Ohio | Department of Job and Family Services

TO STRENGTHEN OHIO'S FAMILIES WITH SOLUTIONS TO TEMPORARY CHALLENGES

# 2009 ECONOMIC ANALYSIS

## Responding to Recession

## Preparing for Recovery

## Preface

The Ohio Department of Job and Family Services (ODJFS) Bureau of Labor Market Information (BLMI) publishes an annual report reviewing changes in the Ohio economy, particularly the effects on the workforce and what is being done to meet workforce development challenges.

The past year has been very difficult for the nation and Ohio. Ohio's unemployment rate has been consistently among the highest in the nation. Manufacturing has seen especially heavy employment losses. Compounding this situation is the uncertainty of the future of the auto industry, which has a large presence in Ohio. Even the education and health services sector, the state's strongest sector, has been underperforming. However, as this report shows, much of Ohio's current difficulties started long before the current recession. Employment growth began to fall below the national average in the mid 1990s. Understanding Ohio's economic past, as well as its current situation, are key to developing workforce strategies for tomorrow.

The report is divided into sections that review:

- Ohio's overall economic situation,
- statewide and local area employment,
- industry and occupational employment with a close look at manufacturing,
- the employment outlook,
- the composition of the Ohio workforce, and
- workforce development strategies.

Through careful examination of the economic statistics in this publication, we hope that individuals; businesses; economic development corporations; labor and governmental organizations; educational institutions; and all others interested in the economy and quality of life in Ohio will be able to draw a clearer picture of where we are to help inform policy on where we should be going.

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## Executive Summary

- Ohio is not keeping pace with other states, either in Gross Domestic Output or per capita income.
- Employment growth has lagged the national trend since the mid-1990s. Ohio employment never fully recovered from the 2001 recession.
- The current recession is hitting Ohio hard. Employment is declining farther in Ohio than in the nation as a whole.
- The employment situation varies widely. From 2000 to 2008, employment grew in the Akron, Cincinnati-Middletown, and Columbus metropolitan areas, but declined in the Canton-Massillon, Cleveland-Elyria-Mentor, Dayton, Toledo, and Youngstown-Warren-Boardman metro areas.
- Since 2000, employment in goods-producing industries has declined farther and employment in service-providing industries has increased more slowly in Ohio than nationally.
- Employment in all goods-producing sectors has declined since 2000. Among service-providing industries, education and health services, business and professional services, and leisure and hospitality grew, but other sectors declined.
- Because Ohio has higher-than-average employment concentrations in manufacturing industries, job losses in this sector have had a disproportionately severe effect.
- Declines in Ohio manufacturing employment may be attributed to changing product demand, foreign competition, off-shoring, outsourcing, facility consolidation, non-competitive cost structures, and increased productivity.
- In period 2006 t0 2016, employment in goods-producing industries is expected to fall 11.2 percent and service-providing industries to grow 9.4 percent. The fastest-growing occupations will be in healthcare support and community and social services.
- Ohio is ranked 24$^{th}$ out of the 50 states and District of Columbia in the proportion of adults with a high school diploma. Low levels of educational attainment could act as a constraint on Ohio employment growth.
- Suggested workforce development strategies include measures with an immediate effect (e.g. unemployment compensation), bridging the current economic crisis (e.g. short-term high prospect training options), and building infrastructure (e.g. broad-base educational reform).

## Introduction

The current national fiscal crisis is the headline of the day and no doubt significantly adds to Ohio's challenges in workforce development. However, Ohio must do more than simply sustain itself through the current national and global fiscal crisis and recession. For Ohio, these events are occurring within the context of other, more systemic trends that have been with us for a while and will continue to form the basis of economic and workforce challenges for years, if not decades, to come. This context can be encapsulated with the following core realities:

- Ohio has not fully recovered to pre-2001 recession employment levels because of structural and business paradigm shifts in a global economy. Ohio's well being will depend on comparative shifts in the capacity and abilities of our workforce.
- Ohio's workforce is older compared to decades past and the trend will continue for the foreseeable future. This shifts the underlying foundation of workforce and economic development and the nature of policy and intervention services required of government.
- Ohio's population has plateaued relative to decades past and is expected to remain well under the growth patterns of other areas of the country over the next decade or more. We do not have the luxury of large new generations and the talent and promise they brought to the economy of the past.
- The fundamental structure and organization of manufacturing has changed forever. Manufacturing remains critical as a value-added component and driver for the economy. However, it can no longer be seen as the beacon for the masses nor can manufacturing alone be the bulwark of a middle class.
- The modern economy is built less on physical structures and manual labor and increasingly on knowledge, communication, shared professional communities and business linkages. It is not raw materials but interactions that stimulate the economy. Educational transformation, talent transmission and ubiquitous knowledge are the essential material of the 21st century economy.

The Turnaround Ohio initiatives of the Strickland Administration have provided for the alignment of education, workforce development and economic development to match the realities of a changing economy. The American Recovery and Reinvestment Act provides resources to further fine tune workforce development, not only to bridge the current recession, but to cross the structural and business paradigm shifts in the Ohio economy.

The text below provides details on the economic context of the core realities noted above and the policy initiatives that follow.

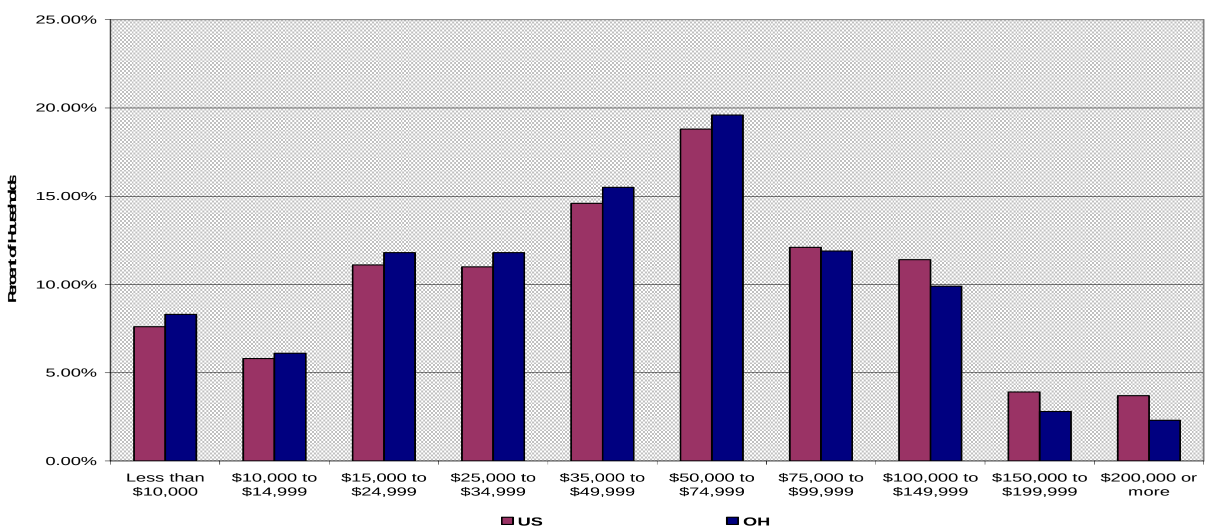
## Ohio's Economic Situation

In 2007, Ohio was the seventh-largest state with approximately 11.47 million residents[1] and had the seventh-largest state economy with a gross domestic product (GDP) estimated at $466.3 billion in current dollars.[2] Although Ohio is an economic powerhouse, economic measures show that state is not keeping up with other states.

- Real state GDP has grown more slowly than real national GDP, with only an 11.3 percent increase since 1997 compared with a 33.0 percent increase nationally. From 1997 to 2007, Ohio ranked 48th in percent increase in real GDP.
- Ohio's per capita real GDP in 2007 was $34,040, well below the national average of $38,020 and 33rd among the states. Ohio dropped from 23rd in 1997.
- Employment peaked in 2000 and never completely recovered from the 2001 recession. Employment growth in many industries is below national trends.
- The current recession is hitting Ohio hard as well. In February 2009, initial claims for unemployment insurance were 122 percent above February 2008.

The economic well-being of Ohio's citizens is being affected. Figure 1 shows U.S. and Ohio household income distributions. Ohio has a higher percentage of households earning less than $75,000 per year. In 2007, per capita personal income in Ohio was $34,468, below the national level of $38,615.[3] Ohio's per capita personal income has been rising more slowly than other states. Ohio's per capita personal income fell from 21st in 1997 to 33rd in 2007.

