

# State Notes

## TOPICS OF LEGISLATIVE INTEREST

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### **Employment Performance in Michigan Compared with Other States By David Zin, Economist**

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On September 25, 2007, the U.S. Department of Labor's Bureau of Labor Statistics released the August employment information for states. While Michigan did not experience the largest monthly decline in employment from the July level, Michigan did report the largest year-over-year percentage decline in employment (-1.3%, compared with an average 1.2% increase nationally) and, with the exception of Ohio, which had a 0.02% decline, Michigan was the only state to exhibit a year-over-year decline in payroll employment. Michigan also exhibited the highest unemployment rate in the nation (7.4%, compared with a national average of 4.6%) and showed the largest employment decline of any state (56,400 jobs, compared with Ohio's 1,300 job decline). These sorts of statistics have become commonplace since Michigan employment peaked in June 2000, and even the infrequent positive statistic appears with a negative component. For example, in February 2007, Michigan exhibited the fifth largest monthly increase in employment (9,300 jobs) but still posted the second highest state unemployment rate, as well as the largest year-over-year decline in payroll employment, and the increase was insufficient to offset the loss of 23,900 jobs that occurred in the preceding month.

This article reviews the employment situation in Michigan compared with the situation in other states. The focus is on payroll employment, which is sometimes referred to as wage and salary employment. Payroll employment data are collected from surveys of businesses and differ from the employment data used when the unemployment rate is computed. The unemployment rate data are collected from surveys of households rather than businesses, and also include among the employed populace individuals who indicate they are "self-employed". The employment and labor force figures from the household survey can vary for a number of reasons, including people's expectations about the job market and shifting between being "self-employed" and looking for work with an employer.

Labor statistics can vary significantly from month to month for a variety of reasons, and not all states are affected to the same degree by different local, national, and international economic events. Similarly, employment is only one portion of how the economy is perceived. For example, the 2001 recession is dated as beginning in March 2001, the first month national-level payroll employment declined, and ending in November of that year. However, just as some states, such as Nevada and Alaska, continued to experience employment gains for months after the "beginning" of the recession, other states, such as Michigan and North Carolina, had already been experiencing declining employment for months. Furthermore, while the recession is officially dated as ending in November 2001, U.S. payroll employment did not begin a recovery until the second half of 2003, nearly another two years later. For some states, such as Michigan and Ohio, it is unclear whether a recovery in employment has even yet begun.

### **Michigan's Payroll Employment Performance**

Without delving into the causes of Michigan's employment performance in recent years, it is difficult to find measures where Michigan does not rank last or exceedingly close to last. The choice of a benchmark period to measure performance is somewhat arbitrary, but regardless of which period is chosen, Michigan fares badly. Measured from peak to trough, out of 50



states plus the District of Columbia, Michigan exhibits the greatest employment decline, with seasonally adjusted payroll employment down 8.9% (Table 3). Even Louisiana, at the height of the impacts from Hurricane Katrina, reported payroll employment 8.0% below the prerecession peak. As of August 2007, only six states had failed to exceed their prerecession employment peak: Louisiana (-0.1%), Indiana (-0.6%), Illinois (-0.8%), Massachusetts (-2.9%), Ohio (-3.6%), and Michigan (-8.8%). Out of those six states, all but Michigan and Ohio posted employment gains for at least eight of the last 12 months. The length of the employment recession also has varied significantly between states, with the decline in Montana not beginning until June 2001, the middle of the U.S. recession, and lasting only three months. At the other extreme, 85 months after its peak, employment in Michigan is still falling.

While the U.S. recession is officially dated as ending in November 2001, the U.S. continued to lose jobs through July 2003 and reached a quarterly low during the second quarter of 2003 (Table 1). During the period from the fourth quarter of 2001 to the third quarter of 2003, when the economy was no longer in recession but payroll employment continued to decline, Michigan actually fared better than a few states, ranking 44<sup>th</sup> with a 1.8% decline of payroll jobs, ahead of Georgia, Illinois, Connecticut, Colorado, Kansas, Massachusetts, and Oklahoma. In contrast, during this period, employment nationally declined 0.8% and employment grew most rapidly in Nevada, rising 3.8%.

By the second quarter of 2003, payroll employment began rising nationally after 30 months of declines, although many states continued to see declining employment figures in subsequent months. Despite these continued declines, by the second quarter of 2007, the rest of the country had at least regained the employment level from the second quarter of 2003. However, between the second quarter of 2003 and the second quarter of 2007, Michigan's payroll employment growth ranked 51<sup>st</sup> out of the 50 states and the District of Columbia, actually falling 2.8%. By comparison, Louisiana ranked 50<sup>th</sup>, with a 0.4% increase in payroll employment. Excluding the 177,800 payroll jobs that Louisiana lost between August and October 2005 due to Hurricane Katrina, Ohio exhibited the next-worst payroll employment performance over the period, rising 0.6%. As a result, Michigan represents the only state to experience a decline in payroll employment over the period between the second quarters of 2003 and 2007. Michigan was also the only state to exhibit weaker payroll employment growth between the second quarters of 2003 and 2007 than during the period between the fourth quarter of 2001 and the second quarter of 2003.

