Federal Reserve Bank of Cleveland ISSN 0428-1276
October 8, 1984

economic commentary

Dimensions of Change in Cleveland's Economy

by Randall W. Eberts

In the past two decades, Cleveland has shared in the plight of many heavily industrialized cities in the northern United States.[1] Unable to match the attractions of climate and business environment of the Sunbelt, these metropolitan areas have experienced a slow but steady movement of population and employment opportunities away from the North and into the South and Southwest. In most cases, the shift in activity is a response to fundamental social and economic changes in the United States and not to specific conditions in particular metropolitan areas. Nonetheless, this trend has placed cities such as Cleveland in an uneasy period of transition. Once a great success story in the industrialization of this country, Cleveland is now grappling with declining population, an employment growth rate that is below the national average, and a shift away from manufacturing to other types of employment. The Cleveland of tomorrow will be dramatically different from the Cleveland of two decades ago.

When assessing the vitality of the local economy, there is a tendency to concentrate on one or two dimensions of employment change. The closing of existing businesses, for instance, is usually associated with decline, and the opening of new ones is associated with growth. No one can dispute that the formation of new businesses stimulates an economy. But economic health does not preclude the closing of plants. In fact, recent studies show that the fastest growing regions are associated with the highest rate of business failures. Thus, one sign of a community's vitality is the absolute number of formations of new businesses and closings of existing ones. To dwell on a single dimension of the dynamic process of regional change, therefore, may misrepresent the forces that continually transform a local economy.

Instead of concentrating on net change of employment, as many studies have done, we compared employment activity in four basic components of change. These four components are (1) the formation of new businesses; (2) the expansion of existing businesses; (3) the contraction of existing businesses; and (4) the closing of existing businesses. Recently released data from the Small Business Administration record the four components of employment change for individual firms and make such an analysis possible.[2] A comprehensive understanding of these dynamics can help answer important questions that arise when shaping local development policies.

Business Activity in Cleveland

The level of activity within a local economy can be viewed in two ways, both of which are considered here. One is to consider the number of establishments that exhibited no change in employment; the other is to examine the number of businesses that reported a change in employment. Since businesses may behave differently over various portions of a business cycle, we compared their performance over an entire cycle. To do this, we chose two time periods—1976-78 and 1980-82. The 1976-78 period marks a recovery, while the 1980-82 period spans two recessions (as defined by the National Bureau of Economic Research). Charting the performance of businesses over both periods helps to distinguish businesses that are susceptible to downturns from those that are resistant to them. It also helps to separate structural, or permanent, changes from cyclical changes. Although many of the cyclical effects are outside local control, the structural effects are certainly within local control.

This article summarizes the results found in Randall W. Eberts, "Components of Employment Change in Cleveland," REI Review, *vol. 2, no. 1 (November 1984), pp. 3-12.*

The author is an associate professor of economics, University of Oregon, and a visiting scholar, Federal Reserve Bank of Cleveland.

The views stated herein 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.

1. In this article *Cleveland* refers to the Cleveland standard metropolitan statistical area (SMSA).

2. For a description of these data, see Eberts, "Components of Employment Change in Cleveland."

Table 1 Employment Change in Cleveland's Economy

Figures in the first row for each sector represent the percentage change in employment from each component. Closings and contractions obviously are negative changes. Figures in the second row represent the percentage of employment change in each category originating from small businesses.

	1976-78					1980-82				
Sectors	Openings	Closings	Expansions	Contractions	Net	Openings	Closings	Expansions	Contractions	Net
Total	15.0	12.2	10.3	10.6	+2.5	9.4	12.0	9.7	11.7	-4.6
	21.1	26.2	39.3	38.5		25.7	24.2	35.6	21.6	
Manufacturing	20.2	17.7	9.9	8.6	+3.8	10.0	14.5	12.0	11.7	-4.2
	6.0	8.9	28.2	16.7		9.8	11.5	14.9	15.5	
Construction	9.6	9.3	14.2	17.0	-2.5	10.4	10.9	13.1	17.8	-5.1
	77.0	87.4	70.7	41.3		43.9	60.5	63.3	52.7	
Transportation	9.1	5.8	6.8	13.5	-3.4	5.0	34.4	6.0	7.9	-31.3
	18.8	24.0	37.0	9.0		48.3	7.2	72.3	28.5	
Wholesale	16.7	8.6	11.6	9.7	+10.0	10.0	11.1	8.2	13.4	-6.3
	24.8	49.9	49.6	34.1		38.0	46.6	66.3	27.2	
Retail	16.8	14.4	9.9	9.5	+2.8	10.1	10.3	5.8	17.6	-12.0
	42.5	56.1	60.8	42.3		47.2	55.1	63.9	16.2	
Financial services	10.9	7.2	13.5	12.4	+4.8	5.0	4.1	13.2	13.0	+1.1
	27.5	24.9	27.1	76.8		32.4	47.7	25.5	17.1	
Services[a]	12.3	10.1	10.8	9.8	+3.2	7.7	6.5	8.6	6.6	+3.2
	24.4	23.5	34.4	67.5		34.2	34.0	49.0	32.2	

a. *Services* include insurance, real estate, and other consumer and business services.
SOURCE: U.S. Establishment Longitudinal Microdata (USELM), Small Business Administration.