**Figure 1. Distribution of U.S. and Ohio Household Income Levels, 2005-2007**

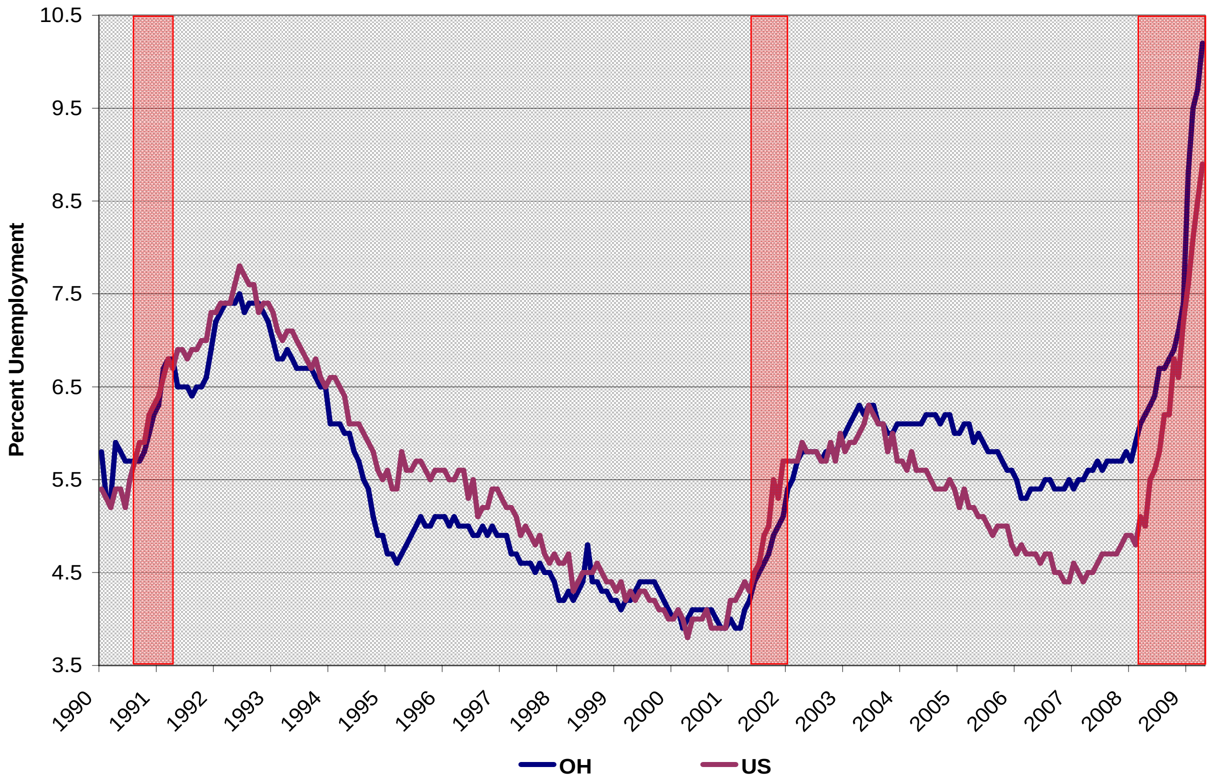



Source: 2005-2007 American Community Survey

[1] U.S. Census Bureau, http://www.census.gov/popest/states/tables/NST-EST2007-01.xls
[2] U.S. Bureau of Economic Analysis, http://www.bea.gov/regional/gsp/
[3] U.S. Bureau of Economic Analysis, http://www.bea.gov/regional/spi/default.cfm?selTable=summary

## Statewide Employment Conditions

### Figure 2. U.S. and Ohio Unemployment Rates, January 1990 – April 2009 (Seasonally Adjusted)



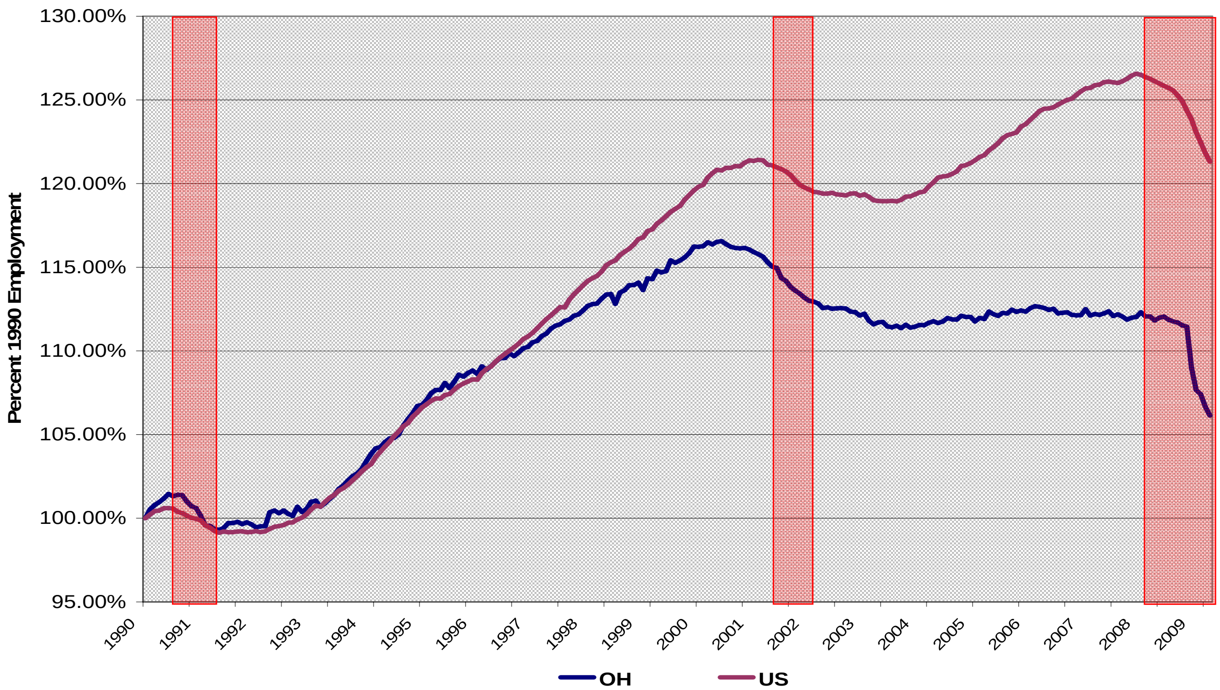

Source: Local Area Unemployment Statistics program

Figure 2 charts seasonally adjusted monthly unemployment rates for the U.S. and Ohio from January 1990 to April 2009. The red-shaded areas are recessions as defined by the National Bureau of Economic Research.[4] Following the 1990-1991 and 2001 recessions, unemployment continued to increase for about a year. If this pattern holds, unemployment will continue to rise when the current recession ends. IHS Global Insight, a major economic analysis firm, has predicted that U.S. unemployment will peak at over than over 10 percent and Ohio unemployment will peak at over 11 percent during 2010.

Figure 2 shows a change in Ohio unemployment patterns. Until mid-2003, U.S. and Ohio unemployment rates were similar. Starting in late 2003, however, Ohio's unemployment rate rose above the U.S. rate. For much of 2007 and 2008, Ohio's unemployment was about one percent above the U.S. rate. In January 2009, Ohio's unemployment rate was 8.8 percent, well above the U.S. rate of 7.6 percent. Unfortunately, Figure 2 only hints at the employment issues Ohio is facing.

[4] National Bureau of Economic Research, http://www.nber.org/cycles/recessions.html

**Figure 3. U.S. and Ohio Employment Growth, January 1990 – April 2009 (Seasonally Adjusted)**




Source: Current Employment Statistics program

Figure 3 shows seasonally adjusted employment growth for the U.S. and Ohio from January 1990 to April 2009. The red-shaded areas are recessions.

From March 1991 until March 2001 was the longest economic expansion in U.S. history. Ohio employment growth kept pace with U.S. through mid-1996, when Ohio employment growth began to slow. Ohio employment peaked in June 2000 at 17.4 percent above May 1991 trough[5], eight months before the start of the 2001 recession. U.S. employment peaked in February 2001, 22.5 percent above the trough level.

The U.S. and Ohio employment diverged further following the 2001 recession. U.S. employment bottomed out in mid-2003, declining about 2.0 percent. U.S. employment recovered by early 2005 and continued to increase until December 200. U.S. employment in December 2007 was 26.6 percent higher than January 1990.

