

# ECONOMIC COMMENTARY

Federal Reserve Bank of Cleveland

## Looking Back at Slow Employment Growth

by Kristin M. Roberts and Mark E. Schweitzer

**J**obs growth in the current expansion has been unusually sluggish despite coming on the heels of a relatively mild recession in 1990-91. Employment finally returned to its pre-recession level in April of last year, but vigorous growth did not resume until the very end of 1993. Three years into the recovery, employment has increased only 4.8 percent, compared with an average of 11.2 percent during the past three economic upturns. If jobs growth since mid-1991 had kept pace with previous patterns, an *additional* seven million Americans would be employed today. Such lackluster performance is difficult to explain and has led to widespread concern. Though employment gains have been heading upward again in the past few months, understanding what has held down employment growth for so long may reveal ongoing economic pressures.

One widely publicized explanation for the disappointing expansion is that corporate downsizing has led to continuing layoffs throughout many industries despite an economic outlook that is more optimistic overall. Some commentators have observed that the recession rolled through various regions of the country at different times and argue that excessive, drawn-out losses in some states held down national jobs growth. Others speculate that defense cutbacks and sagging export industries continue to shrink thousands of jobs, with indirect losses rippling through supporting industries. Alternatively, increased hiring and firing costs, due to regulation compliance or health care

expenses, have made employers reluctant to add to payrolls. A final catch-all explanation is that productivity gains have simply allowed companies to do more with fewer employees. The lack of economywide, firm-level data complicates the direct identification of these conjectures.

The theories can, however, be grouped into two nonexclusive reasons for the recent slow employment growth: 1) too many jobs are being destroyed, or 2) too few jobs are being created. For example, those that cite corporate downsizing or defense cutbacks as explanations view slow growth from the angle that too many jobs are being eliminated, while proponents of the increased hiring/firing cost explanation focus on the problem that too few jobs are being added. Our approach explores the issue from both perspectives by examining job additions in expanding industries and job deletions in contracting industries. To the extent that the actions of single firms in broad industries reflect common trends, firms' behaviors will be observable in industry summaries.

Applying this method at both the state and national level allows us to use the specific situations of individual states to confirm our national results. We focus on the states with the largest shares of the country's employment: California, New York, Texas, Florida, Illinois, Pennsylvania, Ohio, Michigan, New Jersey, and Massachusetts. These 10 states provide a wide mix of industries and represent just over half of national employment, but accounted for 80 percent of all jobs lost

The economic expansion, now more than three years old, has generated a disappointing level of employment growth when compared to previous historical episodes. The authors show that this feature can be traced to a widespread weakness in the rate of job addition in growing industries, rather than to an unusually high job deletion rate in contracting industries. Despite statewide differences in the timing of recession and recovery, this slowdown in the rate of new hires is prevalent in most large states and in the nation as a whole.

in the most recent recession. Their combined experiences should closely reflect the aggregate U.S. trend.

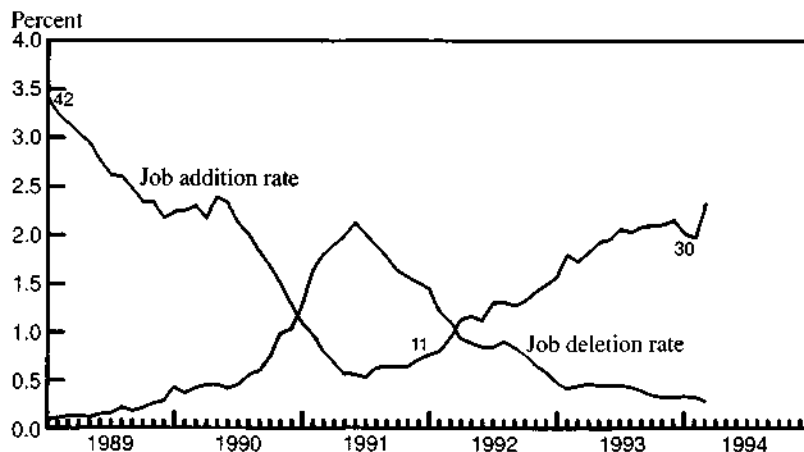
We find that weak employment addition in expanding industries, rather than unusually high job deletion in contracting industries, is the major source of sluggish employment growth in this expansion. While the timing of the recession and recovery varies greatly between states, this pattern of lackluster jobs growth in expanding industries is replicated in state after state. The strength of this trend suggests a need to focus on reasons why healthy industries are adding fewer employees in this expansion. Two states point out interesting contrasts: Ohio's employment growth remains stagnant due to still-weak job additions, while Massachusetts has far exceeded its pre-recession levels of job creation. The key to a more robust recovery, either regionally or nationally, is jobs growth in expanding industries.

