# Inching Our Way Back: The Nation's Tepid Employment Recovery



**Citation to Publisher Version:** Not provided.

**Citation to *this* Version:** Hughes, J., & Seneca, J.Inching Our Way Back: The Nation's Tepid Employment Recovery, 2013 Retrieved from http://dx.doi.org/doi:10.7282/T3TQ606R

# Rutgers

## Regional Report

Issue Paper
Number 35

April 2013

# Inching Our Way Back

## The Nation's Tepid Employment Recovery

**James W. Hughes**
*Dean*
Edward J. Bloustein School of Planning and Public Policy
Rutgers, The State University of New Jersey

**Joseph J. Seneca**
*University Professor*
Edward J. Bloustein School of Planning and Public Policy
Rutgers, The State University of New Jersey

Published by

RUTGERS
Edward J. Bloustein School
of Planning and Public Policy

# Introduction

The economy of the United States is more than three and one-half years into the recovery from the 18-month-long Great Recession, which started in December 2007 and ended in June 2009. It took until the fourth quarter of 2011 for the nation's total output of goods and services (Gross Domestic Product, or GDP) to finally surpass its pre-recession peak (the fourth quarter of 2007). Thus, it took 10 quarters to achieve full output recovery (second-quarter 2009 to fourth-quarter 2011). However, as of December 2012, a full year later, the United States had recovered only 61.6 percent of the total employment loss that it suffered during the recession. Compared with the rebounds from all post–World War II recessions, the length of the current employment recovery period is unprecedented.

This weak employment performance is the result of the severe magnitude of the job losses of the Great Recession, the deep financial crisis that worsened the recession, the post-recession necessity for rebuilding household financial balance sheets, and the widely varying job recovery rates in the various individual employment sectors. It also may be linked to the composition of "new" postindustrial recessions. Beginning with the 2001 recession, services started to represent an increasing share of job losses. During the Great Recession, for the first time, the services sectors accounted for a majority of the employment losses.

# Executive Summary

Private-sector employment in the United States declined by a staggering 8.8 million jobs between December 2007 and February 2010.[1] The long recovery period then commenced and is still under way. From February 2010 to December 2012, the nation regained over 5.9 million private-sector jobs, a 67.7 percent rate of private-sector recovery. Thus, the United States is still inching its way out of an extraordinarily deep employment-loss hole. It needs to add 2.8 million more private-sector jobs just to return to pre-recession employment levels.

This excruciatingly long recovery period may not be due only to the sheer depth of the downturn. The nation's industrial composition has been evolving, with private service-providing activities accounting for both increasing shares of the economy and of recessionary employment losses.

- Manufacturing and construction used to be the prime drivers of recessions. Bounce backs from such "old industrial" recessions were fairly rapid. Bounce backs from "new postindustrial" recessions, which increasingly are centered on private-sector services, appear to be longer in duration.
- In "old" recessions, job losses may have been driven by temporary factory and construction layoffs, with "rehirings" of the same type of jobs in these same sectors occurring as recoveries gained momentum. In "new" recessions, job losses appear to be more permanent, and may be the result of adapting to perceived new economic realities and the emergence of new business models.
- Postindustrial recessions may now spark a process of long-term economic restructuring, driven by globalization and advancing information technology. Recoveries now produce jobs new and different from those lost; and the job-creation phase may be much more deliberate, thus taking far more time than that of the job-destruction phase.

The historic metrics of the past four recessions help shed some light on the dynamics that may be at work.

- The three economic downturns that preceded the Great Recession were July 1981–November 1982, July 1990–March 1991, and March 2001–November 2001. Measured from the start of each of these recessions, it sequentially took 28, 31, and 47 months to fully recover all the jobs lost during each recession. Measured from the end of each

1. According to the Business Cycle Dating Committee of the National Bureau of Economic Research, the Great Recession lasted 18 months (December 2007–June 2009). However private-sector employment continued to decline for another 8 months, reaching a low point in February 2010. Thus, the employment downturn lasted 26 months.

recession, it sequentially took 12, 23, and 39 months to reach full employment recovery.

- This trend of ever-lengthening periods for full job recovery set the stage for the Great Recession. December 2012, the point at which the nation had recovered 67.7 percent of its private-sector recession losses, marked the 60th month since the Great Recession began and the 42nd month after it ended. It will likely take approximately 16 more months to reach full job recovery.[2] The increasing amount of time to accomplish full employment recovery appears to be extending into unprecedented and uncharted territory.
- The shift to a full postindustrial employment downturn took place only with the Great Recession. During the 1981–82 recession, private services accounted for only 1.1 percent of the total employment losses. Their share more than doubled (2.7 percent of total losses) in the 1990–1992 employment downturn.
- This trend continued with the 2001–2003 recession. Services' share of the job losses accelerated significantly, to 18.5 percent. This was the first large-scale service jobs loss during a recession and its extended employment-loss aftermath. But, this was only a prelude to what happened in the Great Recession.
- During the extended 2007–2010 employment downturn, service jobs accounted for a majority (51 percent) of the massive total recessionary job casualties. So, this was the first true postindustrial recession in the United States. Does this represent a new normal? Is this a major contributing factor to the sluggish recovery?

The composition of the employment losses suffered during the Great Recession reflects this new economic focus.

- During the 26-month period of job decline from December 2007 to February 2010, the nation lost 8.8 million private-sector jobs (-7.6 percent). However, the public sector did not experience any employment losses, and during this time it added 94,000 jobs.
- Goods-producing activities, dominated by manufacturing and construction, were responsible for 49 percent (4.3 million jobs out of 8.8 million jobs) of the total private-sector job losses. While this was a record-low share of the job losses, the absolute goods-producing employment decline was still enormous—a record-high 4.3 million jobs, the highest number of such jobs lost since payroll employment statistics were first compiled in 1939. Nonetheless, private service-providing activities had an even larger absolute loss (-4.5 million jobs).
- The largest individual service-sector employment losses were sustained in trade, transportation, and utilities (-2.2 million jobs, or -8.1 percent) and in professional and business services (-1.5 million jobs, or -8.3 percent). The losses in information (-290,000 jobs) were smaller, but the rate of decline (-9.6 percent) was the highest of any service-providing sector.
- Financial activities lost 557,000 jobs (-6.7 percent), and leisure and hospitality jobs fell by 615,000 (-4.5 percent).
- There was no employment recession in the education and health services sector. It gained jobs (841,000, or +4.5 percent) throughout the 26-month period.
- The subsequent 34-month recovery period—February 2010-December 2012—started slowly in 2010, but gained substantial momentum in 2011 and 2012. However, the private-public recovery pattern was the reverse of what took place during the

2. This estimate is based on the assumption that the average annual employment growth of 2011 and 2012, i.e., 2.3 million private-sector jobs per year, will continue through 2013 and into 2014. Full job recovery would then occur in the first half of 2014.

downturn: Private-sector jobs rebounded, while government employment contracted. Thus, a rebalancing process took place during the recovery.

- The private sector added over 5.9 million jobs (+5.6 percent), recovering 67.7 percent of its recession losses.
- In contrast, the public sector lost 596,000 jobs (-2.7 percent), led by a 415,000-job decline in local government (-2.9 percent).
- As a result of non-symmetric recession-recovery job-growth patterns, the public- and private-sector shares of total employment—16.2 percent and 83.8 percent, respectively—were restored to be exactly the same in December 2012 as they were in December 2007.

Rates of recovery varied widely within individual private-sector activities. Goods-producing activities had a much lower recovery rate (20 percent) than service-providing activities (113.5 percent). Thus, services in total have fully recovered their recessionary job losses and have surpassed their pre-recession employment levels, while goods-producing activities have recovered just one-fifth of their job losses.

