

Prepared For:

The Ohio Urban University Program
State of Ohio's Urban Regions Project
#1 in a series of 9
July 2000

*State of
Ohio's Urban
Regions
Reports:*

***Employment
Change***



The Urban University Program...

A unique network linking the resources of Ohio's urban universities with the communities and students they serve, in a cooperative effort to improve the state's urban regions.

Employment Change

AUTHORS

Ziona Austrian, Ph.D., Director, The Urban Center's Economic Development Program, Maxine Goodman Levin College of Urban Affairs, Cleveland State University

John P. Blair, Ph.D., Professor of Economics, Wright State University

Adina Wolf, Research Associate, The Urban Center's Economic Development Program, Maxine Goodman Levin College of Urban Affairs, Cleveland State University

John F. Zipp, Ph.D., Professor and Chair, Department of Sociology, Buchtel College of Arts and Sciences, University of Akron

The Ohio Urban University Program
July 2000

UUP THE OHIO URBAN UNIVERSITY PROGRAM

Mission Statement

The Mission of the Ohio Urban University Program (UUP) is to apply the resources of urban universities to help identify urban problems and propose solutions designed to enhance the vitality of Ohio's urban regions and distressed central cities.

Goals

- Address Ohio's urban problems and opportunities by supporting collaborative inter-institutional research and service networks. Meet the distinctive needs of each metropolitan region by cultivating and supporting linked Centers of Excellence on all eight urban university campuses.
- Propose solutions by undertaking research, education and training, technical assistance, data base development and design services.
- Communicate findings of UUP-related activities to state and local policy makers and citizens.
- Develop and encourage a synergistic process of combining the strengths of traditional university research and teaching with the public service role of the urban university.

The UUP is a unique network linking the resources of Ohio's eight urban universities with the communities and students they serve in cooperative efforts to improve the state's urban regions. Since its founding in 1979, the state funded UUP has provided a strong resource base to support university research, education and training, technical assistance, data base development and urban design services at each of the participating universities. The mission of the UUP is implemented through collaborative university networks and individual centers of excellence.

The UUP is linked through the Ohio Board of Regents' Advisory Committee on the Urban University Program, a statewide consortium of representatives from each of the participating universities. The eight committee representatives are:

W. Dennis Keating, Ph.D., Cleveland State University, Interim Chair
Larry Johnson, Ph.D., University of Cincinnati
Larry C. Ledebur, Ph.D., Cleveland State University
Jack Dustin, Ph.D., Wright State University
Patrick McGuire, Ph.D., The University of Toledo
Jesse Marquette, Ph.D., The University of Akron
W. Randy Smith, Ph.D., The Ohio State University
James B. Tinnin, Ph.D., Kent State University
Gil Peterson, Ph.D., Youngstown State University

Kathryn W. Hexter, UUP Director
216-687-6941
uup.csuohio.edu

PREFACE

Learn From the Past, Assess the Present, Plan for the Future

The Ohio Board of Regent's Urban University Program (UUP) in 1998 invited member universities to participate in a project to analyze Ohio's urban regions. The project had four general goals. One, we wanted to study how urban regions changed over the twentieth century, selecting critical indicators. When possible, our data would provide historical trends, current conditions and future predictions. Two, the data would be analyzed to identify fundamental issues that require the attention of policy-makers. Three, we would propose pragmatic ideas for addressing the fundamental issues. And four, our report on the "State of Ohio's Urban Regions" would be engaging and concisely and clearly written for policy-makers and citizens.

Researchers from UUP member institutions identified nine topical themes to describe the State of Ohio's Urban Regions. The Employment Change Report that follows here is the first in the series of nine reports. The reports covering the eight remaining topics will be released in succession throughout the year 2000 and into the beginning of 2001.

The State of Ohio's Urban Regions project is a unique effort to learn from the past, assess the present, and plan for the future.

The authors of the Employment Change Report wish to recognize the assistance of those working on the project and this report. Aster Girma, a Ph.D. student at the Levin College of Urban Affairs, Cleveland State University provided assistance in data analysis and in the production of the reports' charts and tables. Charissa Brannon, Research Associate and student research assistants, Kris Justice and Mark Ross, working for the Center for Urban and Public Affairs, at Wright State University provided the graphic design and layout for the report. Special thanks are given to Jane Dockery, the Associate Director of the Center for Urban and Public Affairs at Wright State University, who spent numerous hours reviewing drafts, reorganizing and editing the report.

Several states have thought about conducting a similar investigation, but to our knowledge they have not followed through or they have not made the progress Ohio has made. The National Association of Regional Councils (NARC) initiated a "State of the Regions Report" in 1999. Their goal was to define critical baseline indicators through a Delphi process (43 indicators were identified), receive confirmation from the nation's regions, and then ask the regions to begin the job of measurement. Also, the U.S. Department of Housing and Urban Development (HUD) issues an annual report on "the State of the Cities." HUD's annual reports include a number of important indicators of urban conditions, such as employment, population, poverty and home ownership. We believe our UUP project provides a broader picture of urban conditions and policy than HUD's assessment, and we believe our report might encourage other states to develop the baseline data and analysis NARC is seeking.

This *Employment Change* report studies jobs as a principal indicator of economic conditions. This report compares job data across industry sectors, time, states and regions. We believe these data provide the foundation for focusing an economic development policy.

Jack Dustin
Project Director
Wright State University

TABLE OF CONTENTS

List of Tables	iv
List of Figures	v
Ohio's Work - George Knepper	vi
Overview	1
Statewide Patterns and Trends	4
Regional Patterns and Trends	5
Akron	8
Canton	9
Cincinnati	10
Cleveland	11
Columbus	12
Dayton	13
Toledo	14
Youngstown	15
Conclusion and Policy Implications	17

LIST OF TABLES

Table 1. Great Lakes and Neighboring States Growth in Jobs	1
Table 2. Relative Performance of Akron's Industries	19
Table 3. Relative Performance of Canton's Industries	19
Table 4. Relative Performance of Cincinnati's Industries	19
Table 5. Relative Performance of Cleveland's Industries	20
Table 6. Relative Performance of Columbus' Industries	20
Table 7. Relative Performance of Dayton's Industries	20
Table 8. Relative Performance of Toledo's Industries	21
Table 9. Relative Performance of Youngstown's Industries	21

LIST OF FIGURES

Figure 1. Great Lakes Total Employment 2

Figure 2. Great Lakes Manufacturing Employment 2

Figure 3. Great Lakes Nonfarm Employment Projections 3

Figure 4. Great Lakes Manufacturing Employment Projections 3

Figure 5. Change in Jobs in Major Industries 4

Figure 6. Change in Jobs in Broad Services 4

Figure 7. Ohio Employment Distribution 5

Figure 8. MSAs Total Employment Distribution, 1996 6

Figure 9. MSAs Total Employment Change, 1965-1996 7

Figure 10. Ohio MSAs Manufacturing Employment Change, 1965-1996 8

OHIO'S WORK

In the one hundred years following the Civil War, Ohio earned its reputation as an industrial powerhouse. It was a leader, not simply a participant, in nearly every growth industry of the period. Much of the nation's industrial growth rested on the inventiveness of Ohio innovators and business organizers. At the apex of Ohio's manufacturing colossus was heavy equipment, electrical equipment, tires and rubber products, machine tools, and the like. In prosperous times, heavy industry was Ohio's glory. In recession and depression, it was its albatross.

When the economy boomed, the state and its plethora of industrial cities moved forward, as they did in the first three decades of the twentieth century, in World War II, and in the postwar era that followed. But in periods of economic recession, the state suffered disproportionately because buyers could delay purchasing so much of what Ohio made.

In the short but sharp depression of 1920-21, the traumatic Great Depression of the 1930s, and during the industrial malaise of 1965-90, Ohio's heavy industry struggled. In this latter period, many manufacturing concerns left the state because Ohio had become an expensive place to make things. However, Ohio continues to maintain its relative strength in manufacturing as is demonstrated by ranking third in the country for the value of its manufacturing products. And yet, by the end of the twentieth century, one would be hard pressed to identify more than two or three growth industries in which Ohio played a leading or determining role. While manufacturing struggled, agriculture, traditionally Ohio's largest industry, remained a powerful economic force. Agribusiness expanded dramatically and helped to account for the state maintaining a position between 10th and 12th in the value of its agricultural products. Mining, so important in Ohio's early rise to industrial leadership, declined during the twentieth century as the state's industries increasingly looked elsewhere for raw materials.