The 2001 recession hit Ohio harder than the U.S. as a whole. Employment bottomed out in 2003, almost 4.5 percent below the 2000 peak. Recovery was partial. In February 2006, employment peaked at 3.3 percent *below* the 2000 peak level. Employment declined slowly from February 2006 until November 2008, when it dropped rapidly. At the start of the current recession in December 2007, Ohio employment was only 12.0 percent above January 1990.

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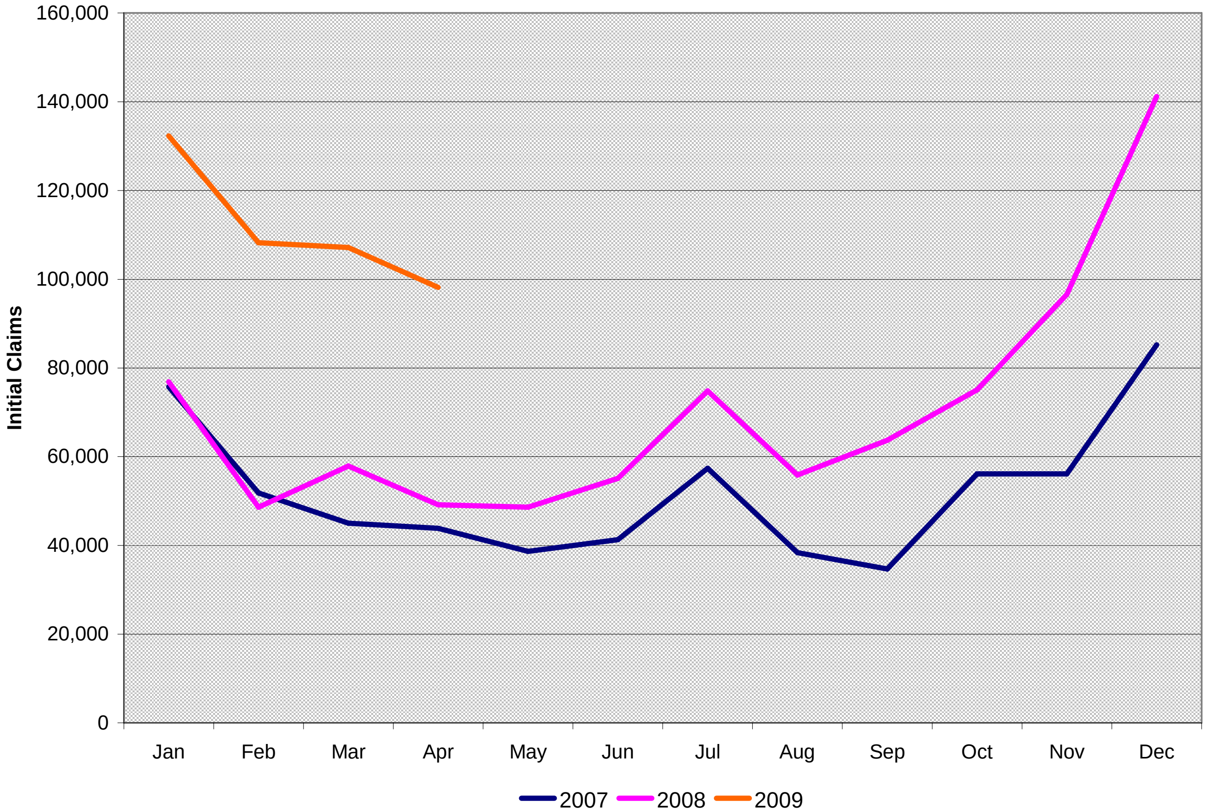
[5] U.S. employment in June 2000 was 21.8 percent above the U.S. trough level.

**Figure 4. Monthly Initial Claims for Unemployment Insurance, January 2007-April 2009**




Source: Ohio Bureau of Labor Market Information

Ohio is being hit hard by the current recession. From December 2007 until April 2009, Ohio employment declined 5.3 percent compared to a 3.3 percent decline for the U.S. In April 2009, Ohio total employment was only 6.1 percent higher than it had been in January 1990.

Figure 4 shows monthly initial claims for unemployment insurance from January 2007 through April 2009. These data are not seasonally adjusted and show typical seasonal spikes in unemployment claims for January, July, and December. The current recession started in December 2007. After February 2008, initial claims unemployment insurance were significantly higher than they were for the same month in the previous year. In February 2009, the number of initial claims was more than 122 percent higher than for February 2008.

## Local Employment Conditions

### Figure 5. Annual Employment Growth by Metropolitan Area, 2000-2008

| Metropolitan Statistical Area | '00-'08 Growth |
|---|---|
| Akron MSA | 4.8% |
| Canton-Massillon MSA | -3.1% |
| Cincinnati-Middletown MSA | 5.3% |
| Cleveland-Elyria-Mentor MSA | -4.9% |
| Columbus MSA | 6.8% |
| Dayton MSA | -4.9% |
| Toledo MSA | -4.2% |
| Youngstown-Warren-Boardman MSA | -4.7% |

Source: Current Employment Statistics program

In 2008, about 84 percent of Ohio's nonfarm wage and salary employment was concentrated in the eight largest metropolitan areas. Figure 5 shows annual employment growth from 2000 to 2008 for the eight metropolitan areas. Clearly, some metropolitan areas have faired better than others.

The Akron, Cincinnati-Middletown, and Columbus MSAs experienced employment growth from 4.8 percent to 6.8 percent between 2000 and 2008. The other MSAs experienced declines in employment ranging from 3.1 percent to 4.9 percent.

### Figure 6. Unemployment Rates and Initial Claims for Unemployment Insurance by Metropolitan Area (Seasonally Unadjusted)

| Metropolitan Statistical Area | Apr-09 Unemployment Rate | April '08-'09 Increase in Initial Claims |
|---|---|---|
| Akron MSA | 9.8% | 111.1% |
| Canton - Massillon MSA | 11.5% | 221.7% |
| Cincinnati - Middletown MSA | 9.1% | 100.5% |
| Cleveland - Elyria - Mentor MSA | 9.0% | 126.2% |
| Columbus MSA | 8.2% | 78.6% |
| Dayton MSA | 11.3% | 57.9% |
| Toledo MSA | 12.0% | 78.1% |
| Youngstown-Warren-Boardman MSA | 12.8% | 85.4% |

Source: Local Area Unemployment Statistics program and the Ohio Bureau of Labor Market Information

Unemployment increased dramatically in the fourth quarter of 2008 and early 2009. Figure 6 shows the April 2009 seasonally unadjusted unemployment rates and the April year-to-year percentage increase in initial claims for unemployment insurance. Four of the metropolitan areas had double-digit unemployment, and four saw increases of more than 100 percent in initial claims for unemployment insurance.

**Figure 7. Annual Employment Growth by Economic Development Region, 2000-2008**

| Region | 00-'08 Growth |
|---|---|
| Central OH - Econ Dev Region 1 | 6.8% |
| Northwest OH - Econ Dev Region 2 | -3.9% |
| West Central OH - Econ Dev Region 3 | 1.1% |
| Southwest Central OH - Econ Dev Region 4 | -3.7% |
| Southwest OH - Econ Dev Region 5 | 5.7% |
| North Central OH - Econ Dev Region 6 | -2.3% |
| Southern OH - Econ Dev Region 7 | 3.3% |
| Northern OH - Econ Dev Region 8 | -6.1% |
| Northeast Central OH - Econ Dev Region 9 | 2.6% |
| East Central OH - Econ Dev Region 10 | -1.5% |
| Southeast OH - Econ Dev Region 11 | 1.5% |
| Northeast OH - Econ Dev Region 12 | -5.0% |

Source: Local Area Unemployment Statistics program

Another way to look at the Ohio employment situation is using the 12 Economic Development Regions, which cover the entire state.[6] Figure 7 shows annual employment growth from 2000 to 2008 for the EDRs. Several EDRs include all or parts of metropolitan areas, which strongly affect their employment situations.

Six of the EDRs experienced positive employment growth between 2000 and 2008 ranging from 1.1 percent to 6.8 percent. Six regions experienced employment declines from 1.5 percent to 6.1 percent.

[6] Data for the Economic Development regions come from the Local Area Unemployment Statistics (LAUS) program. Data from the Current Employment Statistics (CES) program are preferable for this type of analysis because they are based on a larger sample, but CES data are not available for the Economic Development Regions. In general, trends and patterns in LAUS data should be similar to those in CES data.

