

# Issues in Labor Statistics

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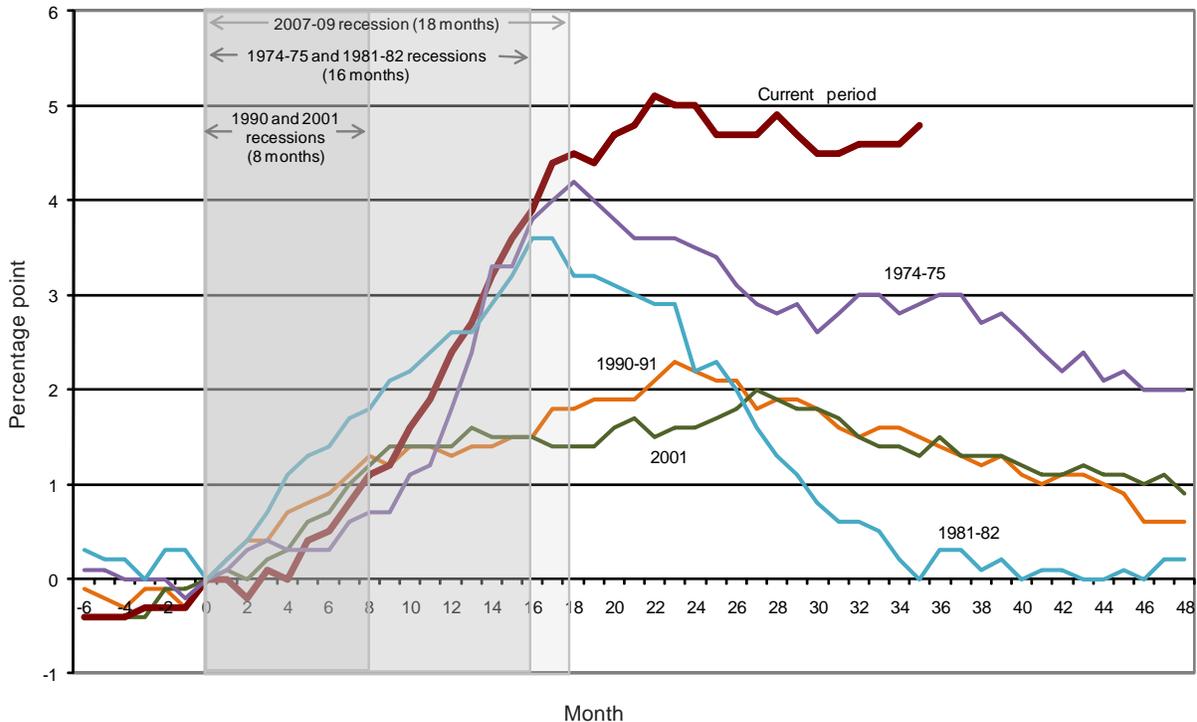
## Sizing up the 2007–09 recession: comparing two key labor market indicators with earlier downturns

The job market weakened dramatically during the recent recession.<sup>1</sup> Two of the most commonly used gauges of labor market performance are the unemployment rate (the proportion of the labor force that is unemployed) and the employment-population ratio (the proportion of the civilian noninstitutional population that is employed).<sup>2</sup> Graphically comparing the changes in these measures across past downturns highlights the severity of the recent recession in the labor market. The unemployment rate increased