- Within the goods-producing sector, construction in particular lagged badly, as housing experienced a prolonged hangover from the bursting of the housing bubble. It gained only 189,000 jobs (+3.4 percent), resulting in a recovery rate of just 9.6 percent. The recovery rate of manufacturing (21.5 percent) was higher, as it gained 491,000 jobs (+4.3 percent).
- Within private service-providing activities, professional and business services experienced the strongest absolute employment job growth (+1.6 million jobs), the highest rate of growth (+9.7 percent), and an overall recovery rate of 106.7 percent.
  - Two important subsectors—professional and technical services, and management of companies and enterprises—actually experienced the most robust recoveries.
- Trade, transportation and utilities had the second highest gain (+1.2 million jobs), but a more modest rate of increase (+5 percent). As a result, this sector recovered only 56.5 percent of its recession losses.
  - Among its subsectors, transportation, warehousing and utilities came closest to full recovery, with a recovery rate of 86.3 percent. Wholesale trade and retail trade together have recovered only half of their recession job losses.
- The third largest absolute gain (+1.1 million jobs, or +5.7 percent) took place in the recession-proof education and health services sector, which added jobs throughout both the recession (+841,000 jobs) and recovery (+1.1 million jobs) periods.
  - The result was a total gain in the sector of nearly 2 million jobs (+10.5 percent) over the full five-year (December 2007–December 2012) period.
- Leisure and hospitality also more than fully recovered (157.1 percent) its recession losses by adding 966,000 jobs (+7.5 percent).
  - Much of this rebound was the result of strong growth in the accommodation and food services subsector—typified by “wait staff” in restaurants.
- In contrast, the “other services” sector did not have enough growth (+155,000 jobs, or 2.9 percent) to surpass its pre-recession employment peak. Consequently, its recovery rate stood at 77.1 percent.
- The financial activities sector, one of the epicenters of the Great Recession, has an employment recovery rate of just 19.2 percent—it has recovered less than one of every five of its recessionary losses.
- The worst-performing private-service sector was information, which failed to return to growth. It had a net loss of 58,000 jobs (-2.1 percent) during the February 2010–December 2012 recovery period.

- The telecommunications subsector dominated the recovery period job losses, followed closely by publishing (except Internet).
- In contrast, Internet-related employment—contained within the "other information services" subsector—experienced growth during both the recession and recovery periods.

The lagging recovery has produced jobs of both high and low quality, measured by average annual pay.

- The combined sectors that experienced job gains during the recovery had an average annual pay that was below the nation's overall average annual pay.
- The sectors that continued to lose employment during the recovery had an average annual pay considerably above the national average.
- The net effect of the recovery, as of December 2012, is to slightly lower the overall average annual pay, and by extension, job quality, in the United States.

The recession and recovery have shifted the composition of the nation's employment profile during the five-year cycle between December 2007 and December 2012. The long-term shift from production to services was accelerated.

- Goods-producing activities lost share (15.9 percent of total employment to 13.8 percent), while private service-providing activities gained share (67.9 percent to 70.0 percent).
- Manufacturing (10.0 percent to 8.9 percent) and construction (5.4 percent to 4.2 percent) both contributed to the goods-production loss of share.
- The increase in the share of employment in service-providing activities was due to the job gains in education and health services (13.4 percent to 15.2 percent), leisure and hospitality (9.8 percent to 10.3 percent), and professional and business services (13.1 percent to 13.5 percent).
- However, the service-providing sectors of trade, transportation and utilities (19.4 percent to 19.1 percent), financial activities (6.0 percent to 5.8 percent), and information (2.2 percent to 2.0 percent), all lost national share.

This changing mix underpinned the slight deterioration in job quality as measured by annual pay during the five-year economic cycle in the United States.

# Organization and Preface

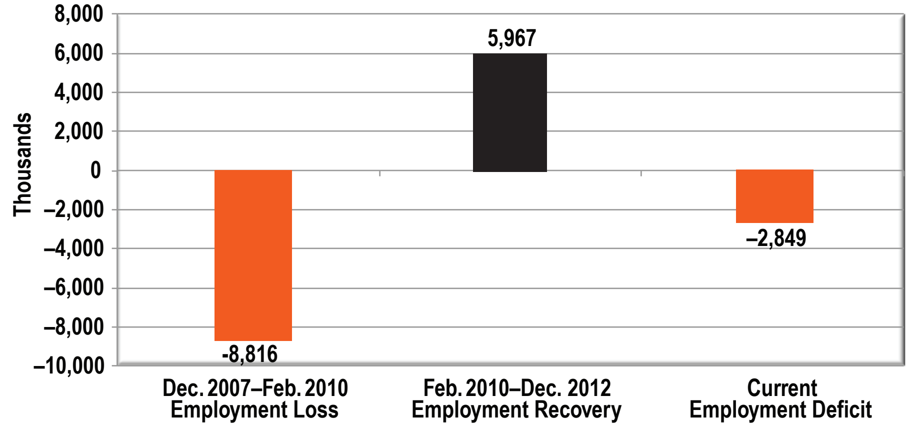
The purpose of this report is to examine the patterns of employment in the recession and recovery in the major business sectors and to discuss their implications for the economy. The report is organized as follows. *Section 1* provides data on the extent and the rate of job change during the recession for the individual business sectors. *Section 2* traces the job recovery by sector. It provides data on the extent of job gains, the rate of increase, and the rate of job recovery by sector. *Section 3* examines the distribution of the jobs gained by sector during the recovery and the annual pay levels in each sector. It also includes an analysis of the several sectors that continued to lose employment even during the recovery period. *Section 4* reviews the change in the shares of employment by sector over the recession and recovery. *Section 5* provides subsector details on the employment dynamics within each of the major business sectors. *Section 6* offers some final observations and conclusions.

## Post-Recession Employment Recoveries: A Contextual Perspective

It is more than five years since the onset of the Great Recession (December 2007), and full employment recovery in the private sector has yet to be achieved. (Employment in the public sector grew during the recession.) This length of time is unprecedented. Part of it is due to the sheer scale

**FIGURE 1**

**Great Recession and Recovery: U.S. Private-Sector Employment**




*Source:* U.S. Bureau of Labor Statistics.

and depth of the downturn.[3] Private-sector employment had declined by a staggering 8.8 million jobs during the 26 months between December 2007 and February 2010 (figure 1).[4] The long recovery period then commenced. Over the next 34 months (February 2010–December 2012), the nation regained over 5.9 million private-sector jobs, a 67.7 percent recovery rate. Thus, the nation needs to add 2.8 million jobs for full recovery to the pre-recession employment level. The United States is still climbing out of an extraordinarily deep employment-loss hole.

But this excruciatingly long recovery period may not be due solely to the severity of the downturn. The nation's industrial composition has been evolving over time, with private service-providing activities accounting for both increasing shares of the economy and of its employment losses during recessions. At the same time, manufacturing's share of employment has dramatically declined and, since 2000, total manufacturing employment has also experienced sharp absolute declines. Bounce backs from "old industrial" recessions, such as the 1981–1982 downturn, which were concentrated in manufacturing and construction, were fairly immediate. Bounce backs from "new postindustrial" recessions, which increasingly are centered on private-sector services, appear to be longer in duration.[5] And, as this report shows, the Great Recession was the first downturn in which a majority of the job losses were in services.[6]

In "old" recessions, job losses may have been driven by temporary factory and construction layoffs, with "rehirings" as recoveries gained momentum. In "new" recessions, job losses appear to be more permanent, and may be the result of restructurings and the emergence of new business models. These new models may produce new and different jobs; however, the job-creation phase may be much more deliberate, and take far more time than the job-destruction phase.