**Figure 8. Unemployment Rates and Initial Claims for Unemployment Insurance by Economic Development Region (Seasonally Unadjusted)**

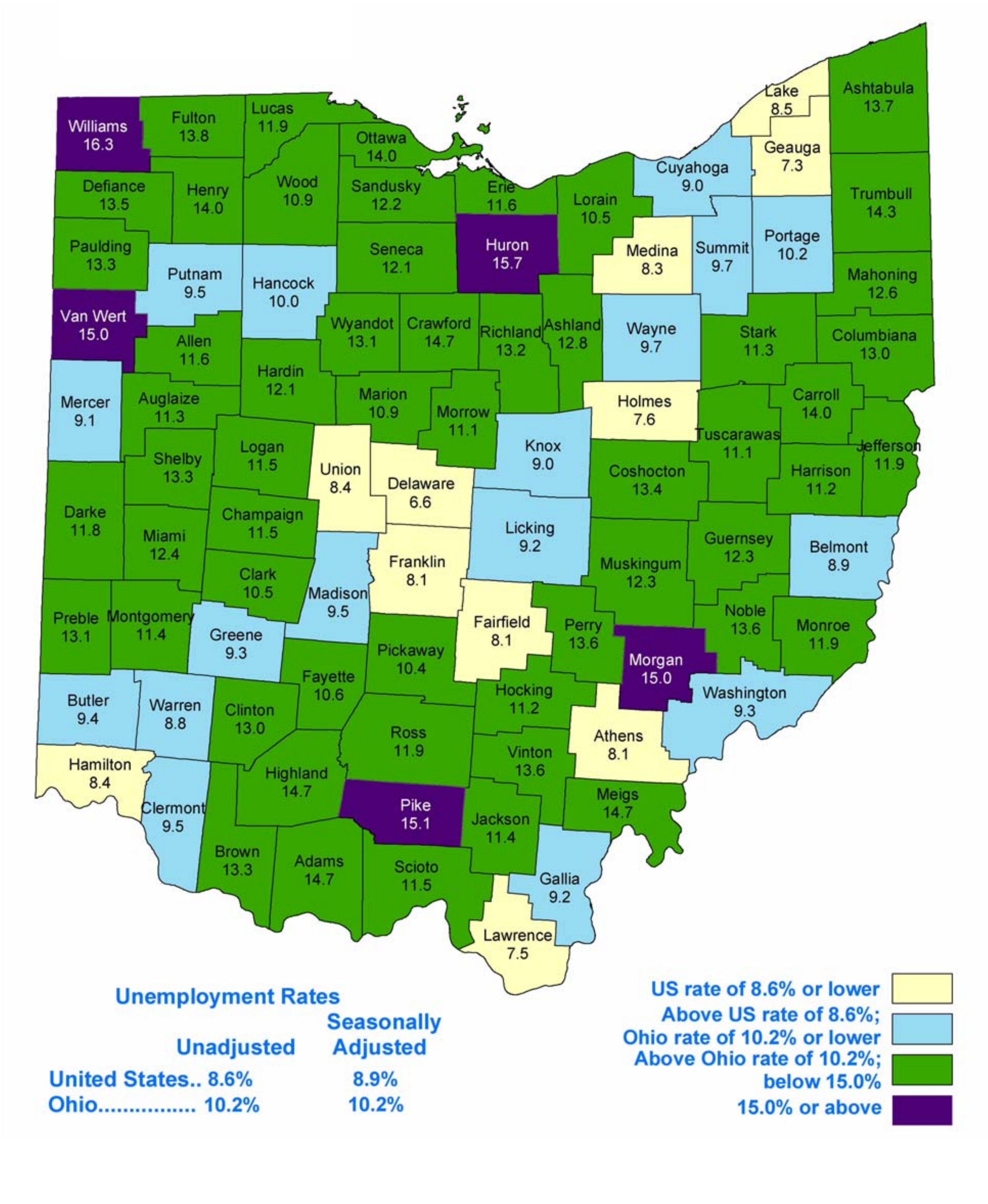
| Region | April '09 Unemployment Rate | April '08-'09 Increase in Initial Claims |
|---|---|---|
| Central OH - Econ Dev Region 1 | 8.3% | 84.7% |
| Northwest OH - Econ Dev Region 2 | 12.3% | 70.8% |
| West Central OH - Econ Dev Region 3 | 11.1% | 131.5% |
| Southwest Central OH - Econ Dev Region 4 | 11.4% | 72.7% |
| Southwest OH - Econ Dev Region 5 | 8.8% | 93.0% |
| North Central OH - Econ Dev Region 6 | 12.5% | 89.0% |
| Southern OH - Econ Dev Region 7 | 11.8% | 145.7% |
| Northern OH - Econ Dev Region 8 | 9.1% | 126.1% |
| Northeast Central OH - Econ Dev Region 9 | 10.0% | 154.1% |
| East Central OH - Econ Dev Region 10 | 11.6% | 82.3% |
| Southeast OH - Econ Dev Region 11 | 10.8% | 48.7% |
| Northeast OH - Econ Dev Region 12 | 13.5% | 91.8% |

Source: Source: Local Area Unemployment Statistics program and the Ohio Bureau of Labor Market Information

Figure 8 shows April seasonally unadjusted unemployment rates for the EDRs and year-to-year percentage increase in initial claims for unemployment insurance. Nine EDRs had double-digit unemployment rates. Four EDRs saw initial claims for unemployment insurance increase by more than 100 percent compared to April 2008.

In February 2009, Ohio's seasonally adjusted unemployment rate was 9.4 percent, the highest in 25 years. The seasonally unadjusted unemployment rate was 10.2 percent. Sixty-two counties had unadjusted unemployment rates above the state rate. Huron County had the highest unemployment rate with 18.0 percent; Delaware County had the lowest rate with 6.3 percent. Figure 9 on the next page shows county unemployment rates for April 2009.

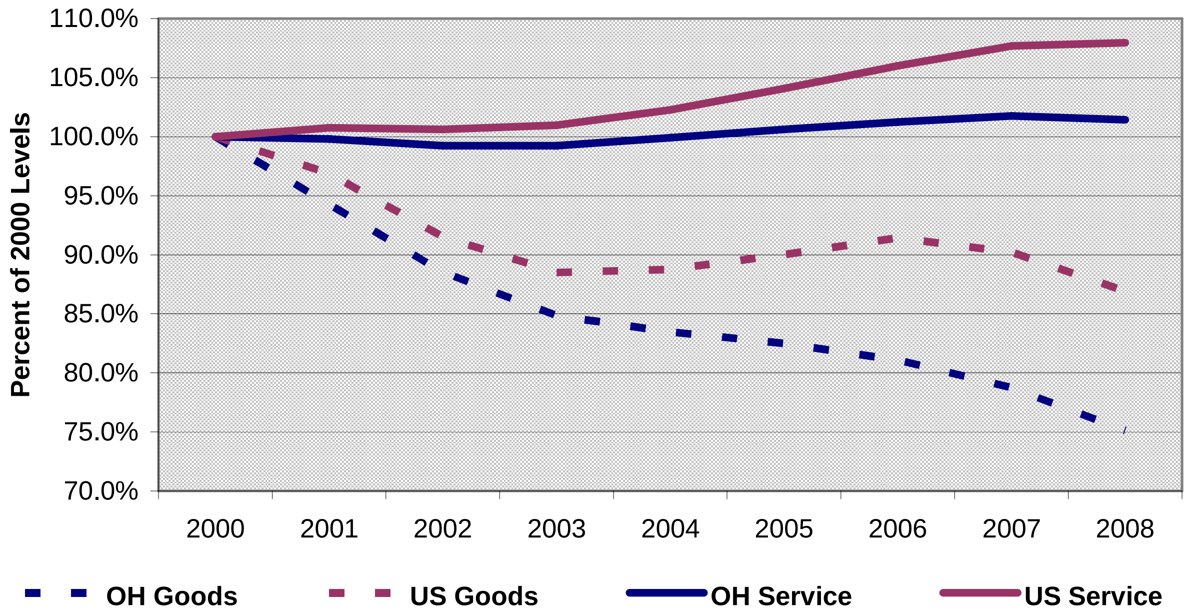
**Figure 9. County Unemployment Rates (Seasonally Adjusted), April 2009**



## Sector and Industry Employment Growth

Ohio's overall employment situation is influenced by the state's mix of industries. Employment patterns in both goods-producing and service-providing sectors have changed since the 2001 recession.