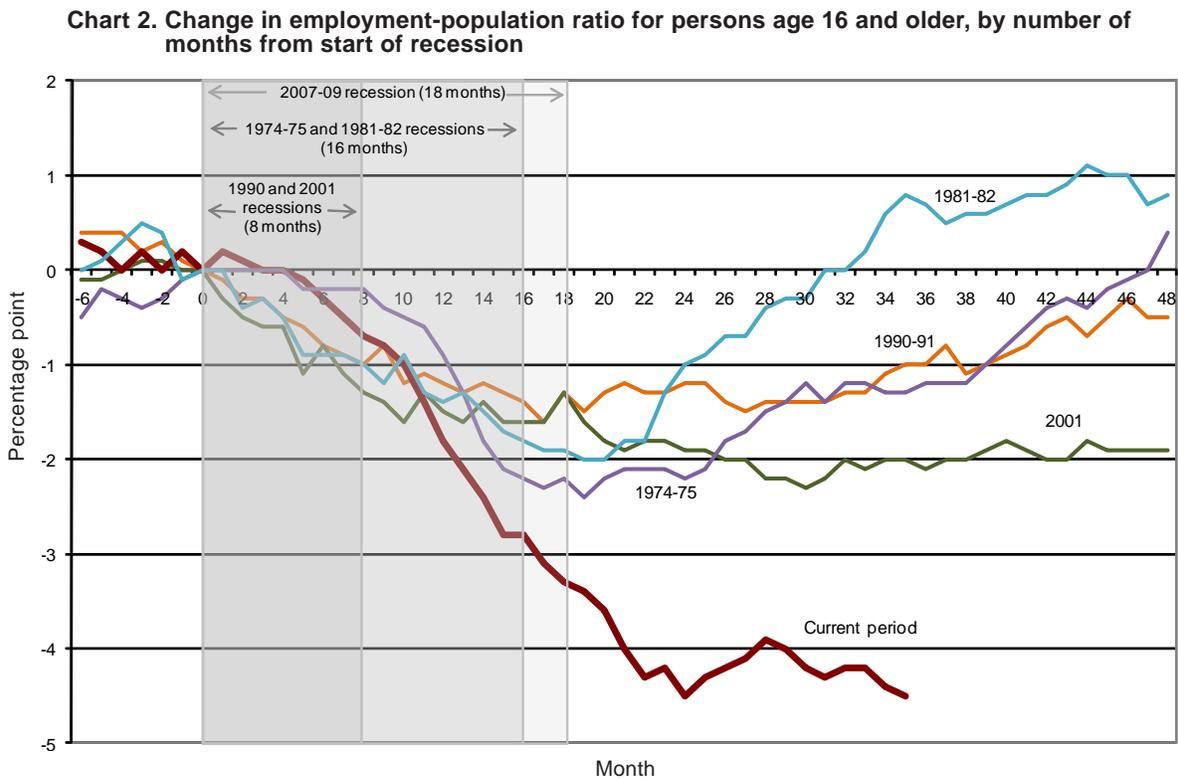
more sharply and the employment-population ratio decreased more precipitously during the 2007-09 recession than in any of the other post WWII recessions. In the first 17 months after the cyclical trough in June 2009, both measures have been relatively slow to recover. (See charts 1 and 2.) The deep recessions that occurred in the early 1980s and the mid-1970s may provide better periods for comparison with the recent recession in terms of length and magnitude than the relatively mild recessions of 2001 and 1990–91; however, the latter two recessions may provide better insights into the nature of recent post-recession recoveries.<sup>3</sup>

The unemployment rate rose significantly in each of the last five recessions, but the most recent recession stands out as having a particularly sharp increase in

**Chart 1. Change in the unemployment rate for persons age 16 and older, by number of months from start of recession**



NOTE: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).



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the rate. At the trough of the recent recession in June 2009, the unemployment rate was 9.5 percent, 4.5 percentage points higher than at the start of the recession. The rate reached 10.1 percent in October 2009, 4 months after the trough, before declining at the start of 2010. By November 2010, the unemployment rate had not shown much net improvement, standing at 9.8 percent. The largest increase in the unemployment rate in the 1981–82 recession was 3.6 percentage points (to 10.8 percent); for the 1974–75 recession, 4.2 percentage points (to 9.0 percent). Jobless rate increases in the 2001 and 1990–91 recessions were of much smaller magnitudes. (See table 1 and chart 1.)

The 2007–09 recession, the deep recessions in the early 1980s and the mid 1970s, and the less se-

vere recessions of 2001 and 1990–91, appear to follow similar trends early on in each downturn. (See chart 1.) For the first 8 months of all five recessions, the unemployment rate followed a similar upward trend, increasing by about 1 percentage point. During the 2007–09 recession and the two long recessions of the 1970s and 1980s, the unemployment rate increased by an additional 3 percentage points or so during the next 8 months of the downturn. However, after 16 months, the similarity disappears as the unemployment rate in the 2007–09 recession continued to trend upward for several months. By contrast, once the 1981–82 and 1974–75 recessions ended, the unemployment rate peaked shortly thereafter and then began to trend down. The unemployment rate at the start of the 1981–82 recession was 7.2 percent; it de-

