Adjustments in Buffalo's Labor Market

Buffalo, a major manufacturing center in New York State, provides a classic example of the difficult labor market adjustments that result when the demand for the output of a region's firms drops sharply. The employment decline in the Buffalo metropolitan area[1] during the early 1980s is the most recent and severe example of long-term trends affecting its economy. Buffalo was vulnerable to a severe downturn at the end of the 1970s because many of its earlier strengths—location, early development, and well-paying heavy manufacturing industries—proved to be serious handicaps.

As a result, the back-to-back recessions of the early 1980s and the appreciation in the value of the dollar hit Buffalo harder than the nation as a whole. While national manufacturing employment dropped 15 percent between 1979 and 1983, the Buffalo metropolitan area lost about 30 percent of its total manufacturing employment. Unemployment at first rose sharply—to about 15 percent in late-1982. But since then, adjustments to this economic decline have occurred in the region's labor market. In late-1985, the metropolitan area's unemployment rate stood at about 7.5 percent, a six-year low. Nevertheless, many long-term economic problems remain for the region.

The purpose of this article is to discuss why these economic problems endured. It begins by describing the pre-1980 employment base in Buffalo, highlighting Buffalo's early role as a manufacturing center and its postwar changes in employment. It then analyzes why Buffalo's economy was vulnerable to decline in the late 1970s and describes the extent of job losses during the recessions of the early 1980s. Next, this article discusses the three major economic adjustments that have occurred in Buffalo's labor market since the late 1970s:

- A drop in the area's labor force.
- A decline in wages paid to Buffalo's workers in most industries and occupations compared with similar workers elsewhere.
- Employment growth in industries paying workers much less than the declining manufacturing industries.

The analysis concludes by showing that even with these rather dramatic changes, Buffalo's adjustment to its shrinking manufacturing sector continues, and its economy remains vulnerable.

Buffalo employment before the 1980s

For 150 years, Buffalo has been an important hub of commerce.[2] With the opening of the Erie Canal in 1825, Buffalo quickly became a center of food processing, transforming the agricultural products of the Midwest into goods for eastern cities. By the late 1850s, Buffalo was emerging as an important area for primary metal production, combining iron ore shipped across the Great Lakes or through the Erie Canal with coal from western Pennsylvania. Abundant hydropower from the Niagara River was harnessed to generate cheap electricity even before 1900. By the turn of the century, the city of Buffalo had a population of 350,000, and was the second largest rail terminal and third largest port in the country.

[1] The Buffalo metropolitan area consists of Erie and Niagara Counties

[2] For a general history of Buffalo, see Mark Goldman, *High Hopes The Rise and Fall of Buffalo, New York* (Albany State University of New York Press, 1983)

Buffalo's important heavy manufacturing industries developed soon after 1900. In 1904, the Lackawanna Iron and Steel Company relocated from Scranton to just south of Buffalo. By 1930, 50,000 people were working in iron, steel, and other primary metal industries. In that year, 10,000 people also worked in auto factories and 4,000 in electrical machinery manufacturing.[3] In 1935, Bethlehem Steel, the new owner of the Lackawanna mill, modernized the plant to produce sheet metal for cars. The investment paid off in 1937 when General Motors built a new Chevrolet plant near Buffalo. Buffalo's employment peaked during World War II at nearly 460,000 workers; nearly 225,000 of them worked in war-related industries producing steel, airplanes, tanks, and ships.

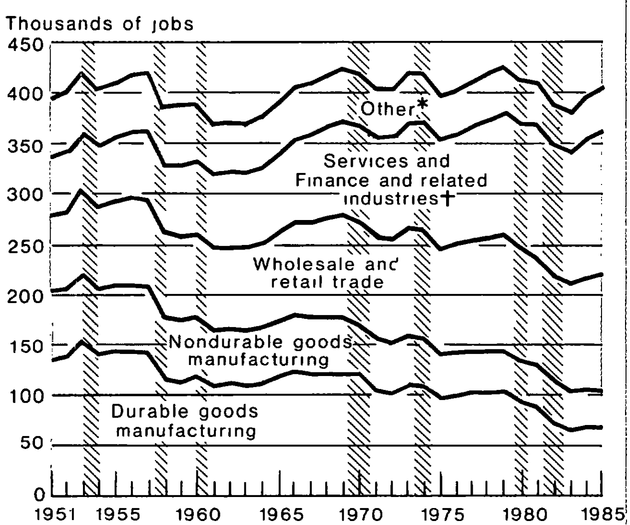
During the postwar period, private employment in the Buffalo area has fluctuated between 375,000 and 425,000 (Chart 1). Buffalo's manufacturing employment declined in each postwar recession but never regained pre-recession levels in the subsequent recoveries. The largest declines in manufacturing employment before the 1980s occurred in the recessions of the late 1950s and mid-1970s. Services and other nonmanufacturing industries gradually became a larger percent of jobs in the Buffalo area as manufacturing declined in importance.[4] In 1979, however, manufacturing still remained more important in Buffalo than in New York State and nationally (Chart 2). Buffalo's shift toward nonmanufacturing jobs was similar to national trends, but for the