The service sector filled much of the void left by declining manufacturing employment. Fifty years ago no one could have predicted that at century's end, Cleveland's largest employer would be the Cleveland Clinic. Ohio, of course, reflects the nation as it reorients its economy to the postindustrial age.

Ohio still grows things in great quantity; it still employs as many people in manufacturing as all but one other state; its service sector is vigorous. Its present economic mix has prepared Ohio to continue its productive role into the twenty-first century.

~George Knepper

OVERVIEW

With broad strokes, many studies have sketched the relative economic decline of the rust belt states beginning in the mid 1960s in favor of economic growth in the south and western United States. Certainly, in the last half of the twentieth century, Great Lakes states reeled from industrial shifts, affecting hard core manufacturing jobs in auto, steel, and rubber and supplanted them with service-producing jobs. What is less well known, however, is that this transformation has been uneven. In the midst of the overall shift, some Great Lakes states fared well and, within states, some areas prospered while others faltered.

To begin this look into employment changes, we begin with comparisons across a nine-state region including the larger states of Illinois, Pennsylvania, Ohio, and Michigan; the medium sized states of Indiana, Wisconsin, and Minnesota; and the smaller states of Kentucky and West Virginia. Data from the Department of Labor, Bureau of Labor Statistics (BLS) were chosen for the analysis of historical trends because the Bureau has historical state-level data in an electronic form going back to 1957. Data from the Department of Commerce, Bureau of Economic Analysis (BEA) were used for state-level projections.

As Table 1 demonstrates, all of these states expanded their labor force between 1957 and 1998, as this region added almost 14 million jobs. Still, the region as a whole grew more slowly than the U.S. These nine states had 79 percent more jobs in 1998 than in 1957, while the nation had 137 percent more jobs over that same time period.

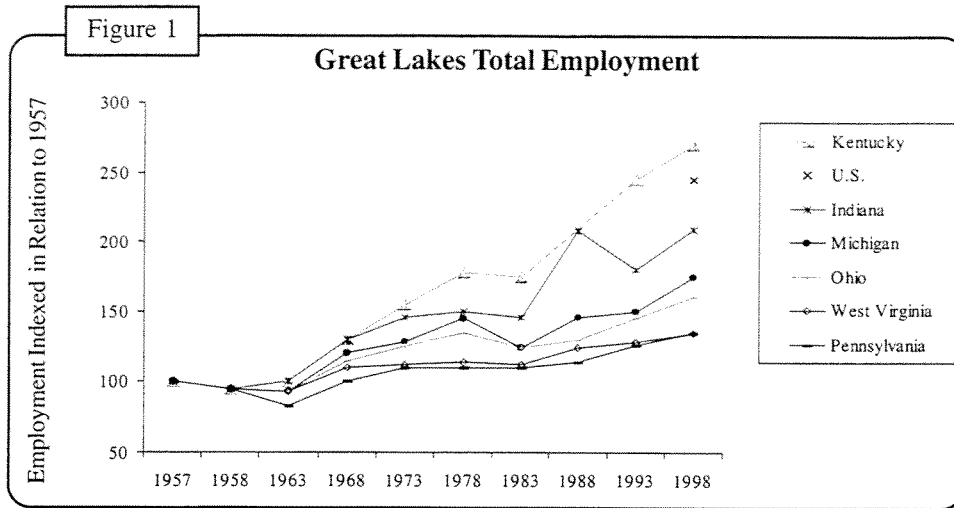
This transformation has been uneven. In the midst of the overall shift, some Great Lakes states fared well and, within states, some areas prospered while others faltered.

Table 1			
Great Lakes & Neighboring States Growth in Jobs			
	1998 Employment	Change in Jobs over Last 40 Years	Change in Jobs over Last 10 Years
Large states			
Illinois	5,786,200	63%	13%
Pennsylvania	5,402,400	41%	6%
Ohio	5,390,500	68%	14%
Michigan	4,469,000	80%	16%
Medium-size states			
Indiana	2,862,300	104%	18%
Wisconsin	2,656,000	134%	22%
Minnesota	2,497,100	182%	22%
Small states			
Kentucky	1,724,900	167%	23%
West Virginia	705,400	41%	16%
Great Lakes States	31,493,800	79%	15%
United States	124,006,000	137%	16%

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

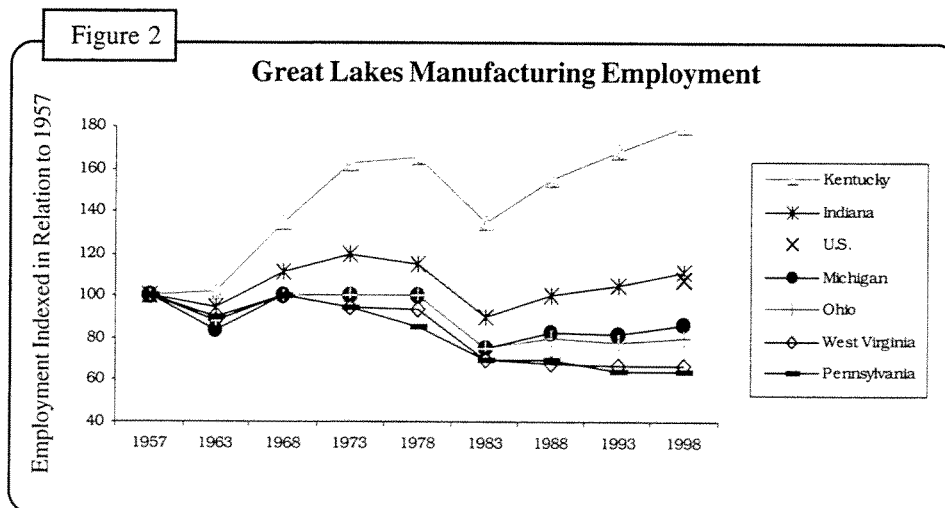
Table 1 shows the growth in the number of jobs for each of these nine Great Lakes and Neighboring states (hereinafter referred to as Great Lakes states). Ohio's growth rate of 68 percent is slower than the region's and is half the rate for the nation. Thus, Ohio is losing its share of the region's jobs as the 20th century draws to a close. However, in the past 10 years Ohio's employment

growth rate was only slightly less than the region's and nation's (14% in Ohio versus 15% in the region and 16% in the U.S.). Figure 1 presents comparative employment trends for Ohio and her neighboring states.



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

As the heart of the nation's industrial base, the Great Lakes' trends in manufacturing employment matter. Overall, the Great Lakes lost 945,400 manufacturing jobs over those 42 years. Five states—Ohio, Illinois, Michigan, Pennsylvania, and West Virginia—collectively lost 1.5 million manufacturing jobs, while Indiana, Wisconsin, Minnesota, and Kentucky gained over a half million manufacturing jobs. Figure 2 presents comparative trends in manufacturing employment for Ohio and her neighboring states.

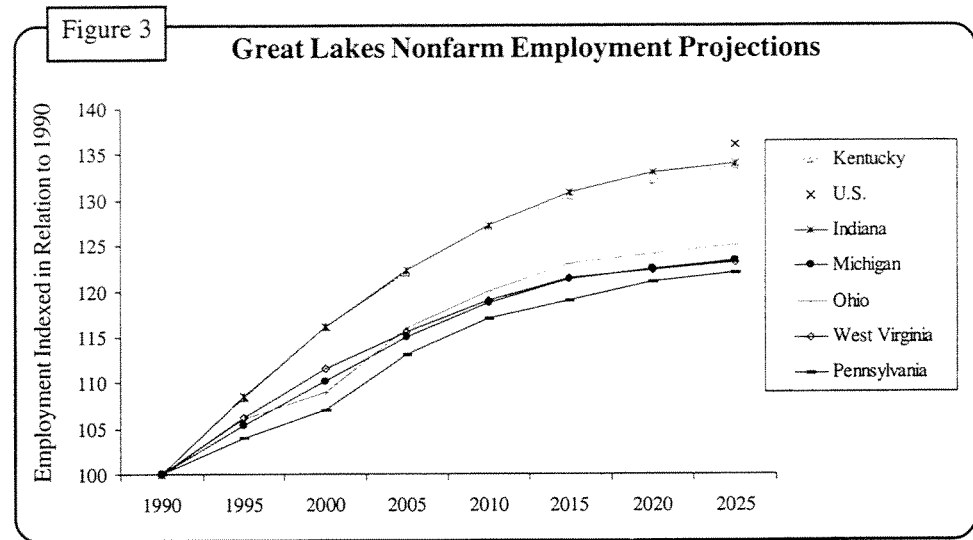


Source: U.S. Department of Labor, Bureau of Labor Statistics

Thus, forty years ago, four or five of every ten jobs in Michigan, Indiana, Ohio, and Pennsylvania were in manufacturing. Today, manufacturing accounts for only one of five jobs in Ohio and Michigan. Where are the jobs today? The largest single industry is "services," a sector comprised of personal, business, health, legal, and educational services.