#### Job Addition and Deletion in the United States

While net employment changes are usually tracked as one indicator of the health of the economy, these changes are actually the result of two forces: job creation and destruction.<sup>1</sup> The simultaneous addition and reduction of jobs is a normal process in the dynamics of the labor market, and particularly so during recessions, when labor is reallocated among different sectors. This sort of adjustment is neither painless nor instantaneous, but is necessary for an economy to remain vibrant. Looking at both dimensions of employment changes provides additional insight into the behavior of labor markets in business cycles that cannot be gained from analyzing net growth alone.<sup>2</sup>

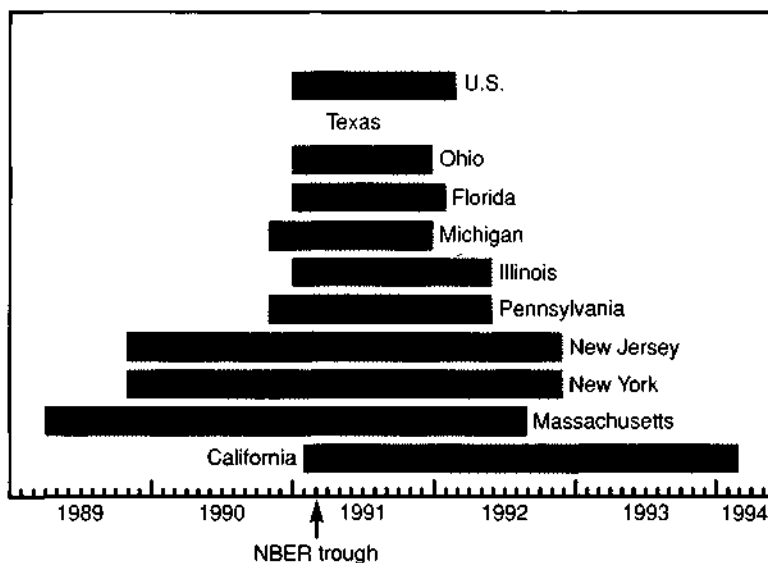
Studies of firms' employment levels have shown that both job creation and job destruction exhibit certain patterns over the business cycle.<sup>3</sup> Well in advance of the peak, job creation typically starts to diminish while destruction begins to escalate. Recessions are generally dominated by a sharp increase in job destruction, mixed with only a mild slowing in job creation.

FIGURE 1 EMPLOYMENT GAINS AND LOSSES IN THE UNITED STATES



NOTE: Numbers printed in blue indicate the number of industries reporting rising employment at three points in time: January 1989, December 1991, and January 1994. Shaded area indicates recession.

FIGURE 2 TIMING OF NET EMPLOYMENT LOSSES



SOURCE: Authors' calculations based on data from the U.S. Department of Labor, Bureau of Labor Statistics.

Usually, job destruction reaches its highest rate near the end of the recession. In recoveries, job deletion tapers off while job addition exhibits a strong, post-trough increase.

Because employment figures from individual establishments are not available at the state level, we must compromise on the level of disaggregation. Using employment data at the industry level, we define the job addition rate as the sum of net jobs added across expanding industries over a 12-month interval divided by total employment at the beginning of the period.<sup>4</sup> Similarly, the job deletion rate is the sum of all net

job reductions over the same period, divided by initial employment. To avoid seasonal disturbances, the job addition and deletion rates are calculated on a year-over-year basis — the difference between employment in any given month and in the corresponding month of the previous year. While intra-industry job reallocations are unmeasured in these numbers, our job addition and deletion rates identify important reallocations across industries.

Figure 1 plots U.S. job addition and deletion rates over a five-year period, encompassing the end of the previous expansion, the 1990–91 recession, and

**TABLE 1 JOB ADDITION AND DELETION RATES (Percent)**

	Pre-Recession		Recession		Expansion	
	Addition Rate	Deletion Rate	Addition Rate	Deletion Rate	Addition Rate	Deletion Rate
U.S.	2.35	0.36	0.70	1.64	1.69	0.53
CA	2.78	0.43	0.68	2.07	—	—
FL	3.80	0.67	1.16	2.69	3.44	0.50
IL	2.55	0.69	0.94	1.86	1.94	0.56
MA	2.57	1.56	0.95	5.25	4.05	1.30
MI	2.82	0.53	0.65	2.33	1.79	0.48
NJ	2.24	0.89	0.82	2.87	1.85	0.73
NY	1.65	0.74	0.71	2.73	1.34	1.09
OH	2.26	0.34	0.80	2.03	1.59	0.61
PA	2.21	0.80	0.73	1.91	1.28	0.74
TX	3.33	0.38	—	—	2.77	0.58

NOTE: Recession is measured as a period of continuous net employment declines.

