



Summer 2008

www.michigan.gov/lmi

Jennifer M. Granholm, Governor

Department of Labor & Economic Growth
Bureau of Labor Market Information & Strategic Initiatives

Michigan Economic and Workforce Indicators

Preface

Michigan's economy is undergoing constant change and experiencing numerous challenges. The impact of global markets, technology innovation and energy demands is placing new pressures on our state's businesses and labor markets. Michigan must compete for capital, resources and jobs with other states and countries and to be in the game we will need to provide a quality workforce.

Responding to challenges of the new knowledge-based global economy, Michigan is focusing its resources, developing programs that address the knowledge, skills and abilities required by the labor markets for job performance. To support this process, Michigan's leaders require objective information on key economic and workforce market conditions. Understanding these dynamics is fundamental to making public policies and developing sound strategies.

This biannual report is designed to provide insight and perspective on key labor market information that impacts Michigan's workforce and businesses. It assesses the state's relative strength and competitive position over time against relative benchmarks.

The analysis is not intended to be an all encompassing review, but rather a well-documented series of data and analysis that taken together illustrate a comprehensive picture of Michigan's workforce and economic situation.

The labor market indicators center on five general categories – workforce, knowledge-based jobs, innovation, education, and economics -- each with a set of metrics that measure Michigan's labor market development. Fifteen metrics in total were selected. Only newly released and updated data appear in each publication as they become available. Indicators may be added or modified as new and pertinent data sets are identified.

The Michigan Department of Labor & Economic Growth (DLEG), Bureau of Labor Market Information & Strategic Initiatives continues to dedicate itself to providing insight on Michigan's economy, its workforce and its labor markets to promote a more prosperous future for Michigan residents.

Richard Waclawek, Director
Bureau of Labor Market Information & Strategic Initiatives
Michigan Department of Labor & Economic Growth

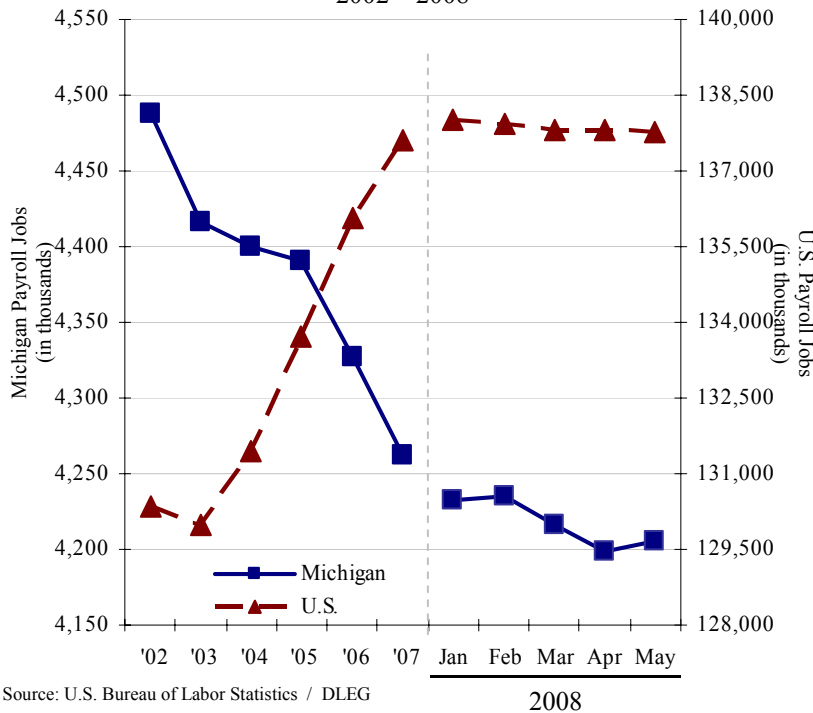
Table of Contents

Preface	2
Michigan Job Trends	4
Payroll Jobs by Industry Sector	5
Unemployment Rates	6
Business Employment Dynamics	7
Jobs in High-Tech Industries	8
Michigan Exports	9
Migration of Young Knowledge Population	10
Per Capita Personal Income	10
College Graduations/Tech Degrees	11
Motor Vehicle Indicators	12
Appendix	16
 Special Workforce Report	
Employment Forecasts 2006–2016	14

Michigan Job Trends

Nonfarm Payroll Jobs

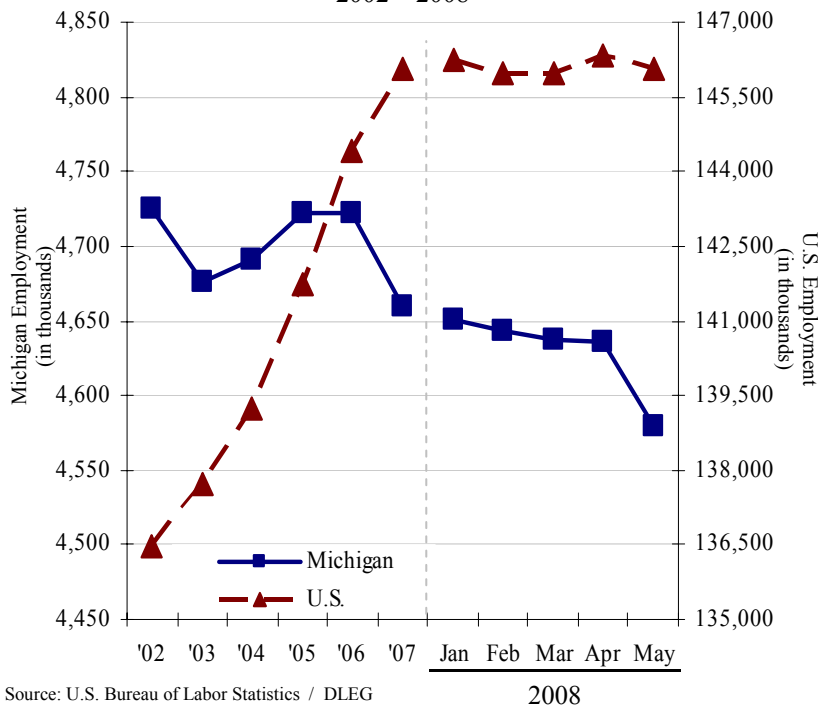
Michigan vs. U.S. Total Payroll Jobs
2002 – 2008