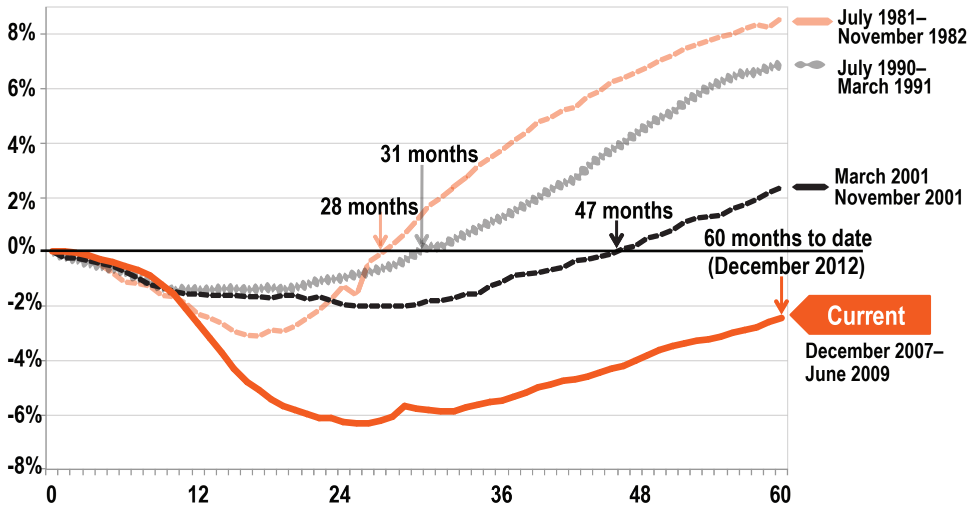
3. A recent study concludes that the steep cyclical loss of employment during the Great Recession is the key cause of the slow rate of job recovery. See, Edward P. Lazear and James R. Spletzer, "The United States Labor Market: Status Quo or a New Normal?" (NBER Working Paper No. 18386, September 2012).

4. According to the Business Cycle Dating Committee of the National Bureau of Economic Research, the official umpire of the timing of the cycle, the Great Recession lasted 18 months (December 2007–June 2009). However, private-sector employment continued to decline for another 8 months, reaching a low point in February 2010.

5. The 2001–2003 and 2007–2010 employment downturns are considered postindustrial recessions because, for the first time, services accounted for significant job losses.

6. A recent study indicates that middle-skilled jobs lost during recessions constitute the bulk of job losses in recessions and that these jobs tend not to return during recoveries. This results in tepid or jobless recoveries. See, Nir Jamiovich and Henry Siu, "The Trend is the Cycle: Job Polarization and Jobless Recoveries" (NBER Working Paper No. 18334, August 2012). Our analysis of the industry composition of jobs gained during the current recovery supports this conclusion (see Section 3 below).

**FIGURE 2**
**Post-Recession Employment Recoveries**




*Source:* U.S. Bureau of Labor Statistics; National Bureau of Economic Research; *Wall Street Journal*.

## Historic Metrics

To gain perspective on this issue and on the "less than great" recovery from the Great Recession, it is instructive to examine the historic recovery metrics detailed in table 1 and figure 2. The last four recessions were July 1981–November 1982, July 1990–March 1991, March 2001–November 2001, and December 2007–June 2009. Table 1 presents each recession's length and the time needed for full employment recovery, both from the start of the recession and from the end of the recession. Figure 2 complements this table by presenting the recovery trajectory in the context of the full economic cycles. It presents, by month, the percentage of employment change since the start of each recession. The horizontal scale presents the months since the start of the recession, while the vertical scale presents the percentage change in employment since the start of the recession. The start of the recession is month zero, the far left side of the figure.

The earliest downturn is the 16-month-long July 1981–November 1982 recession, indicated by the light orange dotted line in figure 2 and the data in the first row in table 1. The employment nadir (approximately -3 percent, the worst decline since the Great Depression) was reached exactly 16 months after the recession started. Thus, the employment trough was coterminous with the end of the recession. As soon as economic output started to grow, so did employment, and 28 months after the recession began (12 months after the recession ended), there was full job recovery. In figure 2, the light orange dotted line crossed the zero percent line at that point. The pattern here is the classic v-shaped recession—a sharp downturn followed by a sharp recovery. However, subsequent recessions would show new and increasingly different economic calligraphies.

The brief eight-month-long 1990–1991 recession (July 1990 to March 1991) is shown by the gray dotted line in figure 2 and the second row of table 1. It was far shallower than its predecessor. Two months after the recession officially ended, employment reached its low point—a decline of approximately 1.4 percent. However, employment then bounced along this low for an additional year even though the economy was recovering and output was growing. A new term emerged at the time—jobless economic growth. And even though the 1990–1991 recession was half the length of the

**TABLE 1**
**Duration of Post-Recession Job Recoveries**

| Dates of Official Recession: Start | End | Length of Recession (Months) | Full Job Recovery: Months since End of Recession | Full Job Recovery: Months since Start of Recession |
|---|---|---|---|---|
| **July 1981** | **– November 1982** | 16 | 12 | 28 |
| **July 1990** | **– March 1991** | 8 | 23 | 31 |
| **March 2001** | **– November 2001** | 8 | 39 | 47 |
| **December 2007** | **– June 2009** | 18 | 42+ | 60+ |

*Source:* U.S. Bureau of Labor Statistics.

1981–1982 downturn and was far shallower, it took longer—31 months from the start of the recession (23 months after the recession ended)—for full employment recovery. Some observers irreverently called this then unorthodox pattern an elongated soup dish!

The 2001 recession (March 2001 to November 2001) also lasted just eight months, and is shown by the dotted black line in figure 2 and the data in the third row of table 1. As was the case in the 1990-1991 downturn, employment did not bounce back after the recession officially ended—losses continued for another 21 months despite growing economic output. At the low point, 29 months after the recession started (21 months after the recession ended), employment had fallen by approximately 2 percent. A second new term was invented—job-loss economic growth. It took 47 months after the recession started (39 months after the recession ended) before full employment recovery was achieved. The elongated soup dish became even longer!

So, measured from the start of each of these recessions, it sequentially took 28, 31, and 47 months to reach full employment recovery. Measured from the end of each recession, it sequentially took 12, 23, and 39 months to reach full employment recovery. This trend of ever-lengthening periods for full job recovery set the stage for the 18-month long December 2007–June 2009 Great Recession—the solid red line in figure 2 and the data in the fourth row in table 1—the new worst downturn since the Great Depression.

The employment decline of the Great Recession was approximately 6.3 percent, more than double that of the 1981–1982 downturn. December 2012 marked the 60th month since the Great Recession began and 42 months after it ended. Figure 2 indicates that employment, five years later, remains more than 2 percent below its pre-recession level (December 2007). Consequently, the trend of ever-lengthening employment recovery periods has been extended into unprecedented and uncharted territory.

This suggests that the last two recessions may have sparked a process of longer-term economic restructuring, driven by globalization and advancing information technology. Temporary layoffs may now have been supplanted by permanent job eliminations, fostered by cost pressures and the imperatives of efficiency gains. Replacement positions created to staff new business protocols and new technologies appear to be much more deliberate, taking increasingly longer periods of time. The job-creation phase may not be temporally symmetrical to the job-destruction phase.

**TABLE 2**
**Composition of Recession Employment Losses (Private Sector)**

| Period[a] | Total Private-Sector Employment Loss | Services | | Manufacturing and Construction |
|---|---|---|---|---|
| | | Absolute | Share (%) | Share (%)[b] |
| **1981–1982** | –2,644,000 | –30,000 | 1.1 | 98.9 |
| **1990–1992** | –1,648,000 | –44,000 | 2.7 | 97.3 |
| **2001–2003** | –3,313,000 | –612,000 | 18.5 | 81.5 |
| **2007–2010** | –8,816,000 | –4,497,000 | 51.0 | 49.0 |

*Note:* a. Each period covers job losses from the official start of the recession through the employment trough.
b. Manufacturing and Construction includes the Logging and Mining sector.