Virtually all of Michigan's poor payroll employment performance, especially since the second quarter of 2003, can be attributed to changes in manufacturing employment, particularly in the motor vehicle manufacturing sector. Michigan's overall employment peak also corresponds to this State's manufacturing employment peak, and the job losses in manufacturing account for more than 76.1% of the decline in Michigan's payroll employment since the second quarter of 2003. Although Michigan had already lost more than 119,200 manufacturing workers before the fourth quarter of 2001, between that quarter and the second quarter of 2003, Michigan's manufacturing employment decline of 8.7% (68,900 jobs) ranked only 31<sup>st</sup> among the states (Table 2). However, between the second quarters of 2003 and 2007, Michigan manufacturing employment fell 12.9% (93,500 jobs), ranking 49<sup>th</sup>, above only Rhode Island and the District of Columbia, which have such small manufacturing sectors that



Michigan's job loss is nearly twice the total manufacturing employment in the two states combined. Over the same period, manufacturing employment declined 3.4% nationally and, on a seasonally adjusted basis, fewer than one-third of the states reported any increase in manufacturing employment at all.

While Michigan's private service-producing employment has performed better than manufacturing employment, the job losses in the manufacturing sector have exerted a dragging effect on service sector employment ([Table 2](#)). As a result, Michigan ranked 51<sup>st</sup> among the 50 states and the District of Columbia in private service-producing employment growth over the period from the second quarter of 2003 to the second quarter of 2007. Michigan's private service-producing employment rose 0.5% over that period, compared with a national gain of 7.9%. Louisiana ranked 50<sup>th</sup>, with a 0.7% increase, and Ohio ranked 49<sup>th</sup>, with a 3.1% increase. Fifteen states exhibited increases of 10.0% or more in private service-producing employment.

Employment declines quickly translate to lower tax revenue, particularly for state and local governments, which operate under balanced budget requirements. As a result, Michigan also has ranked poorly in employment growth in the government sector ([Table 2](#)). During the period from the fourth quarter of 2001 to the second quarter of 2003, Michigan employment in the government sector (a combination of Federal, state, and local government employment, including employment for state universities and local public school districts) rose 0.2% and ranked 43<sup>rd</sup> in the nation, comparatively lower than the declines in manufacturing employment (28<sup>th</sup>) and private service-producing employment (33<sup>rd</sup>). However, between the second quarter of 2003 and the second quarter of 2007, Michigan's 3.3% decline in government employment ranked 50<sup>th</sup> among the states and the District of Columbia, behind only Louisiana (-6.6%) and well below the 3.0% increase experienced nationally. Twelve states exhibited growth in government employment of 5.0% or more over the same period, while 11 states reported declines.

### **The Economics Behind the Employment Performance**

Several important factors have largely driven Michigan's poor employment performance versus that of other states. One key factor underlying much of the variability in employment figures reflects population changes. States with rapidly growing populations have experienced greater employment growth. Certainly, individuals who lose their job in one state may move to another state for a new job. However, in states exhibiting the largest employment gains, the populations were growing rapidly even during periods in the 1990s when states like Michigan were posting economic gains not experienced for decades and in many cases, economic gains that exceeded those elsewhere in the country. Furthermore, most of Michigan's job losses have occurred in sectors where employment is not growing at the national level and few other states have meaningful employment, and the few states that do are experiencing the same type of contractions as those exhibited in Michigan.

For example, Nevada experienced an 11.7% increase in the population aged 18 to 64 between 2003 and 2006, the fastest growth of any state in the country ([Table 3](#)). Nevada also led the country with the fastest growth in payroll employment (17.8%), manufacturing employment growth (15.6%), and government employment growth (11.4%), and was second



in private service-producing employment growth (15.6%). (It should be noted that despite the rapid growth in manufacturing employment growth in Nevada, manufacturing employment in 2006 averaged 7.8% of Michigan's manufacturing employment during 2006 and represented 3.9% of total payroll employment, compared with 14.9% for Michigan.) A similar pattern exists for other rapidly growing states, such as Arizona, Utah, Idaho, Florida, and Washington. Conversely, states with the slowest population growth often have exhibited the weakest growth in employment; these include Louisiana, Michigan, New Jersey, Ohio, and Rhode Island.

Another important factor for job growth between states has been the reliance upon the manufacturing sector, particularly areas of manufacturing that have been affected significantly by both technological advances and increased international competition (Table 3). The resulting increased productivity has drastically reduced the need for manufacturing workers despite growth in the economy. Between 2001 and 2006, productivity in the manufacturing sector, as measured by output per worker, increased more than 28.3%, or an average of 5.1% per year, compared with an average annual growth rate of 3.3% over the 1987-2001 period. For the economy as a whole, productivity grew an average of 2.6% per year over the 2001-2006 period. While comparable detailed statistics for individual industrial sectors, such as vehicle manufacturing or furniture manufacturing, are not available, the statistics on durable goods manufacturing indicate that productivity has been rising more rapidly in these types of sectors than in the manufacturing sector as a whole.

The relationship between productivity improvements and employment declines is easy to illustrate. Assume there is a firm that employs 100 workers who make 1,000 units of a product and, as a result of factors such as an investment in new equipment, it can improve productivity by 5.0%. Also assume the demand for the firm's product remains at 1,000 units. With more productive workers, the firm can make the same 1,000 units using only 95 employees. In fact, any time the demand for a firm's products grows more slowly than productivity grows, the firm can still meet demand while reducing the number of workers. In the case of the manufacturing industry, productivity has risen by more than 5.0% per year since 2001 while inflation-adjusted consumption of durable and nondurable goods has risen about 4.0% per year.

In the case of motor vehicles, sales from General Motors, Ford, and Chrysler fell by an average of 3.7% per year over the 2001-2006 period. Combining productivity growth with the change in sales, it is easy to explain an average annual employment decline of 9.0% or more over that time period in Michigan's transportation equipment manufacturing sector. From that perspective, the actual annual decline of 7.0% in Michigan's transportation manufacturing employment sector looks almost favorable. Much of the explanation why employment in Michigan's transportation equipment manufacturing sector has not been greater reflects the aspect that non-Michigan facilities and activities have been reduced at a faster rate than in Michigan. Had Michigan experienced a 9.0% annual decline in transportation equipment manufacturing employment, by 2006 the sector would have been 22,600 jobs lower than the actual experience.