Source: U.S. Bureau of Labor Statistics / DLEG

Household Employment

Michigan vs. U.S. Total Household Employment
2002 – 2008

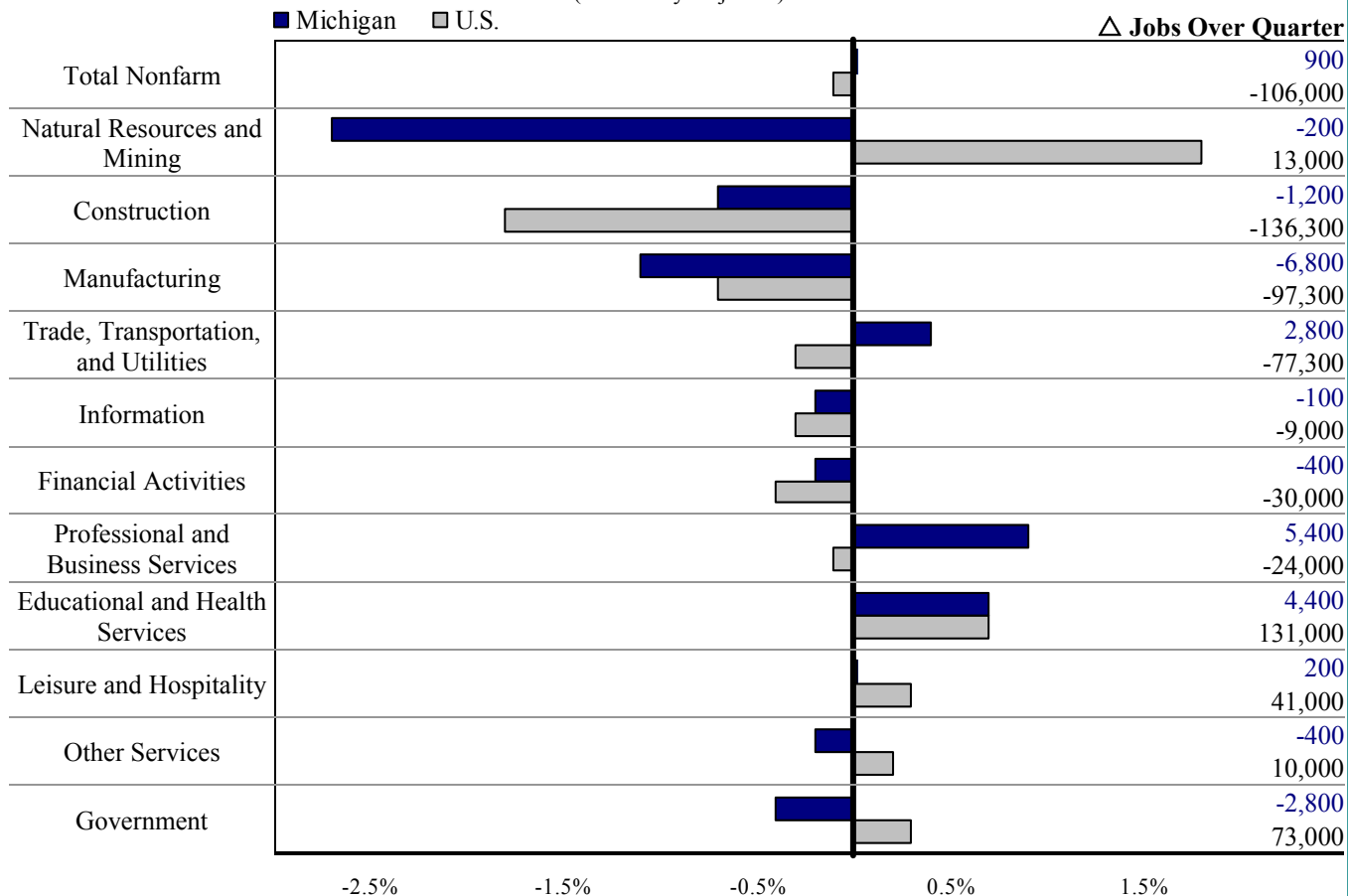


Source: U.S. Bureau of Labor Statistics / DLEG

- There are two government surveys that measure the state of the labor market. Both surveys show continued moderate employment loss in Michigan in early 2008, and a lack of employment growth nationally.
- The *nonfarm payroll or establishment* survey measures the total number of jobs supplied by establishments in the state and its metro areas. This survey excludes the self-employed and agriculture.
- Michigan's job levels had stabilized a bit in the first two months of 2008. However, plant closures due to a strike by a parts manufacturer led to layoffs in the automotive sector causing nonfarm payroll jobs to drop in March and April.
- From 2000 to the first five months of 2008, Michigan lost 458,600 jobs (9.8 percent), with 69 percent of the reduction occurring in the *Manufacturing* sector and 12 percent in *Construction*. *Education and Health Services* was the only sector to show sustained growth adding 101,200 jobs (+20 percent) since 2000.
- In 2008, U.S. payroll jobs declined (-324,000) for five consecutive months, the first reductions since 2003.
- Job cuts in construction and housing-related sectors were leading causes of U.S. job market weakness. Construction alone lost 475,000 positions since peaking in September 2006.
- The *household survey* measures the number of Michigan residents who are employed. This survey is more comprehensive than the payroll survey, including all segments of employment including the self-employed.
- In 2007, Michigan household employment fell sharply by 62,000 or 1.3 percent. Nationally, household employment in 2007 rose by 1.1 percent. The 2007 Michigan household employment level of 4,660,000 was the lowest recorded in the state since 1996.
- Household employment has edged down steadily through the first five months of 2008, reaching 4,580,000 in May 2008. Due to a sharp monthly reduction in May 2008, Michigan employment was down by 94,000 or 2.0 percent since May 2007.
- The University of Michigan May 2008 economic forecast calls for a job decline of 17,000 in the final quarter of 2008, followed by a modest improvement in the jobs picture in 2009. Job loss is forecast at a slight 0.4 percent for the first half of 2009, with the potential for a small jobs gain by the last quarter of the year.

Payroll Jobs by Industry Sector

Michigan vs. U.S.
Percent change, 4th Quarter 2007 – 1st Quarter 2008
(Seasonally Adjusted)

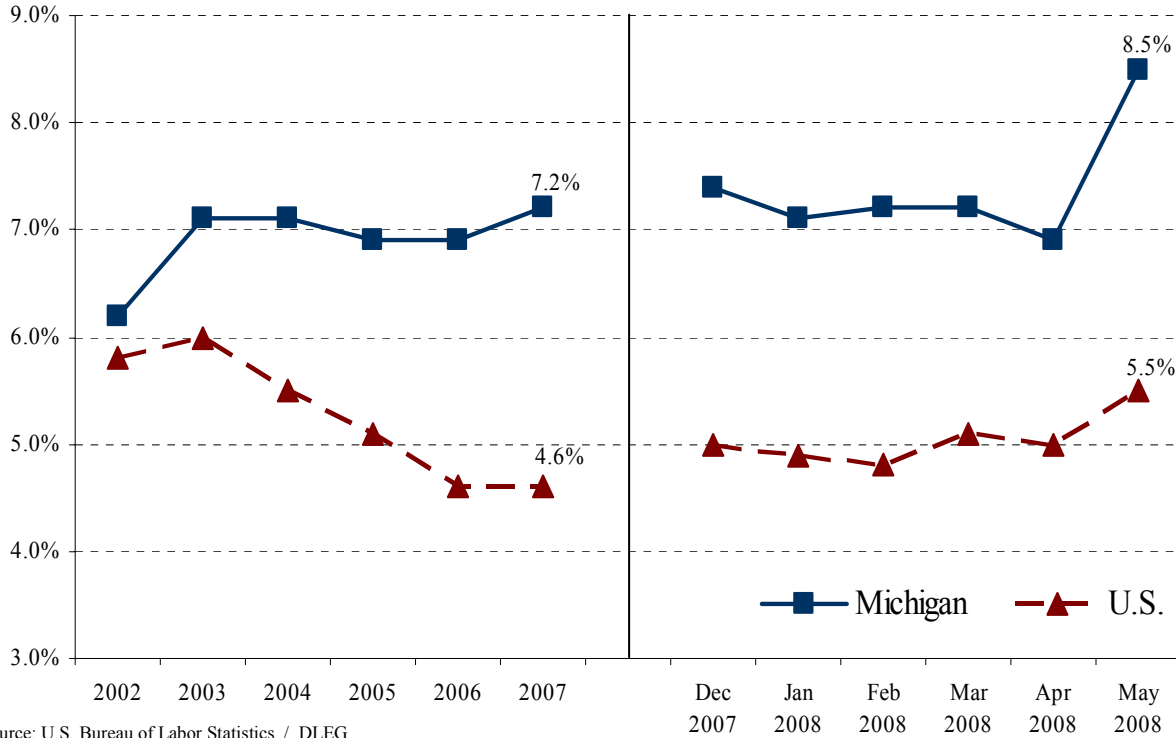


Source: U.S. Bureau of Labor Statistics / DLEG

- The large divergence between Michigan and national job growth trends narrowed considerably in the 1st quarter 2008.
- Michigan lost 61,000 jobs (-1.4 percent) between the 1st quarter 2007 and 1st quarter 2008, compared to a gain of 741,000 jobs (+0.5 percent) nationally. However, between the 4th quarter 2007 and 1st quarter 2008, Michigan job levels stabilized (+900) while nationally the growth trend reversed to a loss of 106,000 jobs.
- Michigan followed the national job growth trends in *Education and Health Services*, expanding by 2.2 percent (+12,800 jobs) over the year. *Health care and social assistance* contributed 86 percent of the job growth. Nationally, this sector grew by 3.0 percent (+551,300 jobs) with 83 percent of the growth recorded in *health care*.
- Two other service industry sectors showed strength in Michigan in the 1st quarter 2008. *Trade Transportation and Utilities* created jobs in retail trade as a result of the scheduled openings of some large stores. *Professional and Business Services* gained jobs in *administrative and waste services* largely due to the outsourcing of education-related work from the public sector to temporary help services. Modest growth was also reported in *professional and technical services*, more specifically, in computer systems design and in management, scientific and technical consulting services.
- Both Michigan and the U.S. showed weakness in the goods-producing sector in the 1st quarter. Michigan lost 8,200 jobs (-1.1 percent) with 83 percent of the loss in the Manufacturing sector. Nationally, employment fell by 220,800 jobs (-1.0 percent) with 62 percent of the loss in the Construction sector.
- The nationwide decline in construction and housing related activities, tightening of credit and high energy prices adversely affected the forecasted recovery in the Detroit-based motor vehicle industry, stalling the growth prospects in the Michigan economy. Employment, a lagging indicator, is following the weak pace of GDP growth. In the past two quarters GDP grew at the weakest rates since the end of the 2001 recession, with construction activity declining at the fastest rates since the recession of 1981.

Unemployment Rates

Average Annual & Monthly Jobless Rates, Michigan and U.S.



Source: U.S. Bureau of Labor Statistics / DLEG

- While the Michigan unemployment rate inched upward to 7.2 percent in 2007, it has essentially shown little overall movement since 2003, when it registered 7.1 percent. The nation's jobless rate declined steadily from 6.0 percent in 2003, but leveled off between 2006 and 2007 at 4.6 percent. The gap between the state and national annual jobless rates widened from 0.4 percent in 2002 to 2.6 percent in 2007. Michigan auto-related job losses during this period of time have contributed substantially to these changes.
- Monthly jobless rates took a steep upward turn in both the U.S. and Michigan in May. In Michigan, high numbers of youth and seasonal job seekers always enter the job market in May, and few were able to find jobs. Michigan's unemployment rate in May was 1.4 percentage points higher than the May 2007 rate, while the U.S. rate was up 1.0 percentage point. Michigan (+21 percent) and the U.S. (+24 percent) have recorded similar percentage increases in the number of unemployed over the past year.
- Average quarterly jobless rates held mostly steady in the first quarter 2008 versus the same quarter last year. During that time, the U.S. quarterly rate increased by four-tenths of a percentage point, which somewhat narrowed the gap between the state and nation. While Michigan's jobless rate remains the highest in the U.S., it's apparent that the state and nation are being impacted by economic uncertainty associated with increasing energy prices, decreasing home values, and issues in the credit market.