3 United States Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States 1930, Volume III, Part 2* (Washington, D C United States Government Printing Office, 1932), pages 306-307

4 The employment categories used are those of the United States Census Bureau and Department of Labor Services include business and personal services plus private sector health, education, and social services Other nonmanufacturing categories include finance, insurance, and real estate, wholesale and retail trade, construction, and transportation and public utilities (except the postal service)

Chart 1

Private Nonagricultural Employment in the Buffalo Area



Data for 1951-84 are annual averages Data for 1985 are for June 1985 Buffalo area includes Erie and Niagara Counties

Shaded areas represent periods of recession, as defined by the National Bureau of Economic Research

*Includes construction, transportation, and public utilities (except the postal service)

†Services include business and personal services plus private sector health, education, and social services

Sources United States Department of Labor and New York State Department of Labor

Chart 2

Private Employment by Industry for the Buffalo Area, New York State, and the United States

Data are annual averages

Sources United States Department of Labor and New York State Department of Labor nation there was a crucial difference. For the economy as a whole, manufacturing employment increased throughout this period—albeit at a slower rate than nonmanufacturing—whereas in Buffalo manufacturing steadily declined

Vulnerability of Buffalo's economy in the late 1970s

By the late 1970s, Buffalo was on the brink of one of its largest postwar reductions of employment With hindsight, it is not surprising that an area with nearly one-third of its manufacturing jobs in the production of primary metals and transportation equipment did not fare well in the early 1980s Buffalo's employment base included more than the national share of jobs in slow-growing or declining durable goods manufacturing industries But, quite surprisingly, Buffalo's unattractive industry mix accounted for only about one and one-half percentage points of the thirteen percentage point difference between Buffalo's and the nation's employment growth in the late 1970s.[5] In other words, if each of Buffalo's industries had grown at the same rate as the national average for those industries, Buffalo's growth in nonagricultural employment between 1974 and 1979 would have been about 13.5 percent (almost equal to the national average of 15 percent) instead of the 2 percent growth that actually occurred

Three other characteristics of the Buffalo economy, besides industry mix, contributed to its vulnerablity to economic decline at the end of the 1970s:

- *Buffalo's location* became a greater disadvantage in the postwar period because producers did not have easy access to the growing markets of the West and South This problem intensified as Buffalo's markets in northeastern and midwestern states declined or grew slowly in the late 1970s and early 1980s. Buffalo's importance as a Great Lakes port also declined in the 1960s and 1970s following the opening of the Saint Lawrence Seaway

- *Many older plants and facilities* had not been updated sufficiently to compete with modern facilities built elsewhere in the postwar period. Buffalo manufacturers did invest in plant and equipment at the national rate in the 1970s.[6] However, in Buffalo a larger-than-average portion of gross investment was needed to prevent deterioration of the old, existing capital stock in the area, so net investment was lower.

- *Wages in Buffalo,* especially in manufacturing, were well above the national average, and during the 1970s area wages rose even further relative to the rest of the country. In 1963 and 1967, Buffalo's average wage for production workers in manufacturing was about 20 percent above the national average; in 1972 and 1977 this difference rose to 24 percent and 30 percent respectively (Table 1) Buffalo's industry mix—a large proportion of firms in high wage durable goods industries—caused about 75 percent of the difference between Buffalo's manufacturing wages and the national average. But even with an adjustment for the industry mix, Buffalo's average production wage was still 3 to 5 percent above the national average in the 1960s, and rose to 7 percent above it in 1972 and 1977.[7]

5 In the analysis, Buffalo's employment change was separated into "industry mix" and "regional" components Industry mix was calculated by comparing national growth in each industry with growth in total employment nationally The regional component compared Buffalo's growth in each industry with national growth in that industry Employment data used in the analysis was two-digit or in some cases one-digit standard industrial code (SIC) industries This technique is sometimes labeled "shift-share" analysis See Gregory Jackson *et al*, *Regional Diversity Growth in the United States, 1960-1990* (Boston Auburn House, 1981), Appendix B In the early 1980s the regional component continued to be the dominant influence

6 This conclusion is based on real investment in new plant and equipment per production worker or investment as a percent of the value of shipments The United States Census Bureau's *Annual Survey of Manufactures* (through 1979) and *Census of Manufactures* provide data on investment by county

7 This analysis focuses on wage costs, which account for about 80 percent of

Table 1

Average Wages For Production Workers in the Buffalo Area and the United States 1963-82

Year	United States average wage In dollars	Buffalo average wage In dollars	Buffalo as percent of United States	Buffalo corrected for industry mix In dollars	Buffalo as percent of United States
1963	2 53	3 05	120 6	2 65	104 8
1967	2 92	3 47	118 8	3 02	103 4
1972	3 95	4 91	124 3	4 24	107 3
1977	5 89	7 65	129 9	6 33	107 5
1982	8 69	11 22	129 1	9 30	106 9

Wage rate is production worker payroll divided by production worker hours The industry mix correction is a weighted average of Buffalo wages with the weight for each industry being the percent of production workers in the category for the entire U S economy The industry categories used were the most disaggregated available in *Census* data Where wage data for Buffalo were unavailable, a value was imputed from other sources

Source Calculated by author using *Census of Manufactures* data for each year

The area's higher-than-average wage and the increase in wages over the 1970s were due in part to the high degree of unionization in Buffalo (Appendix 1)

As a result, several of Buffalo's manufacturing industries competed against firms in growing areas which operated newer, more efficient facilities and paid lower wages. Buffalo producers in chemicals, primary metals, transportation equipment, and instruments not only paid higher-than-average wages but also had lower-than-average productivity Productivity estimates for Buffalo industries were made using data from the *Census of Manufactures.* In Chart 3, these industries with the most severe wage/productivity problems are shown in the shaded upper-left quadrant of the chart (SIC 28, 33, 37, and 38).[8] Their value-added per production worker is below the national average for their industry, and their average wages are above the national industry average.