Complicating the productivity effects on the economy has been Michigan's reliance on the manufacturing sector. In 2001, more than 21.1% of Michigan's private-sector employment was



in the manufacturing sector, compared with a national average of 14.9%. By 2006, the gap had narrowed somewhat, and 17.7% of Michigan's private-sector employment was in the manufacturing sector, compared to a national average of 12.4%. Not surprisingly, three of the four states most reliant on transportation equipment manufacturing in 2001 (Indiana, Kansas, and Michigan) ranked in the bottom 10 in terms of employment growth over the 2001-2006 period. The sole exception is the State of Washington, where transportation equipment manufacturing is almost exclusively aircraft. Of the remaining states with the 10 slowest employment growth rates are three other states heavily reliant on transportation equipment manufacturing (Connecticut, Mississippi, and Ohio) and one other state with significant vehicle manufacturing employment (Illinois).

These manufacturing sectors also contribute heavily to growth in nonmanufacturing sectors, both with business-to-business purchases (such as purchases of accounting, advertising, legal, and other business services) and with the purchases made by their employees. As a result, five of the six states with the weakest growth in transportation equipment manufacturing employment over the 2001-2006 period are among the eight states with the weakest private service-producing employment growth over the same period.

### **Conclusion**

Payroll employment in Michigan has remained in recession since June 2000. The poor performance of Michigan's employment reflects a massive transformation occurring in the manufacturing industry worldwide as well as the reliance the State exhibits on the sectors comprising Michigan's manufacturing industries. When the U.S. as a whole was in an economic recession, Michigan's employment performance ranked only slightly below average. Because other states are less reliant on core manufacturing industries that are facing limited market growth and experiencing significant gains in productivity, the end of the recession has allowed their economies to generate employment gains. Michigan's reliance on such industries is so significant that the job losses in manufacturing not only have exceeded potential gains in nonmanufacturing sectors, but have actually reduced the ability of those sectors to create new jobs. The patterns exhibited in Michigan employment are consistent with those in states with similar economic structures.

Given the productivity trends and changes in market demand, the employment situation in Michigan is actually not as poor as one might expect. To a large degree this performance reflects a growing concentration of vehicle production by domestic manufacturers in Michigan, meaning that the Michigan economy is diversifying at a slower rate compared with other states, in spite of the job losses in manufacturing. As Michigan continues transforming its manufacturing sector rapidly, and most forecasts suggest it will continue at this rate for a number of years, Michigan will continue to fall behind other states on most employment indicators. However, these transformations will ultimately result in stronger, more profitable industries. As a result, once the rate of transformation slows, Michigan will likely exhibit substantial gains in many economic measures, not just those associated with employment.