Jobless Rates By Quarter

Month	Michigan	U.S.	Gap
January	7.1	4.9	2.2
February	7.2	4.8	2.4
March	7.2	5.1	2.1
1st Qtr. 2008	7.1	4.9	2.2
October	7.5	4.8	2.7
November	7.4	4.7	2.7
December	7.4	5.0	2.4
4th Qtr. 2007	7.4	4.8	2.6
January	7.0	4.6	2.4
February	7.0	4.5	2.5
March	7.0	4.4	2.6
1st Qtr. 2007	7.0	4.5	2.5

Quarterly Rate Movements

	Michigan	U.S.
1st Qtr. 2008 Average Rate	7.1	4.9
Change Since Prior Qtr.	-0.3	0.1
Change Since 1st Qtr. 2007	0.1	0.4

Source: U.S. Bureau of Labor Statistics / DLEG

Business Employment Dynamics (BED)

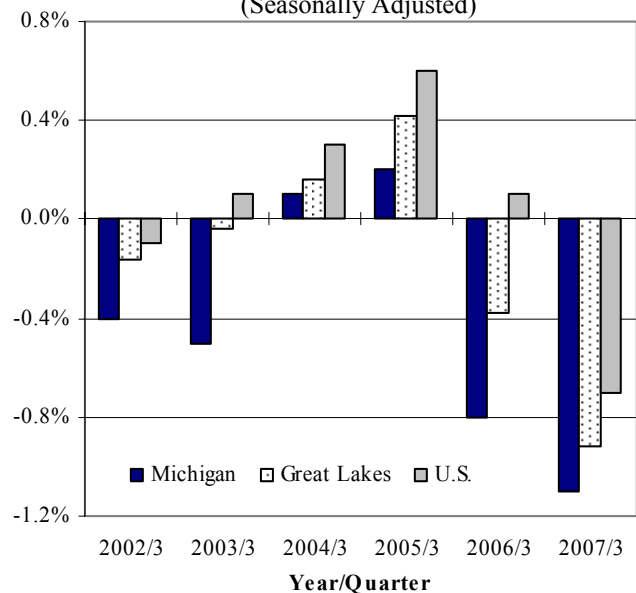
Business Employment Dynamics (BED) consists of a quarterly series on gross job gains and losses. Exploration of these gains and losses reveal underlying dynamics of establishment openings, closings, expansions and contractions. The difference between gross job gains and losses provides total net job change.

The data used to construct the BED statistics are from the Quarterly Census of Employment and Wages (QCEW), or ES-202, program, which covers approximately 98 percent of all employment. Gross job gains and losses data exclude government employees, private households, and establishments with zero employment. The job flow estimates report employment changes between the third month of each quarter. All four dynamics can exhibit changes each quarter regardless of the direction of net job change in the quarter.

BED data provide insight in how each component of gross job gains (expansions and openings) and gross job losses (contractions and closings) impact quarterly total net job changes. BED data for the third quarters of 2002-2007 revealed:

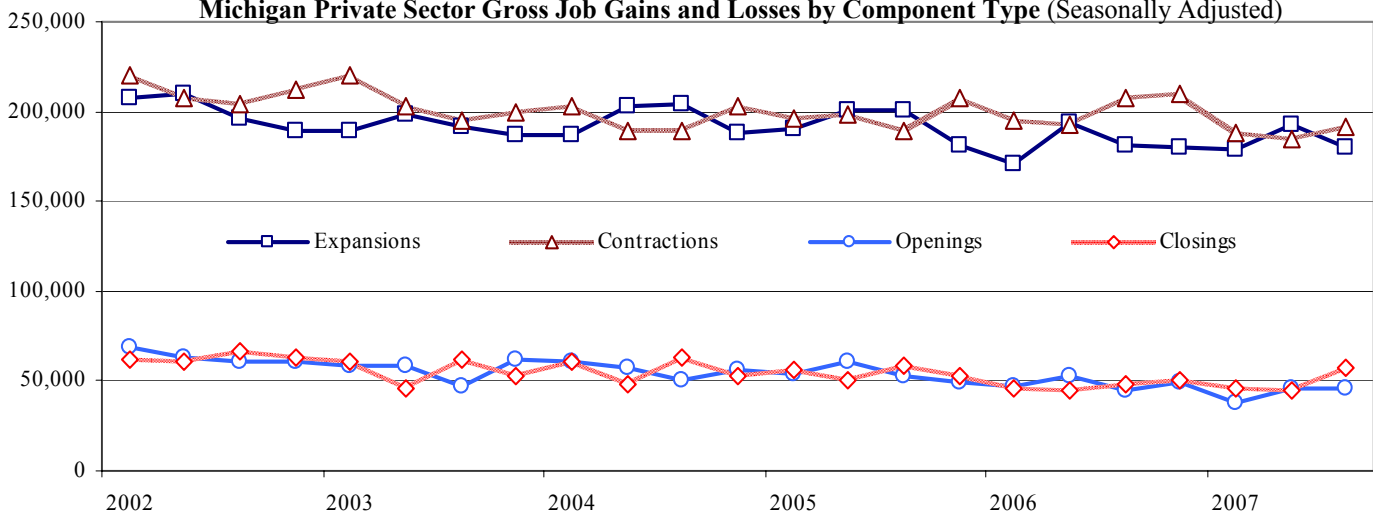
- Michigan trailed the U.S. and Great Lakes region in total net job change as a percent of total employment. The state recorded the largest net job losses as a percent of total employment during the third quarters of 2002, 2003, 2006, and 2007 registering decreases of -0.4 percent, -0.5 percent, -0.8 percent, and -1.1 percent, respectively. Severe employment declines in manufacturing along with sizeable job reductions in construction and retail trade accounted for the vast majority of net job losses.
- Closings as a percent of total job losses registered 23.0 percent in Michigan, surpassing both the U.S. (19.0 percent) and the Great Lakes region (17.6 percent). Again, this demonstrated the adverse conditions the state experienced as economically vulnerable establishments either ceased operations or reduced employment levels to zero at a higher rate than the nation and region.
- Approximately four out of five (79.7 percent) job gains in Michigan were attributable to expansions at existing establishments. Remaining employment gains were due to openings or existing establishments moving from zero employment to positive job totals. Even though declining economic conditions existed during the period, expansions and openings consistently added jobs in the state. Third quarter 2007 showed expanding and opening establishments registered job gains of more than 179,000 and 45,000, respectively.
- A 50-state comparison of the rates of each BED component to total employment for the third quarter 2007, indicated that Michigan ranked 16th highest in expansions (tied with four other states) and 27th best in openings (tied with seven others). The state also had the 17th greatest rate of contractions (tied with eight others), and produced the 4th highest rate of closings (tied with two others). Overall, Michigan ranked 39th (tied with six others) in the rate of total net job change.

Private Sector Net Job Gains/Losses as a Percent of Employment (Seasonally Adjusted)



Source: U.S. Bureau of Labor Statistics

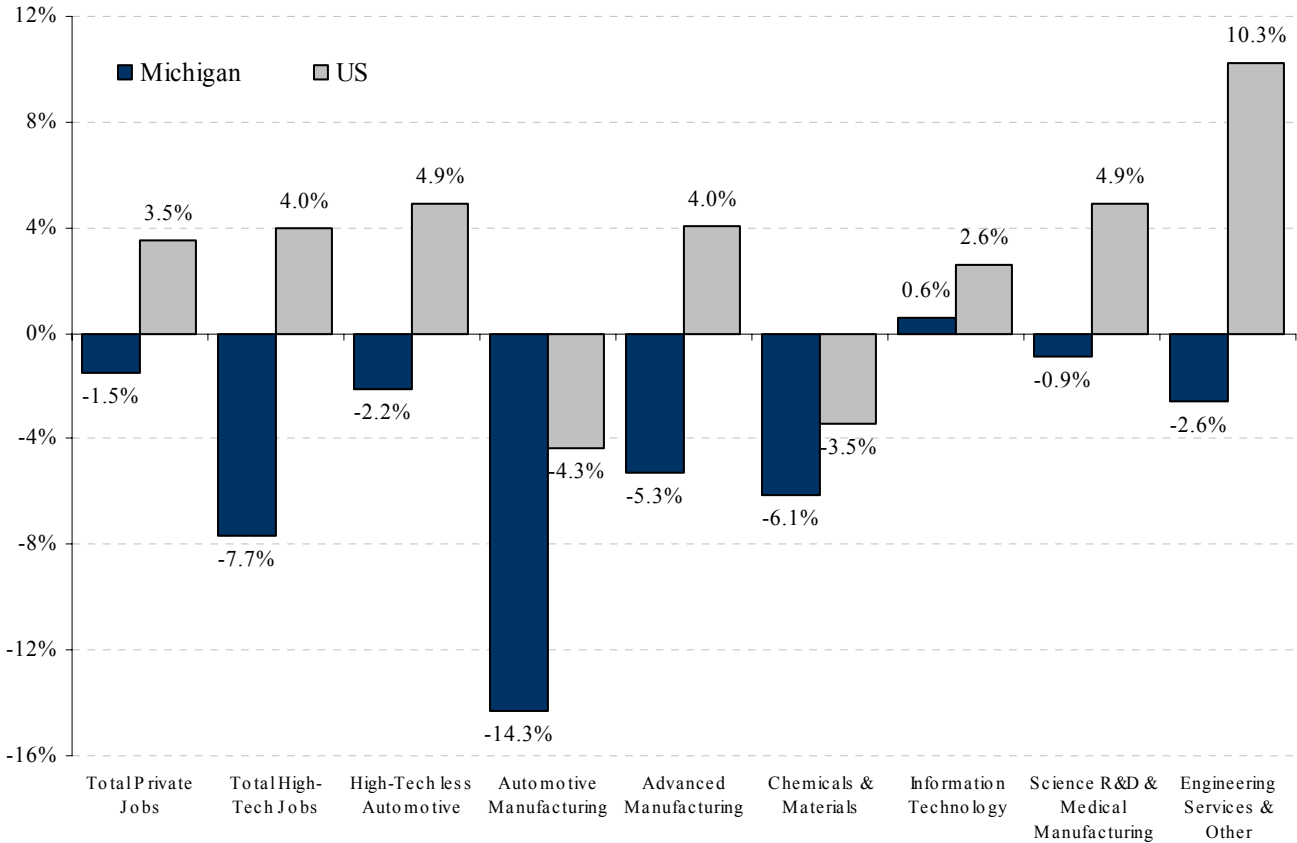
Michigan Private Sector Gross Job Gains and Losses by Component Type (Seasonally Adjusted)



