



Alternative Unemployment Rates: Their Meaning and Their Measure

March 12, 2014

Who Is Unemployed?

Most people are familiar with the unemployment rate reported by the Bureau of Labor Statistics (BLS) each month. It is arguably the most closely watched indicator of economic activity with immediate ramifications for the majority of the nation's households. But who gets counted as unemployed?

Are fresh-faced graduates looking for their first job unemployed? Or only persons drawing unemployment checks? Is a person counted as unemployed if he or she has been looking for work in recent months but has spent the past month caring for a family member instead? Many people would like to work full time but can only find part-time jobs. At least they are employed, right? What about those people who have given up looking for work? Are they still counted as unemployed?

In fact, all these people are considered unemployed by one or more of the six alternative measures (shown below) that are produced every month by the BLS. However, the unemployment rate

that is most widely reported (known as U-3) counts only those who are unemployed and actively seeking work during the past month. This paper describes the alternative unemployment rates as reported by the BLS, and their significance, and briefly reviews recent data for the Third District states.

The Official Unemployment Rate (U-3)

The BLS computes the monthly unemployment rate using a "civilian noninstitutional population 16 years and over," that is, persons who are not on active duty in the armed forces nor in residential nursing homes, jails, and other institutions, and are older than 15. Of this population, people are in the labor force if they are employed (have a job) or are unemployed (have no job but actively looked for a job in the past four weeks and are available for work). People without a job who are not looking for work or are not available for work are not considered to be in the labor force.

Using these concepts, the official unemployment rate (U-3) is equal to the total number of unemployed

Alternative unemployment rates produced by the BLS include:

U-1: Persons unemployed 15 weeks or longer, *as a percent of the civilian labor force*

U-2: Job losers and persons who completed temporary jobs, *as a percent of the civilian labor force*

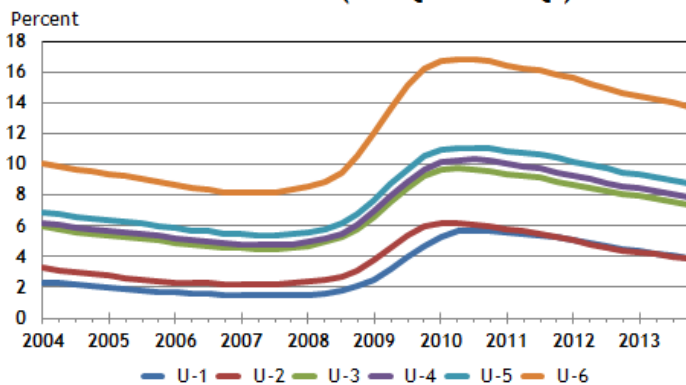
U-3: Total unemployed persons, *as a percent of the civilian labor force* [the official unemployment rate]

U-4: Total unemployed persons plus discouraged workers, *as a percent of the civilian labor force plus discouraged workers*

U-5: Total unemployed persons, plus discouraged workers, plus other "marginally attached" workers, *as a percent of the civilian labor force plus "marginally attached" workers*

U-6: Total unemployed persons, plus all "marginally attached" workers, plus all persons employed part time for economic reasons, *as a percent of the civilian labor force plus all "marginally attached" workers*

Figure 1. Alternative Measures of the Unemployment Rate: The United States (2004Q1 to 2013Q4)



Note: Data are smoothed with a four-quarter moving average.
Source: Bureau of Labor Statistics via Haver Analytics

persons as a percent of the civilian labor force. This measure has been used since 1948 and is widely regarded as the most useful general measure of unemployment.

Julius Shiskin, the former commissioner of Labor Statistics, endorsed the official measure in a *Monthly Labor Review* article (February 1976) as follows: “In a sense, this series reflects a consensus among the many different user groups; it involves no value judgments regarding a person’s family or marital status, relative need for work, or personal characteristics. It only requires that jobseeking take place. It has had widespread support from various study groups and was recommended by the Committee to Appraise Employment and Unemployment Statistics (Gordon Committee) established by President Kennedy in 1961.”

However, labor economists, including those at the BLS, have long recognized the inadequacy of using a single measure to capture the various aspects of being unemployed or underemployed. The literature that considers other concepts and specific alternative measures is extensive and has been around for decades.