**Table 1**  
**Payroll Employment, by State: Selected Quarters, 2001, 2003 and 2007**

|                      | Payroll Employment (1,000s) |                |                | Percent Change |           |              |           |              |           |
|----------------------|-----------------------------|----------------|----------------|----------------|-----------|--------------|-----------|--------------|-----------|
|                      | 4th Quarter                 | 2nd Quarter    | 2nd Quarter    | 4q01 to        | Rank      | 2q03 to      | Rank      | 4q01 to      | Rank      |
|                      | 2001                        | 2003           | 2007           | 2q03           |           | 2q07         |           | 2q07         |           |
| United States        | 130,931.7                   | 129,845.0      | 137,864.3      | -0.8%          |           | 6.2%         |           | 5.3%         |           |
| Alabama              | 1,895.6                     | 1,872.6        | 2,008.2        | -1.2%          | 41        | 7.2%         | 20        | 5.9%         | 21        |
| Alaska               | 289.8                       | 298.9          | 319.3          | 3.1%           | 3         | 6.8%         | 21        | 10.2%        | 10        |
| Arizona              | 2,249.3                     | 2,285.7        | 2,717.8        | 1.6%           | 6         | 18.9%        | 2         | 20.8%        | 2         |
| Arkansas             | 1,146.7                     | 1,140.8        | 1,208.7        | -0.5%          | 24        | 6.0%         | 26        | 5.4%         | 26        |
| California           | 14,472.9                    | 14,394.9       | 15,259.4       | -0.5%          | 25        | 6.0%         | 24        | 5.4%         | 25        |
| Colorado             | 2,197.1                     | 2,147.1        | 2,319.6        | -2.3%          | 48        | 8.0%         | 17        | 5.6%         | 23        |
| Connecticut          | 1,676.4                     | 1,642.9        | 1,697.6        | -2.0%          | 47        | 3.3%         | 41        | 1.3%         | 46        |
| Delaware             | 415.9                       | 413.4          | 439.3          | -0.6%          | 29        | 6.3%         | 23        | 5.6%         | 22        |
| District of Columbia | 657.2                       | 666.0          | 698.0          | 1.3%           | 8         | 4.8%         | 32        | 6.2%         | 20        |
| Florida              | 7,141.6                     | 7,225.9        | 8,127.8        | 1.2%           | 9         | 12.5%        | 6         | 13.8%        | 8         |
| Georgia              | 3,906.8                     | 3,834.5        | 4,150.5        | -1.8%          | 45        | 8.2%         | 15        | 6.2%         | 19        |
| Hawaii               | 547.3                       | 565.1          | 628.1          | 3.3%           | 2         | 11.1%        | 8         | 14.8%        | 6         |
| Idaho                | 564.3                       | 569.5          | 653.9          | 0.9%           | 10        | 14.8%        | 4         | 15.9%        | 4         |
| Illinois             | 5,924.0                     | 5,810.5        | 5,988.1        | -1.9%          | 46        | 3.1%         | 45        | 1.1%         | 47        |
| Indiana              | 2,905.7                     | 2,889.4        | 2,977.1        | -0.6%          | 26        | 3.0%         | 46        | 2.5%         | 44        |
| Iowa                 | 1,451.9                     | 1,435.7        | 1,521.3        | -1.1%          | 38        | 6.0%         | 25        | 4.8%         | 28        |
| Kansas               | 1,343.7                     | 1,312.5        | 1,380.6        | -2.3%          | 49        | 5.2%         | 29        | 2.7%         | 41        |
| Kentucky             | 1,788.7                     | 1,780.7        | 1,856.0        | -0.4%          | 23        | 4.2%         | 37        | 3.8%         | 34        |
| Louisiana            | 1,905.9                     | 1,901.4        | 1,908.2        | -0.2%          | 19        | 0.4%         | 50        | 0.1%         | 48        |
| Maine                | 604.6                       | 604.1          | 618.5          | -0.1%          | 17        | 2.4%         | 47        | 2.3%         | 45        |
| Maryland             | 2,472.7                     | 2,486.5        | 2,609.6        | 0.6%           | 12        | 4.9%         | 31        | 5.5%         | 24        |
| Massachusetts        | 3,292.7                     | 3,200.3        | 3,274.9        | -2.8%          | 50        | 2.3%         | 48        | -0.5%        | 49        |
| <b>Michigan</b>      | <b>4,497.3</b>              | <b>4,415.0</b> | <b>4,292.9</b> | <b>-1.8%</b>   | <b>44</b> | <b>-2.8%</b> | <b>51</b> | <b>-4.5%</b> | <b>51</b> |
| Minnesota            | 2,672.5                     | 2,660.7        | 2,785.9        | -0.4%          | 22        | 4.7%         | 33        | 4.2%         | 32        |
| Mississippi          | 1,122.7                     | 1,110.1        | 1,159.3        | -1.1%          | 39        | 4.4%         | 36        | 3.3%         | 37        |
| Missouri             | 2,709.3                     | 2,678.2        | 2,801.0        | -1.1%          | 40        | 4.6%         | 34        | 3.4%         | 36        |
| Montana              | 391.4                       | 399.9          | 446.6          | 2.2%           | 4         | 11.7%        | 7         | 14.1%        | 7         |
| Nebraska             | 920.6                       | 912.9          | 961.8          | -0.8%          | 32        | 5.4%         | 27        | 4.5%         | 31        |
| Nevada               | 1,038.5                     | 1,077.8        | 1,310.0        | 3.8%           | 1         | 21.5%        | 1         | 26.1%        | 1         |
| New Hampshire        | 621.0                       | 615.3          | 646.0          | -0.9%          | 33        | 5.0%         | 30        | 4.0%         | 33        |
| New Jersey           | 3,993.2                     | 3,970.0        | 4,092.0        | -0.6%          | 28        | 3.1%         | 44        | 2.5%         | 43        |
| New Mexico           | 757.0                       | 773.0          | 845.0          | 2.1%           | 5         | 9.3%         | 12        | 11.6%        | 9         |
| New York             | 8,469.1                     | 8,400.2        | 8,683.6        | -0.8%          | 31        | 3.4%         | 40        | 2.5%         | 42        |
| North Carolina       | 3,848.1                     | 3,790.4        | 4,101.2        | -1.5%          | 42        | 8.2%         | 16        | 6.6%         | 18        |
| North Dakota         | 329.9                       | 331.7          | 359.1          | 0.5%           | 13        | 8.3%         | 14        | 8.9%         | 12        |
| Ohio                 | 5,485.1                     | 5,399.5        | 5,434.1        | -1.6%          | 43        | 0.6%         | 49        | -0.9%        | 50        |
| Oklahoma             | 1,499.1                     | 1,454.9        | 1,569.2        | -2.9%          | 51        | 7.9%         | 19        | 4.7%         | 29        |
| Oregon               | 1,584.9                     | 1,567.3        | 1,724.2        | -1.1%          | 37        | 10.0%        | 9         | 8.8%         | 13        |
| Pennsylvania         | 5,643.6                     | 5,608.2        | 5,799.1        | -0.6%          | 30        | 3.4%         | 39        | 2.8%         | 40        |
| Rhode Island         | 476.3                       | 483.4          | 498.5          | 1.5%           | 7         | 3.1%         | 43        | 4.7%         | 30        |
| South Carolina       | 1,805.4                     | 1,804.3        | 1,924.4        | -0.1%          | 16        | 6.7%         | 22        | 6.6%         | 17        |
| South Dakota         | 377.3                       | 377.5          | 407.3          | 0.1%           | 14        | 7.9%         | 18        | 8.0%         | 16        |
| Tennessee            | 2,658.8                     | 2,660.2        | 2,800.7        | 0.1%           | 15        | 5.3%         | 28        | 5.3%         | 27        |
| Texas                | 9,447.1                     | 9,359.0        | 10,264.3       | -0.9%          | 34        | 9.7%         | 11        | 8.7%         | 14        |
| Utah                 | 1,074.1                     | 1,069.4        | 1,255.1        | -0.4%          | 21        | 17.4%        | 3         | 16.8%        | 3         |
| Vermont              | 300.8                       | 298.0          | 309.3          | -1.0%          | 35        | 3.8%         | 38        | 2.8%         | 39        |
| Virginia             | 3,491.7                     | 3,485.1        | 3,779.4        | -0.2%          | 18        | 8.4%         | 13        | 8.2%         | 15        |
| Washington           | 2,666.5                     | 2,651.0        | 2,909.2        | -0.6%          | 27        | 9.7%         | 10        | 9.1%         | 11        |
| West Virginia        | 734.6                       | 727.1          | 759.4          | -1.0%          | 36        | 4.5%         | 35        | 3.4%         | 35        |
| Wisconsin            | 2,786.4                     | 2,775.7        | 2,867.5        | -0.4%          | 20        | 3.3%         | 42        | 2.9%         | 38        |
| Wyoming              | 247.3                       | 248.8          | 285.3          | 0.6%           | 11        | 14.7%        | 5         | 15.3%        | 5         |