Buffalo's nonmanufacturing firms, in contrast, did not have such severe disadvantages. Services, trade, and finance and related industries grew throughout the national economy because of changing consumption patterns and business organization.[9] The fixed capital in these industries is less affected by physical deterioration and technological advances than the factories of many manufacturers. Therefore, the age of business facilities was less of a handicap for local nonmanufacturing firms. In addition, wage costs for Buffalo nonmanufacturing firms tended to be near the national average for metropolitan areas.[10] Finally, competition from outside the region was less important because these industries generally serve local markets

Buffalo employment in the 1980s

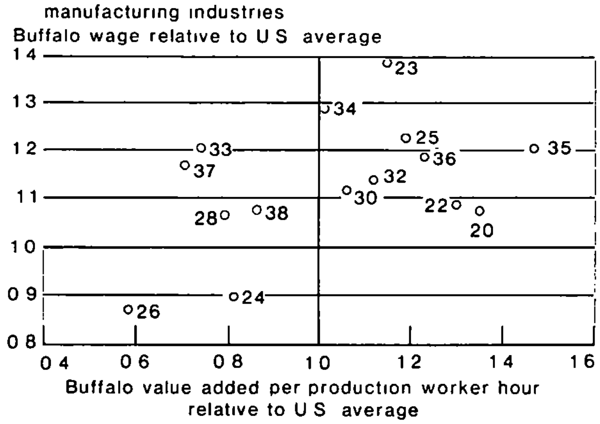
The back-to-back recessions of the early 1980s, along with the difficulties of American manufacturing because of foreign competition, caused a sharp decline in employment and payroll in Buffalo's vulnerable industries. The relative prosperity of 1979 was followed by rapid decline in several of the area's major manufacturing industries. Because of this manufacturing decline, by 1985 the industry mix of employment in Buffalo resembled that of the U.S economy as a whole (Chart 4).

As would be expected, those Buffalo industries with wage/productivity problems that were competing in declining national markets were affected most by the recession The decline in primary metals was dramatic (Table 2, page 34) Between 1979 and 1983, when total local private employment bottomed out, employment in primary metals dropped from about 22,000 to 8,400 Declining demand and overcapacity in the world steel industry meant that the local decline in primary metals employment continued even after the rest of the local economy began to recover. Employment dropped to 5,500 in 1984 and 4,500 by September 1985. The employment declines in other manufacturing in-

Chart 3

Wages and Productivity in the Buffalo Area Compared with the National Average-1977

For two-digit Standard Industrial Code (SIC) manufacturing industries



Symbol numbers of SIC observations are 20-food products, 21-tobacco, 22-textile mill products, 23-apparel and other textile products, 24-lumber and wood products, 25-furniture and fixtures, 26-paper and allied products, 27-printing and publishing, 28-chemicals and allied products, 29-petroleum and related products, 30-rubber and plastics, 31-leather and leather products, 32-stone, glass, clay, and concrete, 33-primary metals, 34-fabricated metals, 35-machinery excluding electrical, 36-electric and electronic equipment, 37-transportation equipment, 38-instruments, and 39-miscellaneous

No data for SIC 21, 27, 29, 31, and 39

Source 1977 Census of Manufactures

Footnote 7 continued
total labor cost Regional data on fringe benefits disaggregated by industry are not available Published information suggests that fringe benefits are highly correlated with wage levels and that focusing on wages alone understates the differences in total labor cost between locations See Timothy Smeeding, "The Size Distribution of Wage and Nonwage Compensation Employer Cost Versus Employee Value", in Jack E Triplett, ed, *The Measurement of Labor Cost* (Chicago University of Chicago Press, 1983), pages 237-277 The Bureau of Labor Statistics *Area Wage Surveys* collect information on types, but not costs, of fringe benefits offered by employers in a sample of metropolitan areas Buffalo employees received a wider range of benefits than workers in many other areas in the sample

8 The value-added figure for transportation equipment (SIC 37) suggests Buffalo's situation was worse than it actually was Buffalo had much more than the national percentage of auto manufacturing, a part of the industry with value-added per worker below the overall industry average

9 For an analysis of the growing importance of business services, see Bobbie H McCrackin, "Why Are Business and Professional Services Growing So Rapidly?" *Economic Review,* Federal Reserve Bank of Atlanta (August 1985), pages 14-28

10 Among occupations included in the Bureau of Labor Statistics *Area Wage Surveys* in the late 1970s, Buffalo office workers received wages well below the national average for metropolitan areas while unskilled plant workers outside manufacturing were paid slightly above the national average

dustries were also large between 1979 and 1983 (Table 2).[11]

Buffalo's employment outside of manufacturing changed very little during the early 1980s. The sharp decline in Buffalo's goods-producing sectors (cutting sales to businesses and households) and in area population (Appendix 2) limited the growth of local services and trade (Chart 5).[12]

The layoffs in manufacturing and the slow growth in services produced a dramatic change in the Buffalo labor market. Area unemployment stood at about 6 percent in mid-1979. It rose to 10.5 percent in mid-1980 and 15 percent in late-1982 Total private sector payroll adjusted for inflation (a measure of real income growth) declined steadily from 1979 to 1983.