*Source:* U.S. Bureau of Labor Statistics.

## Composition of Recession Employment Losses

The shift to a full postindustrial employment downturn took place with the Great Recession. This is evident in the data of table 2, which separates the total private-sector job losses during the past four downturns into two sectors: services, and manufacturing and construction.[7] Services' share of total losses were minimal (-1.1 percent) in the 1981–82 downturn, as this sector lost just 30,000 jobs. This share more than doubled (2.7 percent of total losses) in the 1990–1992 employment recession. The absolute service job losses (-44,000 jobs) increased by just under 50 percent; however, since this was a milder recession, their share of total losses rose.

This trend continued during the 2001–2003 downturn. Services' share of the job losses jumped significantly in 2001–2003, to 18.5 percent, as absolute service job losses totaled 612,000. This was the first large-scale services job loss during a recession and its extended employment loss aftermath. But, this was just a prelude to what happened in the Great Recession. During the extended 2007–2010 employment downturn, nearly 4.5 million service jobs were lost, accounting for 51 percent of the total employment losses. So, the basic trend of increasing service-job losses, and increasing shares of total losses, culminated in services accounting for a majority of the 2007–2010 employment casualties. Does this represent a new normal? Is this a major contributing factor to the sluggish recovery? Does it confirm the suggestions of the previous section of this report?

### 1. The Great Employment Downturn

The starting point of the analysis is the 26-month period of job decline from December 2007 to February 2010. Although the recession officially ended in June 2009, employment losses continued for another eight months before finally reaching a trough in February 2010. Table 3 provides data on both the amount and rate of change in employment by sector during this period.

The decline of 8.7 million total jobs represented a loss of 6.3 percent of the nation's overall employment base from the peak of the previous business cycle in December 2007. The fall in private-sector jobs was even more severe, with over 8.8 million jobs lost (-7.6 percent), since government employment grew. There was, however, significant variation in job losses across the various sectors. Goods-producing activities, dominated by manufacturing and construction, were responsible for over 49 percent (4.3 million out of 8.8 million) of the

7. The employment dates in table 2 reflect job losses from the official (NBER-determined) start of the recession to the actual private-sector employment trough, not to the official (NBER-determined) end of the recession.

**TABLE 3**
**The Employment Downturn**
**December 2007–February 2010**
*(Employment in thousands)*

| Sector | December 2007 | February 2010 | Change: Dec. 2007–Feb. 2010 Absolute | Change: Dec. 2007–Feb. 2010 Percentage |
|---|---|---|---|---|
| **Total Nonfarm** | **138,042** | **129,320** | **–8,722** | **–6.3** |
| **Private Sector** | **115,666** | **106,850** | **–8,816** | **–7.6** |
| **Goods-Producing** | **21,976** | **17,657** | **–4,319** | **–19.7** |
| Mining and Logging | 740 | 675 | –65 | –8.8 |
| Construction | 7,490 | 5,522 | –1,968 | –26.3 |
| Manufacturing | 13,746 | 11,460 | –2,286 | –16.6 |
| **Private Service-Providing** | **93,690** | **89,193** | **–4,497** | **–4.8** |
| Trade, Transportation, and Utilities | 26,714 | 24,541 | –2,173 | –8.1 |
| Information | 3,024 | 2,734 | –290 | –9.6 |
| Financial Activities | 8,281 | 7,724 | –557 | –6.7 |
| Professional and Business Services | 18,051 | 16,549 | –1,502 | –8.3 |
| Education and Health Services | 18,554 | 19,395 | 841 | 4.5 |
| Leisure and Hospitality | 13,550 | 12,935 | –615 | –4.5 |
| Other Services | 5,516 | 5,315 | –201 | –3.6 |
| **Government** | **22,376** | **22,470** | **94** | **0.4** |
| Federal | 2,756 | 2,871 | 115 | 4.2 |
| State | 5,139 | 5,149 | 10 | 0.2 |
| Local | 14,481 | 14,450 | –31 | –0.2 |

*Source:* U.S. Bureau of Labor Statistics.

total private-sector job losses. This was a record low share of recessionary losses, as was shown earlier. But, in absolute numbers and rate of job decline, the losses were still profound. Construction was decimated by the bursting of the housing bubble and its aftershocks, losing nearly 2 million jobs. Its rate of decline (-26.3 percent) was more than four times that of total employment.[8] The much larger manufacturing sector had an even greater absolute employment loss (-2.3 million jobs), although its rate of decline was smaller (-16.6 percent).

Private service-providing activities accounted for a much higher share (67.9 percent in December 2007) of total employment compared with goods-producing activities (15.9 percent).[9] Thus, a smaller rate of decline (-4.8 percent) yielded a larger absolute loss (-4.5 million jobs). As noted earlier, private service-providing activities' share (52 percent) of total employment losses was a historical high compared with previous post–World War II downturns. The largest individual sector employment losses were sustained in trade, transportation, and utilities (-2.2 million jobs, or -8.1 percent) and in professional and business services (-1.5 million jobs, or -8.3 percent). The losses in information (-290,000 jobs) were smaller, but the rate of decline (-9.6 percent) was the highest of any service-providing sector. Financial activities lost 557,000 jobs (-6.7 percent), and leisure and hospitality jobs fell by 615,000 (-4.5 percent). However, there was no employment recession in the education and health services sector. It gained jobs throughout the 26-month period and, by February 2010, employment in this sector had risen by 841,000 jobs (4.5 percent) from December 2007.

The public sector, as a result of significant countercyclical spending by the federal government, also added jobs (94,000) during the recession.

8. In fact, as noted later, the job decline in the construction sector was considerably worse since the sector kept losing jobs well past the national employment trough of February 2010, the end date of the employment recession used in table 3.

9. In December 2007, the goods-producing employment share was 15.9 percent (21,976,000 jobs out of 138,042,000), the service-providing share was 67.9 percent (93,690,000 jobs out of 138,042,000), and government was 16.2 percent (22,376,000 jobs out of 138,042,000).

**TABLE 4**
**The 34-Month Recovery**
**February 2010–December 2012**
*(Employment in thousands)*

| Sector | February 2010 | December 2012 | Change: Feb. 2010–Dec. 2012 Absolute | Change: Feb. 2010–Dec. 2012 Percentage | Recovery Rate |
|---|---|---|---|---|---|
| **Total Nonfarm** | **129,320** | **134,691** | **5,371** | **4.2** | **61.6** |
| **Private Sector** | **106,850** | **112,817** | **5,967** | **5.6** | **67.7** |
| **Goods-Producing** | **17,657** | **18,522** | **865** | **4.9** | **20.0** |
| Mining and Logging | 675 | 860 | 185 | 27.4 | 284.6 |
| Construction | 5,522 | 5,711 | 189 | 3.4 | 9.6 |
| Manufacturing | 11,460 | 11,951 | 491 | 4.3 | 21.5 |
| **Private Service-Providing** | **89,193** | **94,295** | **5,102** | **5.7** | **113.5** |
| Trade, Transportation, and Utilities | 24,541 | 25,769 | 1,228 | 5.0 | 56.5 |
| Information | 2,734 | 2,676 | –58 | –2.1 | — |
| Financial Activities | 7,724 | 7,831 | 107 | 1.4 | 19.2 |
| Professional and Business Services | 16,549 | 18,152 | 1,603 | 9.7 | 106.7 |
| Education and Health Services | 19,395 | 20,496 | 1,101 | 5.7 | — |
| Leisure and Hospitality | 12,935 | 13,901 | 966 | 7.5 | 157.1 |
| Other Services | 5,315 | 5,470 | 155 | 2.9 | 77.1 |
| **Government** | **22,470** | **21,874** | **–596** | **–2.7** | **—** |
| Federal | 2,871 | 2,799 | –72 | –2.5 | — |
| State | 5,149 | 5,040 | –109 | –2.1 | — |
| Local | 14,450 | 14,035 | –415 | –2.9 | — |

*Source:* U.S. Bureau of Labor Statistics.