*Forty years ago,
four or five of
every ten jobs in
Michigan,
Indiana, Ohio,
and Pennsylvania
were in
manufacturing.
Today,
manufacturing
accounts for only
one of five jobs in
Ohio and
Michigan.*

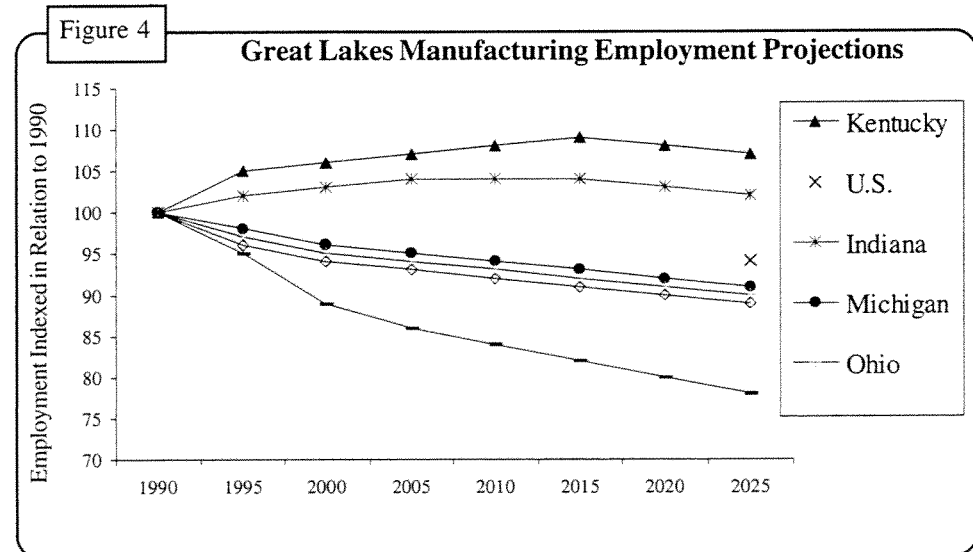
Employment projections, which are based upon historic trends, show that four Great Lakes states will add jobs at about the same rate as the nation. Employment in the U.S. will grow 37 percent from 1990 to 2025, while Minnesota, Wisconsin, Indiana, and Kentucky closely match this rate. On the other hand, Ohio, West Virginia, Michigan, and Pennsylvania will grow more slowly. For Ohio this means the job growth rate will be two-thirds of the nation's rate. Figure 3 presents employment projections for Ohio and its neighboring states.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

From 1990 to 2025, Ohio's job growth rate, at 23 percent, will be two-thirds of the nation's rate.

The same states that show projected job growth at the U.S. rate are also projected to increase their manufacturing employment. The other states will see their manufacturing sector continue to shrink as it will for the U.S. (8 percent decline). Ohio's rate of decline (-11 percent) in manufacturing employment is steeper than that for the U.S. but is not as severe as Pennsylvania's decline (-23 percent). See Figure 4.

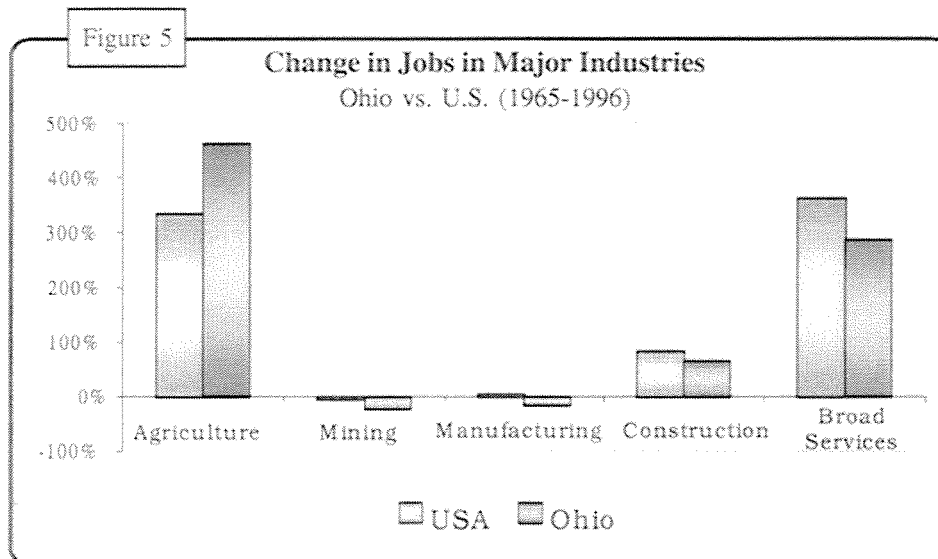


Source: U.S. Department of Commerce, Bureau of Economic Analysis

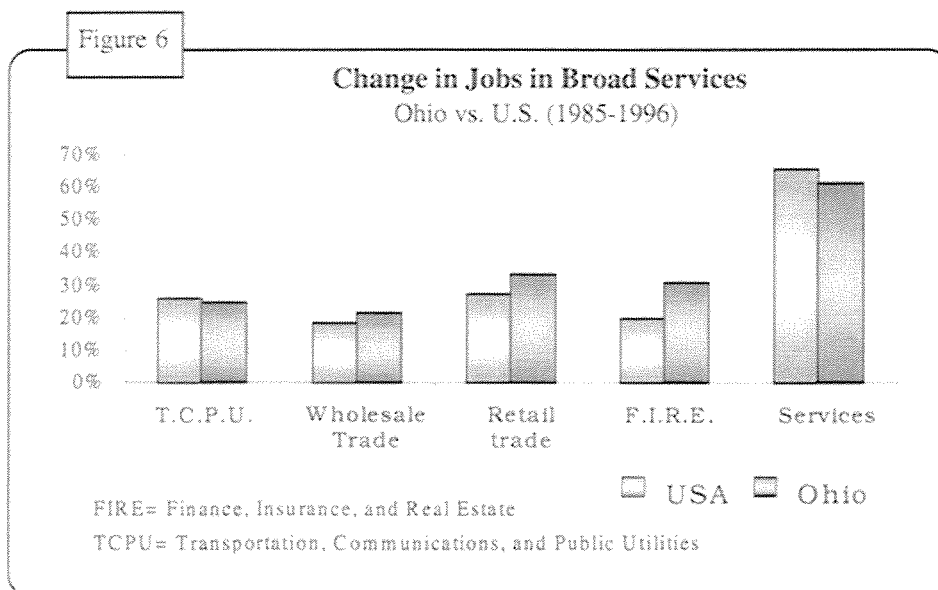
STATEWIDE PATTERNS AND TRENDS

This section of the report narrows employment comparisons to Ohio and the U.S. In the thirty-two year period from 1965 to 1996¹, all industrial sectors in Ohio, except manufacturing and mining, increased the number of employees (Figure 5). Mining employment declined by one-quarter in Ohio compared to a 4 percent decline nationwide. Ohio's employment in manufacturing decreased 15 percent, from 1.3 million jobs to 1.1 million jobs. During that same time period, manufacturing jobs in the U.S. increased by 6 percent. If we organize the thirty-two year period into three decades, we find that Ohio lost manufacturing employment each decade while the U.S. gained jobs in the first two decades but lost manufacturing employment between 1985 and 1996.

From 1965 to 1996, employment in all Ohio industrial sectors, except for agriculture, grew at a slower pace than for the U.S.