Source: U.S. Bureau of Labor Statistics

Jobs in High-Tech Industries

Percent Change in Payroll Jobs 2004 – 2006



Michigan Job Levels in High-Tech Industries

2004	4,301,700	549,200	299,600	249,600	56,700	15,400	80,700	42,800	104,000
2006	4,235,700	506,900	293,000	213,900	53,700	14,400	81,100	42,400	101,300
Change	-66,000	-42,300	-6,600	-35,700	-3,000	-1,000	400	-400	-2,700
Percent	-1.5%	-7.7%	-2.2%	-14.3%	-5.3%	-6.1%	0.6%	-0.9%	-2.6%

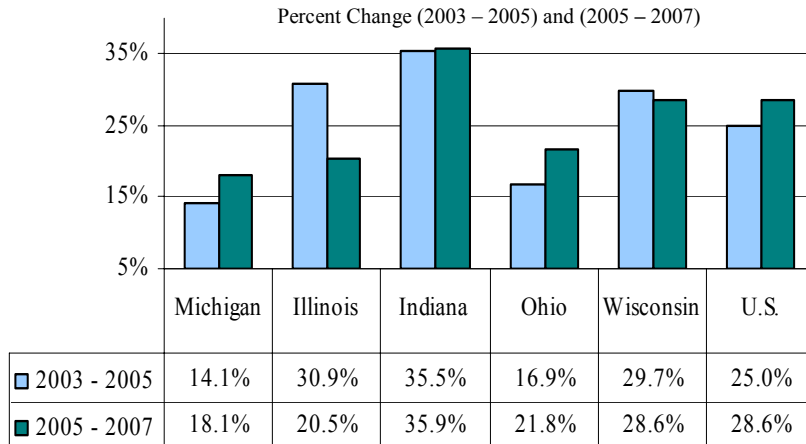
Source: DLEG, Quarterly Census of Employment & Wages

- High-technology industries are major job providers in Michigan, providing more than 506,000 jobs in 2006, or nearly 12 percent of total state employment. The state’s high-tech industries lost roughly 43,000 jobs between 2004 and 2006, nearly two-thirds of the total private sector job decline in the state during this time. In the U.S., high-tech jobs rose during this period at roughly the same rate (+3.5 percent) as total private jobs.
- Since the state boasts some of the most highly advanced automotive manufacturing technology in the world, the automotive component makes up 42 percent of the state’s high-tech sector with nearly 214,000 jobs. This cluster lost more than 35,000 jobs between 2004 and 2006, accounting for 84 percent of Michigan high-tech job reductions. *Outside of the auto sector, high-tech jobs only dipped by 2.2 percent during this period, which did not differ substantially from overall private job loss.*
- Information Technology was the only high-tech component statewide to show a gain from 2004 – 2006, adding roughly 450 jobs during that time. This cluster includes industries related to Internet publishing and communications, software publishing, data processing and computer systems design, and computer and other electronic equipment manufacturing. While showing a positive change, growth in this sector lagged the U.S. rate (0.6 percent versus 2.6 percent).

Michigan Exports

Value of Exports Michigan, Great Lakes and U.S.

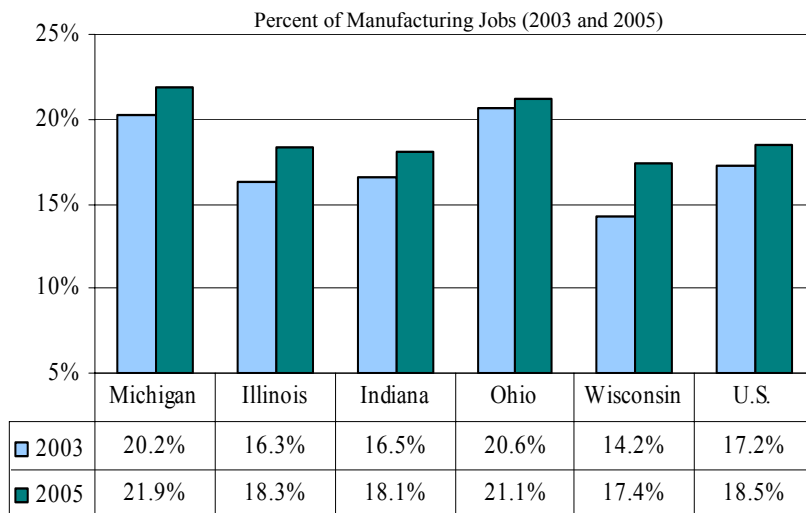
- The value of Michigan’s total exports grew by 10 percent in the current year (annual data: 2007) compared to 12 percent for the U.S.
- Michigan ranked 7th in the U.S. and 2nd among the Great Lake states (after Illinois) in 2007 with \$44.4 billion worth of exports.
- The largest export market in value terms for Michigan is still the NAFTA region exporting \$31 billion worth of goods (up 15 percent from 2005 to 2007). Exports to China, although much smaller (\$1 billion) are increasing more rapidly (up 88 percent).
- Of the total manufactured exports, Transportation Equipment contributed 52.3 percent, followed by Machinery (9.3 percent) and Chemicals (8.1 percent).



Source: WISERTrade, from U.S. Census Bureau, International Trade Administration

Export-Related Manufacturing Employment Michigan, Great Lakes and U.S.

- More than one fifth of all manufacturing workers in Michigan relied on exports for their jobs in 2005 (the most recent data).
- Export-supported jobs linked to manufacturing are an estimated six percent of total private sector employment.
- While total manufacturing jobs declined by 78,000 between 2003 to 2005, the export sector fared better, with a job decline of 5,000 to 134,000 jobs.
- Export jobs as a percent of manufacturing jobs is highest in Michigan in the Great Lakes region and consistently above the U.S. average.
- The lower dollar value and higher growth rates abroad have increased demand for exports while domestic demand remains weak.



Source: U.S. Dept. of Commerce, U.S. Census Bureau

Michigan's Top 10 Manufacturing Industries for Export-Related Jobs (2003 and 2005)

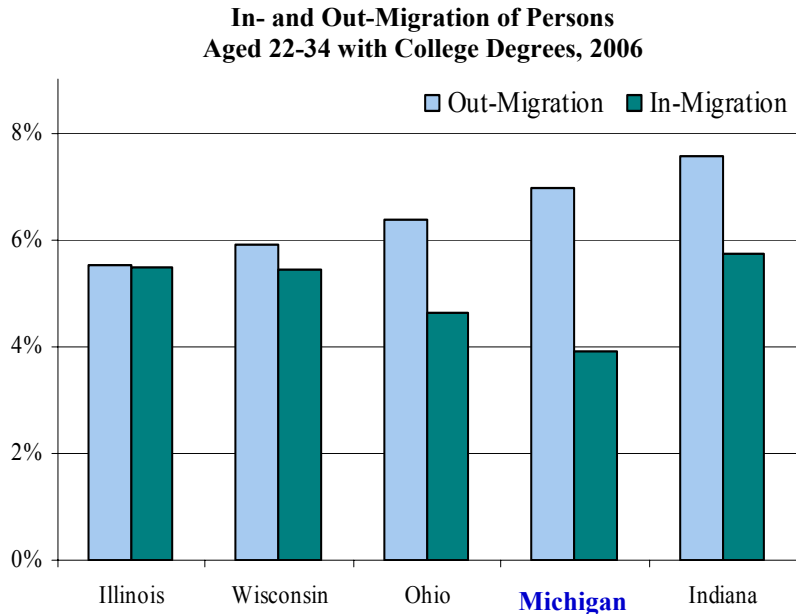
- Preliminary data (2005) shows four industries (bolded in the table) had growth in export-related jobs though total employment in the industries declined.
- The number of export jobs is not tied to the dollar value of export sales. For example, a relatively small dollar value of exports in fabricated metals and machinery manufactures have a large number of jobs.
- A total of 10,042 companies exported goods from Michigan of which 90 percent were small and medium-sized businesses (in 2005).