In addition, the tax revenue losses and the new political realities created by the Great Recession were slow to penetrate the operations of state and local government. These two sectors combined experienced only minor employment losses (-21,000 jobs).[10] However, this very modest public-sector job decline during a period of steep private-sector job losses would soon accelerate during the recovery.

## 2. The Employment Recovery

During the 34 months between the employment trough of February 2010 and December 2012, the national economy added nearly 5.4 million jobs (+4.2 percent), as shown in table 4. This gain represents a 61.6 percent rate of recovery, i.e., 5.4 million jobs recovered of the 8.7 million lost in the recession (table 3). The private sector did somewhat better, adding over 5.9 million jobs (+5.6 percent), recovering 67.7 percent of its recession losses. However, during this time of private-sector employment recovery, the public sector experienced a delayed reaction to the Great Recession, during which it experienced employment increases. As federal stimulus waned, government lost 596,000 jobs (-2.7 percent), led by a decline of 415,000 jobs in local government (-2.9 percent).[11]

Rates of recovery varied widely within the individual private sectors. Goods-producing activities had a much lower recovery rate (20 percent) than service-providing activities (113.5 percent). Of the goods-producing sectors, construction, in particular, lagged badly, with only a small gain of

10. In fact, state government added 10,000 jobs during the recession while local government lost only 31,000 jobs (a 0.2 percent decline).

11. Local government employment did not peak until July 2008, at 14.6 million jobs, well past the December 2007 peak for total national employment. Local government employment then declined until May 2012, long beyond the February 2010 trough for total national employment. Since then it has varied somewhat and stood at 14.0 million jobs as of December 2012.

189,000 jobs (+3.4 percent). This was because the job losses in this sector continued well beyond the February 2010 national employment trough. In fact, the job hemorrhage in construction persisted for nearly another year, ending only in January 2011. At that point, it had lost over 2 million jobs from December 2007, or -27.4 percent.[12] Manufacturing employment grew by 491,000 jobs, or by 4.3 percent. This represented a recovery rate of 21.5 percent of its recession losses. In contrast, the mining and logging sector, driven by expanding natural gas and oil exploration, added 185,000 jobs, for an impressive increase of 27.4 percent. Its employment gain was significantly more than twice the number of jobs lost (-65,000) during the recession, resulting in a 284.6 percent recovery rate.[13]

Overall, private service-providing activities gained over 5.1 million jobs, more than fully re-covering all their recession losses. Professional and business services experienced the strongest absolute employment job growth (over 1.6 million jobs) as well as the highest rate of growth (+9.7 percent during the recovery) by a service-providing sector. This increase was sufficient to regain all the jobs and more lost—revealed by a 106.7 percent recovery rate—during the recession. Trade, transportation and utilities had the second highest gain (+1.2 million jobs) but a more modest rate of increase (+5 percent). As a result, this sector had recovered only 56.5 percent of its recession losses. The third largest absolute gain (+1.1 million jobs, or +5.7 percent) took place in the education and health services sector, which added jobs throughout both the recession (+841,000 jobs) and recovery (+1.1 million jobs) periods. The result was a total gain in the sector of 1.9 million jobs over the cycle starting in December 2007, five years earlier.

The leisure and hospitality sector also recovered more than all (157.1 percent) of its recession losses by adding 966,000 jobs (+7.5 percent). "Other services" did not have enough growth (+155,000 jobs, or +2.9 percent) to surpass its pre-recession employment peak. Consequently, its recovery rate stood at 77.1 percent. The worst-performing private-service sector was information, which had a net loss of 58,000 jobs (-2.1 percent) during the February 2010-December 2012 recovery period.

## 3. Job Quality and the Recovery

Table 5 presents the employment gains, and the 2011 average annual pay—a measure of job quality—for each of the nine private sectors that experienced job growth during the recovery period (February 2010 to December 2012).[14] The total employment gain in these nine sectors was just over 6 million jobs. The weighted average of the 2011 average annual pay for these jobs was $46,151. This is 4 percent below the average annual pay of all jobs in 2011 of $48,043.

The private-sector job gains during the recovery were heavily dominated by the service-providing activities (85.6 percent). Professional and business services had the largest absolute increase in employment (1.6 million jobs). This sector accounted for more than a quarter (26.6 percent) of the total employment increase of the nine sectors that gained jobs. The professional and business services sector had an average annual pay of $61,873 in 2011, well above that of all jobs. However, the average annual pay of the next three sectors that had large employment increases had below-average pay levels. Trade, transportation and utilities (+1.2 million jobs) had an average annual pay of $40,224. The average annual pay of education and health services (+1.1 million jobs) was $44,388, while that of leisure and hospitality services (+966,000 jobs) was only $19,765. Job increases in these three sectors comprised more than half (54.7 percent) of the total gain in jobs. The three goods-producing sectors—mining and logging, construction, and manufacturing—all experienced significant employment growth, with manufacturing (491,000 jobs) dominating the total increase (865,000 jobs). The average annual pay in all three goods-producing sectors exceeded the weighted average pay of all jobs gained during the period ($46,151).

12. From that low point to December 2012, the construction sector gained 276,000 jobs, for a rate of recovery of 13.4 percent of its peak to actual losses (from December 2007 through January 2011).

13. This sector began its recovery earlier than most, reaching its trough in October 2009, four months prior to the national employment trough.

14. The information sector lost 58,000 jobs during this time, and employment declined in all three components (federal, state, and local government) of the public sector (596,000 jobs). Thus, the net job gain for the period (5.371 million) is less than the total (6.025 million) in table 5.

**TABLE 5**
**Share of Recovery Private-Sector Employment Gain for Sectors with Positive Gains February 2010–December 2012**

| Sector | Job Absolute Change (000s) | Share of Net Change (%) | 2011 Average Annual Pay ($) |
|---|---|---|---|
| **Total Employment Gain** | **6,025** | **100.0** | **46,151** |
| Mining and Logging | 185 | 3.1 | 53,688 |
| Construction | 189 | 3.1 | 50,692 |
| Manufacturing | 491 | 8.1 | 59,207 |
| Trade, Transportation, and Utilities | 1,228 | 20.4 | 40,224 |
| Financial Activities | 107 | 1.8 | 77,366 |
| Professional and Business Services | 1,603 | 26.6 | 61,873 |
| Education and Health Services[a] | 1,101 | 18.3 | 44,388 |
| Leisure and Hospitality | 966 | 16.0 | 19,765 |
| Other Services | 155 | 2.6 | 30,025 |

*Note:* a. Employment in the Education and Health Services sector grew during both the recession and the recovery.
*Source:* U.S. Bureau of Labor Statistics.

The sectors that lost jobs during this time (information and all three components of the public sector) had average annual pay levels above the average of the nine sectors combined. The weighted average of the jobs lost across these four sectors was $51,232, or 6.6 percent above the national average annual pay in 2011 ($48,043).

The combined sectors that experienced job gains during the recovery had an average annual pay ($46,151) that was 4 percent below the nation's average annual pay ($48,043) for all jobs. Also, the sectors that continued to lose employment during the recovery (information and the public sector) had an average annual pay considerably above the national average. The net effect of the recovery to date has been to slightly lower the overall average annual pay, and by that measure, job quality, in the United States.

## 4. Changing Employment Profiles

The recession and recovery had differential impacts on the composition of the nation's employment profile by sector. One of the most apparent was the change in private–public shares over the economic cycle (table 6). During the recession, the private-sector share dropped while the public-sector share increased. The exact opposite occurred during the recovery. By December 2012, after 34 months of recovery, the respective shares had returned exactly to their pre-recession levels.