Source: U.S. Bureau of the Census, County Business Patterns



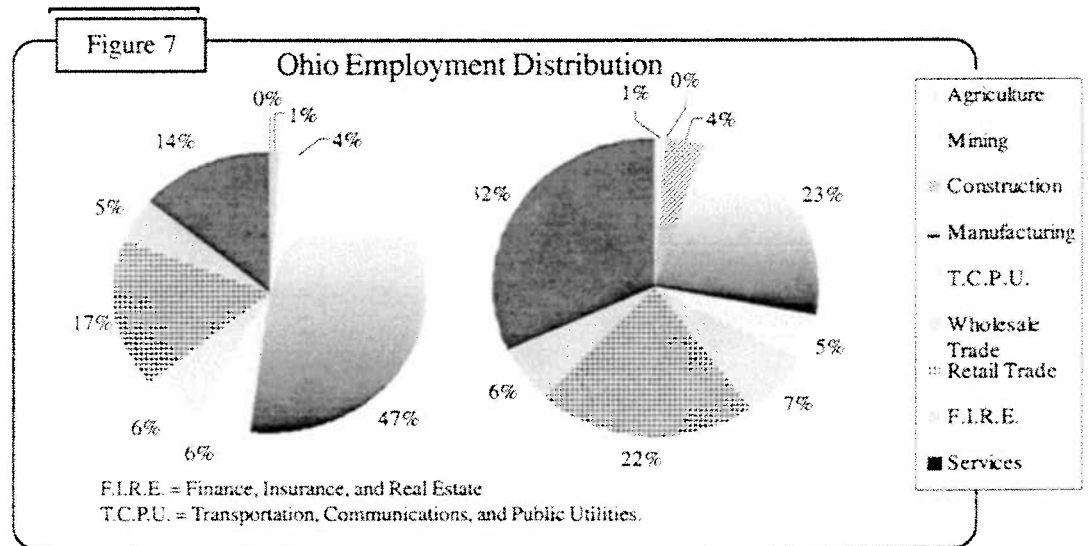
Source: U.S. Bureau of the Census, County Business Patterns

¹ County Business Patterns (CBP) of the U.S. Department of Commerce, Bureau of the Census is the source for employment data for the state and metropolitan analysis.

From 1965 to 1996, employment in all Ohio industrial sectors, except for agriculture, grew at a slower pace than for the U.S. However, if we organize the time period into three decades, we find that Ohio's employment grew faster than the U.S. rate between 1985 and 1996 in some major industries, such as construction (not shown); wholesale trade; retail trade; and finance, insurance, and real estate (see Figure 6). Clearly, Ohio is showing progress in transforming its economy.

As Ohio changed its mix of industries, the most obvious changes are in the manufacturing, retail, and service sectors.

As Ohio changed its mix of industries, the most obvious changes are in the manufacturing, retail, and service sectors (see Figure 7). For example, one in two jobs was a manufacturing job in 1965, while in 1996 less than one in four jobs were in manufacturing. In contrast, retail and service jobs rose considerably. Exemplifying this change, service jobs were one in seven in 1965 and in 1996 were one in three. The impact of this transformation is far-reaching, but a simple look is revealing. Average hourly earnings of a manufacturing worker were \$15.78 in 1996 versus \$8.42 for a retail worker (where one in three workers are part-time workers). By 1996, both the manufacturing and retail industries had roughly 1 million workers, whereas in 1965 Ohio had 1.3 million manufacturing jobs and 470,000 retail jobs.



Source: U. S. Bureau of the Census, County Business Patterns

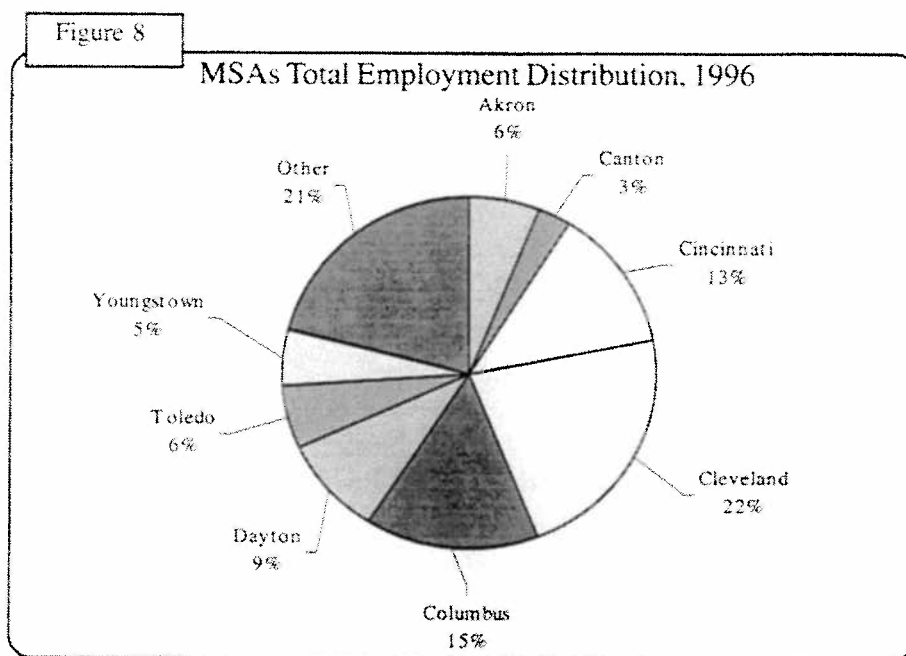
REGIONAL PATTERNS AND TRENDS

Thus far, this report has described employment trends by comparing Ohio to other states, then by comparing Ohio trends to national trends. We have seen that employment growth within the Great Lakes region has been uneven, and so too the growth within Ohio. In the midst of economic transformation, some metropolitan regions have prospered while others have faltered.² While all eight regions have become more diversified from 1965 to 1996, diversification is occurring at different rates. For example, the Akron region has diversified its economy at a faster rate than the other seven metro regions. Still, the

²The eight metropolitan areas included in this study are Akron, Canton-Massillon, Cincinnati, Cleveland-Lorain-Elyria, Columbus, Dayton-Springfield, Toledo, and Youngstown-Warren. This paper uses the first name of each metropolitan area for abbreviation purposes.

largest metro regions--Cincinnati, Cleveland, and Columbus--are the most diversified regions in the state. These eight metropolitan regions are home to eight of every ten jobs in the State, with Cleveland, Ohio's largest metropolitan area, accounting for 22 percent of the state's jobs (see Figure 8).

In the midst of economic transformation, some metropolitan regions have prospered while others have faltered.



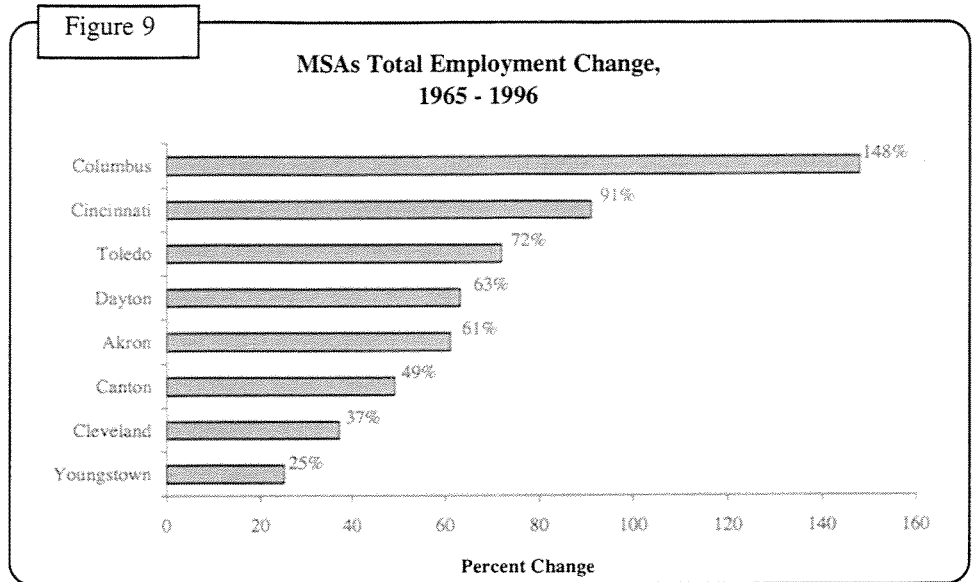
Source: U.S. Bureau of the Census, County Business Patterns

All eight areas exhibited employment gains since 1965, but at different rates. Figure 9 clearly shows that Columbus has grown the fastest, increasing total non-governmental employment by 148 percent between 1965 and 1996. This high rate of growth was not an artifact of a small initial size, as Columbus also had the highest gain in absolute employment, adding over 406,000 jobs. As a result, Columbus moved from being the third largest metropolitan area in Ohio to second, exchanging positions with Cincinnati (considering Cincinnati's Ohio counties only). Cleveland, the largest metropolitan area in the state across the whole period, had the second-lowest growth rate (37 percent), but added the third highest number of jobs.