### Figure 10. U.S. and Ohio Annual Employment Growth by Sector, 2000-2008



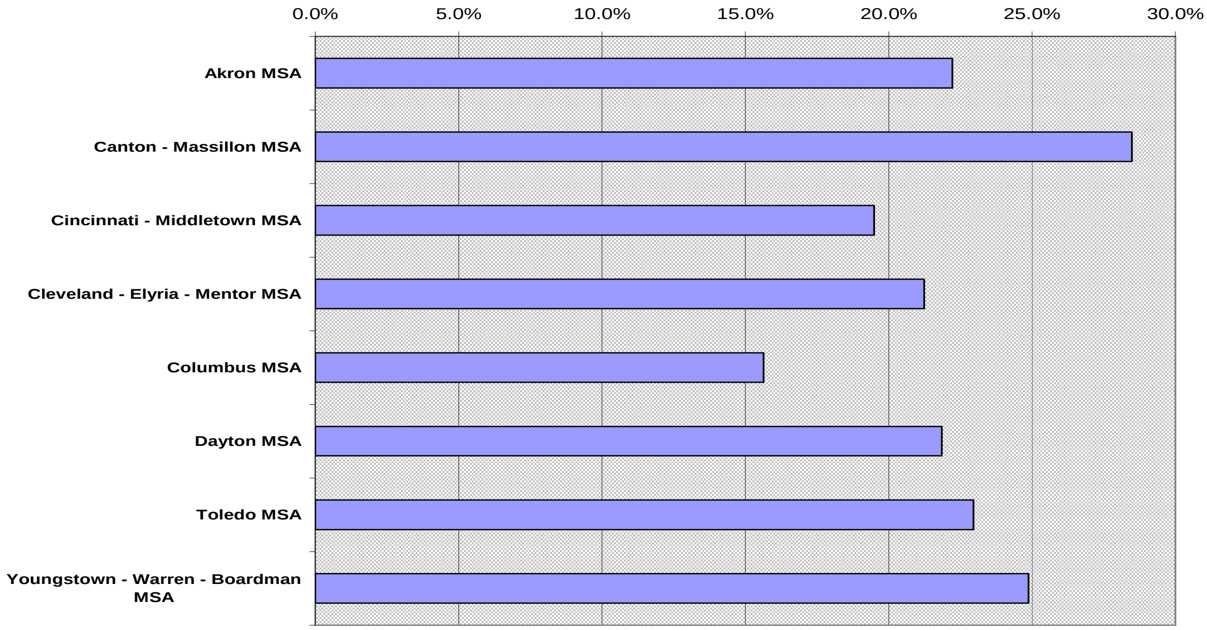

Source: Current Employment Statistics program

Figure 10 shows U.S. and Ohio annual employment growth for goods-producing and service-providing sectors from 2000 to 2008. Employment in both sectors declined following the 2001 recession, but employment in the goods-producing sector continued to decline while the service-providing sector recovered and eventually increased employment beyond 2001 levels.

Ohio employment underperformed the U.S. in both sectors. From 2000 to 2008, annual employment in the goods-producing sector in Ohio declined 24.9 percent compared a 13.1 percent decline for the U.S. Employment in the service-providing sector increased only 1.4 percent in Ohio compared to 7.9 percent for the U.S.

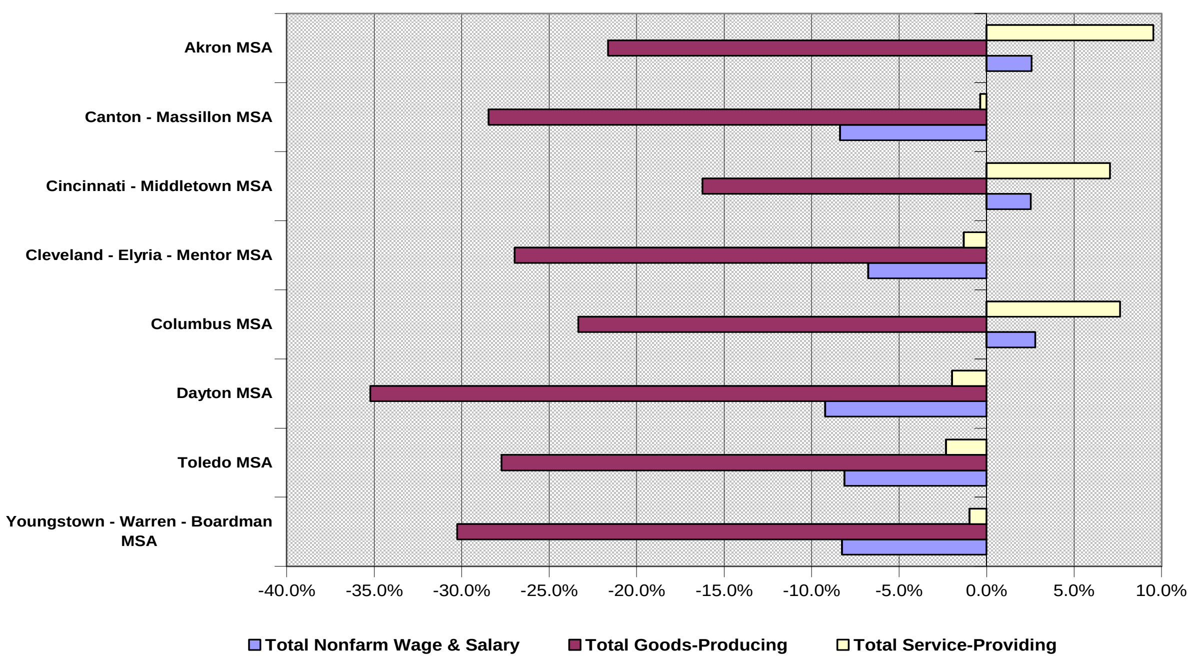
The concentration of employment in the goods-producing sector varies across the state. Figure 11 on the following page shows the percentage of employment in goods-producing industries in 2000 for the eight largest metropolitan areas. The Canton-Massillon MSA had the highest concentration of employment in goods-producing industries with 28.5 percent; the Columbus MSA was lowest with 15.6 percent.