During the employment downturn, the private-sector jobs losses were, as documented earlier, severe (-8.8 million jobs), while employment in the public sector (+94,000 jobs) was not fully exposed to the downturn's severity. As a result, the private sector's share of total employment fell from 83.8 percent in December 2007 to 82.6 percent by February 2010, while the public sector's share increased from 16.2 percent to 17.4 percent. All three components within the public sector increased their employment share.[15]

Within the private sector, construction, reflecting the bursting of the housing bubble, experienced the largest decline in employment share, from 5.4 percent in December 2007 to 4.3 percent in February 2010. Other notable decreases occurred

15. The federal and state government sectors added employment (115,000 and 10,000 jobs respectively) while the local government sector lost 31,000 jobs during the recession (see table 3). Even with this modest loss, given the steep decline in private-sector jobs, the local government sector increased its share of the nation's jobs from 10.5 percent to 11.2 percent (table 6).

**TABLE 6**
**Employment Shares**
**December 2007 – February 2010 – December 2012**
*(Percentage)*

| Sector | December 2007 | February 2010 | December 2012 |
|---|---|---|---|
| **Total Nonfarm** | **100.0** | **100.0** | **100.0** |
| **Private Sector** | **83.8** | **82.6** | **83.8** |
| **Goods-Producing** | **15.9** | **13.7** | **13.8** |
| Mining and Logging | 0.5 | 0.5 | 0.6 |
| Construction | 5.4 | 4.3 | 4.2 |
| Manufacturing | 10.0 | 8.9 | 8.9 |
| **Private Service-Providing** | **67.9** | **69.0** | **70.0** |
| Trade, Transportation, and Utilities | 19.4 | 19.0 | 19.1 |
| Information | 2.2 | 2.1 | 2.0 |
| Financial Activities | 6.0 | 6.0 | 5.8 |
| Professional and Business Services | 13.1 | 12.8 | 13.5 |
| Education and Health Services | 13.4 | 15.0 | 15.2 |
| Leisure and Hospitality | 9.8 | 10.0 | 10.3 |
| Other Services | 4.0 | 4.1 | 4.1 |
| **Government** | **16.2** | **17.4** | **16.2** |
| Federal | 2.0 | 2.2 | 2.1 |
| State | 3.7 | 4.0 | 3.7 |
| Local | 10.5 | 11.2 | 10.4 |

*Source:* U.S. Bureau of Labor Statistics.

in manufacturing (10.0 percent to 8.9 percent); trade, transportation and utilities (19.4 percent to 19 percent); and professional and business services (13.1 percent to 12.8 percent). In contrast, since employment in the education and health services sector grew steadily even during the recession, its share of national employment rose sharply, from 13.4 percent to 15.0 percent.

During the recovery period (February 2010 to December 2012), there was a re-balancing of shares between the private and public sectors. The echo effects of the recession on tax revenues, and a changed political climate that mitigated against tax-rate increases, resulted in large job losses in the public sector (table 4), particularly in state and local government (524,000 jobs). This occurred during a period when the private sector added 6 million jobs. This re-balancing caused the private sector share to rise to 83.8 percent by December 2012 and the public sector share to decline to 16.2 percent (table 6). This was exactly the same as it was before the nation entered into recession (December 2007).

There were some long-term share changes at the end of the overall five-year economic cycle (December 2007–December 2012). Manufacturing (10.0 percent to 8.9 percent); construction (5.4 percent to 4.2 percent); trade, transportation and utilities (19.4 percent to 19.1 percent); financial activities (6.0 percent to 5.8 percent); and information (2.2 percent to 2.0 percent), all experienced shrinkage in employment significance. Four of the five sectors were above-average-paying.[16] In contrast, education and health services (13.4 percent to 15.2 percent) and leisure and hospitality (9.8 percent to 10.3 percent), lower-paying sectors, saw their importance increase substantially. The professional and business services category was the only above-average-paying service sector to gain employment share (13.1 percent to 13.5 percent).

16. Trade, transportation, and utilities is the only below-average-paying sector of the five sectors (table 5).

**TABLE 7**

**Manufacturing Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Change: Dec. 2007 – Feb. 2010 Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Change: Feb. 2010 – Dec. 2012 Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Change: Dec. 2007 – Dec. 2012 Percentage (%) | Percentage Recovered (%) |
|---|---|---|---|---|---|---|---|
| **Manufacturing** | **–2,286.0** | **–16.6** | **491.0** | **4.3** | **–1,795.0** | **–13.1** | **21.5** |
| Durable Goods | –1,717.0 | –19.7 | 504.0 | 7.2 | –1,213.0 | –13.9 | 29.4 |
| Nondurable Goods | –569.0 | –11.3 | –13.0 | –0.3 | –582.0 | –11.5 | –2.3 |

*Source:* U.S. Bureau of Labor Statistics.

## 5. Individual Sector Analysis

Tables 7 through 13 provide subsector details for the employment change during the recession and recovery periods. There are a number of noteworthy nuances and differences in the subsectors that are masked when examining only the aggregate sectors.

### MANUFACTURING

Within manufacturing (table 7), the durable-goods component was severely affected by the recession, losing nearly one in every five jobs (-19.7 percent, or -1.7 million jobs) between December 2007 and February 2010. This contrasts with a smaller, but still large, loss of 11.3 percent (-569,000 jobs) in nondurables. The rate of job loss in both sectors far exceeded the national decline in private-sector employment of 7.6 percent (table 3).

Durable-goods employment bounced back significantly stronger in the recovery compared with that of nondurables. Durable-goods manufacturing gained 504,000 jobs (+7.2 percent) and recovered over 29 percent of its recession losses.[17] However, this is still far below the rate of recovery (67.7 percent) for the overall private-sector economy (table 4). Nonetheless, it contrasts markedly with nondurables manufacturing, where employment continued to decline (-13,000 jobs, or -0.3 percent) during the 34-month recovery period.

### TRADE, TRANSPORTATION AND UTILITIES

The trade, transportation and utilities sector had a more uniform experience among its three component sectors (table 8). Wholesale trade (-9.8 percent), retail trade (-7.5 percent), and transportation, warehousing and utilities (-8.0 percent) had generally similar rates of employment decline during the 26-month employment downturn (December 2007–February 2010), and were close to the overall private-sector decline of 7.6 percent (table 3). In the recovery phase, their respective growth rates of +5 percent, +4.2 percent, and +7.5 percent diverged somewhat, with transportation, warehousing and utilities showing the greatest strength. Its 7.5 percent employment increase was above that (+5.6 percent) of the overall private sector (table 4). As a result, the recovery rate of transportation, warehousing and utilities (86.3 percent) was far higher than that of retail trade (51.7 percent) and wholesale trade (45.5 percent).

### INFORMATION

Since the name of this sector evokes the heart of a knowledge-based, information-age economy, its overall business-cycle performance is somewhat distressing. An examination of the employment changes within its components offers

17. Much of this reflected the successful rescue of America's automobile industry and the increase in manufacturing activity related to energy exploration and development.

**TABLE 8**

**Trade, Transportation and Utilities Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Change: Dec. 2007 – Feb. 2010 Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Change: Feb. 2010 – Dec. 2012 Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Change: Dec. 2007 – Dec. 2012 Percentage (%) | Percentage Recovered (%) |
|---|---|---|---|---|---|---|---|
| **Trade, Transportation and Utilities** | **–2,173.0** | **–8.1** | **1,228.0** | **5.0** | **–945.0** | **–3.5** | **56.5** |
| Wholesale Trade | –592.1 | –9.8 | 269.6 | 5.0 | –322.5 | –5.3 | 45.5 |
| Retail Trade | –1,173.8 | –7.5 | 607.1 | 4.2 | –566.7 | –3.6 | 51.7 |
| Transportation, Warehousing and Utilities | –407.3 | –8.0 | 351.3 | 7.5 | –56.0 | –1.1 | 86.3 |

*Source:* U.S. Bureau of Labor Statistics.