Although most of this analysis was done using employment data, it is worth mentioning another measurement that can be used to rank metropolitan areas' growth — total product output (Gross Metropolitan Output). This measure reveals that in 1996, the Cleveland area was ranked first, followed by Cincinnati. Columbus was ranked third in terms of regional output.³

³ Estimates of Gross Metropolitan Output were calculated by Cleveland State University's Urban Center staff.

All eight areas exhibited employment gains since 1965, but at different rates. Columbus has grown the fastest, increasing total non-governmental employment by 148 percent.



Source: U.S. Bureau of the Census, County Business Patterns

Since manufacturing employment fell in the state as a whole between 1965 and 1996, it is not surprising that it also declined in each of the major metropolitan areas. In 1965, manufacturing employment accounted for at least half the area's employment in Canton (56 percent), Youngstown (54 percent), Akron (51 percent), and Dayton (50 percent). By 1996, manufacturing accounted for more than one quarter of jobs in only two areas, Canton (28 percent) and Youngstown (26 percent), and for less than one-fifth of all jobs in Columbus (14 percent) and Cincinnati (18 percent).

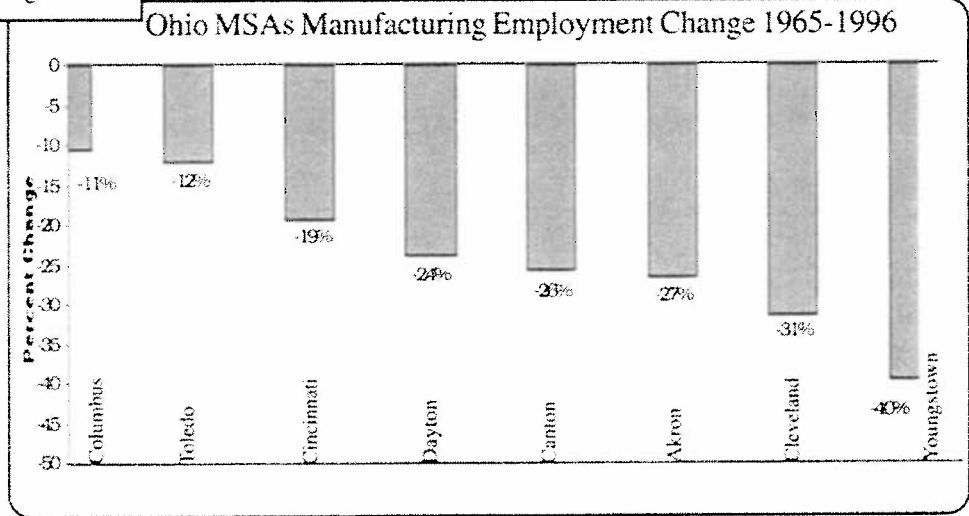
Figure 10 illustrates the declines in manufacturing employment in each of the metropolitan areas. Youngstown experienced the largest rate of decline, losing 40 percent of its manufacturing jobs between 1965 and 1996. The other three metropolitan areas in northeast Ohio lost between 26 and 31 percent of manufacturing employment. At the other end of the spectrum, Columbus lost only 11 percent of its manufacturing employment.

Services, the fastest growing sector in the state (288 percent), posted higher than state average growth rates in Columbus (411 percent), Cincinnati (329 percent), and Akron and Dayton (each growing by 308 percent). In 1965, service jobs accounted for 12 to 16 percent of total employment in all metropolitan areas. By 1996, service jobs rose to between 30 and 36 percent of each regions' total jobs.

All metropolitan areas saw their finance, insurance, and real estate employment grow as a share of total employment over the thirty-year period. The same holds true for retail and wholesale trade. However, except in Youngstown, employment shares in transportation, communications, and public utilities (TCPU) industries fell over the period as a share of total employment. Still, TCPU jobs grew the fastest and at the highest level in Columbus, followed by Cincinnati and Dayton. While these general trends are informative, employment patterns within the eight major metro areas are described in more detail in the following sections.

All eight metropolitan areas saw their finance, insurance, and real estate employment grow as a share of total employment over the thirty-year period. The same holds true for retail and wholesale trade.

Figure 10



Source: U.S. Bureau of the Census, County Business Patterns

Akron

Between 1910 and 1920, Akron was one of America’s fastest growing cities. This fact is attributed to the huge rubber industry that was located in the heart of the city. Once the “Rubber Capital of the World,” in 1917, three of the four leading rubber companies were located in Akron. Demand for rubber products was so great that these factories were open twenty-four hours a day, six days a week. Thus, Akron relied almost solely on the rubber industry. After World War II, rubber companies began looking south and west in search of newer plants and lower labor costs. The scars of this abandonment are still visible today.

In 1965, one out of every two employed people worked in Akron’s manufacturing industry. By 1996, only one out of four people worked in manufacturing. Over that same time period, the services industry grew by 308 percent (compared to 288 percent statewide). Still, job growth was sluggish. Had the Akron region grown at the national rate, Akron would have added almost twice as many jobs as it actually did. The number of jobs grew slowly because Akron had a presence in industries that grew nationally but not in Akron (see Table 2, page 18).

Industries that had a positive effect on Akron’s job growth are service related (e.g., health, business, social, and recreational services). Two manufacturing industries that grew faster in Akron than in the nation are the electronic and other electrical equipment and components industry (excluding computers) and the primary metals industry. At the same time, Akron’s specialization continues to be in rubber and plastic products (where Akron has nearly four times the concentration of such jobs compared to the nation) and in fabricated metal products (two times the national concentration). These are not high job growth industries, however, they account for 40% of Akron’s manufacturing jobs. At the same time, Akron has made greater strides in diversifying its economy than any other major Ohio metro area in the past two decades. And, performance in more recent years shows an improvement in Akron’s competitiveness, which may bode well for the future.

Akron has made greater strides in diversifying its economy than any other major Ohio metro area in the past two decades.

The Akron region includes Summit County, the region's central county, and Portage County. Summit County accounts for 86 percent of the region's jobs. The region added close to 110,000 new jobs during the past 30 years, with three-fourths in the central county and one-fourth in the region's only suburban county.

Summit County lost 30,000 manufacturing jobs between 1965 and 1996, while gaining jobs in all other sectors except for mining. Retail and service jobs were the largest contributing sectors, adding 28,000 and 60,000 jobs, respectively. Not only did the service sector add the most jobs, it grew the fastest, followed by the finance and insurance industry. In contrast, Portage County experienced an increase in manufacturing employment, as well as in all other major sectors, except for mining.

According to employment projections, the Akron region is expected to increase jobs at the third highest rate (12.6 percent) among major metro regions in the state from 1996 to 2006. This pace will only be exceeded by Cincinnati and Columbus. Most growth is expected in the services industry (29 percent growth).

Canton

During the 1900s, Canton provided specialty steel for the auto industry, which was Canton's niche in the greatest steel-producing region in the world. In 1965, 56 percent of Canton's employment was in manufacturing; by 1996, that percentage was 28 percent.

Compared to the U.S., Canton's job growth has been slow in recent decades. If the Canton region had grown at the national rate, Canton would have added almost three times more employment than it did. Table 3 (page 18) shows that job growth was slow because Canton had a strong presence in slow growing industries (like primary metals in the first column) and because industries that performed well nationally did not perform well in Canton (like food products in the third column). While industries such as primary metals did not contribute new jobs in Canton, Canton has nearly nine times the concentration of employees in primary metals compared to the nation. Other areas of specialization in Canton are rubber/plastic products (2.7 times more concentrated in Canton), fabricated metals (2.3), and petroleum and coal products (2.2). Canton's economy is the second most specialized of any major Ohio metro area. It can be said, therefore, that Canton has the second least diversified economy of these metro areas.