In the same 1976 article, Shiskin introduced a comprehensive set of unemployment rate measures. Rates based on some of these definitions were available as far back as 1953. The BLS modified the definitions of its alternative unemployment rate measures several times between 1978 and 1994. Bregger and Haugen (1995) provided a comprehensive

summary of these modifications. Since the 1994 redesign, the BLS has used its alternative unemployment rate measures without any additional changes.

Subsets of Unemployment (U-1 and U-2)

Considering the first two of our questions about who is unemployed, we find that the official U-3 measure of unemployment includes recent graduates looking for their first job. It also counts active, available job seekers even if their unemployment benefits have run out. However, for the purpose of designing policy prescriptions to lower unemployment, it is useful to determine how many people were laid off as opposed to those who voluntarily left their jobs or school; it is also useful to determine how many people have been unemployed for an extended period of time.

The BLS recognizes some of these differences among the unemployed. Its U-1 measure is a subset of the long-term unemployed that is defined as those who have experienced 15 weeks or more of joblessness. The most recent occurrences of joblessness are captured by U-2 — the subset of total unemployed persons who just lost jobs or completed temporary jobs. Shown in Figure 1 along with the other four measures, U-1 and U-2 have moved similarly to U-3; however, those who have recently lost their jobs, as represented by U-2, have made up a greater proportion of those in U-3 since the onset of the Great Recession.¹

Traditionally, researchers and policymakers have been most concerned about persons who have been unemployed for a long time and those who recently lost their jobs involuntarily. Those who regain employment in a relatively short period of time suffer far fewer consequences than the long-term unemployed. Similarly, persons who voluntarily choose to leave a job often have a planned transition, while firings and layoffs can result in a need for new skills, a move to a new location, more difficulty in being rehired, and a greater increase in stress.

¹ National data presented in this report have been adjusted to correspond with the states’ quarterly data, which are only provided as four-quarter moving averages from the BLS. This generates much smoother-looking trends.

During past periods of high unemployment, the federal government has extended unemployment benefits for the long-term unemployed and/or created special job training programs. Job training is often targeted to those from industries and occupations that have experienced large layoffs, or involuntary job losses, to prepare workers for new careers in growing sectors.

In the current economic recovery, young persons, aged 16 to 24, are among those groups with the highest unemployment rates. Fortunately, some of those characteristics of the unemployed can be determined without creating additional measures.

In recent regional research, Dougherty (2014) searches for reasons why Delaware's unemployment rate has been higher relative to the number of job vacancies than had been the norm prior to the recession — an indication that might imply lower labor market efficiency. Dougherty finds that long-term unemployment (defined as 26 weeks or more of joblessness) is the main reason for the decrease in labor market efficiency in terms of matching workers with job vacancies.

Broader Unemployment (U-4 and U-5)

Now recall our initial questions about people who had been looking for work but have given up on the search or were caring for a family member. Since they did not look for work (or were not available due to their caregiving responsibilities) in the most recent month, they are not included in the labor force, nor are they considered unemployed. The discouraged worker is measured by the BLS as U-4; all other "marginally attached" workers are measured as U-5.

More specifically, marginally attached workers are those "not in the labor force who want and are available for work, and who have looked for a job sometime in the prior 12 months (or since the end of their last job if they held one within the past 12 months), but were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey," according to the BLS.

Discouraged workers are a subset of marginally attached workers who did not look for work over the

past four weeks "because they believed their search would be futile." According to Cohany, Polivka, and Rothgeb (1995), these discouraged workers' main reason for such pessimism was one of the following:

- they believe no work is available in their line of work or area;
- they could not find any work;
- they lack the necessary schooling, training, skills, or experience;
- employers think they are too young or too old; or
- they experienced other types of discrimination.

Whatever their reasons, these workers "represent potential labor resources, in the sense that they have recent job search activity and are currently interested in reentering the job market under certain conditions," according to Bregger and Haugen (1995).