Adjustment to the decline

Buffalo's labor market adjusted to this economic downturn in two ways Some workers responded to the sharp decline in demand for labor by leaving the area's labor force. Many others continued to work in the same industry but gradually accepted wages closer to—or even below—those paid similar workers in other parts of the country. Differences in labor demand also contributed to the decline in Buffalo's average wage. Growing sectors of the local economy tended to pay wages well below the wages in declining industries.[13]

Labor force decline

A rapid 10 percent decline in the area labor force between 1979 and 1984 eased the labor surplus in the region. The area's labor force stood at about 580,000 workers in 1979. By 1983 it had dropped to about 540,000 and it continued to drop to 522,000 in 1984.[14] (Nationally the labor force grew 8 percent during this period) Some workers left the region to seek jobs elsewhere,[15] while some older workers dropped out of the labor force by accepting early retirement.[16] The out-migration primarily involved younger workers without the

11 These declines in employment resulted in a one-third reduction in real terms of manufacturing payroll between 1979 and 1983 Primary metals payroll dropped to about one-third of its 1979 level Nondurable goods industries fared somewhat better than durable goods, with their payroll declining only 14 percent in real terms compared with a 37 percent decline for durables Manufacturing payroll fell from about 50 percent of the area's payroll in 1979 to about 40 percent in 1983

12 Subsidized redevelopment of downtown Buffalo has expanded the supply of top quality office space there, and many new retail developments have been constructed throughout the region For a discussion of the possible link between manufacturing and service growth, see Aaron S Gurwitz, "New York State's Economic Turnaround Services or Manufacturing", this *Quarterly Review* (Autumn 1983), pages 30-34

13 Buffalo still must contend with other disadvantages It cannot move closer to the growing markets of the West and South The recent growth of the northeastern economy, however, has lessened this problem In addition, the economic competitiveness of area factories and other physical capital may have declined further compared with other areas New investment is more likely to be drawn to growing regions than to Buffalo with its economic problems The recessions of the early 1980s compounded Buffalo's problems by lowering local investment levels and forcing more plants to close

14 New York State Department of Labor, *Buffalo SMSA, Fiscal Year 1985, Annual Labor Area Report*, page 11

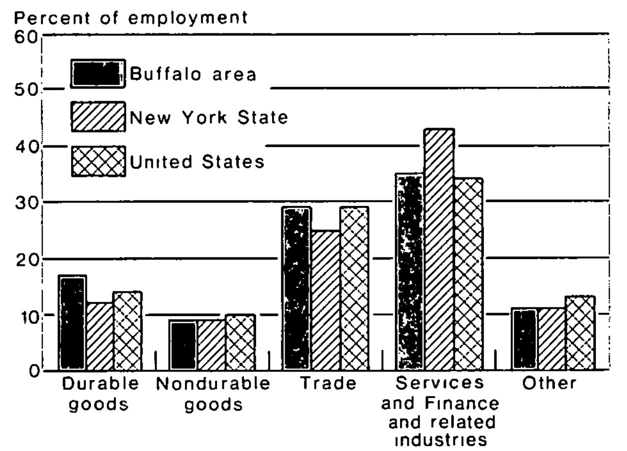
15 This out-migration also occurred in earlier periods See Louis Jacobson, "A Tale of Employment Decline in Two Cities How Bad Was the Worst of Times?", *Industrial and Labor Relations Review*, Volume 37, No 4 (July 1984), pages 557-569

16 In 1980, about 20 percent of all Buffalo's manufacturing workers were age 55 or older The percent was even higher in industries about to experience large layoffs such as primary metals and motor vehicles See United States Census Bureau, *1980 Census of Population, Volume 1*, Chapter D, Part 34, Table 230

Chart 4

Private Employment in the Buffalo Area, New York State, and the United States-June 1985

By industry

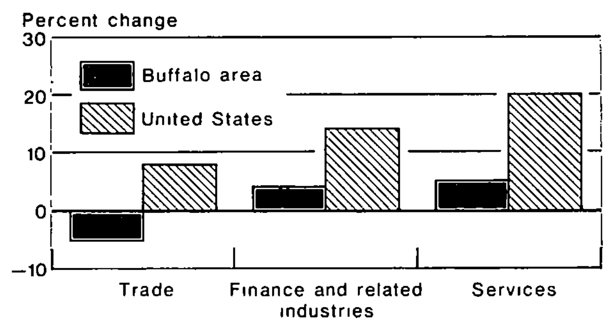


Sources United States Department of Labor and New York State Department of Labor

Chart 5

Nonmanufacturing Employment Change in the Buffalo Area and the United States

1979-83



Sources United States Department of Labor and New York State Department of Labor option of early retirement, while older workers tended to stay in Buffalo because of its low housing cost.[17]

Wage adjustment within industries

Manufacturing production wages showed only a slight adjustment by 1982, three years after the most recent economic downturn started in Buffalo.[18] Buffalo production workers' wages adjusted for industry mix remained about 7 percent above the national average (Table 1).