Industries that have had a positive effect on Canton's job growth are service related, while Canton grew faster than the nation in electronic/electrical equipment, primary metals, retail, educational services, and personal services (in the fourth column).

The Canton metro area is composed of Stark and Carroll counties. Stark, the central county, is by far the dominant one, with 96% of the region's employment.

If we look at only the most recent years, Canton's performance shows improvement.

Over the past thirty years, the Canton area added over 52,000 jobs, with 9 out of 10 new jobs added in Stark County. Over this period, Stark County lost 16,000 manufacturing jobs, while it gained 19,000 retail jobs and almost 34,000 jobs in service industries. Carroll County experienced job growth in all major industries, except for a small decline in mining.

Overall, Canton’s performance over the study period has been weak, however, if we look at only the most recent years, Canton’s performance shows improvement. If this finding indicates a trend, the prospects of Canton’s future look brighter. From 1996 to 2006, jobs should grow by 11.2 percent in the Canton region, primarily in the services industry, while manufacturing employment will remain stable.

Cincinnati

“The Queen City of the West,” as it was known in its early days, was at one point the largest city in the west. Between 1830 and 1850, the city’s population grew faster than any other city in the U.S., increasing from 30,000 people to 115,000 in twenty years. Also once known as “Porkopolis,” Cincinnati was home to the largest Ohio industry, meatpacking. The meatpacking industry used a conveyor system to move carcasses from one area to another, the forerunner to modern assembly lines. Animal fats were salvaged for use in the soap and candle trade, a business that would assume major importance in Cincinnati (Knepper 1997).

While Cincinnati has strong roots in manufacturing, its dependence on this industry is not as great as in some other Ohio regions. In 1965, 43 percent of employees in Cincinnati worked in manufacturing, and in 1996, 18 percent did so. The Cincinnati region is the third largest employment center in the state, when we consider only its four Ohio counties. Eight counties are outside Ohio but are part of Cincinnati’s metro area (two Indiana counties and six Kentucky counties).

Hamilton County, the region’s central county, accounts for 85 percent of the region’s employment. The Cincinnati region added close to 300,000 jobs over a thirty-year period, with 72 percent of these jobs added in Hamilton County. Clermont and Warren Counties, the fastest growing suburban counties in the state, added close to 40,000 jobs each. As with other regions, the central county lost manufacturing jobs (-45,000), while the three suburban counties added some manufacturing employment (18,000), but not enough to offset the losses. Hamilton County added jobs in all other major industrial sectors.

Although Cincinnati’s job growth rate was second best among Ohio’s metro areas (Columbus was highest), the Cincinnati region grew at only two-thirds the rate it should have if it were to match the national rate. The main reason for Cincinnati’s performance is that Cincinnati had a presence in industries (like food products) that grew nationally, but not in Cincinnati (see Table 4,

In the Cincinnati region, several industries grew at a faster rate than the national rate including the banking industry, wholesale trade, food stores, electric, gas, and sanitary services, and agricultural services.

The role of business leaders in Cleveland's history is as distinguished as their role today.

The Cleveland region, which is composed of six counties, is the largest employment center in the state with more than one million jobs.

page 19, column three). In the Cincinnati region, several industries grew at a faster rate than the national rate including the banking industry, wholesale trade, food stores, electric, gas, and sanitary services, and agricultural services (column four).

Of all metro areas, Cincinnati has the most diversified economy from Proctor and Gamble to Krogers to General Electric to Fifth Third. For this reason, the Cincinnati region has no strong industry specialization. Although diversity among industries is common among larger metro areas, Cincinnati's economy is more diversified than any other metro economy in the state.

As in Akron's case, Cincinnati improved its competitive position in more recent years, which indicates a brighter future. In fact, Cincinnati is expected to experience faster job growth than any other major metro area in the state, growing 14.1 percent from 1996 to 2006.

Cleveland

The role of business leaders in Cleveland's history is as distinguished as their role today. In the 1850s, businessmen gained control of ores from Michigan's Upper Peninsula. Ores were transported from Michigan to Cleveland by huge ships. These businessmen also gained control of coalfields in southern Ohio, West Virginia, and Kentucky. Cleveland was an inexpensive midpoint for these resources to come together, thus the birth of the iron and steel industry in Cleveland. Having abundant supplies and workers in place, the machining industry, took off too.

By the 1940s, Cleveland's workers were one of the most unionized labor forces in the nation. Cheaper labor costs in foreign countries and in southern states, as well as the formation of steel industries overseas, contributed to the decline of Cleveland's manufacturing base.

In recent decades, had the Cleveland region grown at the national rate, Cleveland would have added more than four times as many jobs as it did. For one thing, Cleveland had a presence in industries that were slow growth industries nationally (such as the primary and fabricated metals industries). See Table 5, page 19, column one.

However, Cleveland shows strong specialization in these two industries—primary metal products (8.6 times as concentrated in Cleveland versus the nation) and fabricated metal products (2.3 times as concentrated). Neither of these industries contributed to job growth in Cleveland, and are generally slow growth industries nationwide. Conversely, Cleveland had several industries that experienced faster employment growth rates than the nation including banking, insurance, miscellaneous retail, building materials, and lumber and wood products (see fourth column).

The Cleveland region, which is composed of six counties, is the largest employment center in the state with more than one million jobs. Cuyahoga County, the central county, whose share of the region's employment has declined over time, accounted for 72% of the region's employment in 1996.

Over a thirty-year period, the region gained 273,000 jobs, with only 41 percent occurring in the central county. Thus, the suburban counties added more jobs than the central county. Cuyahoga County gained jobs in trade, finance, and service industries, while it lost a large share of its manufacturing base (-47 percent). However, compared to other counties, Cuyahoga County is still home to the largest number of manufacturing jobs in the state. The county also lost jobs in transportation and utilities, construction, and mining. Of the suburban counties, Lake County gained the most jobs and experienced job growth in all major sectors, except for mining. Combined, the suburban counties added 22,000 manufacturing jobs, accounting for less than one-fifth of the manufacturing jobs lost in the central county.

Trends have improved for the central county in the most recent ten years. While Cuyahoga County added 41 percent of new jobs over the thirty-year period, it added nearly half the new jobs from 1987 to 1996. In more recent years, the Cleveland region improved its performance as well, which implies better prospects for the future. From 1996 to 2006, the number of jobs is expected to increase by 11.9 percent in the Cleveland region.

Columbus

In the early 1800s, the only thing Columbus appeared to offer was location. The Columbus area had limited natural resources that could be used as raw materials for manufacturing goods. In the 1870s, the railroads turned this competitive disadvantage into an advantage. Raw materials were transported from Southeast Ohio and Columbus had no rival for the Southeast Ohio trade. In 1890, Columbus shipped 4.5 million tons of coal. Thus its location and access to coal propelled Columbus as a major transportation center.

As a transportation center, Columbus served as home to a strong wholesale trade industry, and growth in this industry remains strong today. Columbus formed its manufacturing expertise largely as a result of the Curtiss-Wright plant erected by the Federal Government in 1941 as part of the war mission. This plant brought new manufacturing concepts, high wages, unionized labor policies, and skilled laborers to the City.

Today, Columbus appears as the state's anomaly where population and employment growth outpace national averages. It is ironic that a city apparently devoid of natural resources in the 1800s should utilize its access to water as a motive for annexation, resulting, today, in Columbus being the largest central city in Ohio. Roughly 800,000 people are employed in the Columbus metro area, where locational advantages continue to serve the region well. Columbus, the second largest employment center in the state, is composed of

Today, Columbus appears as the state's anomaly where population and employment growth outpace national averages.

If Columbus had grown at the national rate, it would have experienced only 90 percent of the job growth that actually occurred.

six counties. Franklin County, the central county, accounts for 82 percent of the region's employment. Over a thirty-year period, Columbus gained over 400,000 jobs, the largest increase in the state. Franklin County, accounting for four out of every five new jobs in the region, added jobs in all major industries except for manufacturing and mining. Three of the five suburban counties added manufacturing employment, accounting for about one of two lost jobs in Franklin.