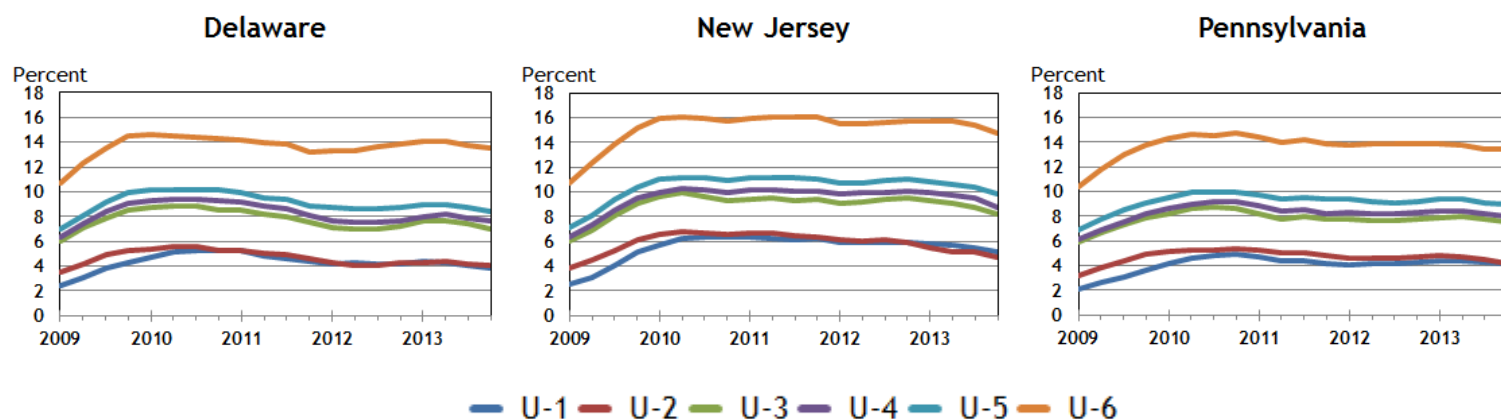
With the recent increase in discouraged workers, researchers want to know whether they will rejoin the labor force and what impact that would have. Among the potential reasons for recent declines in labor force participation rates, Fujita (2014) identified retirement as the primary cause. Discouraged workers (defined by the paper slightly differently than U-4) rose by more than 0.5 percentage point since the recession began. The research suggests that if these discouraged workers were to rejoin the labor force, U-3 would increase by 0.7 percentage point.

Underemployment (U-6)

Finally, we return to the part-time worker who *is* considered employed and is not part of U-3, but who *may* represent one common form of underemployment. If an employee is forced to work part time for economic reasons (e.g., cutbacks in hours due to low demand or lack of full-time opportunities) rather than for noneconomic reasons (e.g., personal choice), then they are classified as an "involuntary part-time worker," rather than a voluntary part-time worker.

The BLS adds all involuntary part-time workers to the number of unemployed in U-5 to calculate U-6 — generating its most inclusive (and highest) measure of the unemployment rate. From January 1994 to the beginning of the Great Recession, U-6 averaged 2.9

**Figure 2. Alternative Measures of the Unemployment Rate:
Third District States (2009Q1 to 2013Q4)**



Note: Data are smoothed with a four-quarter moving average.

Source: Bureau of Labor Statistics via Haver Analytics

percentage points higher than U-5. Interest in the measure and other aspects of labor underutilization tended “to become more popular during times of recession,” according to Haugen (2009). This interest has been reinforced, as the gap between U-6 and U-5 has averaged 5.1 percentage points since the onset of the Great Recession.

Other aspects of underemployment that the U-6 measure does not capture include workers in jobs for which they are overqualified and hidden unemployment (i.e., semi-idle workers in businesses that are overstaffed). At this current stage of the business cycle, overqualified workers are a greater concern, while most businesses report being understaffed, rather than overstaffed.

State Rates Available Since 2003

Alternative unemployment rates are available for all 50 states from the BLS website – dating back to 2003. Figure 2 depicts these alternative unemployment rates for the Third District states – Delaware, New Jersey, and Pennsylvania – between the first quarter

of 2009 through the fourth quarter of 2013. Overall, these three states show similar patterns in their trends, with wider gaps between U-5 and U-6 since the recession – reflecting a rise of involuntary part-time workers.

In the latest release, all six measures for all three states declined between the third quarter and the fourth quarter except U-6 in Pennsylvania, which remained the same. The four-quarter average U-3 rates for the fourth quarter of 2013:

- fell to 7.0 percent from 7.4 percent in Delaware;
- fell to 8.2 percent from 8.8 percent in New Jersey;
- fell to 7.5 percent from 7.8 percent in Pennsylvania; and
- fell to 7.4 percent from 7.6 percent in the nation.