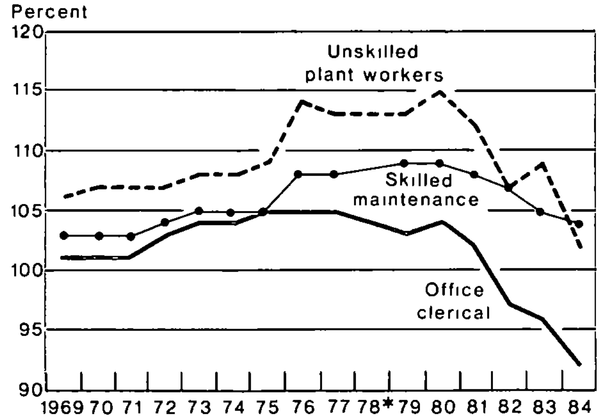
Since 1982, however, Buffalo's wages have adjusted in important manufacturing occupations.[19] In the early 1980s, Buffalo's wages for skilled maintenance occupations in manufacturing firms began a gradual decline compared with other metropolitan areas and this decline continued through 1984, the latest year for which data are available (Chart 6) Buffalo wages for unskilled plant workers in manufacturing also peaked as a percent of the national average in 1980 (at an even higher relative wage) and a more pronounced decline followed.[20] In four years, Buffalo wages for unskilled plant workers in manufacturing fell from about 15 percent above the national metropolitan average to close to the national figure.[21]

Wages for Buffalo's production and clerical workers outside of manufacturing adjusted much faster to the labor surplus than wages for manufacturing production workers. By 1981, wages for important occupations in each nonmanufacturing category were below national metropolitan averages, in some cases at 90 percent of the national average (Chart 7).

Five factors help explain why Buffalo's wages in manufacturing adjusted so much more slowly than other categories.

Chart 6

Buffalo Manufacturing Wage as a Percent of Average for All Metropolitan Areas

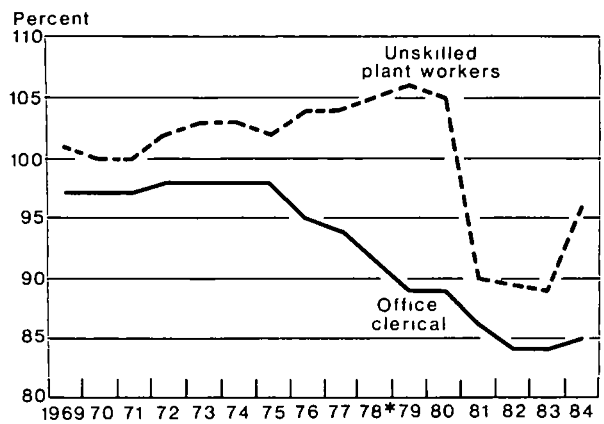


*1978 data not available

Sources United States Department of Labor, Bureau of Labor Statistics, Area Wage Surveys

Chart 7

Buffalo Nonmanufacturing Wage as a Percent of Average for All Metropolitan Areas



*1978 data not available

Sources United States Department of Labor, Bureau of Labor Statistics, Area Wage Surveys

17 The National Association of Realtors found that Buffalo had the lowest median purchase price for existing single family housing of the 44 metropolitan areas they studied in 1984 See *Buffalo News* (November 9, 1985), page A 6

18 This conclusion is based on data from the most recent *Census of Manufactures* taken in 1982

19 The only detailed data on Buffalo's wages after 1982 are from the Bureau of Labor Statistics *Area Wage Surveys*, which are published annually These surveys report wages by occupation The earlier analysis in this article used data from the *Census of Manufactures*, which reports data by industry

20 Buffalo's 1984 wages for unskilled manufacturing workers were, as a result, below other older industrial areas such as Detroit (136 percent of metropolitan average), Dayton (119 percent), Chicago (104 percent), and Philadelphia (107 percent) However, they remained above Boston (88 percent) and New York City (87 percent) Manufacturing growth in the United States, however, is occurring primarily in areas with newer production facilities and wages significantly below the national average Massachusetts and New Hampshire are the only northeastern states to register manufacturing growth over the last five years Their manufacturing wages—adjusted for industry mix—were under 90 percent of the national average in 1982 Many of the southeastern states had adjusted wages at near 80 percent of the U S average See Lynn Browne, "How Different Are Regional Wages? A Second Look", *New England Economic Review*, Federal Reserve Bank of Boston (March/April 1984), pages 40-47

21 These conclusions for manufacturing workers must be tentative until detailed information becomes available with the next *Census of Manufactures* Efforts to duplicate the analysis of manufacturing wages done earlier in this article, using the less detailed data available between *Census* years, produced inconclusive results

- The *union wage effect* was stronger in manufacturing. Most manufacturing production workers in Buffalo were covered by collective bargaining agreements (Appendix 1) and the percentage in most other metropolitan areas was much less than in Buffalo. A much higher proportion of manufacturing workers in Buffalo than elsewhere, therefore, received a "union wage" premium. (For blue-collar and clerical workers in nonmanufacturing firms, however, Buffalo's level of unionization was similar to that of other metropolitan areas.)