**TABLE 9**

**Information Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Change: Dec. 2007 – Feb. 2010 Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Change: Feb. 2010 – Dec. 2012 Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Change: Dec. 2007 – Dec. 2012 Percentage (%) | Percentage Recovered[a] (%) |
|---|---|---|---|---|---|---|---|
| **Information** | **–290.0** | **–9.6** | **–58.0** | **–2.1** | **–348.0** | **–11.5** | **—** |
| Publishing Industries, except Internet | –131.3 | –14.7 | –34.2 | –4.5 | –165.5 | –18.5 | — |
| Motion Picture and Sound Recording Industries | –7.4 | –1.9 | 5.2 | 1.4 | –2.2 | –0.6 | 70.3 |
| Broadcasting, except Internet | –25.2 | –7.9 | –8.3 | –2.8 | –33.5 | –10.5 | — |
| Telecommunications | –113.0 | –11.0 | –67.3 | –7.3 | –180.3 | –17.5 | — |
| Data Processing, Hosting, and Related Services | –21.3 | –8.0 | 6.4 | 2.6 | –14.9 | –5.6 | 30.0 |
| **Other Information Services** | **8.3** | **6.4** | **40.2** | **29.1** | **48.5** | **37.3** | **—** |

*Notes:* a. Employment in the Information sector and three of its subsectors declined during both the recession and the recovery. The Other Information Services subsector grew during both periods.

*Source:* U.S. Bureau of Labor Statistics.

no relief from the overall dismal performance of the full sector (table 9). Five of the six subsectors lost jobs during both the recession and recovery periods. During the recession, losses were especially steep in publishing (-131,300 jobs, or -14.7 percent) and telecommunications (-113,000 jobs, or -11.0 percent), the latter reflecting the continued competitive decline of landline communications. While rates of job decline in the subsectors moderated during the recovery, telecommunications experienced an additional 7.3 percent drop. Thus, for the entire cycle (December 2007–December 2012), this subsector lost 180,300 jobs, or -17.5 percent. Only the "other information services" subsector exhibited contrary behavior, adding jobs during both the recession and recovery (+48,500 jobs, or +37.3 percent). This sector consists of cutting-edge information uses of the Internet; it had a total employment of 178,500 jobs in December 2012.[18]

18. The U.S. Bureau of Labor Statistics indicates that "Industries in the Other Information Services subsector group are establishments supplying information, storing and providing access to information, searching and retrieving information, operating Web sites that use search engines to allow for searching information on the Internet, or publishing and/or broadcasting content exclusively on the Internet. The main components of the subsector are news syndicates, libraries, archives, exclusive Internet publishing and/or broadcasting, and Web Search Portals." See, http://www.bls.gov/iag/tgs/iag519.htm.

**TABLE 10**

**Financial Activities Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Percentage (%) | Percentage Recovered (%) |
|---|---|---|---|---|---|---|---|
| **Financial Activities** | **–557.0** | **–6.7** | **107.0** | **1.4** | **–450.0** | **–5.4** | **19.2** |
| Finance and Insurance | –355.1 | –5.8 | 97.8 | 1.7 | –257.3 | –4.2 | 27.5 |
| Real Estate and Rental and Leasing | –202.6 | –9.4 | 9.7 | 0.5 | –192.9 | –9.0 | 4.8 |

*Source:* U.S. Bureau of Labor Statistics.

## FINANCIAL ACTIVITIES

Financial activities, one of the epicenters of the Great Recession, now has an employment recovery rate of 19.2 percent (table 10). Of the major industrial sectors that experienced absolute growth during the recovery period, only construction had a lower recovery rate (9.6 percent), shown earlier in table 4. Within financial activities, the finance and insurance subsector fared somewhat better than the real estate subsector, as it lost employment during the downturn (table 10) at a rate (-5.8 percent) that was less than the decrease (-7.6 percent) for all private-sector jobs (table 3). The real estate and leasing subsector, directly linked to the housing bust, shed jobs at a considerably higher rate (-9.4 percent), as shown in table 10. Job gains in the two subsectors during the recovery have been tepid at best (+1.7 percent and +0.5 percent, respectively) as have their recovery rates (27.5 percent and 4.8 percent). This compares with 67.7 percent for all private-sector jobs (table 4).

## PROFESSIONAL AND BUSINESS SERVICES

The large professional and business services sector is an amalgam of very disparate subsectors (table 11). Two of the three subsectors consist of high-end, high-value-added, high-pay jobs: professional and technical services, and management of companies and enterprises. The third subsector, administrative and waste services, comprises much lower-skilled, lower-paid, support-type jobs. The average annual pay in 2011 was $79,807 in professional and technical services and $103,075 in management of companies and enterprises.[19] In contrast, the average annual pay in the administrative and waste services subsector was $33,864.

During the recession, the two high-end subsectors experienced relatively low rates of employment job losses: -4.9 percent (-383,800 jobs) in professional and technical services, and -2.6 percent (-50,200 jobs) in management of companies and enterprises. Employment losses were much higher (-1.1 million jobs, or -12.8 percent) in administrative and waste services.

The two high-end subsectors were engines of job growth during the recovery, more than recapturing the employment losses incurred during the recession. Professional and technical services added 576,100 jobs, recouping 150.1 percent of the losses suffered during the downturn. Recovery gains in management of companies and enterprises (+167,100 jobs) resulted in an even higher recovery rate of 332.9 percent. The administrative and waste services subsector also performed well, adding 859,600 jobs and regaining 80.5 percent of its losses.

## EDUCATION AND HEALTH SERVICES

The recession-proof education and health services sector had a consistent performance within its two subsectors over the cycle (table 12). Educational services, and health care and social assistance, both added jobs at the same rate (4.5 percent) during the 26-month-long employment

19. The two highly paid subsectors had 55.2 percent of the 18.2 million total jobs in the aggregate sector in December 2012.

**TABLE 11**

**Professional and Business Services Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Change: Dec. 2007 – Feb. 2010 Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Change: Feb. 2010 – Dec. 2012 Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Change: Dec. 2007 – Dec. 2012 Percentage (%) | Percentage Recovered (%) |
|---|---|---|---|---|---|---|---|
| **Professional and Business Services** | **–1,502.0** | **–8.3** | **1,603.0** | **9.7** | **101.0** | **0.6** | **106.7** |
| Professional and Technical Services | –383.8 | –4.9 | 576.1 | 7.8 | 192.3 | 2.5 | 150.1 |
| **Management of Companies and Enterprises** | **–50.2** | **–2.6** | **167.1** | **9.0** | **116.9** | **6.1** | **332.9** |
| Administrative and Waste Services | –1,067.5 | –12.8 | 859.6 | 11.8 | –207.9 | –2.5 | 80.5 |

*Source:* U.S. Bureau of Labor Statistics.

**TABLE 12**

**Education and Health Services Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 Absolute (000) | Change: Dec. 2007 – Feb. 2010 Percentage (%) | Change: Feb. 2010 – Dec. 2012 Absolute (000) | Change: Feb. 2010 – Dec. 2012 Percentage (%) | Change: Dec. 2007 – Dec. 2012 Absolute (000) | Change: Dec. 2007 – Dec. 2012 Percentage (%) | Percentage Recovered[a] (%) |
|---|---|---|---|---|---|---|---|
| **Education and Health Services** | **841.0** | **4.5** | **1,101.0** | **5.7** | **1,942.0** | **10.5** | **—** |
| Educational Services | 135.4 | 4.5 | 232.9 | 7.5 | 368.3 | 12.4 | — |
| Health Care and Social Assistance | 705.1 | 4.5 | 867.9 | 5.3 | 1,573.0 | 10.1 | — |

*Note:* a. Employment in the Education and Health Services sector and its two subsectors grew during both the recession and the recovery.

