

Economic Trends

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Labor Market Behavior during and after the Great Recession: Has It Been Unusual?

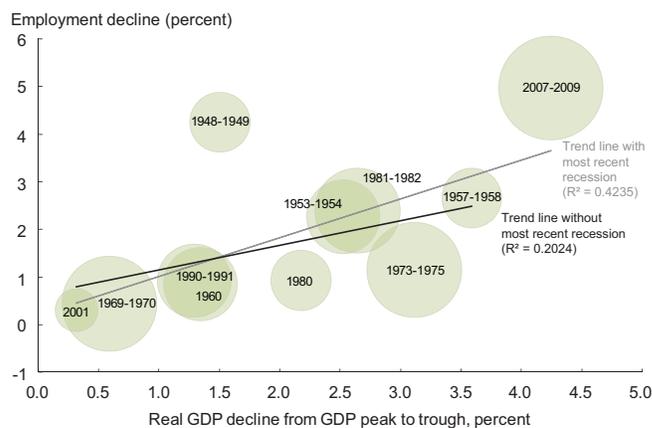
Murat Tasci and Caitlin Treanor

This summer marked the six-year anniversary of the end of the Great Recession, one of the longest economic recessions, and possibly the worst, since the Great Depression. What followed was a disappointingly feeble recovery, causing analysts to call into question the fundamental relationship between the labor market and the rest of the aggregate economy. The phrase “jobless recovery” came into heavy use.

But has the relationship between the labor market and the aggregate economy been so unusual during and after the Great Recession? To answer that question, we examine conditions in 11 different recessions and the ensuing recoveries since the late 1940s. To gauge the evolving relationship between labor markets and the aggregate economy, we use two major indicators of labor market conditions—payroll employment and the unemployment rate—and one for the aggregate economy—real (inflation-adjusted) gross domestic product (GDP).

Figure 1 shows the relationship between the decline in GDP and employment for all recessions. The size of the bubbles represents the length of the recession in quarters. As we would expect, greater losses in

Figure 1. Real GDP and Employment During the Recession



aggregate output led to a greater drop in employment. The Great Recession saw GDP fall by 4.2 percent and employment contract by 5 percent. This is the largest drop in employment and GDP during any recession since the late 1940s.

While these numbers are extraordinary in magnitude, placing the Great Recession in the uppermost corner of the chart, they are generally in line with the relationship between GDP and employment during previous recessions. The two trend lines show the linear association between employment and GDP across recessions, one with and one without the last episode.

Bearing in mind that this linear relationship relies on 11 data points and is limited in its statistical significance, one can still see in this figure two features of the Great Recession. The recession certainly elevated the average employment loss associated with a given level of contraction in GDP (the slope of the line with the last episode is steeper than the line without). But even then the Great Recession sits above the line that includes it, showing that employment losses during the Great Recession were disproportionately larger than the historical norm among all 11 episodes. If the Great Recession were on the line, its 4.2 percent decrease in GDP would have been associated with a smaller employment loss than what was observed. Given the small number of observations and the modest R2 (showing the amount of the decline in employment explained by the decline in GDP), this does not stand out as statistically significant, but it is nonetheless informative.

Figure 2 offers a similar analysis of the unemployment rate across all 11 recessionary episodes. Again, there is an upward rotation in the trend line when the Great Recession is included. We can also see that the 2007–2009 bubble sits above that trend line, indicating that, based on historical norms, the decline in GDP would have been associated with a smaller upsurge in unemployment than was observed.

Eradicating the job deficit once the recovery was underway was a painfully slow process. This was true one year into the recovery, and it remained true even four years into the recovery. Figures 3 and 4 show the average change in GDP that is associated with improvements in employment and unemployment one year into the recovery. The size of a bubble represents the drop in GDP during the preceding recession. We expect to see a similar relationship between these variables over the course of the recovery as they had during the recessions, though with the opposite sign.

Figure 2. Real GDP and Unemployment During the Recession

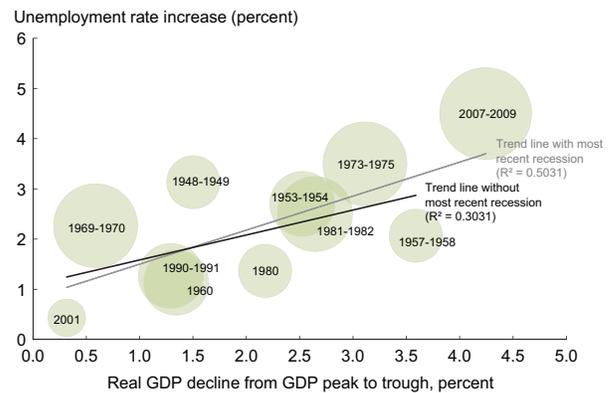
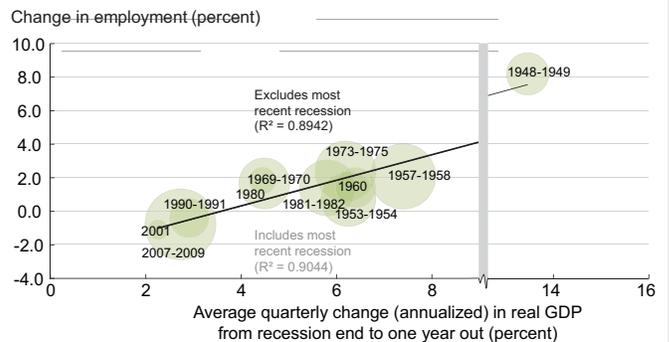


Figure 3. Recovery in Real GDP and Employment: One Year Out



In fact, we find a tighter relationship between average GDP growth and improvements in labor market measures within the first year of the recovery relative to the recessions. For instance, every episode was much closer to the trend line in figure 3 than it was in figure 1.