- *National collective bargaining agreements* in manufacturing slowed the downward wage adjustment in Buffalo by stabilizing local wages in some industries or causing them to rise despite the local downturn. Primary metals, transportation equipment, and machinery are important local industries whose wage provisions are negotiated nationally.[22] In the first two of these industries, Buffalo's wages actually increased compared with other areas between 1977 and 1982 as a growing portion of these industries in other parts of the country became nonunion and paid lower wages.[23] Only starting in 1982, collective bargaining in the auto and steel industries led to wage concessions and flexibility in local work rules to encourage recovery, and the expected wage adjustment began.[24]

- The *slow-changing wage expectations* of workers in durable goods manufacturing kept wages from adjusting quickly. These production workers have become accustomed to repeated layoffs and rehires over business cycles, and their high hourly wages are viewed as compensation for their intermittent unemployment.[25] In other words, Buffalo's workers in cyclical durable goods industries were slow to decide that the layoffs of 1980-82 were anything other than the latest round in the usual pattern of layoffs and eventual recalls.[26]

- *Average seniority increased* among manufacturing workers in durable goods industries as younger, lower-paid workers were laid off. Because layoffs hit a larger percent of the manufacturing workforce in Buffalo than in the nation, Buffalo's relative wages increased because of higher effective seniority. Nonmanufacturing industries in Buffalo and elsewhere in the nation did not experience similar large layoffs.

22 These national agreements are not rigid, as the recent wage and benefit concessions in the steel and auto industries illustrate. However, they are less sensitive to local labor market conditions than either locally negotiated agreements or nonunion wage-setting. See Freeman and Medoff, *op. cit.*, Chapter 3.

23 The new independent mini-mills in steel and nonunion auto parts suppliers under contract with major auto companies are examples of these developments.

24 See Bureau of National Affairs, *Layoffs, Plant Closing, and Concession Bargaining* (1983).

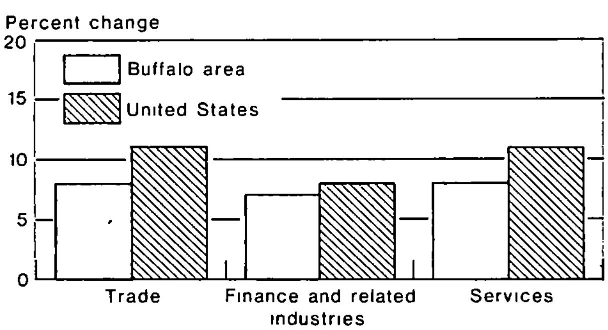
25 See Sherwin Rosen, "Implicit Contracts: A Survey", *Journal of Economic Literature* (September 1985), pages 1144-1175.

26 This attitude was most common among older workers. Some eligible for retraining preferred to wait out the "cycle" and collect unemployment benefits. See Walter Corson, Sharon Long, and Rebecca Maynard, *An Impact Evaluation of the Buffalo Dislocated Worker Demonstration Program*, Mathematica Policy Research (1985).

Chart 8

Nonmanufacturing Employment Change in the Buffalo Area and the United States

September 1983 to September 1985



Sources: United States Department of Labor and New York State Department of Labor.

Table 2

Manufacturing Employment in the Buffalo Area

Annual average 1979 and 1983 (in thousands)

Industry	Buffalo employment 1979	Buffalo employment 1983	Percent change Buffalo	Percent change United States
Durable goods	102.5	67.3	−34	−16
Primary metals	21.7	8.4	−61	−37
Fabricated metals	14.1	9.8	−25	−20
Machinery, excluding electrical	13.2	9.9	−25	−18
Electrical equipment	11.6	9.2	−21	−4
Transportation equipment	26.1	17.6	−33	−15
Other	15.8	12.4	−22	−12
Nondurable goods	42.7	36.4	−15	−7

Source: New York State Department of Labor.

- *An oversupply of office workers and market determination of local wages* reduced Buffalo's relative wage for office workers to well below the national metropolitan average With relatively slow growth in Buffalo's service sector, compared with national trends, the demand for office workers grew more slowly than in many other metropolitan areas The supply, on the other hand, was more than adequate In 1982, the depth of the recession, there were eight jobseekers for each Buffalo area job listed in the professional, technical, managerial, and clerical categories in the state job data bank.[27] The ratio of jobseekers to jobs for office work exceeded even the ratios for factory processing and benchwork, and packaging and material handling—important lower-skilled blue collar jobs [28]

27 State of New York, *Annual Planning Information for Manpower Planners, Fiscal Year 1984, Buffalo SMSA,* page 30

28 Buffalo's office workers were younger than manufacturing workers and hence less likely to leave the labor market through retirement This contributed to the labor surplus United States Census Bureau, *1980 Census of Population, Volume 1,* Chapter D, Table 221