U-6 rates for the fourth quarter of 2013:

- fell to 13.5 percent from 13.7 percent in Delaware;
- fell to 14.7 percent from 15.4 percent in New Jersey;
- remained at 13.4 percent in Pennsylvania; and
- fell to 13.8 percent from 14.1 percent in the nation.

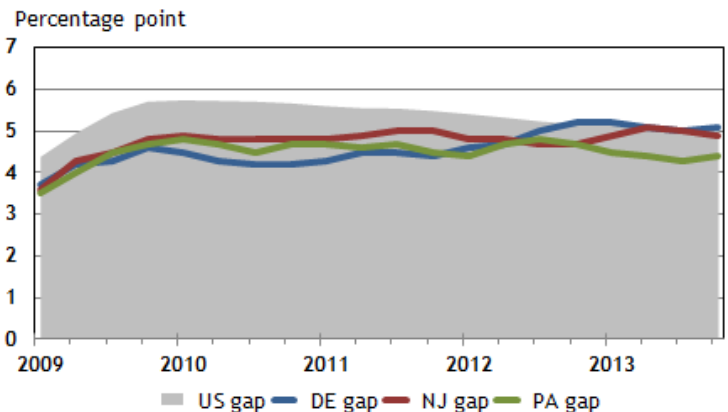
A direct comparison of the gaps between U-5 and U-6 among the three states and the nation is depicted in Figure 3. The already large gap representing states' involuntary part-time workers rose further during 2012 for Delaware and New Jersey, eliminating any significant differences with the nation's gap.

Summary

The official unemployment rate has been in use since 1948, while a set of alternative unemployment measures have been in place since 1976 and have remained unchanged since 1994. Similar rates were added for the 50 states, with data dating back to 2003. However, many misperceptions remain about the "true" unemployment rate.

Economists know that there is no one "true" unemployment rate; rather, there are valid alternative measures of unemployment that capture important concepts of labor force participation, including long-term unemployment, marginal attachment to the labor force, discouraged workers, and various forms of underemployment.

Figure 3. Gap Between U-5 and U-6 for US, DE, NJ, and PA (2009Q1 to 2013Q4)



Note: Data are smoothed with a four-quarter moving average.
Source: Bureau of Labor Statistics via Haver Analytics

With measures of these alternative unemployment rates in hand, economists can conduct more robust research on related labor force issues, policymakers can develop more appropriate prescriptive solutions, and the public should be better informed.

References and Suggested Reading

Bregger, J.E. and S.E. Haugen, "BLS Introduces New Range of Alternative Unemployment Measures," *Monthly Labor Review*, (October 1995), pp. 19-26.

Cohany, S.R., A.E. Polivka, and J.M. Rothgeb, "Revisions in the Current Population Survey Effective January 1994," *Employment and Earnings*, (February 1994), pp. 13-37.

Dougherty, T., "Disaggregation of the Beveridge Curve: The Skills Gap and the Duration of Unemployment," Office of Occupational and Labor Market Information, Delaware Department of Labor, February 2014.

Fujita, Shigeru, "On the Causes of Declines in the Labor Force Participation Rate," *Federal Reserve Bank of Philadelphia Research Rap – Special Report*, February 6, 2014.

Haugen, S.E., "Measures of Labor Underutilization from the Current Population Survey," BLS Working Paper 424, March 2009.

Shiskin, J., "Employment and Unemployment: The Doughnut or Hole?" *Monthly Labor Review*, (February 1976), pp. 3-10.

Federal Reserve Bank of Philadelphia Research Department

Contacts:

Paul R. Flora
**Research & Policy Support Manager/
Senior Economic Analyst**
Phone: 215-574-6649
paul.flora@phil.frb.org

Tosmai Puenpatom
Senior Economic Analyst
Phone: 215-574-3852
tosmai.puenpatom@phil.frb.org

Elif Sen
Economic Analyst
Phone: 215-574-6424
elif.sen@phil.frb.org

Mike Trebing
Senior Economic Analyst
Phone: 215-574-6426
mike.trebing@phil.frb.org

<http://www.philadelphiafed.org/research-and-data/regional-economy/>