In both the 1976-78 and 1980-82 periods, nearly half of the businesses in the Cleveland SMSA reported having the same number of employees (within a 2 percent margin) in each year. More businesses remained stable in the recessions than in the recovery. Nationally, nearly 60 percent of the businesses reported no change in employment between 1978 and 1980. Tabulating the amount of employment change within Cleveland reveals that its economy may be considerably more dynamic than one might think. Between 1976 and 1978, 35 percent of the businesses in existence in both years registered a net employment change of more than 2 percent of their 1976 employment.

Counting the number of jobs either gained or lost because of expansions and contractions, the total turnover from these sources is 184,000 jobs. In addition, 6,000 businesses closed their doors to over 100,000 employees, while 5,400 businesses opened their doors to 133,000 workers. In all, a little less than half of the jobs in the Cleveland area changed hands (or were abolished or created) in the 1976-78 period. The recessions of 1980 and 1981-82 marked a slightly less active local economy than during the earlier recovery, showing a 43 percent turnover rate compared with the earlier 50 percent rate. Even so, Cleveland's economy was considerably more active in both periods than the nation's economy, which exhibited a 35 percent turnover rate.

Components of Change

The components of employment change—openings, closings, expansions, and contractions—are shown in table 1 for the total Cleveland economy, broken down by sector. Overall, employment increased by 25.3 percent above the base-year level as a result of openings and expansions during 1976-78. At the same time, employment fell by 22.8 percent as a result of closings and contractions. Together these changes produced a net increase in employment of 2.5 percent. Of the more than 220,000 jobs added to the local economy, the formation of new businesses accounted for 60 percent of the gain, while expansions of existing establishments contributed the remaining 40 percent. Of the 200,000 jobs that were lost, 54 percent came from closings and 46 percent from contractions. The more recent period presents a slightly different overall picture. From 1980 to 1982, openings and expansions increased employment by 19.1 percent, while closings and contractions reduced employment by 23.7 percent. The combination resulted in a net decline in employment of 4.6 percent.

A comparison of the four components of change over the business cycle provides a somewhat surprising assessment of the machinery of change. The percentage of employment loss because of closings remained at 12 percent over the entire business cycle. Contractions and expansions were also very similar, with slightly more layoffs and slightly fewer hirings during the recessions than during the recovery. The striking difference between the two periods is in the component of openings. During the recovery, openings accounted for an increase of 15 percent; during the recessions, their contribution fell to 9.4 percent. Openings thus accounted for almost the entire reversal in the net change in employment—from a positive 2.5 percent during the recovery to a negative 4.6 percent during the recessions.

Upon examining the components of employment change for the seven major sectors shown in table 1, we find a pattern of firm behavior that parallels the business cycle. Closings and contractions generally are higher in a recession than in a recovery, whereas openings and expansions are higher in a recovery than in a recession. The interesting exceptions to this behavior are in the two sectors that expanded during both the recovery and the recessions. Financial and other services exhibited more openings than closings and more expansions than contractions in both periods. Thus, services show a strong resiliency throughout the entire business cycle. Since the formation of new establishments is one of the primary forces that alter the composition of the economy, it is interesting to see how employment has changed within the largest sector—manufacturing. Within manufacturing, textiles, apparel, furniture, paper, chemicals, petroleum, and primary metals consistently have lost more employees because of closings of establishments than they have gained because of openings. Rubber, transportation equipment, and instruments, on the other hand, have consistently gained more employees because of openings than they have lost because of closings. Thus, the transition within manufacturing is moving the economy away from the more traditional manufacturing activities into more high-technology endeavors.

The Role of Small Firms

Small businesses recently have been heralded as the primary sources of jobs in the U.S. economy. Birch (1979) estimates that the contribution of small businesses to job creation is as high as 78 percent of net new jobs.[3] There is a widely held belief that the small-business sector is a powerful force for technological innovation and entrepreneurial ingenuity that can stimulate development of severely depressed regions. In addition, small businesses are believed to be more dedicated to the local economy than are branch plants; they are less likely to abandon a region when economic conditions turn sour.

The share of small businesses in Cleveland's economy is lower than in the nation. In 1976, small businesses accounted for 88 percent of the establishments in the Cleveland SMSA; yet these establishments employed only 32 percent of the private-sector labor force. In contrast, 55 percent of the labor force was employed by establishments affiliated with firms having over 500 employees, although these affiliated establishments accounted for only 8 percent of all establishments in Cleveland. The 1980 figures show virtually the same share, with employment by small firms dropping slightly to 30 percent of the labor force. National estimates by Armington and Odle (1982) reveal that small businesses employed 36 percent of the labor force in 1980.[4] Cleveland's small business employment thus fell below the national share in that year.