SOURCE: Authors' calculations based on data from the U.S. Department of Labor, Bureau of Labor Statistics.

the current expansion. The entry into this recession follows the pattern reported for prior downturns. At the end of the last expansion, job addition was well above job deletion, resulting in year-over-year net employment gains of around 3 percent. Heading into the downturn, job addition begins to dwindle while job deletion speeds up. At the onset of the recession (July 1990), job losses take a sharp turn upward, rising from 0.4 percent to 1.8 percent at the March 1991 trough. Meanwhile, the drop in job gains is just as steep (from 2.1 percent to 0.8 percent), as many industries switch from rising or steady hiring levels to falling employment.

The unusual features of this recession are net employment declines that continue from December 1990 to March 1992 and job additions that do not begin to accelerate until January 1992. Figure 1 clarifies the source of current slow employment growth nationally: Job deletion has returned to its pre-recession rate of between 0.25 and 0.50 percent, but the job addition rate has not yet bounced back to the 3.0 to 3.5 percent range realized at the end of the last expansion. In fact, it seems to be stuck at the same rate as in the early months of the downswing.

The economy's anemic job creation has two dimensions: Fewer industries reported employment gains (an average of 28 in 1993, compared with 37 in 1989), and the average job addition rate in expanding industries is lower. The average monthly job addition rate per industry in 1993 was .068 percent, down from .074 percent in 1989. While the 1989 figure seems only slightly higher, it would have translated into average year-over-year net employment growth of 1.72 percent in 1993, rather than the 1.54 percent realized. The sources of uneven and weak job additions can be further investigated at the state level. Is slow growth on the national level the result of regional variation in the severity and length of the recession?

#### ■ Job Addition and Deletion at the State Level

According to the National Bureau of Economic Research, the U.S. recession began in July 1990 and ended in March 1991, but the timing across states was highly uneven.<sup>5</sup> There is no uniform dating procedure for recessions at the state level, so we will measure them as the period of continuous year-over-year employment declines.<sup>6</sup> Under this definition, most Mountain and Great Plains states remained unscathed in the latest downturn. The Midwest recorded mild employment losses, while the coastal

states were hit hard. Note also that under this definition, the recession for the nation as a whole would be measured as starting later but lasting longer: from December 1990 to April 1992.

Evidence of the regional disparity in timing for the states used in our discussion is presented in figure 2. Texas never experienced net employment declines, although jobs growth did slow between July 1990 and July 1991. Industrial states like Ohio and Michigan were in recession for a relatively short time, exhibiting declines for about a year. At the other end of the spectrum, New York, New Jersey, and Massachusetts posted net job losses over a much longer period. California, the state holding the largest share of the nation's employment, was one of the last to enter the downturn but remains the only state in this group still in a recession.<sup>7</sup>

To gauge the extent to which these 10 states support the U.S. trend in job addition and deletion, we calculate their average job addition and deletion rates over three periods: pre-recession, recession, and expansion. The results, presented in table 1, reflect both divergent patterns and a commonality among the states.

Clearly, the depth of each state's recession varied greatly. California, New York, New Jersey, and Massachusetts had severe contractions, with jobs being eliminated three to five times faster than they were added. For example, the job deletion rate for Massachusetts averaged 5.25 percent during its recession and reached a high of 8.4 percent in March 1991, translating into a loss of 336,000 workers. Such steep rates of job deletion are easily associated with the regional impact of sharp nationwide reductions in specific industries, particularly in the defense industries concentrated in these states.

Another source of variation reflected in table 1 is the need for states with rapidly growing populations (Florida, Texas, and California, for instance) to have higher job addition rates in order to avoid steadily rising unemployment. The job addition rates for these states

were well above the U.S. average in the pre-recession period and have continued to remain above the national average in the recovery. The exception is California, which has an expanding population but a job addition rate close to zero, indicating that the lingering recession there is quite severe.

Although the states have had different experiences in the recession and recovery, a strong pattern emerges from table 1. In all but two states, job deletion either returns to or falls below its pre-recession rate, while job addition remains much lower than before. Indeed, this is exactly the pattern we saw at the national level in figure 1. Even in Texas — where there was no recession — recent job gains are still well below pre-recession rates. While substantially higher employment losses set it apart from other states, California shares the common thread of fewer new hires in expanding industries. The one exception is Massachusetts, where the job addition rate not only has rebounded, but has accelerated to a five-year high.

