What’s Happened to Ohio’s Manufacturing Jobs?

by Randall W. Eberts

Ohio’s manufacturing sector has experienced a healthy expansion during the last five years. According to the Federal Reserve Bank of Cleveland’s Ohio Manufacturing Index, output has increased at an average annual rate of 7.7 percent. This pace is even faster than the national annual rate of 5.6 percent, which in recent years has grown at a faster pace than it has averaged over the last two decades.

Despite this surge in Ohio production, manufacturing employment has remained relatively flat (see figure 1). Since the lowest point of the 1982 recession, the gain in factory jobs has averaged only 0.3 percent annually. Most of this gain occurred within the first six quarters of the current expansion. Since peaking in 1984 third quarter, manufacturing employment has been slowly falling, registering a total net loss of 3.0 percent (as of June 1988).

Employment gains in the current expansion pale in comparison to the number of factory jobs added during the previous expansion. Between 1975 second quarter and 1979 fourth quarter, Ohio’s manufacturing sector created 107,500 jobs—35,300 more than were created between 1983 first quarter and June 1988. Furthermore, employment increased throughout most of the previous expansion, swelling by 142,000, or 11.3 percent, before it began trending downward during the last three quarters of that expansion.

What has happened to all the manufacturing jobs during a period that has been heralded as the “return of manufacturing” by recent newspaper and journal articles? Obviously, significant labor productivity gains are part of the answer.

One article attributes the resurrection of Midwest manufacturing to an ardent pursuit of the fundamentals: closing older, less efficient plants, trimming the work force, improving management and labor relations, capitalizing on neglected product niches, and improving product quality. Whatever the reasons for productivity gains, the fact remains that fewer factory jobs are being created during this expansion than in the previous one.

Although the current business expansion has spawned a resurgence in Ohio manufacturing, fewer factory jobs are being created than in previous growth periods. In examining components of Ohio’s net manufacturing employment change through three recent periods, the author finds that while job losses from plant closings have remained constant, a lower percentage of jobs have been created from business openings. The slowdown in new job creation has come primarily from large firms.
The opening of manufacturing firms is the primary source of net employment change over the business cycle for Ohio. Of the four components, openings exhibit the largest fluctuation over the business cycle. As illustrated in figure 2, the percentage of jobs gained as a result of firm openings dropped 5.8 percentage points from the recovery of 1976-78 to the recession of 1980-82. Jobs increases from openings then bounced back by 4.4 percentage points between 1984 and 1986, which helped to pull net employment up from a 10.2 percent decline to a slight 0.2 percent increase. In terms of employment levels, openings accounted for an average increase or decrease over the business cycle of roughly 65,000 jobs, assuming an average manufacturing base of 1.3 million jobs.

Openings are also the largest source of new jobs during each period, and the importance of this source is greater in the current expansion than in the previous one. Between 1976 and 1978, the heart of the first expansion, job gains from openings were 40 percent higher than gains from expansions. After falling during the recession, the ratio has risen to 56 percent in the current expansion. Contractions of existing establishments exhibit the second largest degree of fluctuation over the business cycle. The percentage of jobs lost due to contractions increased by 2.1 percentage points between 1976-78 and 1980-82, and then fell by 3.5 percentage points between 1982-86.

A surprising finding is that the proportion of jobs lost from firm closings is virtually the same during recessions as it is during expansions. Over the business cycle, the percentage of jobs lost due to closings declined by less than two percentage points.

The finding that closings do not vary appreciably over the business cycle runs counter to the general perception that recessions help to reduce the economy by purging it of inefficient firms. Rather, these results suggest that restructuring from closings occurs continuously, in expansions as well as in recessions. The question is whether enough startups will occur to replace the jobs that are lost due to closings. For Ohio, jobs lost from closings have outnumbered jobs gained from openings in all periods except 1976-78, when the two components were virtually the same. Expansions of existing establishments account for the rest of the job gains, but these increases barely cover the jobs lost due to contractions of firms in earlier expansionary period. What, then, has happened to manufacturing jobs in Ohio? The answer is simply that fewer jobs are being created from firm openings than in this economic expansion than in the earlier one. The smaller net job gain is not due to more jobs being lost from closures and layoffs; rather, the percentage of jobs lost as a result of closings and contractions is lower now than in the 1976-78 period.

Who is Falling Behind? Jobs gained from the opening of establishments affiliated with large firms (500 or more employees) are lower in this period than in the earlier expansion, and their share of total job creation is also lower. The openings of establishments affiliated with large corporations currently add 9 percent to the employment base, whereas in the earlier expansion these establishments added 11.4 percent to the employment base. Consequently, the contribution of large corporate employment has fallen from 86 percent of all new jobs resulting from firm openings to 76 percent. Expansions of large firms have also dropped off, from generating 5.8 percent additional jobs.
Net between 1976-78 to adding 4.2 percent between 1984-86. Furthermore, much of this reduction has come from establishments affiliated with firms headquartered outside the state.