*Source:* U.S. Bureau of Labor Statistics.

downturn, defying the Great Recession. They both then gained jobs at even higher rates (7.5 percent and 5.3 percent, respectively), during the 34-month recovery. By December 2012, the overall education and health services sector had 10.5 percent more jobs (+1.9 million) than when the recession commenced.

### LEISURE AND HOSPITALITY

Leisure and hospitality was one of the least hard-hit sectors during the employment downturn. It experienced a 4.5 percent (-615,000 jobs) rate of decline (table 13), compared with an overall 7.6 percent decline for the entire private sector (table 3). Its two subsectors experienced job losses at similar rates during the recession: arts, entertainment and recreation lost 5.0 percent (-99,000 jobs) of its employment base, while accommodation and food services—think "wait staff"—lost 4.5 percent (-515,500 jobs). During the recovery, accommodation and food services was the clear leader (+7.9 percent, or +877,600 jobs), and its strong employment increase more than replaced the recession's losses, as evidenced by a 170.2 percent recovery rate. In contrast, arts, entertainment and recreation lagged, but this subsector's recovery rate (89.1 percent) was still higher than the rate (67.7 percent) for the total private sector (table 4).

**TABLE 13**

**Leisure and Hospitality Employment**
**December 2007 – February 2010 – December 2012**
*(Absolute change in thousands)*

| Sector | Change: Dec. 2007 – Feb. 2010 | | Change: Feb. 2010 – Dec. 2012 | | Change: Dec. 2007 – Dec. 2012 | | Percentage Recovered (%) |
|---|---|---|---|---|---|---|---|
| | Absolute (000) | Percentage (%) | Absolute (000) | Percentage (%) | Absolute (000) | Percentage (%) | |
| **Leisure and Hospitality** | **–615.0** | **–4.5** | **966.0** | **7.5** | **351.0** | **2.6** | **157.1** |
| Arts, Entertainment and Recreation | –99.0 | –5.0 | 88.2 | 4.7 | –10.8 | –0.5 | 89.1 |
| **Accommodation and Food Services** | **–515.5** | **–4.5** | **877.6** | **7.9** | **362.1** | **3.1** | **170.2** |

*Source:* U.S. Bureau of Labor Statistics.

## 6. Concluding Observations

The analysis above leads to several observations for the current and future condition of the national economy.

- The large employment gap—over 38 percent of the recession's total job losses have still not been recovered—has meant slower growth in total personal income.[20] This has contributed to the tepid pace of consumer spending—by far the largest component of GDP— inevitably leading to a below-trend rate of growth in real GDP.
- The construction sector has historically been the driver of economic recoveries and expansions. It had been completely absent as a source of growth for much of the February 2010–December 2012 recovery period. Only recently (since the second quarter of 2011) did it begin to contribute to growth in real GDP.
- This stands as a sharp counterpoint to the 2001 recession/2001–2003 employment downturn. A construction industry on steroids defied historic patterns and grew during the recession and then led the ensuing recovery, driven by the credit and housing bubbles. It is still feeling the aftershocks today of the burst bubbles.
- There has been a dichotomy in the nature of job creation with respect to pay levels. Manufacturing and several of the high-end professional and business services subsectors, all with above-average pay levels, added significant numbers of jobs. But large job gains also occurred in below-average-pay sectors, such as food and accommodation services, retail trade, health care, and administrative and waste services.
- Missing are the job gains in the large middle-pay sectors of the economy. Thus, there has been a dual labor market consisting of labor shortages for highly skilled jobs and a simultaneous oversupply of applicants for jobs in lower-paid positions.
- Part of this missing "middle" is due to the aggregate performance of three knowledge-based sectors of the economy that are closely linked to office markets—information, financial activities, and professional and business services. Information employment contracted during the recovery while financial activities stagnated. Only growth in professional and business services has kept the nation's office markets from lagging even further behind in the recovery.

While there are glimmers of light at the end of the tunnel, the hole remains deep and mired in the post-recession employment losses across many of the nation's service industries. ■

20. Employment in December 2012 was still 3.4 million jobs below the level of December 2007. Given that the average annual pay was $48,043 (in 2011), this implies that annual total personal income is approximately $161 billion below what it would be if there had been a full job recovery.

The authors thank Will Irving for research assistance, Arlene Pashman for editorial and production support, and Marcia Hannigan for distribution assistance.

The **Edward J. Bloustein School of Planning and Public Policy** is one of the nation's key centers for the theory and practice of planning and public policy scholarship and analysis. The school was established in 1992 by the Rutgers University Board of Governors to provide a focus for all of Rutgers' initiatives and programs of instruction, research, and service in planning and public policy. The Bloustein School was ranked No. 3 in the United States in the latest survey of the nation's top graduate programs in urban planning by Planetizen, a Los Angeles–based planning and development network.

## The Bloustein School: A Center of Excellence

In March 2012 the Bloustein School celebrated two decades of academic excellence and service to the public and private sectors of the state, region, and nation. A key strength of the school is bringing together three core disciplines in a unique and multidisciplinary manner. The convergence of planning, public policy, and public health promotes systematic thinking and innovative problem solving aimed at some of society's most complex and challenging problems. The school's extensive focus on "Healthy Communities/Healthy Living" requires an integrated understanding of public health, the built environment, economic development, education, environmental risk, housing, transportation, poverty, workforce development, child welfare, and social justice. The Bloustein School brings all these disciplines together in a culture that promotes strong research, teaching, public service, and collaboration.

For additional information about the Bloustein School, its academic programs, upcoming events, and affiliated research centers, visit the school's website: *http://policy.rutgers.edu.* ■

---

Previous issues of the *Rutgers Regional Report* include:

**Report 34** **The Economic and Fiscal Impacts of Hurricane Sandy in New Jersey** (January 2013)

**Report 33** **Reinventing the NJ Economy: New Metro and Regional Employment Dynamics** (December 2012)

**Report 32** **The Evolving Rental Housing Market in New Jersey** (November 2012)

**Report 31** **Fiscal Flows in New Jersey: Spatial Analysis of Major State Taxes/State Aid Programs** (Oct. 2012)

**Report 30** **Employment Recession and Recovery in the 50 States: An Update** (August 2012)

**Report 29** **Demographics, Economics, and Housing Demand** (April 2012)

**Report 28** **Employment Recession and Recovery in the 50 States** (September 2011)

**Report 27** **Reversal of Economic Fortune: Regional and State Prosperity at Risk** (April 2008)

**Report 26** **Where Have All the Dollars Gone? An Analysis of New Jersey Migration Patterns** (Oct. 2007)

**Report 25** **New Jersey's New Economy Growth Challenges** (July 2006)

**Report 24** **Anatomy of a Recovery: A New Jersey Report Card** (July 2005)

**Report 23** **A Transportation-Driven World-Class Economy: New Jersey at Risk** (April 2005)

All issues are available for download on the Bloustein School's Web site:
*http://policy.rutgers.edu/reports/rrr/*

**The RUTGERS REGIONAL REPORT is a publication of the**
**Edward J. Bloustein School of Planning and Public Policy**
Rutgers, The State University of New Jersey
33 Livingston Avenue
New Brunswick, New Jersey 08901-1981

**http://policy.rutgers.edu** 

**Edited by**
**James W. Hughes, Dean**
**Edward J. Bloustein School of Planning and Public Policy**
**and**
**Joseph J. Seneca, University Professor**
**Rutgers, The State University of New Jersey**