## Figure 11. Percentage of Employment in Goods-Producing Industries for the Eight Largest Metropolitan Areas, 2000




Source: Current Employment Statistics program

## Figure 12. 2000-2008 Employment Growth by Sector for the Eight Largest Metropolitan Areas



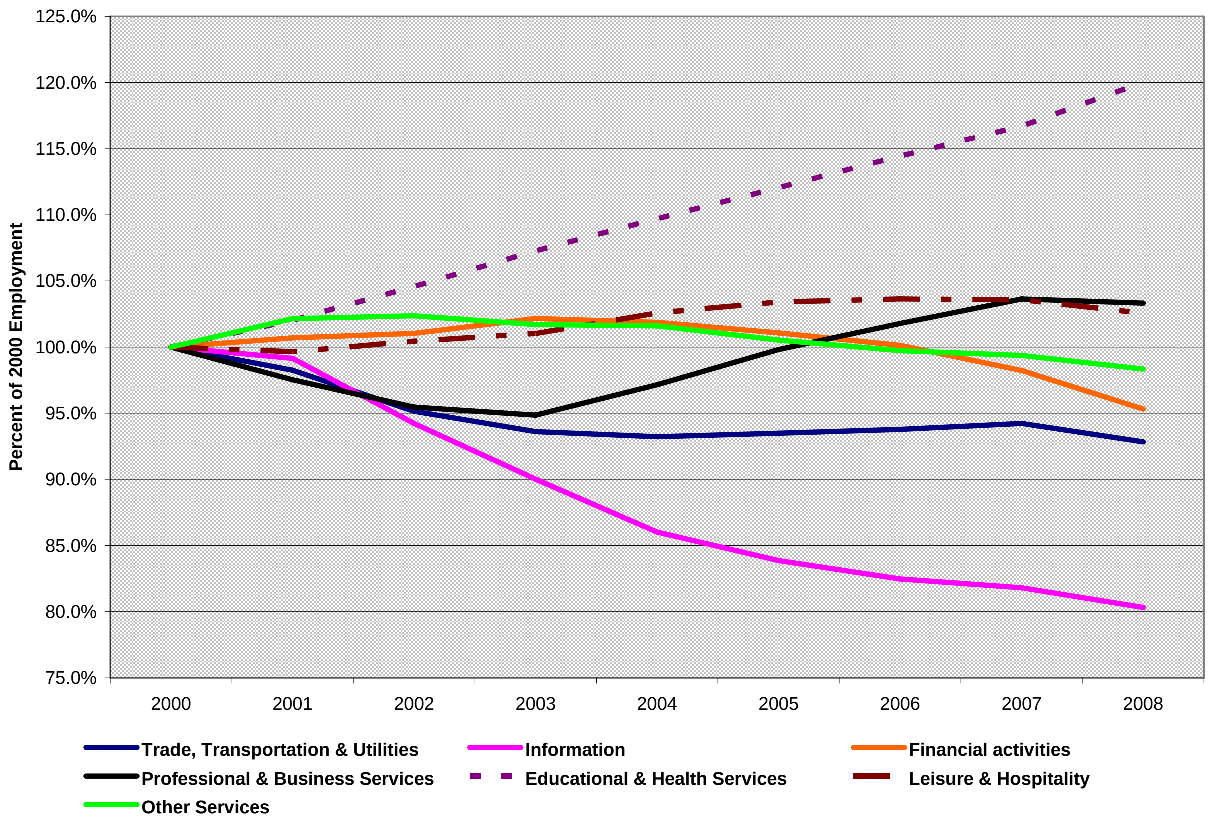

Source: Current Employment Statistics program

Figure 12 on the previous page shows the percentage change in annual employment from 2000 to 2008 for the metropolitan areas. Employment in goods-producing industries declined in all MSAs, but they were not equally affected. The Dayton MSA hade the largest decline (-35.2 percent) and the Cincinnati-Middletown MSA had the smallest decline (16.2 percent).

Employment in service-providing industries increased in the Akron, Cincinnati-Middletown, and Columbus MSAs from 7.1 to 9.5 percent, but it decreased in the remained MSAs by 1.0 to 2.3 percent.

Only the Akron, Cincinnati-Middletown, and Columbus MSAs showed overall employment growth from 2000 to 2008, and this growth was driven by increases in the service-sector offsetting losses in the goods-sector.

**Figure 13. Ohio Employment Growth in Service-Providing Industries, 2000-2008**



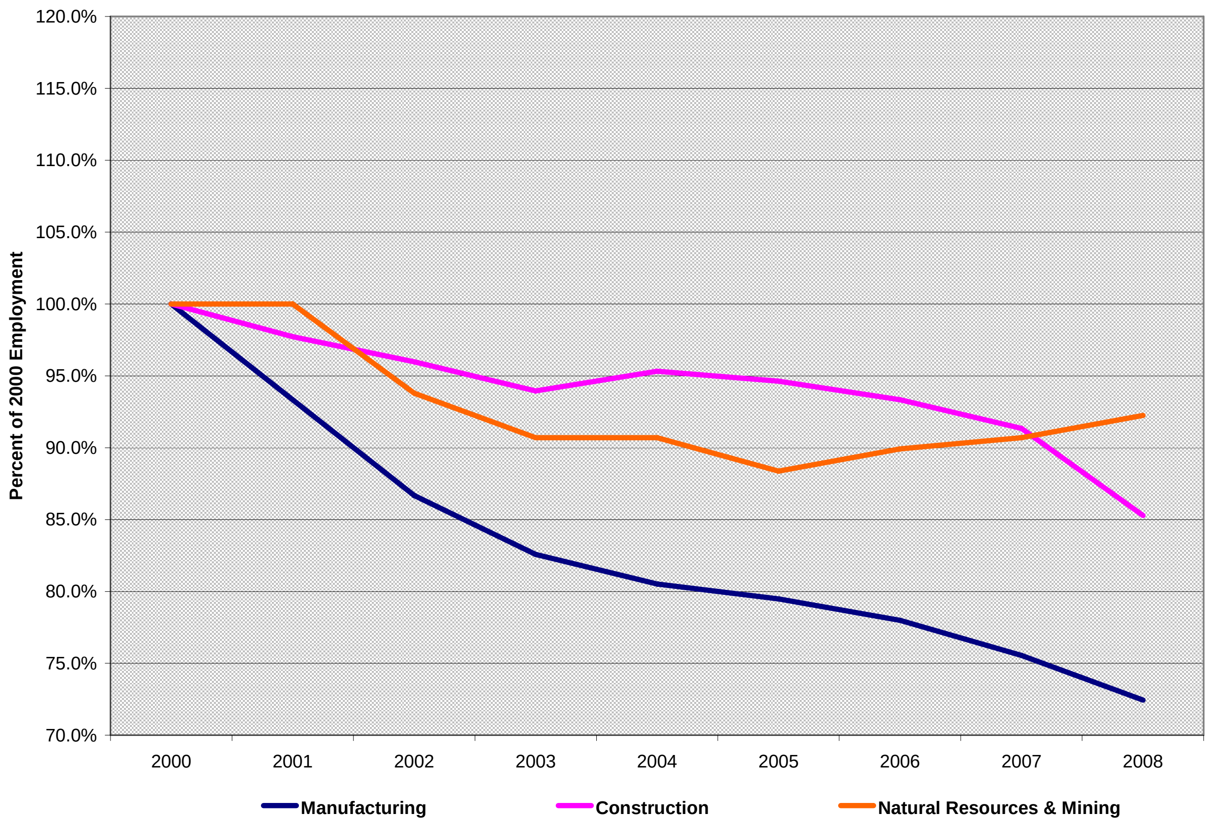

Source: Current Employment Statistics program

Employment growth among service-providing industries was not uniformly positive. Figure 13 shows the annual employment growth among service industries in Ohio from 2000 to 2008.

Service industry employment grew 1.4 percent over the period, but this growth came from only three industries. Education and health services grew 20.0 percent, professional and business services grew 3.3 percent, and leisure and hospitality grew 2.6 percent. Four service industries declined in employment. Financial services declined 4.7 percent; trade, transportation, and utilities declined 7.2 percent; the other services industries declined 1.7 percent; and information declined 19.7 percent.

Employment in service-providing industries increased by more than 62,000 jobs over the period. Education and health services contributed more than 136,000 jobs; professional and business services added more than 21,000; and leisure and hospitality added more than 12,000 jobs. Growth by those industries was offset by losses of more than 4,000 jobs in financial services; 21,000 jobs in information; more than 3,000 jobs in other services; and more than 80,000 jobs in trade, transportation, and utilities.

**Figure 14. Ohio Employment Growth in Goods-Producing Industries, 2000-2008**




Source: Current Employment Statistics program

The employment situation for goods-producing industries was entirely negative. Figure 14 shows employment growth for goods-producing industries from 2000 to 2008. Overall employment growth for goods industries declined 24.9 percent. Construction declined 14.7 percent; natural resources and mining declined 7.8 percent; and manufacturing declined 27.6 percent.

Although employment in service-providing industries was more than three times that of goods-producing industries in 2000, employment losses by goods-producing industries far outpaced the gains among service industries. Natural resources and mining lost 1,000 jobs; construction lost more than 36,000 jobs; and manufacturing lost more than 281,000 jobs. Total job losses for Ohio goods-producing industries were more than 318,000 jobs from 2000 to 2008.

**Figure 15. U.S. and Ohio Employment Growth by Industry, 2000-2008**

| | U.S. | OH |
|---|---|---|
| Goods-Producing Industries | -13.1% | -24.9% |
| Mining and Logging | 29.2% | -7.8% |
| Construction | 6.3% | -14.7% |
| Manufacturing | -22.2% | -27.6% |
| Service-Providing Industries | 7.9% | 1.4% |
| Trade, Transportation and Utilities | 0.6% | -7.2% |
| Information | -17.4% | -19.7% |
| Financial Services | 6.0% | -4.7% |
| Professional and Business Services | 6.7% | 3.3% |
| Education and Health Services | 24.8% | 20.0% |
| Leisure and Hospitality | 13.5% | 2.6% |
| Other Services | 7.0% | -1.7% |

Source: Current Employment Statistics program

How do Ohio employment trends compare to national trends? Figure 15 compares changes in industry employment in Ohio to the U.S. for 2000 to 2008.

Three industries grew more slowly in Ohio than they did nationally:

- Education and Health Services;
- Professional and Business Services; and
- Leisure and Hospitality.

Employment in five industries declined in Ohio while they grew nationally:

- Natural Resources and Mining;
- Construction;
- Trade, Transportation, and Utilities;
- Financial Services; and
- Other Services.

Employment in two industries declined farther in Ohio than nationally:

- Manufacturing, and
- Information.