Notes: Data reflect quarterly averages of seasonally adjusted monthly payroll employment figures.  
National data are estimated separately from the states and thus do not equal the sum of the states.  
Source: Bureau of Labor Statistics, U.S. Department of Labor.

**Table 2**  
**Percent Change in Payroll Employment, Selected Sectors, by State**  
 Fourth Quarter 2001 to Second Quarter 2003 and Second Quarter 2003 to Second Quarter 2007

|                      | Manufacturing   |           |                 |           | Private Service-Producing |           |                 |           | Government      |           |                 |           |
|----------------------|-----------------|-----------|-----------------|-----------|---------------------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
|                      | 4q01 to<br>2q03 | Rank      | 2q03 to<br>2q07 | Rank      | 4q01 to<br>2q03           | Rank      | 2q03 to<br>2q07 | Rank      | 4q01 to<br>2q03 | Rank      | 2q03 to<br>2q07 | Rank      |
| United States        | -8.1%           |           | -3.4%           |           | -0.2%                     |           | 7.9%            |           | 1.3%            |           | 3.0%            |           |
| Alabama              | -6.7%           | 17        | 1.5%            | 17        | -0.4%                     | 37        | 8.8%            | 18        | 1.6%            | 21        | 5.0%            | 13        |
| Alaska               | 40.2%           | 1         | 15.3%           | 2         | 7.9%                      | 2         | 8.0%            | 23        | 2.9%            | 4         | -0.7%           | 47        |
| Arizona              | -9.1%           | 36        | 6.3%            | 10        | 2.2%                      | 10        | 20.8%           | 1         | 2.9%            | 5         | 6.0%            | 9         |
| Arkansas             | -6.6%           | 16        | -6.4%           | 36        | 1.5%                      | 11        | 8.6%            | 20        | 1.2%            | 28        | 6.6%            | 6         |
| California           | -8.8%           | 32        | -3.9%           | 29        | -0.2%                     | 35        | 7.4%            | 27        | 0.7%            | 36        | 2.3%            | 23        |
| Colorado             | -10.1%          | 44        | -4.9%           | 31        | -2.0%                     | 49        | 9.2%            | 17        | 2.2%            | 15        | 5.0%            | 14        |
| Connecticut          | -8.7%           | 29        | -3.9%           | 28        | -1.3%                     | 45        | 4.9%            | 42        | -1.0%           | 48        | -0.3%           | 43        |
| Delaware             | -6.3%           | 14        | -9.4%           | 44        | -0.2%                     | 36        | 7.0%            | 28        | 1.3%            | 25        | 6.6%            | 7         |
| District of Columbia | -20.0%          | 51        | -35.5%          | 51        | 0.9%                      | 19        | 7.7%            | 25        | 0.7%            | 35        | 0.7%            | 36        |
| Florida              | -7.2%           | 22        | 0.1%            | 19        | 1.4%                      | 12        | 12.7%           | 5         | 2.3%            | 13        | 6.2%            | 8         |
| Georgia              | -6.0%           | 11        | -2.7%           | 26        | -2.2%                     | 51        | 9.7%            | 16        | 2.3%            | 12        | 7.0%            | 5         |
| Hawaii               | -6.7%           | 18        | 0.4%            | 18        | 53.6%                     | 1         | 12.5%           | 6         | 1.5%            | 22        | 2.2%            | 24        |
| Idaho                | -6.2%           | 12        | 5.0%            | 13        | 2.3%                      | 9         | 16.8%           | 3         | 1.3%            | 26        | 4.0%            | 16        |
| Illinois             | -8.2%           | 28        | -5.5%           | 34        | -1.6%                     | 46        | 5.6%            | 39        | 0.1%            | 44        | -1.5%           | 48        |
| Indiana              | -3.6%           | 4         | -2.6%           | 25        | -0.2%                     | 34        | 4.7%            | 44        | 2.5%            | 10        | 1.5%            | 29        |
| Iowa                 | -4.9%           | 6         | 5.5%            | 12        | -0.5%                     | 39        | 6.1%            | 34        | -0.3%           | 46        | 1.9%            | 25        |
| Kansas               | -9.6%           | 38        | 6.9%            | 9         | -1.7%                     | 47        | 5.2%            | 41        | -0.0%           | 45        | 3.2%            | 18        |
| Kentucky             | -6.7%           | 19        | -2.3%           | 24        | 1.0%                      | 18        | 6.5%            | 31        | 0.3%            | 41        | 1.0%            | 34        |
| Louisiana            | -6.5%           | 15        | -0.9%           | 21        | 0.7%                      | 21        | 0.7%            | 50        | 1.4%            | 24        | -6.6%           | 51        |
| Maine                | -10.7%          | 45        | -7.2%           | 38        | 1.4%                      | 13        | 3.7%            | 48        | 0.6%            | 37        | 1.1%            | 33        |
| Maryland             | -9.7%           | 40        | -9.4%           | 43        | 1.3%                      | 14        | 6.2%            | 32        | 0.9%            | 34        | 1.5%            | 30        |
| Massachusetts        | -11.7%          | 47        | -9.2%           | 42        | -2.0%                     | 50        | 4.2%            | 46        | -3.3%           | 51        | 1.6%            | 27        |
| <b>Michigan</b>      | <b>-8.7%</b>    | <b>31</b> | <b>-12.9%</b>   | <b>49</b> | <b>-0.2%</b>              | <b>33</b> | <b>0.5%</b>     | <b>51</b> | <b>0.2%</b>     | <b>43</b> | <b>-3.3%</b>    | <b>50</b> |