**Table 1. Change in unemployment rate from start of recession to post-recession peak, by sex, selected recessions**

Seasonally adjusted

Recession period and sex <sup>1</sup>	Length of recession (in months)	Number of months from start of recession to series peak	Unemployment rate at start of recession	Unemployment rate at end of recession	Month of peak unemployment rate	Peak unemployment rate	Change in unemployment rate from start to peak
<b>Total</b>							
Recession period							
Nov. 1973–Mar. 1975	16	18	4.8	8.6	May. 1975	9.0	4.2
July 1981–Nov. 1982	16	17	7.2	10.8	Dec. 1982	10.8	3.6
July 1990–Mar. 1991	8	23	5.5	6.8	Jun. 1992	7.8	2.3
Mar. 2001–Nov. 2001	8	27	4.3	5.5	Jun. 2003	6.3	2.0
Dec. 2007–June 2009	18	22	5.0	9.5	Oct. 2009	10.1	5.1
<b>Men</b>							
Recession period <sup>1</sup>							
Nov. 1973–Mar. 1975	16	18	4.1	7.9	May. 1975	8.4	4.3
July 1981–Nov. 1982	16	17	6.9	11.1	Dec. 1982	11.2	4.3
July 1990–Mar. 1991	8	23	5.6	7.2	Jun. 1992	8.3	2.7
Mar. 2001–Nov. 2001	8	27	4.3	5.7	Jun. 2003	6.7	2.4
Dec. 2007–June 2009	18	22	5.1	10.6	Oct. 2009	11.4	6.3
<b>Women</b>							
Recession period <sup>1</sup>							
Nov. 1973–Mar. 1975	16	18	6.0	9.6	May. 1975	9.8	3.8
July 1981–Nov. 1982	16	17	7.7	10.2	Dec. 1982	10.4	2.7
July 1990–Mar. 1991	8	24	5.4	6.3	Jul. 2001	7.3	1.9
Mar. 2001–Nov. 2001	8	27	4.2	5.4	Jun. 2003	5.9	1.7
Dec. 2007–June 2009	18	29	4.9	8.3	May. 2010	8.8	3.9

<sup>1</sup> The dates and length of recessions are determined by the National Bureau of Economic Research (NBER), generally recognized as the official arbiter of recessions in the United States.

clined to that pre-recession level 19 months after the recession ended. The recovery after the 1974–75 recession was somewhat different. Although the unemployment rate declined by about 3 percentage points from its peak by the late 1970s, an unemployment rate equal to that at the start of the recession—4.8 percent—was not achieved before the next recession began.

In the milder 2001 and 1990–91 recessions—

which each lasted 8 months—the unemployment rate continued to rise for a year or more after the recessions ended. For several years after the 1990–91 and 2001 recessions, the rate remained between 1 and 2 percentage points higher than when the recessions began. In terms of recovery, an unemployment rate equal to that at the beginning of the 1990–91 recession was not reached until December 1994. In the recovery period following the 2001 recession, the job-

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**Table 2. Change in employment-population ratio from start of the recession to post-recession trough, by sex, selected recessions**

Seasonally adjusted

Recession period and sex <sup>1</sup>	Length of recession (in months)	Number of months from start of recession to series trough	Employment-population ratio at start of recession	Employment-population ratio at end of Recession	Month of employment-population ratio trough	Trough of employment-population ratio	Change in employment-population ratio from start to trough
<b>Total</b>							
Recession period							
Nov. 1973–Mar. 1975	16	19	58.2	56.0	Jun. 1975	55.8	–2.4
July 1981–Nov. 1982	16	20	59.1	57.3	Mar. 1983	57.1	–2.0
July 1990–Mar. 1991	8	17	62.8	61.8	Dec. 1991	61.2	–1.6
Mar. 2001–Nov. 2001	8	30	64.3	63.0	Sep. 2003	62.0	–2.3
Dec. 2007–June 2009	18	24	62.7	59.4	Dec. 2009	58.2	–4.5
<b>Men</b>							
Recession period <sup>1</sup>							
Nov. 1973–Mar. 1975	16	19	75.8	71.9	Jun. 1975	71.3	–4.5
July 1981–Nov. 1982	16	20	71.5	68.2	Mar. 1983	67.8	–3.7
July 1990–Mar. 1991	8	19	72.1	70.6	Feb. 1992	69.6	–2.5
Mar. 2001–Nov. 2001	8	29	71.4	70.0	Aug. 2003	68.6	–2.8
Dec. 2007–June 2009	18	24	69.3	64.6	Dec. 2009	63.2	–6.1
<b>Women</b>							
Recession period <sup>1</sup>							
Nov. 1973–Mar. 1975	16	16	42.6	41.7	Mar. 1975	41.7	–0.9
July 1981–Nov. 1982	16	22	48.1	47.5	May. 1982	47.5	–0.6
July 1990–Mar. 1991	8	17	54.3	53.7	Dec. 1991	53.5	–0.8
Mar. 2001–Nov. 2001	8	34	57.7	56.6	Jan. 2003	55.7	–2.0
Dec. 2007–June 2009	18	31	56.5	54.5	Oct. 2010	53.3	–3.2