Ohio underperformed the national average in every industry from 2000 to 2008.

**Figure 16. U.S. and Ohio Employment Growth by Industry, January 2008 to April 2009 (Seasonally Adjusted)**

| | U.S. | OH |
|---|---|---|
| Goods-Producing Industries | -12.5% | -14.4% |
| Mining and Logging | -0.5% | -0.9% |
| Construction | -15.2% | -17.9% |
| Manufacturing | -11.6% | -16.0% |
| Service-Providing Industries | -2.5% | -1.2% |
| Trade, Transportation and Utilities | -5.1% | -4.9% |
| Information | -4.5% | -8.7% |
| Financial Services | -5.0% | -5.0% |
| Professional & Business Services | -7.2% | -8.4% |
| Education and Health Services | 3.0% | 1.7% |
| Leisure and Hospitality | -2.8% | -0.6% |
| Other Services | 3.8% | -2.0% |

Source: Current Employment Statistics program

The situation in the current recession is much the same. Figure 16 shows change in seasonally adjusted industry employment from January 2008 to April 2009. Ohio employment declined more or increased less than the U.S. averages for seven of the ten industries.

## Manufacturing Employment

Figures 15 and 16 show substantial declines in goods-producing industries, and most of these losses have been in manufacturing. The decrease in manufacturing jobs has slowed income growth in areas such as Ohio with high concentrations of manufacturing employment.[7] The decrease of manufacturing's share of the economy has contributed to slow population growth in the Northeast and Midwest.[8]

Declines in manufacturing are particularly painful because it accounts for a larger-than-average portion of Ohio's employment. Seventy-five Ohio counties derive an above average portion of their earnings from manufacturing.[9] In 2007, 14.2 percent of Ohio nonfarm employment was in manufacturing compared to 10.1 percent for the U.S. Manufacturing employment in general is 40 percent more concentrated in Ohio than in the U.S. as a whole.

Figure 17 on the next page displays location quotients for 18 manufacturing industries with employment greater than 4,500. An LQ of 1.00 means the concentration of industry employment in Ohio is the same as the national concentration. The LQ of 2.77 for primary metal manufacturing means employment in the industry is 2.77 times as concentrated in Ohio compared to the U.S. Employment is more concentrated in Ohio than in the U.S. for 10 of the 18 manufacturing industries.

[7] Testa, Klier, & Mattoon, 2005
[8] *Ibid.*
[9] Federal Reserve Bank of Cleveland, http://www.clevelandfed.org/Our_region/regional_profile/industry.cfm

**Figure 17. Location Quotients for 18 Ohio Manufacturing Industries, 2007**

| Industry | Location Quotient |
|---|---|
| All Manufacturing Industries | 1.40 |
| Primary metal manufacturing | 2.77 |
| Plastics and rubber products manufacturing | 2.13 |
| Transportation equipment manufacturing | 1.97 |
| Fabricated metal product manufacturing | 1.89 |
| Electrical equipment and appliance mfg. | 1.88 |
| Machinery manufacturing | 1.75 |
| Nonmetallic mineral product manufacturing | 1.53 |
| Chemical manufacturing | 1.35 |
| Paper manufacturing | 1.32 |
| Printing and related support activities | 1.25 |
| Petroleum and coal products manufacturing | 1.00 |
| Furniture and related product manufacturing | 1.00 |
| Miscellaneous manufacturing | 0.94 |
| Food manufacturing | 0.91 |
| Beverage and tobacco product manufacturing | 0.88 |
| Wood product manufacturing | 0.77 |
| Textile product mills | 0.73 |
| Computer and electronic product manufacturing | 0.44 |

Source: U.S. Bureau of Labor Statistics

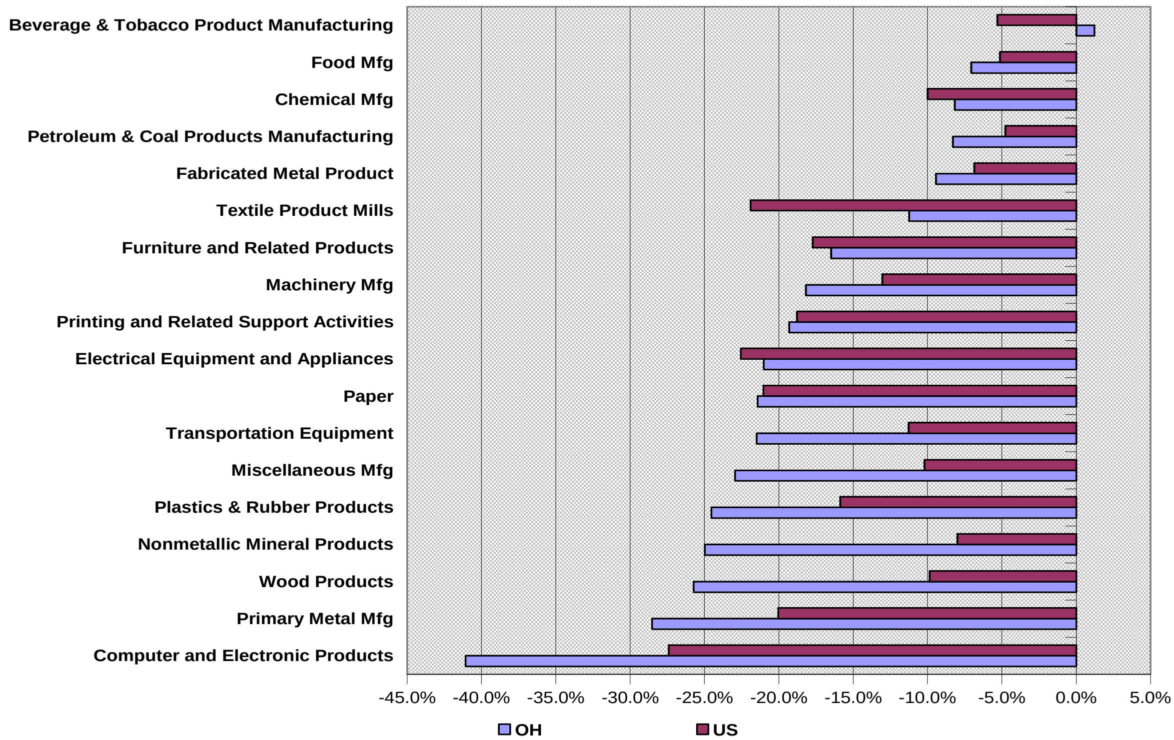
The decline in manufacturing employment varies by industry. Although manufacturing employment has been declining nationally, the decline has been faster in the Midwest states including Ohio.[10] Figure 18 on the following page shows the percentage change in employment from 2001 to 2007. Employment in all 18 industries declined nationally, but declines in Ohio outpaced the nation for 13 industries.

High percentage declines among highly concentrated industries results in large job losses. Two industries stand out. Transportation equipment manufacturing, which includes motor vehicle manufacturing, declined 21.5 percent, from about 170,000 to 134,000 jobs. Employment in fabricated metal product manufacturing declined 9.4 percent from about 129,000 to 117,000 jobs.

Both short- and long-term long forces are affecting manufacturing employment. Although the current recession is severe, some of its impact will be relatively short term. In particular, the low consumer confidence is associated with decreased demand for big-ticket durable goods such as cars and appliances. When the recession eases, demand for these goods will increase and employment will rise.

[10] Testa, Klier, & Mattoon, 2005

**Figure 18. Ohio and U.S. Manufacturing Industries Employment Change, 2001-2007**




Source: Quarterly Census of Employment and Wages

The recession may have some long-term impacts as well. General Motors and Chrysler are in precarious positions; negative events for either of these manufacturers will strongly affect Ohio. A GM shutdown could cost Ohio more than 60,000 jobs.[11]

However, much of the decline in manufacturing employment is because of long-term forces affecting multiple industries and regions. The long-term changes affecting manufacturing take several forms:

- Changing product demand. For example, LCD and plasma televisions are replacing cathode-ray tube televisions and energy-efficient fluorescent lights are replacing incandescent lights. The Midwest is heavily concentrated in basic equipment manufacturing, but investment in high-tech goods has been increasing faster.