The slack in job creation has been picked up by small businesses (less than 100 employees). During the 1976-78 expansion, 14 percent of the new jobs (from both openings and expansions) came from small businesses. During the 1984-86 expansion, their share climbed to 21 percent.

This small contribution, although on the rise, runs counter to the popular belief that small firms are the primary creators of new jobs in the United States. Of course, small businesses' contribution is much higher when all sectors are considered, since small businesses account for more than 50 percent of job creation in wholesale and retail trade. In manufacturing, however, the national average is roughly 20 percent, and Ohio manufacturing is not much different.

Small businesses' net contribution to a region's employment growth requires more than simply creating jobs. They must also retain jobs and expand employment by staying in business. Since the average life of small businesses is quite short, they also have a high closing rate. As shown in table 1, jobs lost by small business failures outnumber jobs gained from small business formation in every period. However, expansions of small businesses have exceeded contractions in every period. During the current expansion, three jobs are created from expansions for every job lost from contractions. Consequently, the success of small businesses comes more from the rate of expansions than from openings.
Ohio Compared with the Nation  
The process of net employment change over a business cycle described above is not unique to Ohio. National estimates show the same general pattern, but with a slight twist. As displayed in figure 3, the percentage of jobs gained nationally due to openings fell from 11.5 percent in 1976-78 to 7.4 percent in 1980-82 and then spring back to 13.6 percent in 1984-86. The percentage of jobs lost due to closings, on the other hand, increased by 1.9 percentage points between the earlier expansion and the recession. However, the difference between the nation’s closing rate and Ohio’s is that the national rate has continued to climb an additional 1.8 percentage points during the current expansion, whereas Ohio’s closing rate has settled back to 12.1 percent—1.6 percentage points lower than the recessionary rate. Why does the national closing rate continue to increase? Part of the answer may be related to a flurry of mergers and acquisitions during this expansion. This phenomenon may account for the equal percentage of jobs gained and lost due to openings and closings of large firms (9.7 percent for each), since mergers and acquisitions in many cases merely represent a change of ownership. The earlier two periods do not show this balance between openings and closings.

Another piece of the puzzle may simply be related to the higher number of openings in this economic expansion than in the previous one. Since new firms, especially small ones, have a higher probability of closing, the increase in closings in 1984-86 may simply reflect the fallout from the increase in small firm openings. Another difference is that the role of openings in manufacturing employ- ment is greater in Ohio than in the nation. Nationally, expansions generated more jobs than openings in both 1976-78 and 1980-82, and only recently have openings contributed more than expansions. In Ohio, the percentage of jobs created from openings consistently exceeds the number generated from expansions for those two periods as well as for the current expansion.

Conclusion  
The current expansion has yielded sizable productivity gains in Ohio’s manufacturing sector, but at the expense of employment growth. The primary reason for this relatively slow employment growth compared with the previous expansion is that openings and, to a lesser extent, expansions have not created enough new jobs to replace the normal rate of job loss that typically takes place in the economy. During the 1984-86 period, Ohio’s manufacturing sector created jobs at an 11 percent slower rate than the nation and at a 16 percent slower rate than during the previous expansion. Although the rate of job growth is important to a region’s economy, it is also important to consider the composition of this job growth. In Ohio, job growth has shifted away from large corporations to small firms. This trend may bring some long-run benefits to the state.

For instance, the small business sector is thought to be a powerful force for technological innovation and entrepreneurial ingenuity that can stimulate an industry and a local economy. Small businesses have been shown to generate more innovations per employee than larger firms and to spend twice as much of their research and development dollars on fundamental research. In addition, small businesses are believed to be more responsive to structural changes than large firms through quicker entry and exit into markets, enhancing a region’s ability to adjust more rapidly to changing economic conditions.

Furthermore, the slight trend away from the dominance of large corporate affiliates in Ohio may decrease the relatively wide fluctuations in employment observed across business cycles and reduce the state’s vulnerability to decisions made by parties outside the region.

However, neither trend promises to bring back the tens of thousands of manufacturing jobs to Ohio’s economy that have been lost over the last decade. In order to maintain a leaner, more efficient posture, manufacturing enterprises must continue to rely on proportionately smaller work forces per unit of output. The only hope for increasing the manufacturing employment base in Ohio is for this increase in productivity and entrepreneurship to spawn and attract greater industrial activity within the state.

Randall W. Short is an assistant vice president and economist at the Federal Reserve Bank of Cleveland. The author would like to thank Ralph Day and John Stemson for computer assistance. The views stated here are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

Federal Reserve Bank of Cleveland  
Research Department  
P.O. Box 6387  
Cleveland, OH 44101

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Footnotes  
1. The Ohio Manufacturing Index is estimated using manufacturing employment and electric power consumption data. For more details, see Michael P. Bryan and Ralph L. Day, "Views from the Ohio Manufacturing Index," Economic Review, Federal Reserve Bank of Cleveland, Quarter 1, 1987, pp. 20-30. The index is similar in many respects to the Federal Reserve Board of Governors’ Industrial Production Index for the nation.