Another interesting observation is that average GDP growth per quarter varies a lot in the first year of the recoveries. The recovery following the 1948–1949 recession saw an average of 13.5 percent growth, whereas none of the last three recoveries averaged more than 3 percent growth. In spite of this large variation in the degree of GDP growth during recoveries, the relationship between GDP and employment did not seem to change after the last recession; that is, the trend lines did not change at all. The 2007–2009 recovery process was unusual only insofar as GDP growth was weak, falling on the left-most side of the graph along with the previous two recoveries. Note that the three weakest recoveries have all followed the most recent recessions: 1990–1991, 2001, and 2007–2009. In fact, payroll employment was still falling a year after the start of the recovery in the first two episodes.

Even though the term “jobless recovery” has been used repeatedly for all three of these episodes, figure 3 makes it clear that what makes them “jobless” is not their divergence from historical patterns as far as employment is concerned. Rather, it is the weakness of the recovery in aggregate output. Note that this weakness does not seem to be an artifact of how severe the preceding recession was. For example, the overall GDP decline, peak to trough, was 0.3 percent in 2001 and 4.2 percent in 2008–2009, but both episodes were followed by anemic recoveries: GDP grew only 2.3 percent and 2.7 percent, respectively, within the first year. We see a similar picture for unemployment in figure 4. Given that unemployment is generally considered a lagging indicator, we hardly see a major improvement within the first year of the recovery.

Figures 5 and 6 show the relationships between GDP and employment and GDP and unemployment, respectively, four years into the recovery. We exclude recoveries in which a new recession began before four years had passed, which leaves us with only 6 of our original 11 episodes. We see that the recovery following the Great Recession still stands out as having the lowest GDP growth of all the recessions over this longer period, a mere 1.9 percent per quarter on average. After four years of recovery, the previous two jobless recoveries looked much better than the Great

Figure 4. Recovery in Real GDP and Unemployment: One Year Out

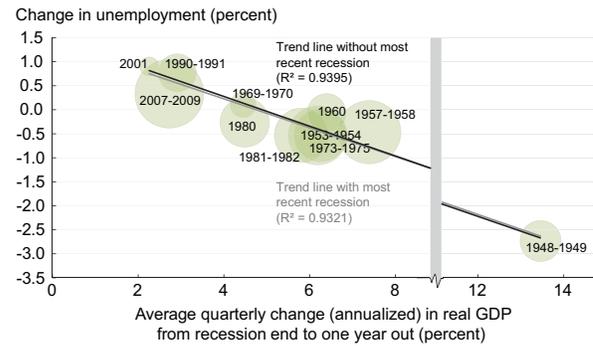
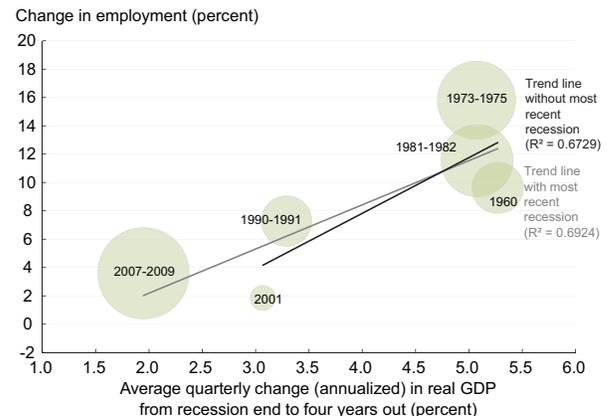


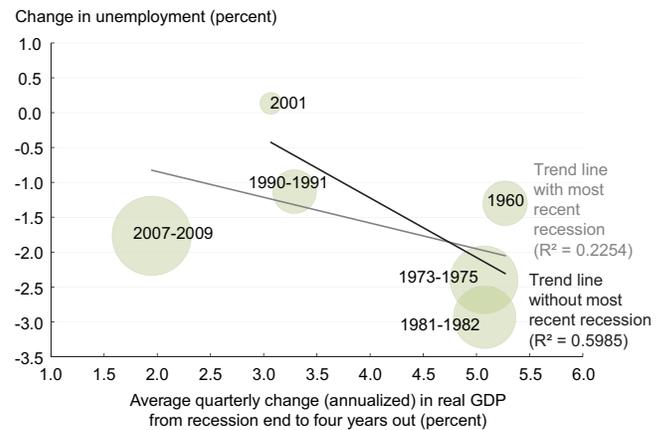
Figure 5. Recovery in Real GDP and Employment: Four Years Out



Recession, featuring growth rates of 3.1 percent and 3.3 percent. In some sense, what is different about the Great Recession is that the recovery in aggregate output started out weak and has never picked up. In spite of that anemic growth, employment grew by 3.6 percent, roughly in line with the historical pattern. On the other hand, the unemployment rate declined by almost 2 percentage points, a substantially larger decline than one would expect from a period of only 1.9 percent growth.

The Great Recession certainly had some unusual features. It is an outlier in terms of the severity of the recession and the sluggishness of the recovery. But the labor market's behavior has not been that unusual, particularly in the recovery phase. While the recession saw a larger employment loss and a larger unemployment rise than would have been predicted by the decline in GDP, the recovery has seen improvement in these indicators that is completely in line with historical patterns. The Great Recession, like most recent recoveries, has been particularly anemic, and that's the real problem. The question is not why or how the link between labor markets and output has changed, but why growth after recessions has become so feeble compared to that of earlier times.

Figure 6. Recovery in Real GDP and Unemployment: Four Years Out





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