| Minnesota            | -6.2%           | 13        | 0.0%            | 20        | 0.2%                      | 26        | 6.8%            | 29        | 0.5%            | 39        | 1.1%            | 32        |
| Mississippi          | -7.5%           | 24        | -3.3%           | 27        | 0.8%                      | 20        | 6.1%            | 33        | 1.0%            | 30        | 2.3%            | 22        |
| Missouri             | -5.7%           | 9         | -4.5%           | 30        | -0.6%                     | 40        | 6.7%            | 30        | 1.5%            | 23        | -0.6%           | 45        |
| Montana              | -9.7%           | 39        | 7.9%            | 8         | 3.2%                      | 4         | 11.2%           | 11        | 3.2%            | 3         | 2.5%            | 21        |
| Nebraska             | -5.8%           | 10        | -1.3%           | 22        | 0.0%                      | 29        | 7.6%            | 26        | 2.0%            | 17        | 0.7%            | 37        |
| Nevada               | 0.3%            | 2         | 19.6%           | 1         | 2.9%                      | 6         | 19.3%           | 2         | 5.6%            | 1         | 16.3%           | 1         |
| New Hampshire        | -11.2%          | 46        | -6.5%           | 37        | 0.2%                      | 28        | 7.9%            | 24        | 2.7%            | 8         | 2.9%            | 20        |
| New Jersey           | -8.7%           | 30        | -9.8%           | 45        | -0.0%                     | 31        | 3.9%            | 47        | 1.7%            | 19        | 5.0%            | 12        |
| New Mexico           | -9.1%           | 35        | 3.7%            | 15        | 2.5%                      | 8         | 10.8%           | 13        | 4.3%            | 2         | 0.4%            | 39        |
| New York             | -9.8%           | 41        | -10.0%          | 47        | -1.2%                     | 44        | 5.4%            | 40        | 0.6%            | 38        | -0.1%           | 42        |
| North Carolina       | -9.8%           | 42        | -9.9%           | 46        | 1.2%                      | 16        | 12.0%           | 8         | -0.6%           | 47        | 7.5%            | 3         |
| North Dakota         | -1.7%           | 3         | 10.9%           | 6         | 0.2%                      | 27        | 8.7%            | 19        | 2.8%            | 7         | 0.5%            | 38        |
| Ohio                 | -7.7%           | 25        | -7.9%           | 40        | -0.9%                     | 42        | 3.1%            | 49        | 0.4%            | 40        | -0.5%           | 44        |
| Oklahoma             | -13.7%          | 49        | 6.0%            | 11        | -1.9%                     | 48        | 5.9%            | 36        | -1.2%           | 49        | 9.0%            | 2         |
| Oregon               | -7.2%           | 21        | 4.3%            | 14        | -0.9%                     | 43        | 11.3%           | 10        | -1.6%           | 50        | 3.4%            | 17        |
| Pennsylvania         | -9.4%           | 37        | -7.6%           | 39        | 0.3%                      | 23        | 5.8%            | 38        | 1.8%            | 18        | -0.0%           | 41        |
| Rhode Island         | -10.0%          | 43        | -13.3%          | 50        | 2.9%                      | 5         | 6.0%            | 35        | 1.3%            | 27        | -3.0%           | 49        |
| South Carolina       | -7.5%           | 23        | -12.0%          | 48        | 2.8%                      | 7         | 12.3%           | 7         | 0.9%            | 33        | 1.8%            | 26        |
| South Dakota         | -4.2%           | 5         | 13.5%           | 4         | 1.2%                      | 17        | 8.5%            | 21        | 0.9%            | 32        | 1.5%            | 28        |
| Tennessee            | -5.5%           | 8         | -5.2%           | 33        | 0.7%                      | 22        | 8.1%            | 22        | 1.7%            | 20        | 0.3%            | 40        |
| Texas                | -8.9%           | 33        | 2.8%            | 16        | -0.5%                     | 38        | 11.0%           | 12        | 2.8%            | 6         | 5.1%            | 11        |
| Utah                 | -5.4%           | 7         | 13.7%           | 3         | -0.8%                     | 41        | 16.3%           | 4         | 2.2%            | 16        | 5.2%            | 10        |
| Vermont              | -14.4%          | 50        | -5.1%           | 32        | -0.1%                     | 32        | 4.8%            | 43        | 2.6%            | 9         | 3.2%            | 19        |
| Virginia             | -7.9%           | 27        | -6.2%           | 35        | 0.3%                      | 24        | 10.0%           | 15        | 1.1%            | 29        | 7.1%            | 4         |
| Washington           | -12.6%          | 48        | 8.9%            | 7         | 0.0%                      | 30        | 10.8%           | 14        | 2.2%            | 14        | 1.0%            | 35        |
| West Virginia        | -7.8%           | 26        | -8.2%           | 41        | 0.2%                      | 25        | 4.6%            | 45        | 0.9%            | 31        | 1.2%            | 31        |
| Wisconsin            | -6.9%           | 20        | -1.8%           | 23        | 1.2%                      | 15        | 5.9%            | 37        | 0.3%            | 42        | -0.7%           | 46        |
| Wyoming              | -9.0%           | 34        | 10.9%           | 5         | 4.7%                      | 3         | 12.0%           | 9         | 2.4%            | 11        | 4.5%            | 15        |