Top Ten Industries	Export jobs as % of Total		2003 - 2005	
	2003	2005(p)	% change in total jobs	% change in export jobs
Total Manufacturing	20.2	21.9	-11.3	-3.7
Transportation Equipment	21.3	22.0	-9.1	-6.0
Fabricated Metal Products	22.7	26.1	-12.5	0.8
Machinery Manufactures	20.6	23.5	-9.3	3.8
Primary Metal Manufactures	57.1	58.4	-8.5	-6.4
Plastic & Rubber Products	19.8	21.9	-13.0	-3.5
Chemical Manufactures	21.4	22.3	-18.4	-14.9
Computers & Electronic Prod.	20.0	23.7	-8.7	8.4
Elec. Eq.; Appliances & Parts	23.6	27.4	-13.0	0.6
Non-Metallic Mineral Mfgs.	18.1	18.4	-12.9	-11.7
Paper Products	17.6	18.6	-10.8	-5.8

Source: International Trade Administration and the U.S. Dept. of Commerce
(p) Preliminary estimated employment for 2005

Migration of Young Knowledge Population

- Retention of the young, highly educated population (aged 22 – 34, with a college degree) in the Great Lakes states was generally low during the 2006 calendar year. In fact, four of five states in the region witnessed a net loss – a result of high levels of out-migration and exceedingly low levels of in-migration.
- Among its Great Lakes counterparts, Michigan posted a region low 3.9 percent rate of in-migration, totaling 22,700 people in 2006. Michigan had the second highest rate of out-migration, with more than 40,100 people accounting for a 6.9 percent decline in population. These movements resulted in a net out-migration of 17,500 people, off 3.0 percent over the year.
- This performance at the regional level carried over nationally, where no state posted a lower rate of in-migration than did Michigan. This shortfall was partially offset by a better than average rate of retention (18th in the country in out-migration), to leave Michigan ranked 46th in the nation in its rate of net migration.

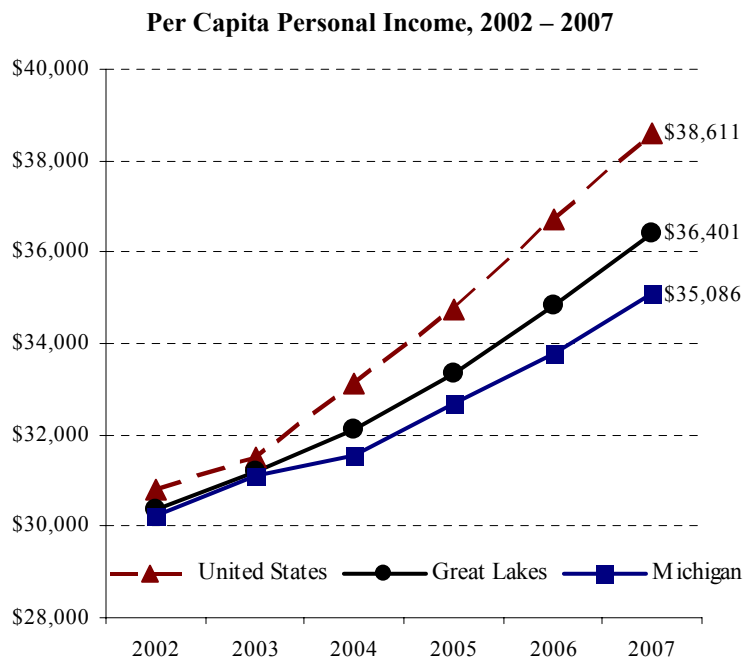


Source: U.S. Census Bureau, American Community Survey

- Michigan held a similar regional and national position in 2005, with a net decline of nearly 12,000 individuals (two percent loss). Due to changes in the survey population, however, this figure is not directly comparable to 2006 results.
- Washington D.C. stands as the nation’s greatest magnet of the young, highly educated population. The western states of Nevada, Washington, Arizona, and Oregon were also national leaders in net domestic migration, and are joined at the top of the list by a handful of east coast states: North Carolina, Georgia, and Maryland. Of the Great Lakes states, Illinois had the best national showing, ranking 23rd overall.

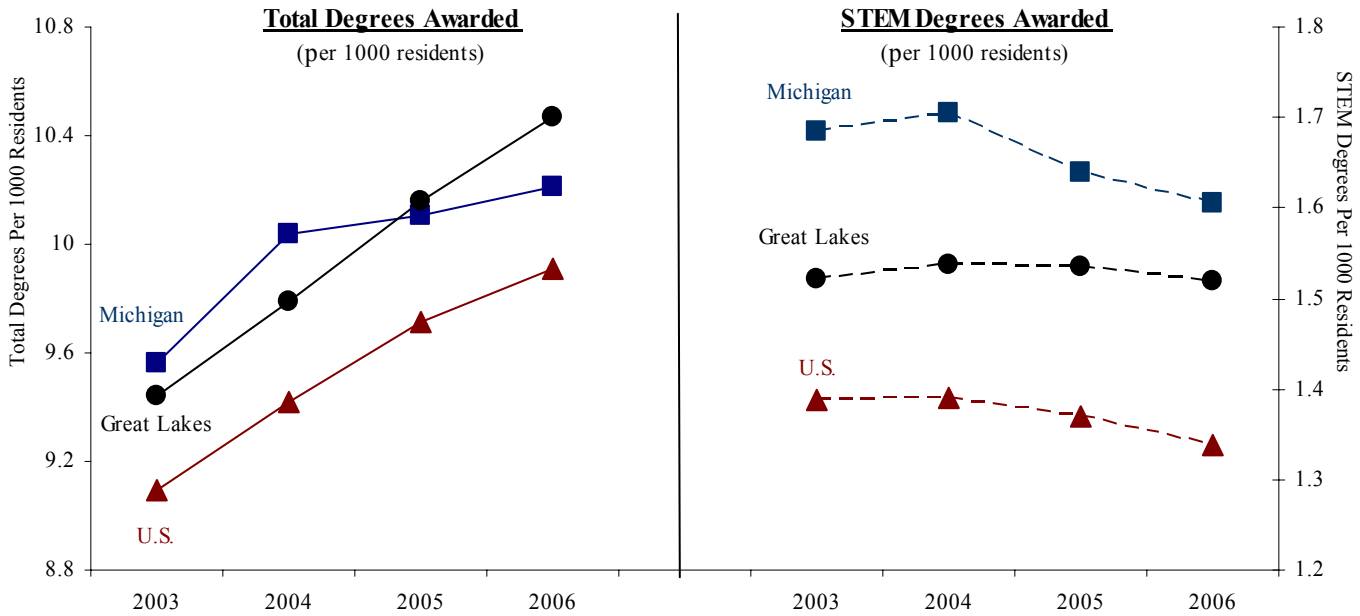
Per Capita Personal Income

- Due to the state’s unique economic struggles in the auto sector, the per capita personal income gap between the U.S. and Michigan continues to widen. In 2002, statewide per capita income was about two percent lower than the nation at \$30,200. By 2006 this gap had widened to 7.8 percent, and increased to 9.1 percent in 2007.
- Michigan’s standing when compared to other states also weakened over this period. In 2002, the state ranked 20th in terms of per capita income, yet that ranking fell to 27th by 2006 and 2007. Good-paying jobs continue to decline in the state’s manufacturing and construction sectors, slowing the per capita income growth rates in the state.
- Per capita income grew by 16.1 percent in the state between 2002 and 2007, although this comparison is not adjusted for inflation. This rate of income growth lagged behind the U.S. average of 25.3 percent. While Michigan’s per capita income growth rate during this period ranked last among states, the \$35,100 Michigan per capita income in 2007 was still higher than nearly half of all states.



Source: U.S. Bureau of Economic Analysis, Regional Economic Information System

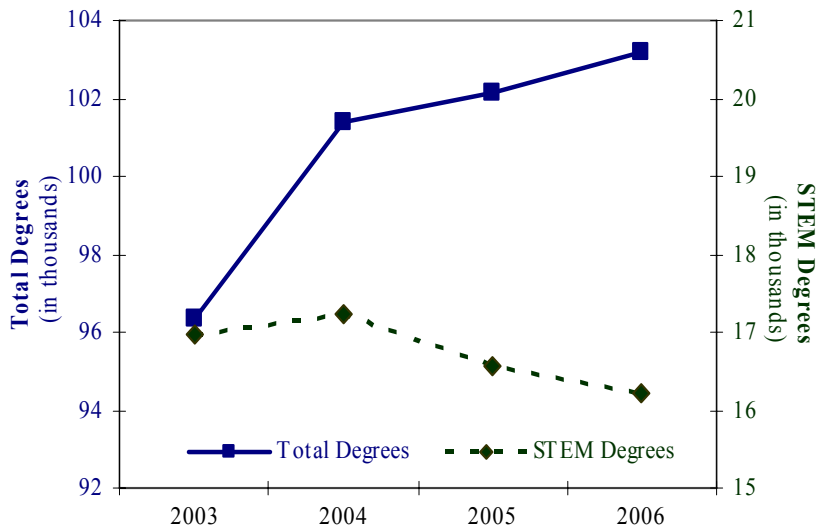
College Graduations/ Tech Degrees



Source: IPEDS from U.S. Department of Education, U.S. Census Bureau

- In 2006, Michigan was 8th in the nation in the number of college graduates. Since 2004, Michigan has seen growth leveling off whereas the Great Lakes states have continued their steady increase. The Great Lakes states now graduate more degrees per capita than Michigan; both are higher than the U.S. average.
- Michigan ranked 7th in the United States in 2006 in the number of Science, Technology, Engineering and Math (STEM) graduates with 16,200 graduates at associate’s, bachelor’s, master’s and doctorate levels. Michigan continues to exceed both the Great Lakes and the U.S. averages in STEM degrees per capita, although the gap has narrowed since 2004.
- More than half of all Michigan’s STEM degrees granted are in engineering disciplines. Computer science and biological and medical science account for the next largest shares, each with nearly 20 percent. For the U.S. as a whole, engineering degrees make up the leading group but with less than 40 percent of the total. Computer science, and biological and medical science are the second and third most popular STEM degrees in the U.S. with 25 percent and 21 percent, respectively.