If Columbus had grown at the national rate, it would have experienced only 90 percent of the job growth that actually occurred. The status of the region as a political and education center undoubtedly contributed to its performance. In fact, job gains would be even stronger if public jobs were included in the data.

As in other Ohio cities, the service industry had a positive effect on Columbus' job gains. In fact, the service industry grew by over 400 percent from 1965 to 1996 adding 186,000 new jobs. Among the Columbus industries that grew faster than the national average are food stores, banking and lending institutions, and wholesale trade (see Table 6, page 20, fourth column).

Although Columbus' economy is diverse (only 14 percent of its employment is in manufacturing), it still displays strong specialization in stone, clay, and glass products (where this industry is 2.9 times more concentrated in Columbus than in the nation), lending institutions (2.6), and insurance carriers (2.1). From 1996 to 2006, Columbus is expected to add nearly 112,000 jobs, an increase of 14 percent.

Likely due to its heavy concentration of engineers, Dayton was known as a seedbed of invention.

Dayton

Formerly known as "the Cash," at one time Dayton was home to some of the largest manufacturers in Ohio. The National Cash Register Company (later known as NCR) employed over 20,000 workers at its peak, hence the source of Dayton's nickname. Another major employer is General Motors/Delphi (once known as Delco), where Dayton for many years had the second largest concentration of GM workers in the world. Fortuitously, in the early 1900s Dayton donated 5,000 acres to the U.S. government—the origin of Wright-Patterson Air Force Base, the largest single site employer in the State. Those two industries—automotive and defense—and their suppliers/vendors remain the two pillars of Dayton's economy today.

Likely due to its heavy concentration of engineers, Dayton was also known as a seedbed of invention. It was host to such creations as the electric starter (Charles F. Kettering), modern day salesmanship and corporate philanthropy (John Patterson, who trained one in six of the top executives in the country from 1910 to 1930), and powered flight (Orville and Wilbur Wright).

As was the case in the other major metro areas of the State, the Dayton regional economy was hard hit in the 1970s, due primarily to its reliance upon heavy manufacturing. In fact, in 1965, one in two workers was employed in manufacturing. Today, less than one in four are so employed. While manufacturing declined, service sector employment expanded by 308 percent from 1965 to 1996.

The Dayton region, the largest among the smaller of Ohio's metro areas, is composed of four counties. Montgomery County, the central county, accounts for 69 percent of the region's jobs. Dayton added 160,000 jobs over a thirty-year period, with 57 percent of it added in the central county. Montgomery County's share of the region's economy has declined over time. As with all other central counties, Montgomery County lost manufacturing employment, while two of the suburban counties gained some. It is also interesting to note that in Montgomery County, nine of ten new jobs occurred in services. Still, had Dayton grown at the national rate, Dayton would have added nearly two times as many jobs as it actually did. The main reason for Dayton's poor performance is that Dayton had a presence in industries that grew nationally, but did not grow as rapidly in Dayton such as rubber and plastic products, electronic and electrical equipment, and health services (see Table 7, page 20, column three).

However, several industries in the Dayton area experienced job growth at a faster rate than the nation including business services, miscellaneous repair services, transportation equipment, air transportation, and educational services. Dayton holds strong specializations in transportation equipment, having 4.4 times the concentration of employees in this industry compared to the nation, industrial machinery and equipment (3.2 times as concentrated), and repair services (2.6).

Just looking at job growth from 1986 to 1996, Dayton's performance and competitiveness is improving, which may indicate transformation toward a brighter future. From 1996 to 2006, the Dayton region is expected to add 44,000 jobs, an increase of 9.4 percent. This rate is the second slowest rate among the major metro areas of the state (Youngstown has the slowest rate).

Toledo

Known as the "Glass City" in the 1800s, Toledo's natural resource deposits of gas, oil, and sandstone with a high silica content made it ideal for glass production. Retaining the Owens glass company in downtown Toledo had a marked effect on its skyline while several major investments were made in new world headquarter buildings. Such Toledo industries as Champion Spark Plug and the Libby-Owens-Ford Glass Company played a major role in the Korean War, resulting in a federal influx of investment and stabilizing such industries as glass, the automobile, and oil refining into the 1960s.

Just looking at job growth from 1986 to 1996, Dayton's performance and competitiveness is improving.

Several industries grew faster in Toledo than in the nation, including rubber and plastic products and holding investment offices.

In contrast to other Ohio regions where the central county dominates the regional economy, two of Youngstown's counties are similar in employment size, Mahoning and Trumbull.

The movement of automotive jobs to the south and overseas as well as moves made by OPEC, affecting the cost of oil and thus affecting both oil refining and the glass industry, smacked Toledo from every angle in the 1970s.

Since then, had the Toledo region grown at the national rate, its employment would have grown twice as much as it did. Industries that contributed to Toledo's weak performance were health services, wholesale trade, motor freight transportation and warehousing, among others (see Table 8, page 21, column three). However, several industries grew faster in Toledo than in the nation, including rubber and plastic products and holding and investment offices (see column four). Toledo's strong specializations continue to be connected to its natural resources—petroleum and coal products (where Toledo has 4 times the concentration of employees in this industry as compared to the nation), stone, clay, and glass products (2.7 times the concentration), and pipelines (2.6).

Toledo, a region of three counties, is dominated by Lucas, the central county, which accounts for over three-fourths of the region's jobs. The region added 114,000 jobs during the thirty-year period, and 62 percent of those jobs were added by the central county. Lucas County's share of the Toledo economy has declined over time. Over one-fourth of the region's new jobs were located in Wood County, the larger of the two suburban counties. Lucas County added jobs in all major industries, except for manufacturing, and transportation and utilities. Both suburban counties added manufacturing jobs, where the gains accounted for six out of ten jobs lost in the central county. Manufacturing jobs still account for 23 percent of the region's total employment. Like the other metro areas, Toledo's performance improved in more recent years, which may indicate a positive trend. The Toledo region is expected to add nearly 32,000 jobs from 1996 to 2006, a 10.1 percent increase.

Youngstown

In 1805, two brothers, John and Daniel Heaton built Ohio's first furnace that enabled them to melt down ore with charcoal and limestone to create steel. Later, it was discovered that locally mined black coal could be used directly for iron smelting. In 1855, the Sault Ste. Marie locks were opened, allowing Youngstown to take advantage of the Great Lakes' rich iron ore deposits. By 1920, Youngstown had become one of the largest steel-producing centers in the U.S. Beginning in the 1970s, strikes and mill closings cut steel output.

From 1965 to 1996, decreases in manufacturing employment were more dramatic in Youngstown than in any other Ohio metro area, where 40 percent of manufacturing jobs disappeared. Manufacturing still accounts for 26 percent of the region's employment base, the second highest manufacturing-dependent economy among Ohio's major metro areas. Had the Youngstown region grown at the national rate, Youngstown would have grown 13 times more than it did.

Youngstown had large portions of its employment in industries that are slow growing, or even declining, nationally such as primary metals, transportation equipment, fabricated metals, and industrial and commercial machinery (see Table 9, page 21, first column). At the same time, Youngstown had several industries where jobs grew at a faster rate than the nation including heavy construction, lumber and wood products, banking, and social services (fourth column).

The Youngstown region has three counties. In contrast to other Ohio regions where the central county dominates the regional economy, two of Youngstown's counties are similar in employment size, Mahoning and Trumbull. The region added over 42,000 jobs during the thirty-year period, with six out of ten new jobs located in Trumbull County and almost a quarter in Columbiana County, the only "real" suburban county. Mahoning County, where the City of Youngstown is located, contributed only 16 percent of the job gains, while it accounted for 45 percent of the region's employment.

On the brighter side, Youngstown is included in the group of metro areas that is improving its job growth performance and competitiveness. From 1996 to 2006, the Youngstown region is expected to add 21,000 new jobs, the slowest among Ohio's major metro areas, an increase of 8.6 percent.

The process of economic restructuring in Ohio's regions from a goods-producing economy, with a strong concentration on durable manufacturing, to a more service-oriented economy, is still in process.