Notes: Data for manufacturing employment and private service-producing employment reflect quarterly averages of seasonally unadjusted monthly payroll employment figures, while government employment reflects seasonally adjusted employment figures.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

**Table 3**  
**Selected Employment and Population Statistics, by State**

|                      | Mfg. Emp., % of Total |          |              |          | Peak-to-Trough |           |           |          | Population Growth (Age 18-64 ) |             |              |           |
|----------------------|-----------------------|----------|--------------|----------|----------------|-----------|-----------|----------|--------------------------------|-------------|--------------|-----------|
|                      | 4th Qtr               |          | 2nd Qtr      |          | Percent Change | Length in |           |          | Change 2001-06                 | Emp. Growth |              |           |
|                      | 2001                  | Rank     | 2007         | Rank     |                | Rank      | Months    | Rank     |                                | Less Pop.   | Rank         |           |
| United States        | 12.0%                 |          | 10.2%        |          | -2.1%          |           | 30        |          | 6.3%                           |             | -3.0%        |           |
| Alabama              | 16.6%                 | 7        | 14.9%        | 5        | -3.5%          | 34        | 37        | 9        | 3.8%                           | 39          | 0.0%         | 9         |
| Alaska               | 2.7%                  | 50       | 3.8%         | 48       | -0.4%          | 3         | 5         | 48       | 9.0%                           | 8           | -0.1%        | 11        |
| Arizona              | 8.5%                  | 39       | 6.9%         | 40       | -1.6%          | 13        | 9         | 40       | 16.9%                          | 2           | -0.2%        | 12        |
| Arkansas             | 19.1%                 | 3        | 15.9%        | 3        | -1.9%          | 16        | 34        | 13       | 5.6%                           | 26          | -1.6%        | 22        |
| California           | 11.7%                 | 24       | 9.8%         | 29       | -2.5%          | 25        | 28        | 25       | 6.7%                           | 19          | -3.5%        | 36        |
| Colorado             | 7.8%                  | 41       | 6.3%         | 42       | -4.6%          | 47        | 30        | 21       | 8.0%                           | 12          | -5.6%        | 49        |
| Connecticut          | 13.0%                 | 20       | 11.3%        | 19       | -3.5%          | 37        | 36        | 11       | 4.5%                           | 32          | -4.6%        | 43        |
| Delaware             | 9.2%                  | 37       | 7.4%         | 38       | -3.5%          | 36        | 23        | 34       | 7.9%                           | 13          | -3.9%        | 39        |
| District of Columbia | 0.5%                  | 51       | 0.2%         | 51       | -2.4%          | 23        | 4         | 50       | 1.1%                           | 50          | 4.2%         | 3         |
| Florida              | 6.0%                  | 44       | 4.9%         | 44       | -0.7%          | 6         | 5         | 48       | 12.5%                          | 4           | -0.7%        | 16        |
| Georgia              | 12.3%                 | 22       | 10.7%        | 21       | -3.8%          | 39        | 29        | 23       | 11.2%                          | 6           | -7.6%        | 51        |
| Hawaii               | 2.9%                  | 49       | 2.4%         | 50       | -2.4%          | 24        | 6         | 46       | 5.8%                           | 24          | 5.3%         | 2         |
| Idaho                | 11.7%                 | 27       | 10.0%        | 28       | -1.3%          | 10        | 12        | 38       | 12.7%                          | 3           | -0.1%        | 10        |
| Illinois             | 13.1%                 | 19       | 11.3%        | 20       | -4.5%          | 44        | 41        | 4        | 3.9%                           | 38          | -4.9%        | 45        |
| Indiana              | 20.3%                 | 1        | 18.7%        | 1        | -4.4%          | 42        | 38        | 8        | 4.1%                           | 35          | -2.8%        | 33        |
| Iowa                 | 15.8%                 | 11       | 15.1%        | 4        | -3.3%          | 33        | 39        | 7        | 3.7%                           | 40          | -1.2%        | 21        |
| Kansas               | 14.2%                 | 15       | 13.4%        | 11       | -3.5%          | 35        | 35        | 12       | 4.5%                           | 33          | -4.1%        | 40        |
| Kentucky             | 15.7%                 | 12       | 13.9%        | 10       | -3.1%          | 29        | 33        | 15       | 4.0%                           | 37          | -1.8%        | 25        |
| Louisiana            | 8.7%                  | 38       | 8.1%         | 34       | -8.0%          | 50        | 65        | 2        | -2.5%                          | 51          | -0.6%        | 14        |
| Maine                | 11.7%                 | 26       | 9.6%         | 30       | -1.3%          | 9         | 7         | 44       | 5.6%                           | 25          | -4.5%        | 42        |
| Maryland             | 6.6%                  | 43       | 5.1%         | 43       | -0.6%          | 4         | 9         | 40       | 5.9%                           | 23          | -1.2%        | 20        |
| Massachusetts        | 11.2%                 | 29       | 9.0%         | 32       | -6.1%          | 49        | 34        | 13       | 2.2%                           | 48          | -5.1%        | 47        |
| <b>Michigan</b>      | <b>17.4%</b>          | <b>5</b> | <b>14.5%</b> | <b>7</b> | <b>-8.9%</b>   | <b>51</b> | <b>85</b> | <b>1</b> | <b>2.7%</b>                    | <b>45</b>   | <b>-7.5%</b> | <b>50</b> |