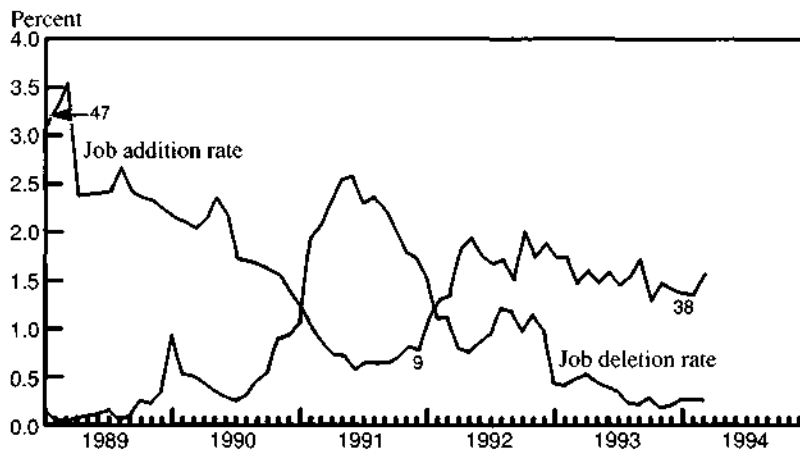
Because sluggish levels of payroll additions are the driving factor for slow employment growth in the majority of these states, the obvious question is why employers are hiring fewer people. To provide a look at the mechanics of job addition and deletion rates, we turn to a discussion of two states with divergent experiences in net employment growth.

#### ■ Ohio and Massachusetts

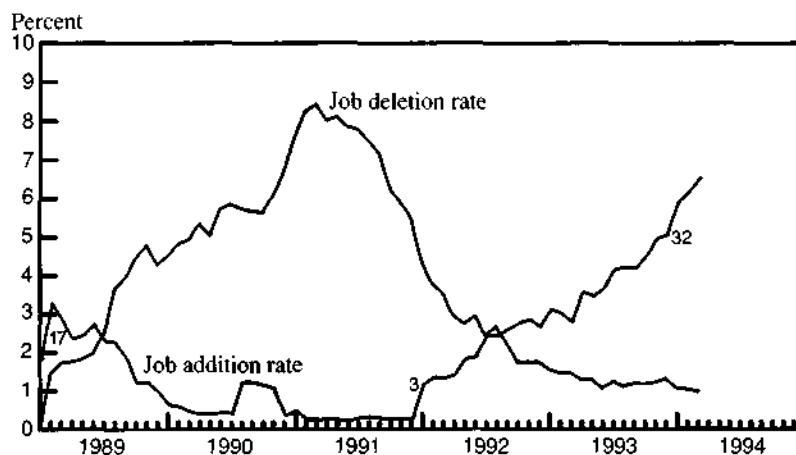
Since April 1992, year-over-year net employment growth has averaged 1.0 percent in Ohio and 2.0 percent in Massachusetts. Job deletion in the two states is fairly similar, but job addition is not. Indeed, the timing and trend of job addition rates implicate this measure as the source of slower-than-usual employment growth.

**Ohio** Figure 3 plots employment gains and losses in Ohio, a trend that matches quite closely the one observed at the national level. Ohio is also representative of the typical patterns seen in most of the other states in our discussion. Each

**FIGURE 3 EMPLOYMENT GAINS AND LOSSES IN OHIO**



**FIGURE 4 EMPLOYMENT GAINS AND LOSSES IN MASSACHUSETTS**



NOTE: Numbers printed in blue indicate the number of industries reporting rising employment at three points in time: January 1989, December 1991, and January 1994. Shaded areas indicate recession.

SOURCE: Authors' calculations based on data from the U.S. Department of Labor, Bureau of Labor Statistics.

varies in the magnitude of job addition and deletion rates, but all of the states replicate the common thread: lower job addition in expanding industries.

Coming out of the recession, a steady rise in job addition begins, which might have led to a good rebound in employment growth. However, Ohio's job addition rate stagnated in early 1992 and has remained relatively flat ever since — despite reports from a number of industries that employment has increased steadily over the same period. Thus, progressively more of the state's industries are recovering, but in the process are adding fewer jobs. This

pattern is evident in a variety of industries, including manufacturing, retail trade, and services. The stalled job addition rate has caused the state's net employment growth to linger around 1 percent for the past two years, compared with 3 percent in 1989.

