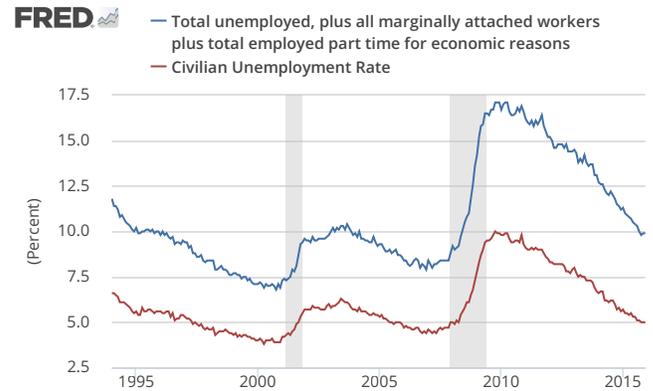
Figure 3



NOTE: The labor force participation rate rose from 58.1 percent in 1954 to a high of 67.3 percent in 2000 and then started a downward trend. In December 2015 it was 62.6 percent. Gray bars indicate recessions as determined by the National Bureau of Economic Research (NBER).

SOURCE: BLS Civilian Labor Force Participation Rate [CIVPART]. Retrieved from FRED® (Federal Reserve Economic Data), Federal Reserve Bank of St. Louis, Federal Reserve Bank of St. Louis, January 8, 2016; <https://research.stlouisfed.org/fred2/graph/?g=34VV>.

Figure 4



NOTE: In December 2015, the U-3 unemployment rate (red line) was 5.0 percent. It peaked at 10 percent after the Great Recession. In December 2015, the U-6 unemployment rate (blue line) was 9.9 percent. It peaked at 17.1 percent after the Great Recession. Gray bars indicate recessions as determined by the National Bureau of Economic Research (NBER).

SOURCE: BLS Total Unemployed, Plus All Marginally Attached Workers Plus Total Employed Part Time for Economic Reasons [U6RATE] and BLS Civilian Unemployment Rate [UNRATE]. Retrieved from FRED® (Federal Reserve Economic Data), Federal Reserve Bank of St. Louis, January 8, 2016; <https://research.stlouisfed.org/fred2/graph/?g=34GF>.

force participation rate from 1948 to 2000 largely to two historic shifts: women entering the labor force and the baby boom generation (those born between 1946 and 1964) maturing and entering the labor force. They attribute the recent decline to demographics again: Baby boomers (currently between 52 and 70 years old) leaving the labor force for retirement have reduced the labor force participation rate for both men and women.

Economists disagree, however, about how much of the change in labor force participation is due to demographics alone and how much is due to cyclical (business cycle) factors. Economists who use a more cyclical explanation perceive the decrease in the labor force participation rate as a “bad omen” for the broader economy.⁸ These economists argue that the relatively low labor force participation rate indicates that the economy is weaker than the (U-3) unemployment rate alone might indicate. For example, having a large number of discouraged workers (who are not counted as part of the labor force) would cause the labor force participation rate to fall and keep the unemployment rate lower than it would otherwise be.

Other economists find the decrease in the labor force participation rate fairly predictable based on demographics and cyclical factors to be relatively small.

James Bullard is among those who think demographics have driven most of the recent decline in labor force participation. As such, he argues that most of the decline in the unemployment rate can be understood as an improving labor market rather than workers dropping out of the labor force because they can’t find jobs.⁹

Conclusion

The standard unemployment rate (U-3) is an important measure of the health of national labor market conditions. Recent unemployment data indicate that the U.S. economy is near full employment. However, many observers doubt that the unemployment rate fully reflects the reality of underemployed and discouraged workers—both of whom are not counted as unemployed. They often refer to the downward trend in the labor market participation rate as an indication of labor market weakness. However, taken in the context of the demographic shift, the current low unemployment rate is likely an indication of a strong labor market. ■

Notes

¹ BLS All Employees: Total Nonfarm Payrolls [PAYEMS]. FRED® (Federal Reserve Economic Data), Federal Reserve Bank of St. Louis; <https://research.stlouisfed.org/fred2/series/PAYEMS/>.

² Clifton, Jim. "The Big Lie: 5.6% Unemployment." Gallup. February 3, 2015; <http://www.gallup.com/opinion/chairman/181469/big-lie-unemployment.aspx>.

³ BLS Labor Force Statistics from the Current Population Survey; <http://www.bls.gov/web/empsit/cpseea01.htm>.

⁴ Baseball-reference.com. "League Year-By-Year Batting—Averages." Accessed December 15, 2015; <http://www.baseball-reference.com/leagues/MLB/bat.shtml>.

⁵ U.S. Congressional Budget Office *Natural Rate of Unemployment (Long-Term)* [NROU]. FRED®, Federal Reserve Economic Data, Federal Reserve Bank of St. Louis; <https://research.stlouisfed.org/fred2/series/NROU/>.

⁶ Federal Reserve Bank of St. Louis. "St. Louis Fed's Bullard Discusses Five Questions on U.S. Monetary Policy." November 11, 2015; <https://www.stlouisfed.org/news-releases/2015/11/06/st-louis-feds-bullard-discusses-five-questions-on-us-monetary-policy>.

⁷ The BLS defines the civilian noninstitutional population as "people 16 years of age and older residing in the 50 states and District of Columbia, who are not inmates of institutions (e.g., penal and mental facilities, homes for the aged) and who are not on active duty in the Armed Forces." BLS "Frequently Asked Questions"; http://www.bls.gov/dolfaq/bls_ques23.htm.