- Foreign competition. Foreign competitors have gained market share against American companies. American auto manufacturers have been losing market share since 1993.[12]

- Off-shoring. Some American firms are moving facilities or processes to other countries. For example, American auto manufacturers have decreased auto

[11] Scott, 2008
[12] Center for Automotive Research, 2008

production in the Unites States and increased production in Mexico.[13] Off-shoring tends to be most harmful to workers without a college degree.[14]

- Outsourcing. Many manufacturers have cut their payrolls by outsourcing service activities such as cleaning, accounting, and research to other companies.[15]

- Facility consolidation. Firms with multiple facilities or merging firms may consolidate into fewer facilities. Ohio has been on the gaining and losing sides of consolidations, however, in general, manufacturing activity is shifting to the west and south.[16]

- Non-competitive cost structures. Rising costs, including wages, health care benefits, and retirement contributions, have led many businesses to look for cost-saving ways of remaining competitive. High costs in the Midwest have led to many high-tech manufacturers to locate in Texas, Arizona, and California.[17]

- Productivity has increased. Higher worker "quality" and new technologies allow manufacturers to produce goods with fewer workers. From 1990 through 2000, manufacturing employment was relatively flat while real output steadily increased.[18]

[13] Scott, 2008
[14] Liu & Trefler, 2008
[15] Testa, Klier, & Mattoon, 2005
[16] *Ibid.*
[17] *Ibid.*
[18] *Ibid.*

## Projected Employment Growth

### Figure 19. Projected Ohio Employment Growth by Sector and Industry, 2006-2016

| | Growth 2006-2016 |
|---|---|
| Goods-Producing Sector | -11.2% |
| Natural Resources and Mining | -7.2% |
| Construction | 9.3% |
| Manufacturing | -17.7% |
| Service-Providing Sector | 9.4% |
| Trade, Transportation and Utilities | 2.8% |
| Information | -2.7% |
| Financial Services | 8.5% |
| Professional and Business Services | 15.4% |
| Education and Health Services | 21.7% |
| Leisure and Hospitality | 9.7% |

Source: Ohio Bureau of Labor Market Information

Figure 19 shows projected employment growth by sector and major industry group for 2006 to 2016. These projections were based on historical data through 2006, so they consider many of the long-term forces in operation prior to the recession. The recession will change labor demand in the short term and will probably have some long-term effects on employment. Regardless of the long-term effects of the recession, the basic pattern of employment trends should continue.

Employment in goods-producing industries is expected to continue to decline, with heaviest losses in manufacturing. Unfortunately, this will mean more dislocated workers in goods-producing industries. The challenges will be to reemploy these workers quickly and mitigate potential wage loss if possible. Manufacturing will remain, but will change. Improved productivity may mean that future production workers will need more high-tech skills. New technologies for green energy efforts could produce more jobs.

Employment in service-providing industries is expected to increase, with the most growth in education and health services. Many service occupations will require some form of post-secondary education. This will result in higher paying jobs for those who acquire such education, but it will also require an education system that can provide an adequate supply of trained workers.

Figure 20 shows projected employment growth among major occupational groups. The decline in production occupations is tied to the decline in manufacturing. Health care industries will have a high demand for both support occupations and health care practitioner and technical occupations. The state and national shortage of registered nurses illustrates the potential difficulty of maintaining a supply of workers.

**Figure 20. Projected Ohio Employment Growth by Occupational Group, 2006-2016**

| Occupational Group | Growth 2006-2016 |
|---|---|
| Management Occupations | 0.2% |
| Business and Financial Operations Occupations | 10.1% |
| Computer and Mathematical Occupations | 17.8% |
| Architecture and Engineering Occupations | 2.0% |
| Life, Physical, and Social Science Occupations | 8.3% |
| Community and Social Services Occupations | 20.6% |
| Legal Occupations | 9.3% |
| Education, Training, and Library Occupations | 7.6% |
| Arts, Design, Entertainment, Sports, & Media Occ. | 5.3% |
| Healthcare Practitioners and Technical Occupations | 17.3% |
| Healthcare Support Occupations | 24.5% |
| Protective Service Occupations | 8.8% |
| Food Preparation and Serving Related Occupations | 10.0% |
| Building & Grounds Cleaning & Maintenance Occup. | 6.9% |
| Personal Care and Service Occupations | 13.9% |
| Sales and Related Occupations | 2.4% |
| Office and Administrative Support Occupations | 2.9% |
| Farming, Fishing, and Forestry Occupations | 0.0% |
| Construction and Extraction Occupations | 6.9% |
| Installation, Maintenance, and Repair Occupations | 3.1% |
| Production Occupations | -11.8% |
| Transportation and Material Moving Occupations | 0.6% |

Source: Ohio Bureau of Labor Market Information

## Composition of the Workforce

The composition of the labor force itself is a constraint on economic and employment growth.

Ohio's population is expected to grow slowly, which will limit employment growth. The Census predicts that Ohio's population growth will be one of the slowest in the country, 47th among the 50 states and the District of Columbia.[19] Ohio's population is expected to increase by fewer than 200,000 between 2000 and 2030. By 2030, Ohio will drop from being the seventh to the ninth most populous state.

There will be shifts in the composition of the workforce. The percentage of working-age adults who participate in the labor force is expected to remain steady. In 2008, the labor force participation rate was 67.2 percent, slightly above the national average of 66.0 percent.[20] Participation is expected to decrease among men and increase among women.[21] A larger change, however, will be the increasing average age of the workforce. Because birth rates dropped from 1965 to 1980, there will be fewer workers to replace those leaving the workforce. The workforce of 2016 is expected to have higher proportions

[19] U.S. Census, http://www.census.gov/population/www/projections/projectionsagesex.html
[20] U.S. Bureau of Labor Statistics, http://www.bls.gov/lau/ptable14full2008.pdf
[21] Ohio Bureau of Labor Market Information, *Ohio's Graying Labor Force: Aging through 2016*

of workers ages 55 and older and ages 25 to 34 and a lower proportion of those ages 45 to 54.[22]

Perhaps the most important constraint is educational attainment. Ohio ranked 24th among the states and the District of Columbia in the percentage of those 25 and older who were high school graduates in 2007.[23] Ohio lags the nation and most states in postsecondary education attainment. About 33 percent of Ohioans ages 25 and older have an associate degree or more, which is below the national average of 39 percent.[24] Ohio ranked 38th among the states and the District of Columbia in the percentage of those with a bachelor degree or more.

Educational attainment is important to Ohio because the growth rates for occupations requiring some form of postsecondary education are expected to be higher than occupations requiring only a high school diploma or less.[25] In addition, higher education generally pays off in terms of higher wages and a lower likelihood of unemployment.[26]

A significant portion of productivity increases has been because of increases in worker educational attainment. Over time, the general education level of the labor force has increased. Younger workers replacing older workers have been better educated, and some workers have increased their education levels while on the job. However, these educational gains have been slowing.

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[22] *Ibid.*
[23] U.S. Census, http://www.census.gov/prod/2009pubs/p20-560.pdf
[24] The National Center for Public Policy and Higher Education, 2008
[25] Ohio Bureau of Labor Market Information, *2016 Ohio Job Outlook*
[26] U.S. Bureau of Labor Statistics, http://www.bls.gov/emp/emptab7.htm

**Workforce Development Strategies**

There are three broad approaches to addressing the Ohio economic context. First, there are immediate capacity enhancements to address the rising numbers of individuals suffering from the recession and needing assistance. Second, there are workforce strategies that are designed to offer a bridge across the recessionary downturn. Third, there are long-term workforce strategies designed to build workforce infrastructure.

Examples of immediacy of the crisis approaches:

- Unemployment insurance and social services as safety net strategies protecting Ohio citizens during this time of crisis.
- Focusing individuals on job openings that occur in recessionary times due to replacement needs and economic churn using OhioMeansJobs.com.
- Identifying potential opportunities in occupations and industries less impacted by the recession.
- Providing increased job search and resume assistance.

Examples of bridging the crisis approaches:

- Aligning the unemployed workforce with stimulus opportunities and projects.
- Broadening job searches by identifying occupations of comparable or related skills.
- Identifying short-term high prospect training options for unemployed individuals.
- Soliciting business opportunities in internships and part-time jobs.
- Enhancing vocational/technical training in critical fields and providing for stackable certificates.

Examples of building infrastructure:

- Adult career-change training strategies and opportunities associated with high--prospect occupations.
- Aligning education with long-term critical occupations at the regional level.
- Focus economic development in business areas that operate within the core innovative functions of research and development, information technology or advanced production.
- Educational reform and increasing educational achievement.

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Partner with the workforce and economic development community.

Develop and deploy new information solution tools and systems for the workforce and economic development community.

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Be known as an important and reliable source for information solutions that support workforce development goals and outcomes.

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