<sup>1</sup> The dates and length of recessions are determined by the National Bureau of Economic Research (NBER), generally recognized as the official arbiter of recessions in the United States

less rate had not declined to the pre-recession level before the 2007–09 recession began.

The employment-population ratio is another useful measure for evaluating labor market conditions, as it provides a somewhat different perspective than the unemployment rate. The labor force—the denominator used in the calculation of the unemployment rate—may expand or contract in response to changes in the pace of economic activity. In contrast, the civilian noninstitutional population, the denominator for the employment population ratio, tends to

grow regardless of economic conditions.<sup>4</sup> The employment-population ratio typically decreases during recessions and for the 2007–09 recession, the decline was especially severe. At the start of the recession in December 2007, the employment-population ratio was 62.7 percent. When the recession ended in June 2009, the ratio was 59.4 percent, down by 3.3 percentage points. The employment-population ratio continued to decline for the second half of 2009, and had fallen by 4.5 percentage points by December 2009. The ratio then rose slightly in the first half of

2010, but had fallen back to 58.2 percent by November 2010. (See table 2 and chart 2.)

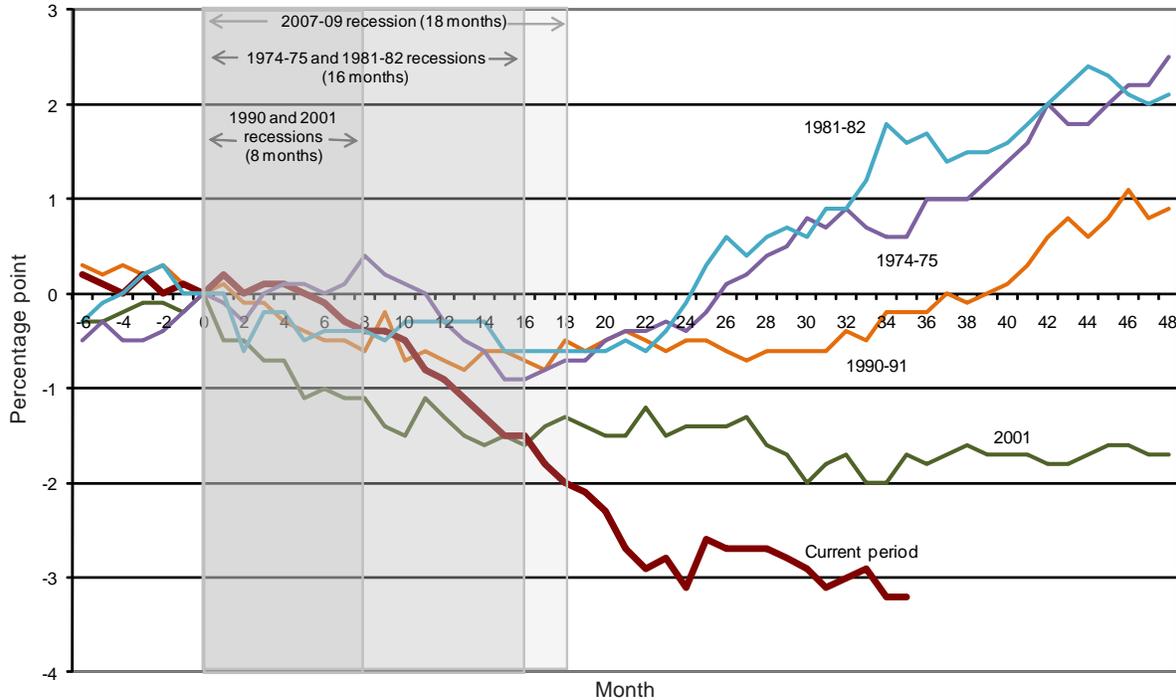
The decline in the employment-population ratio during and after the recent downturn was much larger than that of any of the other four recessions covered in this analysis. For the 1981–82 recession, the deepest decline in the employment-population ratios was 2.0 percentage points and for the 1974–75 recession, it was 2.4 percentage points. Shortly after the 1981–82 and 1974–75 recessions ended, the employment-population ratio began to trend up, more slowly after the 1974–75 recession, and more quickly after the 1981–82 downturn. For the 1981–82 recession, the employment-population ratio reached its pre-recession level 15 months after the recession ended. After the 1974–75 recession, the ratio increased, but did not reach its pre-recession level until late 1977, more than 2 years after the business cycle trough. The reductions in the employment-population ratio for the 2001 and 1990–91 recessions, at 2.3 and 1.6 percentage points, respectively, were about in line with the deepest declines for the 1970 and 1980 recessions. The periods that followed the 2001 and 1990–91 recessions were not, however, particularly strong recoveries in the labor market. After the 1990–91 recession, the ratio did not return to its pre-recession level until late 1994. As for the 2001 recession, the employment-population ratio never returned to the rate it had reached prior to the recession. (See chart 2.)