CONCLUSION AND POLICY IMPLICATIONS

The purpose of this report has been to document employment changes in Ohio over the last 40 years. At the most general level, this period has been one of economic and spatial change. The process of economic restructuring in Ohio's regions from a goods-producing economy, with a strong concentration on durable manufacturing, to a more service-oriented economy, is still in process. Through all this change, Ohio is still home to the largest absolute number of manufacturing jobs in the Great Lakes region today. And during the past ten years, Ohio's growth rates exceeded the nation in construction; wholesale trade; retail trade; and finance, insurance, and real estate.

Even though jobs in Ohio's suburban counties are growing at a faster rate than in central counties, policy makers should remember that two of every five existing jobs are located in the three largest central counties, (Cuyahoga, Franklin and Hamilton Counties). In addition, four out of every five jobs are located within the eight metropolitan areas.

The following courses of action are recommended:

- The state should stimulate technological advances in traditional core manufacturing industries. In periods of economic transition, state development policies may ignore the importance of older industries, because those industries are not growing new jobs. In addition, local economic development organizations too often base their strategic focus upon the number of jobs industries generate. This report demonstrates that most of Ohio's metro areas still have high concentrations of employees in older industries. Given that many older industries have a large employment base, the state must determine how best to increase the competitiveness of these manufacturers, and to stimulate technological changes in traditional core manufacturing industries.

- The state needs to take the lead by giving a high priority to investments in technology and human capital. Policy makers should focus on improving educational attainment at all levels in Ohio as well as creating incentives for companies to invest in workers' training, leading ultimately to increased productivity. Ohio needs to improve its competitive position in global markets in manufacturing as well as in non-manufacturing industries. To do so will require identifying and promoting industries that have the potential to create a significant number of high paying jobs.

- The state should assess Ohio’s economic assets, including the stock of capital and labor applicable to emerging industries such as the Information Technology and the Biotechnology industries; and then invest in industries demonstrating potential long-term economic payoffs.
- For decades Ohio prospered because it had a workforce with the skills needed to succeed. As industry changes, to continue to prosper, Ohio needs to make the necessary investments in technology and human capital required in the global economy of the 21st century.
- Each metro area is transforming uniquely from a distinct past. Therefore, a multifaceted approach is necessary. Transforming the state’s economies is not as simple as chasing the Silicon Valley concept, but requires strategic finesse--a balance in economic policy that strengthens the mix of industries while supporting competitive, high growth industries. Perhaps the most important tool in developing an appropriate strategy is understanding the current picture and how we got here. It is our hope that this analysis has helped to better inform a multifaceted approach that will sustain Ohio’s major metropolitan regions as engines of economic growth.

Transforming the state’s economies requires strategic finesse -- a balance in economic policy that strengthens the mix of industries while supporting competitive, high growth industries.

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Fabricated Metal products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Heavy Construction other than Building Construction Contractors Rubber & Miscellaneous Plastic Products Transportation Equipment	Health Services Eating & Drinking Places Business Services Social Services Amusement & Recreation Services	Rubber & Miscellaneous Plastic Products Eating & Drinking Places Motor Freight Transportation & Warehousing Fabricated Metal Products, except Machinery & Transportation Equipment Heavy Construction other than Building Construction Contractors	Social Services Apparel & Accessory Stores Automotive Dealers & Gasoline Service Stations Electronic & other Electrical Equipment & Components, except Computer Equipment Primary Metal Industries

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Primary Metal Industries Food & Kindred Products Fabricated Metal Products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Electronic & other Electrical Equipment & Components, except Computer Equipment	Health Services Eating & Drinking Places Business Services Social Services Membership Organizations	Fabricated Metal Products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Health Services Food & Kindred Products Electric, Gas & Sanitary Services	Miscellaneous Retail Primary Metal Industries Educational Services Electronic & other Electrical Equipment & Components, except Computer Equipment Personal Services

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Industrial & Commercial Machinery & Computer Equipment Transportation Equipment Chemicals & Allied Products Fabricated Metal Products, except Machinery & Transportation Equipment Electronic & other Electrical Equipment & Components	Health Services Eating & Drinking Places Business Services Social Services Amusement & Recreation Services	General Merchandise Stores Membership Organizations Social Services Food & Kindred Products	Depository Institutions Wholesale Trade-- Non-Durable Goods Food Stores Agricultural Services Electric, Gas & Sanitary Services

Footnote: Tables are based on a shift share analysis. Technical detail is available in the full report available from Cleveland State University, The Urban Center.
^A Industries with a major local presence that grew slowly throughout the nation
^B Industries with a major local presence that grew rapidly throughout the nation
^C Industries that grew slower in the region than nationally
^D Industries that grew more rapidly in the region than nationally

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Primary Metals Industries Transportation Equipment Fabricated Metal Products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Electronic & other Electrical Equipment & Components, except Computer Equipment	Health Services Eating & Drinking Places Business Services Social Services Educational Services	Business Services Health Services General Merchandise Stores Food Stores Wholesale Trade--Durable Goods	Depository Institutions Insurance Agents, Brokers & Services Miscellaneous Retail Building Materials, Hardware, Garden Supply & Mobile Home Dealers Lumber & Wood Products, except Furniture

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Stone, Clay, Glass & Concrete Products Electronic & Other Electrical Equipment & Components, except Computer Equipment Industrial & Commercial Machinery & Computer Equipment Fabricated Metal Products, except Machinery & Tran	Health Services Eating & Drinking Places Business Services Social Services Membership Organizations	Electronic & Other Electrical Equipment & Components, except Computer Equipment Fabricated Metal Products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Measuring, Analyzing & C	Foods Stores Depository Institutions Non-Depository Credit Institutions Wholesale Trade--Non-Durable Goods Social Services

Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Industrial & Commercial Machinery & Computer Equipment Transportation Equipment Electronic & other Electrical Equipment & Components, except Computer Equipment Fabricated Metal Products, except Machinery & Transportation Equipme	Health Services Eating & Drinking Places Business Services Social Services Educational Services	Rubber & Miscellaneous Plastic Products Electronic & other Electrical Equipment & Components, except Computer Equipment Health Services Printing, Publishing & Allied Industries General Merchandise	Transportation Equipment Business Services Transportation by Air Miscellaneous Repair Services Educational Services

Footnote: Tables are based on a shift share analysis. Technical detail is available in the full report available from Cleveland State University, The Urban Center.

^A Industries with a major local presence that grew slowly throughout the nation

^B Industries with a major local presence that grew rapidly throughout the nation

^C Industries that grew slower in the region than nationally

^D Industries that grew more rapidly in the region than nationally

Table 8 Relative Performance of Toledo's Industries			
Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Transportation Equipment Stone, Clay, Glass & Concrete Products Primary Metal Industries Fabricated Metal Products except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment	Health Services Eating & Drinking Places Business Services Social Services Membership Organizations	Health Services Eating & Drinking Places Wholesale Trade--Durable Goods Motor Freight Transportation & Warehousing Fabricated Metal Products, except Machinery & Transportation Equipment	Furniture & Fixtures Rubber & Miscellaneous Plastic Products Educational Services Holding & Other Investment offices Printing, Publishing & Allied Industries

Table 9 Relative Performance of Youngstown's Industries			
Negative Mix ^A	Positive Mix ^B	Not Competitive ^C	Competitive ^D
Primary Metal Industries Transportation Equipment Fabricated Metal Products, except Machinery & Transportation Equipment Industrial & Commercial Machinery & Computer Equipment Stone, Clay, Glass & Concrete Products	Health Services Eating & Drinking Places Business Services Social Services Membership Organizations	Health Services Primary Metal Industries Membership Organizations Industrial & Commercial Machinery & Computer Equipment Eating & Drinking Places	Social Services Depository Institutions Miscellaneous Repair Services Heavy Construction other than Building Construction Contractors Lumber & Wood Products

Footnote: Tables are based on a shift share analysis. Technical detail is available in the full report available from Cleveland State University, The Urban Center.

^A Industries with a major local presence that grew slowly throughout the nation

^B Industries with a major local presence that grew rapidly throughout the nation

^C Industries that grew slower in the region than nationally

^D Industries that grew more rapidly in the region than nationally

State of Ohio's Urban Regions
upcoming reports:

- Health
- Land Use
- Environment
- Demographics
- Education
- Criminal Justice
- Governance
- Transportation