⁸ For an overview of the "bad omen" and other views, see Bullard, James. "The Rise and Fall of Labor Force Participation in the United States." Federal Reserve Bank of St. Louis *Review*, First Quarter 2014, 96(1), pp. 1-12; <https://research.stlouisfed.org/publications/review/2014/q1/bullard.pdf>.

⁹ Bullard, James. "The Rise and Fall of Labor Force Participation in the U.S." Presented to the Exchequer Club, Washington, DC, February 19, 2014; https://www.stlouisfed.org/~media/Files/PDFs/Bullard/remarks/Bullard_ExchequerClub_19Feb2014_final.pdf.

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Teacher's Guide

Federal Reserve Bank of St. Louis *Page One Economics*®:
"Making Sense of Unemployment Data"

After reading the article, answer the following questions:

1. Explain why discouraged workers are not counted as unemployed.

Discouraged workers are people who do not have a job and are no longer looking for work because they think there are no jobs available to them. To be counted as unemployed, a person must not be employed but must have looked for work in the past four weeks. Because discouraged workers are not actively looking for work, they are not counted as unemployed.

2. Define underemployed workers and explain why are they not counted as unemployed.

Underemployed workers are people who work part time but want a full-time job or those who are overqualified for the job they have and earn less pay than they would at a job consistent with their education and experience. People employed cannot be counted as unemployed. Because underemployed workers are currently employed, they are not counted as unemployed.

3. Which measure of unemployment attempts to include discouraged and underemployed workers?

The U-6 measure of unemployment attempts to include the underemployed and discouraged workers.

- How much higher is this measure than the U-3 measure?

See <https://research.stlouisfed.org/useraccount/dashboard/7191> for the most recent data.

The U-6 rate is always higher than the U-3 rate. Please refer to the current data for the correct answer to this question.

4. Which type of unemployment rises and falls due to changes in the business cycle?

Cyclical unemployment

5. Explain why the natural rate of unemployment is used as a benchmark.

The natural rate of unemployment is an estimate of "full employment," or the level of unemployment when cyclical unemployment is zero. Comparing the U-3 unemployment rate with the natural rate indicates how much of the unemployment rate is due to cyclical unemployment. For example, say the U-3 unemployment rate during a recession was 8 percent and the natural rate was estimated to be 5 percent. In this case, approximately 3 percent of the U-3 unemployment rate could be attributed to the recession (cyclical unemployment).

6. How have demographics influenced the labor force participation rate?

The increase in the labor force participation rate from 1948 to 2000 is largely due to women entering the labor force and the baby boom generation (those born between 1946 and 1964) maturing and entering the labor force. The recent decline in the labor force participation rate is largely due to baby boomers leaving the labor force for retirement, which has reduced the labor force participation rate for both men and women.

For Further Discussion

The Federal Reserve Bank of St. Louis provides numerous economic education resources for teachers to use with their students. These include lesson plans, videos, online modules, interactive whiteboard lessons, and podcasts. These free resources are available at <https://www.stlouisfed.org/education>.

NEW Short, Online Courses

Use the collection of short courses described below (and available at the following link) to further explore key concepts of unemployment: <https://www.stlouisfed.org/education/unemployment-short-courses>.

Consequences of Unemployment (Estimated Completion Time: 15 minutes)

Question addressed: What are some of the consequences of unemployment, both socially and otherwise?

Education vs. Unemployment (Estimated Completion Time: 15 minutes)

Questions addressed (among others): What can be done to get people without jobs back to work? Why might education be the best way to avoid unemployment in the future?

Measuring Unemployment (Estimated Completion Time: 40 minutes)

Question addressed (among others): How do we know how many people are unemployed?

Types of Unemployment (Estimated Completion Time: 30 minutes)

Questions addressed (among others): Who are the unemployed? Why are they unemployed?

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Common Core State Standards

Grades 6-12 Literacy in History/Social Studies

- **Key Ideas and Details**

RH.11-12.1: Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.

RH.11-12.2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

- **Craft and Structure**

RH.11-12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).

Voluntary National Content Standards in Economics

Standard 19: Unemployment and Inflation

Unemployment imposes costs on individuals and the overall economy. Inflation, both expected and unexpected, also imposes costs on individuals and the overall economy. Unemployment increases during recessions and decreases during recoveries.

- **Benchmark: Grade 4**

1. Unemployment exists when adults can't find jobs.

- **Benchmarks: Grade 8**

1. To be counted as unemployed, a person must be in the labor force. The labor force consists of people age 16 and over who are employed or actively seeking work. Thus the labor force is the sum of total employment and total unemployment.

3. The unemployment rate is the percentage of the labor force that is willing and able to work, does not currently have a job, and is actively looking for work.

- **Benchmarks: Grade 12**

1. The unemployment rate is an imperfect measure of unemployment because, among other reasons, it does not: (1) include workers whose job prospects are so poor that they become discouraged from seeking jobs and leave the labor force, and (2) reflect part-time workers who are looking for full-time work.

3. Unemployment can be caused by people changing jobs, by seasonal fluctuations in demand, by changes in the skills needed by employers, or by cyclical fluctuations in the level of national spending.

4. Some people are unemployed even when the economy is said to be functioning at full employment.