Like the nation, Ohio's weak rate of new hires has two dimensions. Not only are there fewer industries reporting rising payrolls (an average of 29 in 1993, compared with 42 in 1989), but the average job addition rate for these growing industries is lower: In 1993, the average monthly rate of new hires

per industry was .053 percent, compared with .062 percent in 1989. Indeed, had the latter rate prevailed, net employment growth in Ohio would have averaged 1.9 percent, rather than the actual 1.5 percent.

On the upside, total job losses in shrinking industries (measured by the job deletion rate) headed down in 1993 to less than half a percent. This is especially evident in manufacturing, which experienced a high degree of restructuring and productivity growth in the 1980s that led to employment declines. There has even been a mild slowing in job losses in the heavily restructured communications sector. If the end of industry job losses alone indicated a resurgent economy, then Ohio would be unusually healthy.

**Massachusetts** Massachusetts had a long, severe recession with a high amount of reallocation. As shown in figure 4, the job deletion rate began to climb as early as March 1989, reaching a high of 8.4 percent in March 1991 and remaining well above 4 percent for most of the recession. In April 1991, one of the lowest points in this state's downturn, only three industries had reported net employment gains: personal services, health services, and engineering and management services. In the recovery, however, the severe losses are being reabsorbed as the job addition rate has escalated strongly since early 1992. It now stands at 6.48 percent — more than double the average pre-recession rate of 2.57 percent. The result is an impressive rate of net employment growth in the range of 5 to 6 percent in recent months. Though job losses have not entirely ceased, the state is on the path to a robust recovery.

Improvements in net jobs growth in Massachusetts can be traced to the fact that the state now has *more* industries reporting rising employment with a *higher* job addition rate per industry than before the recession. The mean rate of new hires per industry climbed from .144 percent in 1989 to .152 percent in 1993. As of January 1994, job additions were reported in 32 industries,

including real estate, food and kindred products, and general building and contracting (which posted year-over-year employment gains as high as 24 percent in 1993).

#### ■ Conclusion

While the states differed in the timing and depth of their recessions, the current expansion has witnessed widespread weakness in the rate of job addition in growing industries that has limited overall employment gains. In most large states and in the nation as a whole, the less-than-stellar net employment growth can be traced to the fact that the rate of new hires has not yet rebounded. A detailed look at two states offers further support of this conclusion: So far in this expansion, the difference in employment growth between Ohio and Massachusetts is due to variations in their job addition rate, not their job deletion rate.


What are the factors that might have suppressed growth in new jobs? Feasible explanations include productivity gains, increases in hiring and firing costs, or uncertainty about economic conditions. Productivity gains seem somewhat unlikely, because these effects would tend to focus on the industries with the most rapidly rising productivity, namely manufacturers. If slow employment growth resulted from continuing economic uncertainty on the part of employers, the recently higher consumer confidence rates and positive economic reports should cure this problem. On the other hand, a general resistance to new hirings on the part of employers based on a perception of rising employment costs would likely continue to hold back the expansion.

While our analysis is not definitive in pinpointing the reason for firms' slow hirings, it supports concerns that employment costs associated with hiring or firing workers held down past employment gains and may limit future increases.

## ■ Footnotes

1. See Steven J. Davis and John Haltiwanger, "Gross Job Creation, Gross Job Destruction, and Employment Reallocation," *Quarterly Journal of Economics*, vol. 107, no. 3 (August 1992), pp. 819-63.
2. A summary of techniques used in the analysis of job creation and destruction can be found in Randall W. Eberts and Edward Montgomery, "Employment Creation and Destruction: An Analytical Review," Federal Reserve Bank of Cleveland, *Economic Review* (1994 Quarter 3), forthcoming.
3. See Joseph A. Ritter, "Measuring Labor Market Dynamics: Gross Flows of Workers and Jobs," Federal Reserve Bank of St. Louis, *Economic Review*, vol. 75, no. 6 (November/December 1993), pp. 39-57.
4. "Industry" refers to the 1987 two-digit SIC code definitions in The Standard Industrial Classification Manual published by the U.S. Office of Management and Budget. We used the largest sample of two-digit industries available for all 10 states. To account for industries where no data were available, we calculated a residual industry, which is defined as employment in the one-digit industry minus employment in the two-digit industries for which data existed.

5. See Steven D. Gold and Sarah Ritchie, "Differences among States in the Impact of the Recession," New York: Center for the Study of the States, January 1994.
6. At the national level, the National Bureau of Economic Research examines many factors when dating recessions, including trends in output, income, employment, and trade.
7. According to our measures, California is still experiencing a recession, although reports early this year from the Federal Reserve Bank of San Francisco suggest improving conditions in the state.

  
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*The views stated herein are those of the authors and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.*

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