| Minnesota            | 13.6%                 | 18       | 12.3%        | 14       | -2.0%          | 18        | 33        | 15       | 5.9%                           | 22          | -3.3%        | 35        |
| Mississippi          | 17.2%                 | 6        | 14.9%        | 6        | -4.6%          | 46        | 37        | 9        | 2.7%                           | 44          | -1.6%        | 23        |
| Missouri             | 12.2%                 | 23       | 10.7%        | 22       | -3.0%          | 28        | 44        | 3        | 5.4%                           | 28          | -3.8%        | 38        |
| Montana              | 5.4%                  | 45       | 4.6%         | 45       | -0.7%          | 5         | 3         | 51       | 7.0%                           | 16          | 3.8%         | 5         |
| Nebraska             | 11.7%                 | 25       | 10.4%        | 23       | -1.6%          | 14        | 8         | 43       | 4.7%                           | 30          | -1.8%        | 24        |
| Nevada               | 4.1%                  | 47       | 4.0%         | 47       | -2.0%          | 17        | 7         | 44       | 19.2%                          | 1           | 2.7%         | 6         |
| New Hampshire        | 14.5%                 | 13       | 11.6%        | 15       | -3.2%          | 31        | 26        | 30       | 7.2%                           | 15          | -5.2%        | 48        |
| New Jersey           | 9.6%                  | 34       | 7.7%         | 36       | -1.5%          | 12        | 27        | 28       | 4.1%                           | 36          | -2.1%        | 27        |
| New Mexico           | 5.2%                  | 46       | 4.4%         | 46       | 0.2%           | 1         | 6         | 46       | 8.2%                           | 11          | 1.9%         | 7         |
| New York             | 8.0%                  | 40       | 6.4%         | 41       | -3.6%          | 38        | 31        | 19       | 2.5%                           | 46          | -2.3%        | 29        |
| North Carolina       | 17.4%                 | 4        | 13.3%        | 12       | -4.5%          | 45        | 30        | 21       | 7.9%                           | 14          | -4.6%        | 44        |
| North Dakota         | 7.2%                  | 42       | 7.2%         | 39       | -1.0%          | 7         | 10        | 39       | 3.0%                           | 43          | 4.0%         | 4         |
| Ohio                 | 16.6%                 | 8        | 14.3%        | 8        | -4.4%          | 43        | 41        | 4        | 2.4%                           | 47          | -4.2%        | 41        |
| Oklahoma             | 10.9%                 | 31       | 9.5%         | 31       | -4.3%          | 41        | 24        | 31       | 4.2%                           | 34          | -1.2%        | 19        |
| Oregon               | 13.0%                 | 21       | 11.6%        | 16       | -4.0%          | 40        | 31        | 19       | 8.4%                           | 10          | -2.4%        | 30        |
| Pennsylvania         | 13.9%                 | 16       | 11.4%        | 18       | -2.1%          | 19        | 29        | 23       | 3.5%                           | 42          | -2.2%        | 28        |
| Rhode Island         | 13.6%                 | 17       | 10.2%        | 25       | -1.4%          | 11        | 9         | 40       | 3.6%                           | 41          | -0.4%        | 13        |
| South Carolina       | 16.6%                 | 9        | 12.6%        | 13       | -4.8%          | 48        | 19        | 35       | 6.8%                           | 17          | -2.5%        | 31        |
| South Dakota         | 10.4%                 | 33       | 10.4%        | 24       | -1.1%          | 8         | 24        | 31       | 5.9%                           | 21          | -0.6%        | 15        |
| Tennessee            | 16.3%                 | 10       | 14.0%        | 9        | -3.2%          | 32        | 40        | 6        | 5.4%                           | 29          | -1.9%        | 26        |
| Texas                | 10.4%                 | 32       | 9.0%         | 33       | -2.3%          | 21        | 28        | 25       | 10.7%                          | 7           | -5.1%        | 46        |
| Utah                 | 10.9%                 | 30       | 10.2%        | 26       | -1.6%          | 15        | 24        | 31       | 12.3%                          | 5           | -1.0%        | 18        |
| Vermont              | 14.5%                 | 14       | 11.6%        | 17       | -2.3%          | 22        | 27        | 28       | 4.7%                           | 31          | -2.9%        | 34        |
| Virginia             | 9.4%                  | 36       | 7.6%         | 37       | -2.2%          | 20        | 28        | 25       | 6.8%                           | 18          | -0.9%        | 17        |
| Washington           | 11.4%                 | 28       | 10.0%        | 27       | -3.1%          | 30        | 15        | 37       | 8.6%                           | 9           | -2.5%        | 32        |
| West Virginia        | 9.5%                  | 35       | 7.8%         | 35       | -2.9%          | 27        | 33        | 15       | 1.9%                           | 49          | 1.0%         | 8         |
| Wisconsin            | 19.3%                 | 2        | 17.2%        | 2        | -2.7%          | 26        | 32        | 18       | 5.4%                           | 27          | -3.7%        | 37        |
| Wyoming              | 4.1%                  | 48       | 3.5%         | 49       | -0.4%          | 2         | 16        | 36       | 6.7%                           | 20          | 6.1%         | 1         |

Notes: Data for manufacturing share of total employment reflect quarterly averages of seasonally unadjusted monthly payroll employment figures.

Data for peak-to-trough employment decline reflect seasonally adjusted monthly payroll employment figures.

Data for population changes and the employment growth rate less population growth rate reflect annual averages.

Source: Bureau of Labor Statistics, U.S. Department of Labor and Bureau of the Census, U.S. Department of Commerce.