Michigan Graduates, Total and STEM

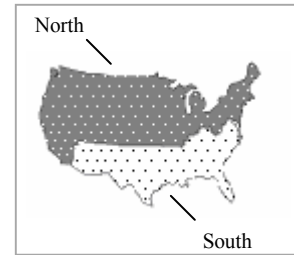


Source: IPEDS from U.S. Department of Education, U.S. Census Bureau

- Since 2003, Michigan has seen a drop in the number of STEM graduates due to a decline in both engineering and computer science graduates, the state’s two largest STEM disciplines. STEM degrees declined nationally as well, mainly due to a large (20 percent) drop in the number of computer science graduates which counteracted a rise in all other STEM disciplines. Michigan’s decline over this period (four percent) was greater than the national drop of one percent.
- In Michigan, as the level of degree attainment increases from associate’s to doctorate, the percent of STEM graduates who are non-resident aliens increases, capping out at just over 30 percent of doctorate degrees being awarded to nonresident aliens. Similar to the U.S. trend, students in Michigan who are nonresident aliens are more than twice as likely to graduate with a STEM degree than the student population as a whole.

Motor Vehicles

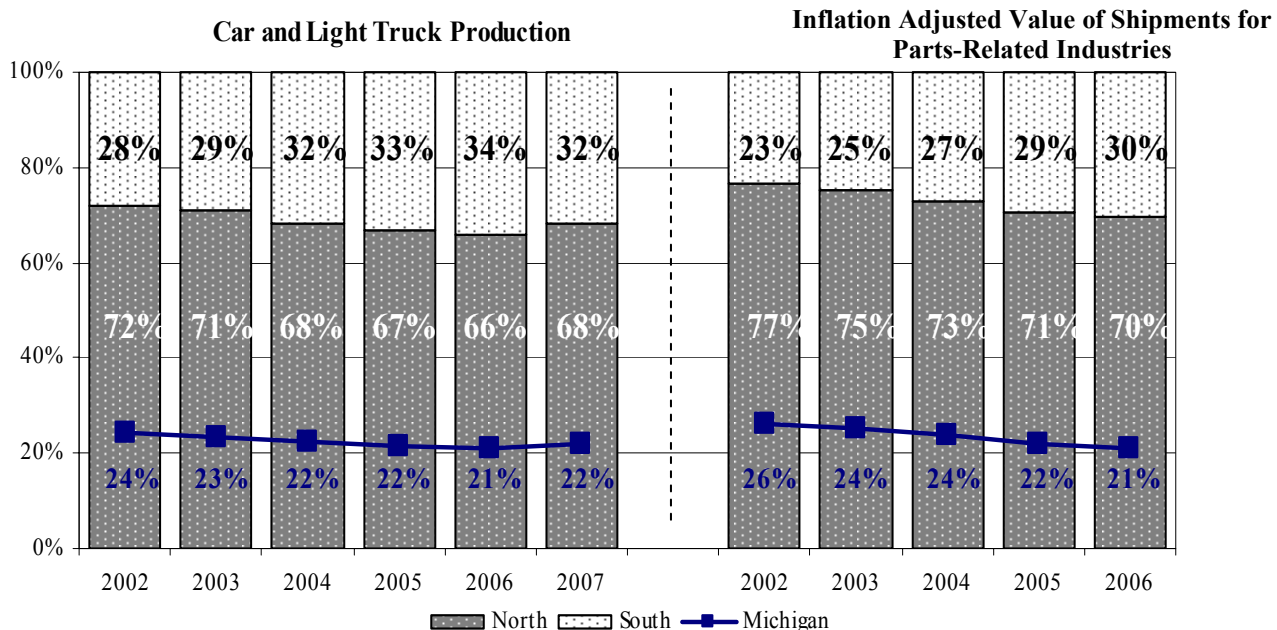
Michigan’s motor vehicle industry has undergone a dramatic shift in order to sustain its prominent place in the American economy. Increased competition from abroad and ever-changing consumer preferences have reworked the landscape of the industry - calling upon major players to develop new products and undertake vast restructuring programs. To understand the effect of these changes on Michigan’s auto industry and the state’s economy, this analysis examines industry production and employment trends. These measures segment the U.S. into North and South (see Appendix) to highlight the patterns of growth in industry production capacity.



Motor Vehicle Production

- Michigan consistently ranks first among all states in both Dollar Value of Shipments for parts-related industries and total production of cars and light trucks, despite steady declines over the last five years. Michigan’s product shipments fell nearly 24 percent to \$42.3 billion from 2002 to 2006. Car and light truck production over the same period fell by 22 percent, coming in at nearly 2.3 million units in 2006.
- For the 2007 calendar year, Michigan saw a 53,700 increase in car and light truck production (up 2.4 percent), leading a one percentage point advance by Northern states. The South witnessed an 11 percent unit production decline for the year. This loss is largely attributable to two factors: a temporary idling of plants in Tennessee for retooling, as well as a permanent plant closure in Atlanta, Georgia. Because the latest value of shipments data is available through 2006, the years 2002 to 2006 will be the timeline used for comparison.
- Though still the industry leader, Michigan’s share of production in the North has declined steadily, with a 4.3 percent cut in parts from 2002–2006, being matched by a 1.8 percent drop in cars and light trucks over the same time horizon. Nationally, the state’s share of shipments was off 4.9 percent, and vehicle production declined 3.2 percent.
- Neighboring states have joined Michigan in recording auto production declines from 2002–2006. Ohio experienced a 15 percent decline in parts production and a 9 percent fall in car and light truck production. Vehicle production was down 23 percent in Illinois.
- At the same time, new production capacity in the South has led the region to rapid growth in motor vehicle-related production. Unit production rose 9.5 percent to 3.7 million units, and parts suppliers have settled in the South to take advantage of these newfound gains. Parts shipments, at \$61.7 billion, were up 24 percent from their 2002 total, and surpassed Michigan’s output beginning in 2004. Advances have been driven most notably by motor vehicle related production in Alabama, where car and light truck manufacturing has increased more than threefold and value of parts has witnessed a 38 percent gain.

Share of United States Automotive Production



Sources: Ward’s Automotive Group, Census Bureau Annual Survey of Manufacturers (NAICS 3362-3363)

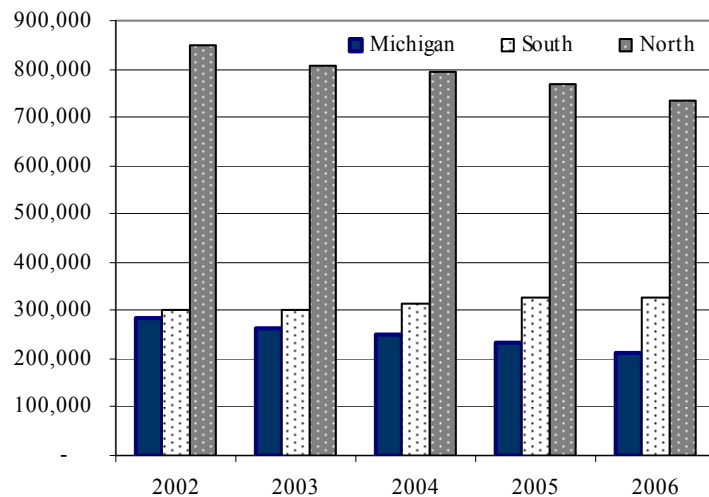
Motor Vehicle Employment

The employment analysis compares *Motor Vehicle Manufacturing; Motor Vehicle Body and Trailer Manufacturing; and Motor Vehicle Parts Manufacturing* (NAICS 3361-63, hereafter referred to as automotive production) across the two regions. Also presented is a comprehensive look at total auto industry employment in Michigan, which includes automotive production employment as well as jobs related to manufacturing of materials, tooling and parts not already included, and the nonmanufacturing activity associated with vehicle design, engineering, and company management.

Automotive Production Employment

- While Michigan still stands as the nation’s employment leader in automotive production, jobs in the industry were down 25 percent from 2002 to 2006, reaching 213,000 overall. These losses, largely a result of restructuring efforts by domestic producers, tallied more than 74,000 jobs in total, leading employment declines in the North and pushing total auto jobs in the region down by 13 percent. In contrast, automotive production employment nationwide fell by just seven percent, paced in part by increased manufacturing productivity.
- Michigan’s share of total U.S. employment has declined over this five year horizon. While Michigan composed 25 percent of domestic automotive production employment in 2002, the state now accounts for 20 percent of the nation’s 1.06 million related jobs. This shift in employment share has had an impact on the region at large. States in the North employed 74 percent of all workers in the industry in 2002. Five years later, the region’s share fell to 69 percent.
- Losses in the North have, at the national level, been partially offset by employment gains in the South, where automotive production jobs increased eight percent since 2002. Alabama and Mississippi have led the gains, having added more than 20,000 workers by 2006.