The contribution of small businesses to the components of employment change differs significantly over the business cycle. In fact, small businesses exhibited a strong countercyclical behavior. Small firms captured a larger share of employment gain during the 1980 and 1981–82 recessions than during the recovery, but had a smaller share of the loss in employment during the recession than the recovery. The numbers are striking. During the recovery, the share of employment gains from small businesses (because of openings and expansions) was 29 percent, less than their share of employment. During the recessions, however, the share of employment gain from small businesses rose to 30. The share of employment loss from small businesses (from closings and contractions) was 32 percent during the recovery but only 23 percent during the recessions. Since the prominence of small businesses in Cleveland's economy follows the ebb and flow of these firms over the business cycle, it follows that they could be an important instrument of stability over the long run.

In addition to withstanding cyclical downturns in the economy better than large businesses, small businesses are less sensitive to weaknesses in a regional economy than are large businesses. Armington (1983) reports that in 1976–80 small businesses grew twice as fast as large ones in the relatively slow-growing Northeast.[5] The relative strength of small businesses in weaker economies is also reflected in the fact that small businesses have a higher share of growth in the slower-growing areas, in spite of having lower shares of employment in these areas.

A large proportion of small businesses in Cleveland are concentrated in sectors that are characterized by low fixed costs. The wholesale and retail sectors have the largest share of small businesses, followed by the two service sectors. Manufacturing, although below the local average, exhibits a relatively high rate of participation

3. See David L. Birch, *The Job Generation Process*, Cambridge, MA: MIT Program on Neighborhood and Regional Change, 1979.

4. See Catherine Armington and Marjorie Odle, "Small Business—How Many Jobs?" *Brookings Review*, vol. 1, no. 2 (Winter 1982), pp. 14–17.

5. See Catherine Armington, *Further Examination of Sources of Recent Employment Growth Analysis of USEEM Data for 1976 to 1980*. Processed. Business Microdata Project, Brookings Institution, Revised April 1983.

of small businesses. The countercyclical behavior found for the overall economy is also found for each of the major sectors, except manufacturing. In manufacturing, the small firms' share of employment gains and losses falls far below their share of employment. This is especially true during a recession. While the ratio of small businesses' share of change to their share of employment is greater than 1 (or very close to 1) for all other sectors, manufacturing exhibits a ratio of 0.42 for employment gain and 0.44 for employment loss. If such a relationship is maintained for any length of time, small businesses will definitely lose ground in the manufacturing sector.

Summary

A dynamic economy can be a positive instrument of change. Many studies of dynamic economies have concentrated on *net* employment changes or have focused on one dimension of change, such as plant closings. However, all four components of net employment change need to be considered to gain an accurate picture of the path of transition in Cleveland's economy. Cleveland's economy is indeed dynamic. Almost half of the total number of jobs in the Cleveland SMSA have been gained or lost over any two-year period from 1976 onward. This rate is slightly higher than the national average. Roughly one-quarter of the jobs that turned over were lost because of closings, but nearly the same number of jobs were gained because of the startup of new establishments.

Openings are the primary mechanism of overall employment change for Cleveland's economy. While expansions, contractions, and closings remained relatively constant over the business cycle, the increase in employment from the formation of new businesses accounted for most of the positive net employment gains during the recovery and the negative net employment loss during the 1980 and 1981-82 recessions. Small businesses (defined as those having fewer than 100 employees) claimed a smaller share of the local Cleveland economy than of the national average. Even so, these establishments showed strong countercyclical behavior over the business cycle, which may provide some degree of stability to the local economy.

It may be premature to offer policy suggestions based only on this brief description of the dynamics of Cleveland's economy. Nonetheless, the findings provide some interesting insights into the mechanisms that will shape Cleveland's future development. Two findings are particularly noteworthy. First, all cities, whether growing or declining, lose establishments and gain establishments. In many cases, the closing of businesses is determined by factors outside the control of the local economy. Permanent changes in the national economy and simply the natural attrition of firms have much to do with closings. Although painful, closings of these types must be expected.

Openings, on the other hand, can be influenced by local policies. New business formations, especially in manufacturing, are characterized by competitive firms, whose success comes from product innovations or more efficient management techniques. Although many of these establishments, especially small ones, might not survive past five years, the ones that do survive provide a solid basis for future development. Local policies thus should be directed toward the formation of these establishments.

Second, by exhibiting countercyclical behavior, small establishments have an important place in the local economy. During a recession, when larger businesses are generally cutting back on employment, small businesses are more likely to open establishments and less likely to close them than are their larger counterparts. In the case of Cleveland, encouraging such behavior would help to reduce the problems of cyclical unemployment.

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