Table 3
Payroll Per Worker and Employment Change in the Buffalo Area 1979-84

Industry	1979 average payroll per worker* In dollars	Change in employment 1979-84 In thousands	Change in employment 1979-84 In percent	1984 average real payroll per worker* In 1979 dollars	Percent change in real payroll per worker 1979-84
Average all sectors	**13,345**	**−17.6**	**−4.2**	**11,909**	**−10.8**
Medical and other health services	10,030	7 8	25 6	9,832	−2 0
Business services	9,448	3 6	22 9	8,900	−5 8
Social services	7,278	2 4	39 0	6,899	−5 2
Finance and related industries	11,989	2 1	9 9	12,194	1 7
Education	8,091	1 3	22 9	8,413	3 8
Construction	17,051	1 3	7 5	15,612	−8 4
Miscellaneous services to individuals	9,136	1 1	10 4	9,012	−1 4
Agriculture, forestry, fisheries, and mining	10,924	1 0	44 2	10,075	−7 8
Lodging	5,889	0 9	28 1	5,766	−2 1
Legal	11,720	0 8	29 7	12,796	9 2
Personal services	7,119	0 3	6 3	5,921	−16 8
Retail trade	6,698	0 2	0 2	6,028	−10 0
Printing and publishing	15,428	0	−4 4	14,323	−7 2
Membership organizations	5,669	0	−0 5	4,966	−12 4
Miscellaneous services	13,057	−0 1	−2 0	13,899	6 4
Food and kindred products	15,643	−0 5	−5 1	15,436	−1 3
Rubber and plastic	16,540	−0 6	−10 2	17,263	4 9
Transportation and public utilities	17,995	−0 7	−2 8	16,764	−6 8
Wholesale trade	15,184	−1 0	−4 0	14,137	−6 9
Electrical machinery	17,766	−1 8	−15 9	17,750	0
Chemicals	19,657	−1 9	−19 6	20,291	3 2
Machinery, excluding electrical	17,750	−2 2	−16 1	17,048	−4 0
Miscellaneous nondurable manufacturing	13,850	−2 6	−25 3	13,131	−5 2
Miscellaneous durable manufacturing	16,478	−3 1	−24 9	15,291	−7 2
Fabricated metals	19,119	−3 1	−21 9	18,026	−5 7
Transportation equipment	22,239	−6 3	−24 0	22,412	0 7
Primary metals	22,918	−16 6	−76 6	19,822	−13 5

* This figure is total annual payroll in an industry divided by the average number of people who worked in the industry during the year As a result, differences in payroll per worker reflect differences in wages and in the proportion of part-time workers
Source New York State Department of Labor

Earnings in growing versus declining industries

Buffalo's new nonmanufacturing jobs tended to be lower-paying than the lost manufacturing jobs. Table 3 lists industries ranked by their employment change between 1979 and 1984. Many workers laid off from durable goods production work who found new jobs in retail trade or services experienced a large earnings decrease. Within the national service sector, only certain types of professional and technical jobs offer high pay And these high-paying jobs tend to be concentrated in regional or national service centers such as New York, Boston, or San Francisco—not Buffalo

Table 4

Private Sector Employment in the Buffalo Area in September 1983 and September 1985

In thousands

Sector	September 1983	September 1985	Change	Percent change
Total private nonagricultural	**390.4**	**410.0**	**+19.6**	**+5**
Manufacturing	105 0	103 8	−1 2	−1
Durable goods	68 4	67 3	−1 1	−2
Primary metals	8 4	4 5	−3 9	−46
Fabricated metals	9 7	10 5	+ 8	+8
Machinery, excluding electrical	9 9	9 9	0	0
Electrical equipment	9 2	9 0	−0 2	−2
Transportation equipment	18 4	21 4	+3 0	+16
Other durable	12 8	12 0	−0 8	−6
Nondurable goods	36 6	36 5	−0 1	*
Food	8 6	8 3	−0 3	−3
Textile and apparel	3 0	3 3	+0 3	+10
Paper	3 0	2 8	−0 2	−7
Printing and publishing	8 4	8 9	+ 5	+6
Chemicals	7 9	7 3	− 6	−8
Rubber and plastics	4 9	5 1	+0 2	+4
Other nondurable	0 8	0 8	0	0
Transportation and public utilities	25 3	25 0	−3	−1
Wholesale trade	24 8	24 9	+0 1	*
Retail trade	85 6	92 8	+7 2	+8
Finance and related industries	23 1	24 8	+1 7	+7
Services	108 5	117 6	+9 1	+8
Health	35 5	38 1	+2 6	+7
Education	8 2	8 2	0	0
Social services	8 4	9 8	+1 4	+17
Other	56 4	61 5	+5 1	+9
Construction	17 4	20 3	+2 9	+17
Other	0 7	0 8	+0 1	+14

* Less than 0 5 percent change

Source New York State Department of Labor

Where Buffalo stands now

Over the last decade Buffalo's economy has adjusted to the decline in many of its traditional industries Plant closings and layoffs are the most visible part of this adjustment, but the reduced labor force and wage adjustments are also important.