**Automotive Production Employment
Michigan, North, South, 2002 – 2006**

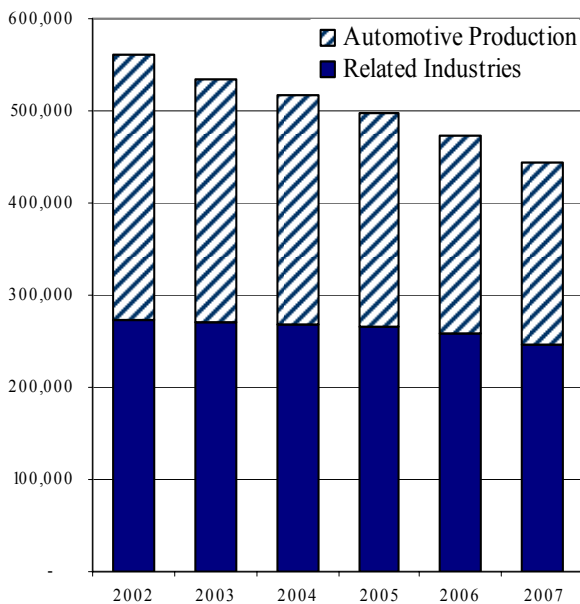


Source: U.S. Bureau of Labor Statistics / DLEG (NAICS 3361-3363)

Note: 3361 employment estimated: Delaware, Kansas, Louisiana, Maryland, Mississippi, New Jersey

Michigan Automotive Industry Employment

**Michigan Automotive Industry
Employment 2002 – 2007**



Source: DLEG, Quarterly Census of Employment and Wages

- In 2007, the automotive industry accounted for an estimated 443,700 jobs in Michigan. 197,000 of those workers participated in automotive production, while related manufacturing and service industries tallied the remaining 246,700 jobs.
- The automotive industry showed a downward trend from 2002 – 2007, having shed 117,000 workers; 89,800 of those losses came in automotive production, yielding a 31 percent decline. The remaining 27,100 job cuts (a 10 percent decline) took place in related industries.
- More than one in 10 jobs in Michigan are in the automotive industry, yet nearly half of statewide job losses from 2002 – 2007 can be attributed to the automotive sector. For industries not related to motor vehicles, Michigan registered just a 3.3 percent reduction in employment (126,700 jobs).
- Auto production led employment losses, but a handful of related industries also saw significant cuts: *Special Die and Tool, Die Set, Jig, and Fixture Manufacturing; Plastic Product Manufacturing; Engineering Services; and Testing Laboratories.*
- While industry forecasts by the Center for Automotive Research project continued contraction in automotive production employment, their research also predicts a simultaneous influx of 45,955 new hires in Michigan by the Detroit Three (Chrysler, Ford, General Motors) through 2016; a response by automakers to replace those exiting the workforce due to retirement and contract buyouts.

Employment Forecasts 2006 – 2016

Michigan Outlook:

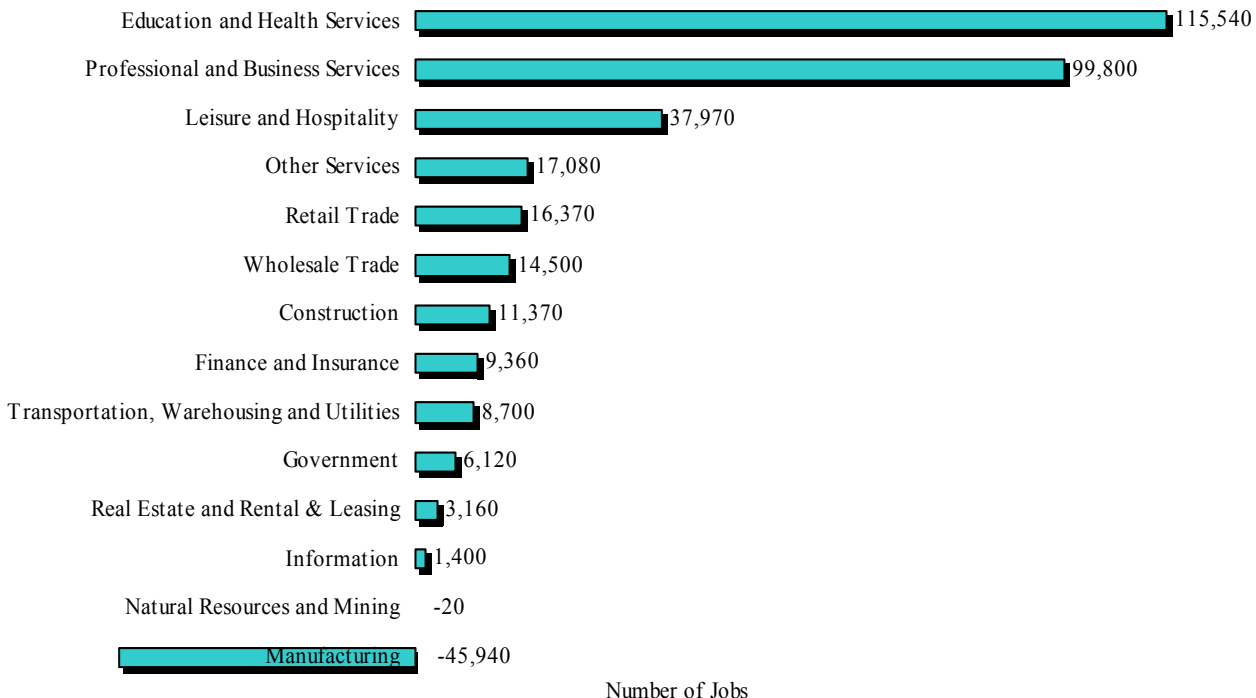
The Michigan employment picture is expected to improve over the forecast period despite the continuing drag from the manufacturing sector. Total employment in Michigan is projected to rise from 4.7 million in 2006 to about 5.0 million in 2016. This is scarcely less than half the growth the state enjoyed during the 1990 – 2000 period when employment grew from 4.3 million in 1990 to 5.0 million in 2000. The rate of growth has slowed from 16.2 percent in 1990 – 2000 to 6.7 percent in the current forecast. Manufacturing, especially automotive and related manufacturing, continues to dampen expansion of Michigan’s economy. The forecast of weaker population growth also contributes to a slowing down of the expanding service sector industries. The state’s 6.7 percent employment growth for the forecast period tracks below the U.S. national forecast of 10.4 percent, but it is a welcome change considering the state’s employment losses experienced in recent years.

Michigan’s population is expected to edge up by nearly four percent during the 2006 – 2016 forecast period. This compares to a 6.9 percent rise in population experienced during the comparable 1990 – 2000 period. The labor force, or the number of people employed or seeking employment, is projected to grow by 273,000; a 5.4 percent increase over current levels. By contrast, the state’s labor force rose by nearly 11 percent between 1990 and 2000. Michigan’s population and labor force growth will not only be slower than in past periods, but will also lag behind the nation as a whole. Nationally, the population is projected to increase by nearly 9 percent and the labor force by 11 percent between 2006 and 2016.

Industry:

Job growth is projected in all industry sectors except for manufacturing and natural resources and mining. Manufacturing is expected to shed the most jobs, nearly 46,000 during the forecast period, primarily in durable goods’ automotive and auto-related industries. Even though annual vehicle sales are expected to increase slightly from the 2006 level of 17.0 million to 17.1 million in 2016, process and productivity improvements along with industry right-sizing contribute to the state’s job losses in the automotive manufacturing industry. While durable goods manufacturing is expected to reduce employment substantially, nondurable goods manufacturing stays reasonably flat losing only 2,000 jobs. Nearly all of Michigan’s job growth is expected in service-producing industries, such as education and health services, professional and business services, and leisure and hospitality. Within the service sector, administrative and support services, professional, scientific, and technical services and ambulatory health care services are expected to record the largest job gains of 58,000, 38,000 and 35,000, respectively.

Michigan Job Growth by Industry, 2006 – 2016



Employment Forecasts 2006 – 2016 *(continued)*

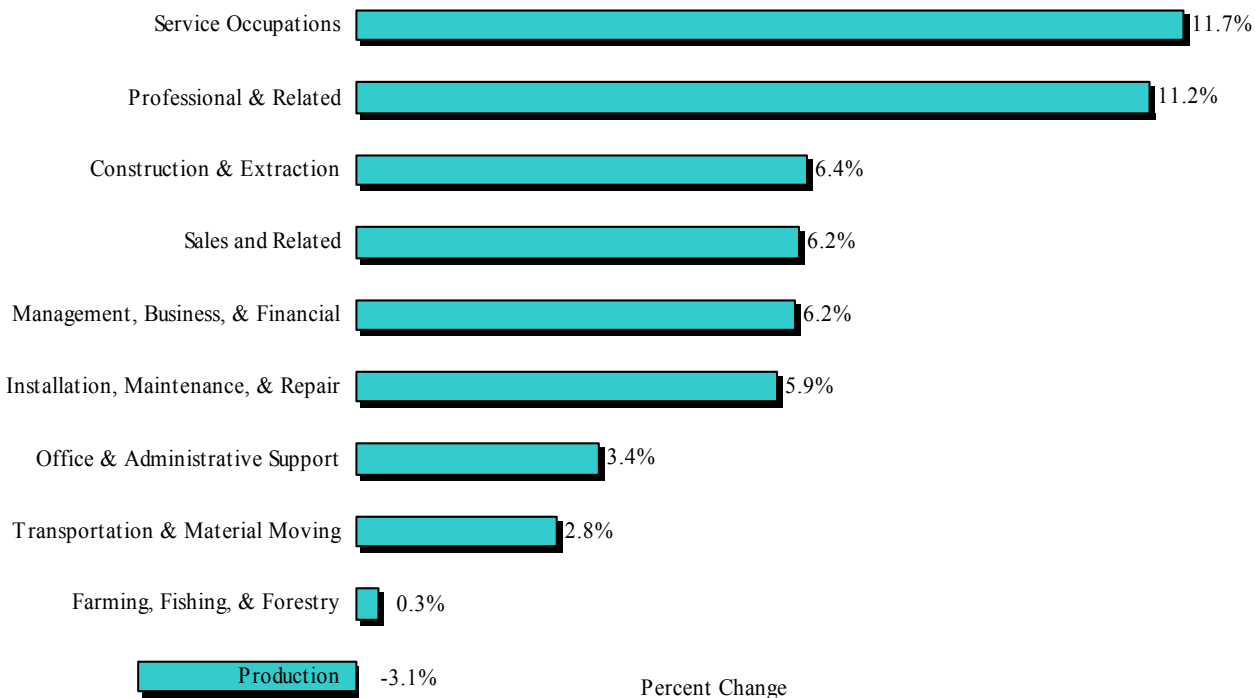
Occupations:

Michigan’s economy will continue creating jobs for workers at all levels of education and training. Occupations requiring a postsecondary award (vocational training, associate’s degree or higher) will, on average, continue to have higher growth rates than occupations that require less education or training. Although occupations that call for a postsecondary education degree will grow at a faster pace, more than half of the new jobs will still be in areas that require less than a postsecondary degree. Occupations with the largest growth rates require educational attainment of an associate’s degree or more, supporting demands from the new knowledge-based economy. These positions tend to be in the faster growing services sector and are in diverse fields such as health, education, and business support services.

Most major occupational groups are projected to increase employment over the forecast period. The fastest-growing group, professional and related occupations, is expected to create more than 108,000 jobs, more than any other occupational group, followed by service occupations at nearly 105,000 new jobs. Only production occupations are expected to post a job loss, totaling 14,000, or three percent over the forecast period.

The profile of Michigan’s employment growth rates by major occupational category matches that of the nation as a whole, albeit to a lesser degree. And like the national trend, jobs requiring postsecondary education and training in Michigan will record the greatest rates of increase.

Michigan Employment Growth Rates by Major Occupational Group, 2006 – 2016



Source: DLEG

Additional Information

A report detailing Michigan’s employment growth by industry and occupation is available on the web at:

www.michigan.gov/lmi

Appendix

State Comparison Groupings

Great Lakes States				
Illinois	Indiana	Michigan	Ohio	Wisconsin

Source: DLEG

North/South States							
North:							
California	Colorado	Illinois	Indiana	Iowa	Kansas	Maine	Maryland
Massachusetts	Michigan	Minnesota	Missouri	Nebraska	New Hampshire	New Jersey	New York
North Dakota	Ohio	Oregon	Pennsylvania	South Dakota	Utah	Washington	Wisconsin
South:							
Alabama	Arizona	Arkansas	Florida	Georgia	Kentucky	Louisiana	Mississippi
North Carolina	Oklahoma	South Carolina	Tennessee	Texas	Virginia	West Virginia	

Source: DLEG

Business Employment Dynamics (BED)

Components of Job Gains and Job Losses	
<p>Openings</p> <p>These are either establishments with positive third month employment for the first time in the current quarter, with no links to the prior quarter, or with positive third month employment in the current quarter following zero employment in the previous quarter.</p>	<p>Closings</p> <p>These are either establishments with positive third month employment in the previous quarter, with no positive employment reported in the current quarter, or with positive third month employment in the previous quarter followed by zero employment in the current quarter.</p>
<p>Expansions</p> <p>These are establishments with positive employment in the third month in both the previous and current quarters, with a net increase in employment over this period.</p>	<p>Contractions</p> <p>These are establishments with positive employment in the third month in both the previous and current quarters, with a net decrease in employment over this period.</p>

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

Motor Vehicle Indicators

Automotive Manufacturing and Related Industries			
NAICS Code	2007 NAICS U.S. Title	NAICS Code	2007 NAICS U.S. Title
326121	Unlaminated Plastics Profile Shape Manufacturing	335911	* Storage Battery Manufacturing
326199	All Other Plastics Product Manufacturing	3361	Motor Vehicle Manufacturing
326211	Tire Manufacturing (except Retreading)	3362	Motor Vehicle Body and Trailer Manufacturing
326220	* Rubber and Plastics Hoses and Belting Manufacturing	3363	Motor Vehicle Parts Manufacturing
326291	Rubber Product Manufacturing for Mechanical Use	336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing
327211	Flat Glass Manufacturing	423110	Automobile and Other Motor Vehicle Merchant Wholesalers
331111	Iron and Steel Mills	423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
331511	Iron Foundries	423130	Tire and Tube Merchant Wholesalers
332510	* Hardware Manufacturing	423830	Industrial Machinery and Equipment Merchant Wholesalers
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	425110	* Business to Business Electronic Markets
333511	Industrial Mold Manufacturing	425120	* Wholesale Trade Agents and Brokers
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	541330	Engineering Services
333515	Cutting Tool and Machine Tool Accessory Manufacturing	541380	Testing Laboratories
333618	Other Engine Equipment Manufacturing	541712	** Research & Dev't in Physical, Engineering, and Life Sciences (except Biotech)
334514	* Totalizing Fluid Meter & Counting Device Manufacturing	55111	* Management of Companies and Enterprises
335110	* Electric Lamp Bulb and Part Manufacturing		

Notes: * partial
** estimated

Source: DLEG, with assistance from the Center for Automotive Research

Appendix

College Graduations/Tech Degrees

Science, Technology, Engineering and Math (STEM) Degrees	
Computer Science	11.xxxx (except 11.06xx)
Engineering	14.xxx
Engineering Technology	15.xxx
Biological and Medical Science	26.xxxx
Mathematics and Statistics	27.xxxx
Military Technology	29.0101
Physical Science	40.xxxx
Science Technology	41.xxxx
Health Professions and Related Clinical Sciences	51.1401
Actuarial Science	52.1304

Source: The National Center for Education Statistics

Jobs in High-Tech Industries

High-Tech Industries			
NAICS Code	2007 NAICS U.S. Title	NAICS Code	2007 NAICS U.S. Title
	Automotive Manufacturing Cluster		Information Technology Cluster
3361	Motor Vehicle Manufacturing	3341	Computer and Peripheral Equipment Manufacturing
3362	Motor Vehicle Body and Trailer Manufacturing	3342	Communications Equipment Manufacturing
3363	Motor Vehicle Parts Manufacturing	3343	Audio and Video Equipment Manufacturing
	Advanced Manufacturing Cluster	3344	Semiconductor and Other Electronic Component Manufacturing
3329	Other Fabricated Metal Manufacturing	3346	Manufacturing and Reproducing Magnetic and Optical Media
3331	Agriculture, Construction and Mining Machinery Manufacturing	5112	Software Publishers
3333	Commercial and Service Industry Machine Manufacturing	5161	Internet Publishing and Broadcasting
3336	Engine, Turbine and Power Transmission Equipment Manufacturing	5171	Wired Telecommunication Carriers
3339	Other General Purpose Machinery Manufacturing	5172	Wireless Telecommunication Carriers (Except Satellite)
3345	Navigational, Measuring, Electromedical, Control Instrument Manufacturing	5174	Satellite Telecommunications
3353	Electrical Equipment Manufacturing	5181	Internet Service Providers and Web Search Portals
3359	Other Electrical Equipment and Compound Manufacturing	5182	Data Processing, Hosting, and Related Services
3364	Aerospace Product and Parts Manufacturing	5415	Computer Systems Design and Related Services
3369	Other Transportation Equipment Manufacturing		Science R&D & Medical Manufacturing Cluster
	Chemicals & Materials Cluster	3254	Pharmaceutical and Medicine Manufacturing
3241	Petroleum and Coal Products Manufacturing	3391	Medical Equipment and Supplies Manufacturing
3251	Basic Chemical Manufacturing	5417	Science R & D Services
3253	Pesticide, Fertilizer and Other Ag Chemical Manufacturing		Engineering Services & Other Cluster
3255	Paint, Coating and Adhesive Manufacturing	5416	Management, Scientific, and Technical Consulting Services
3256	Soap, Cleaners and Toilet Preparation Manufacturing	4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers
3259	Other Chemical Product and Preparation Manufacturing	5413	Architectural, Engineering and Related Services

Source: DLEG

Bureau of Labor Market Information & Strategic Initiatives

Cadillac Place

3032 West Grand Blvd. Suite 9-100

Detroit MI 48202

Phone: (313) 456-3100

Fax: (313) 456-3150

www.michigan.gov/lmi

This report was prepared by the staff of the Bureau of Labor Market Information & Strategic Initiatives of the Department of Labor & Economic Growth. Substantial contributions were made by:

Jeffrey Anderson

Jacob Bisel

Edd Laska

Konrad Lepecki

Ron McGraw

Aneesa I. Rashid

Mark Reffitt

Wayne Rourke

Carole Sorenson

Rick Waclawek

Bruce Weaver

Michael Williams

Cover Design: Gina DiNatale Coon



DLEG is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.