During the 2007–09 recession, men accounted for the majority of the employment loss and experienced a greater percentage point decrease in their employment-population ratio than did women. This pattern is

similar for past recessions. However, the demographics of the labor market have changed considerably since the 1970s and 1980s. During the 1970s, 1980s, and 1990s, the labor market experienced a large influx of women and the employment-population ratio of women increased significantly, peaking in April 2000 at 58.0 percent. As table 2 shows, declines in the overall employment-population ratio during the 1990–91, 1981–82, and the 1974–75 recessions were not fully shared by women. The drop in the employment-population ratio for women during these three recessions did not reach 1 percentage point. In contrast, for the 2001 and 2007–09 recessions, the employment-population ratio for women declined by 2.0 and 3.2 percentage points, respectively, and these decreases were more comparable with the declines for men than had been the case in earlier downturns.<sup>5</sup> (See table 2 and chart 3.)

In summary, the December 2007 to June 2009 recession was characterized by a larger increase in the unemployment rate and a sharper decline in the employment-population ratio than any of the other post-WWII recessions. There was a much sharper increase in the unemployment rate during the deep recessions of 1974–75, 1981–82 and 2007–09 than in the milder recessions. The 1990–91, 2001, and 2007–09 recessions, however, were characterized by elevated rates of unemployment for long after the recessions ended, while the unemployment rate declined coincident with or shortly after the troughs of the 1981–82 and 1974–75 recessions. The largest declines in the employment-population ratio for the four prior recessions covered in this analysis were about half of the decline for the 2007–09 recession.

**Chart 3. Change in employment-population ratio for women age 16 and older, by number of months from start of recession**



NOTE: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

This *Issues* paper was prepared by James M. Borbely, an economist in the Division of Labor Force Statistics, Office of Employment and Unemployment Statistics. Email: [CPSInfo@bls.gov](mailto:CPSInfo@bls.gov); Telephone: (202) 691-6378.

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**Notes**

<sup>1</sup> The National Bureau of Economic Research (NBER) is generally recognized as the official arbiter of recessions in the United States. The NBER has determined June 2009 as the trough of the recession that began in December 2007—the business cycle peak. For additional information on the NBER business cycle chronology, see <http://www.nber.org/cycles/cyclesmain.html> on the Internet. For this analysis, the NBER designated peaks and troughs are used, rather than the specific series highs and lows from the Current Population Survey.

<sup>2</sup> Both the unemployment rate and the employment-to-population ratio are calculated using Current Population Survey (CPS) data.

<sup>3</sup> The recession that began in December 2007 and ended in

June 2009 had lasted 18 months, making it be the longest post-WWII recession. Both the 2001 and 1990–91 recessions lasted 8 months, and the 1981–82 and 1974–75 recessions each lasted 16 months.

<sup>4</sup> For a discussion of the employment population ratio as a cyclical indication, see Julius Shiskin, “Employment and unemployment: the doughnut or the hole?” *Monthly Labor Review*, February 1976, pp. 3–10.

<sup>5</sup> For additional information on trends in labor force participation, see Abraham Mosisa and Steven Hipple, “Trends in Labor Force Participation in the United States,” *Monthly Labor Review*, October 2006, pp. 35–57, on the Internet at [www.bls.gov/opub/mlr/2006/10/art3full.pdf](http://www.bls.gov/opub/mlr/2006/10/art3full.pdf).