The present labor market situation clearly is better than anytime since 1980. The metropolitan unemployment rate dropped from its peak of 15 percent in late-1982 to about 7.5 percent by mid-1985. The national economic expansion and adjustments in the local economy increased employment in most sectors of the area economy except manufacturing (Table 4). And area payrolls have grown in real terms during 1984 and 1985.

Unfortunately, this recent growth in Buffalo employment does not represent a break with long-run trends It is similar to growth in the late 1970s and other periods of national economic expansion Moreover, Buffalo's growth in the current expansion could turn out to be weaker than in past expansions because manufacturing has continued to decline (Only transportation equipment production has shown employment gains through re-hires at local auto plants) And with the manufacturing sector declining overall, Buffalo service and trade employment growth rates continue to lag behind national figures (Chart 8, page 34).

In sum, Buffalo's recent expansion has not been balanced For much of the last five years, manufacturing, population, and real income have declined while retail and service employment have grown. Currently, the proportions of manufacturing, services, and retail employment are similar to the nation's economy. If manufacturing in Buffalo declines further during the current recovery only to be hit severely in the next recession, local retail and service industries may not be able to continue their growth and Buffalo may once again face difficult times

All the same, the adjustments to the economic decline that have already occurred may set the stage for development of new industries. Buffalo can offer low-cost housing, electric power, office space, and, in many occupations, trained labor Industries that previously might have been priced out of the Buffalo market may now find it more attractive Expansion in financial services for the regional market has already occurred. Local development agencies are encouraging the growth of medical research, high tech, and new smaller manufacturing firms, though in the short run these provide relatively few jobs. Furthermore, the current economic growth in the Northeast is increasing the demand for Buffalo's goods and services. Given the long-term economic problems facing the region, there is clearly a sense of urgency to these efforts to develop a new "product line" for Buffalo's economy

Fred C Doolittle

Appendix 1: The Impact of Collective Bargaining on Wages

Past econometric research suggests that nationwide the "union effect" on wages became greater between the early 1960s and the late 1970s* In the 1960s when labor markets were tight, wages of union jobs were about 10 to 15 percent above the wages of similar nonunion jobs With slower growth and higher unemployment in the 1970s, this difference rose to roughly 20 to 30 percent As the union wage effect grew in the 1970s, wages in heavily-unionized Buffalo rose relative to the rest of the country (table)

Workers in Firms of 50 or More Employees
Covered by Collective Bargaining Agreements, 1980
In percent

Area	Manufacturing production workers	Nonmanufacturing production workers	Office workers
Buffalo	88	61	15
All metropolitan areas			
Median	70	44	11
High	100	82	27
Low	9	11	4

Source Data are from the United States Bureau of Labor Statistics, *Area Wage Surveys, Selected Metropolitan Areas, 1980*, page 115

Collective bargaining developments in auto and basic steel manufacturing were a source of wage growth in the entire manufacturing sector in Buffalo † In autos and steel, national collective bargaining agreements caused industry wages to rise sharply as a percentage of the national average for all manufacturing production workers. Auto workers' wages rose from 30 percent above the national average in 1970 to nearly 50 percent by the late 1970s. At the same time, primary metal workers' wages rose from 22 percent above the national average in 1970 to 45 percent in the late 1970s. In the mid-1970s, these two important Buffalo industries were paying high and rising wages to more than one-fourth of the local manufacturing workforce Other manufacturing employers also had to pay higher wages to attract and retain workers.

* See Richard Freeman and James Medoff, *What Do Unions Do?* (New York Basic Books, 1984), Chapter 3, for a survey of recent research See also Colin Lawrence and Robert L Lawrence, "Manufacturing Wage Dispersion An End Game Interpretation", *Brookings Papers on Economic Activity* (1985), No 1, pages 47-106

† See Otto Eckstein *et al*, *The DRI Report on U S Manufacturing Industries* (New York McGraw-Hill, 1984), Appendix, Jack Steiber, "Steel", in Gerald G Sommers, ed , *Collective Bargaining Contemporary American Experience* (Madison Industrial Relations Research Association, 1980), Chapter 4, and Harry Katz, *Shifting Gears Changing Labor Relations in the U S Automobile Industry* (Cambridge MIT Press, 1985)

Appendix 2: Changing Population in the Buffalo Area

Like many older metropolitan areas, Buffalo lost population during the 1970s and early 1980s

Year	Buffalo area population	Change
1960	1,306,957	*
1970	1,349,211	+42,254
1980	1,242,826	−106,385
1984	1,204,800	−38,026

* Not applicable
Source United States Bureau of the Census

Most forecasts estimate that the area's 1990 population will be slightly less than in 1984. As the baby boomers have grown older, the age structure of the population has changed The number of Buffalo area residents under 20 years of age has declined in 1980 there were about 380,000 people in this age bracket, and the 1990 forecast is about 310,000. Residents from 20 to 64 years of age totaled 710,000 in 1980 and are expected to drop to about 695,000 in 1990 Residents age 65 and over totaled 155,000 in 1980 and are expected to grow to 175,000 in 1990 †

† Battelle Inc , *An Analysis of Current and Short-Term Projections of Economic Conditions in Erie County* (January 1984), page 15