



Winter 2009

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 continues to experience significant challenges as the recent turmoil in the financial markets, both global and domestic, begins to take a toll on our already challenged economy. Now more than ever, economic and workforce information is key to our leaders and policy makers to assist them in better positioning Michigan to compete in the new global economy.

This biannual report addresses five key labor market categories – workforce, knowledge-based jobs, innovation, education and economics -- each with a series of metrics that establishes the state's relative strength and/or competitive position. The information represents the latest available data against relevant benchmarks in a time series format.

The Bureau of Labor Market Information & Strategic Initiatives is committed to providing strategic information to assess the dynamic nature of Michigan's economy, workforce and labor markets in support of a more prosperous future for all Michigan residents.

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

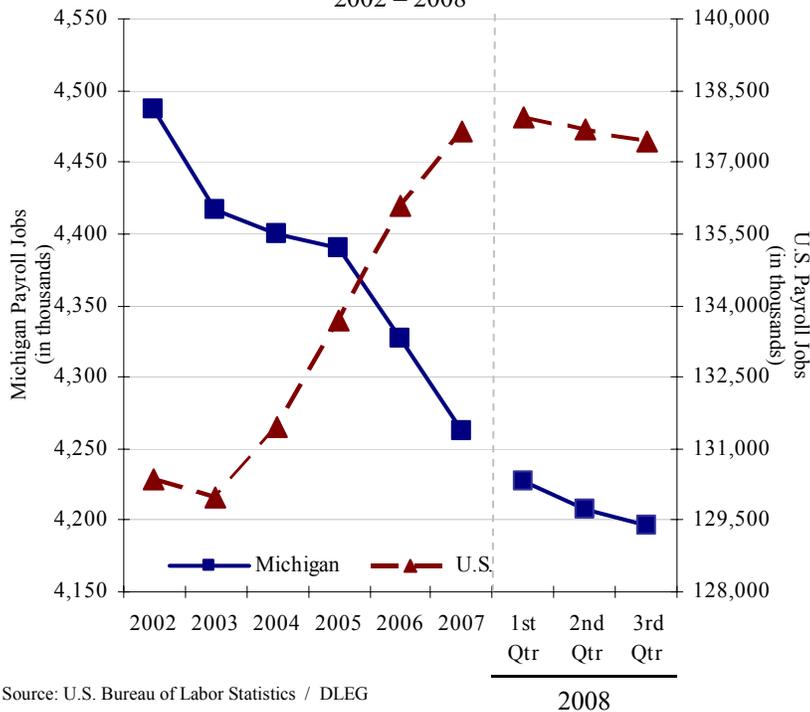
Table of Contents

Preface	2
Michigan Job Trends	4
Payroll Jobs by Industry Sector	5
Unemployment Rates	6
Business Employment Dynamics	7
Gross Domestic Product by Industry	8
Workforce Education	9
Engineering and Scientific Occupations	9
Migration of Young Knowledge Population	10
Industrial R&D	10
Patents	11
Venture Capital	11

Michigan Job Trends

Nonfarm Payroll Jobs

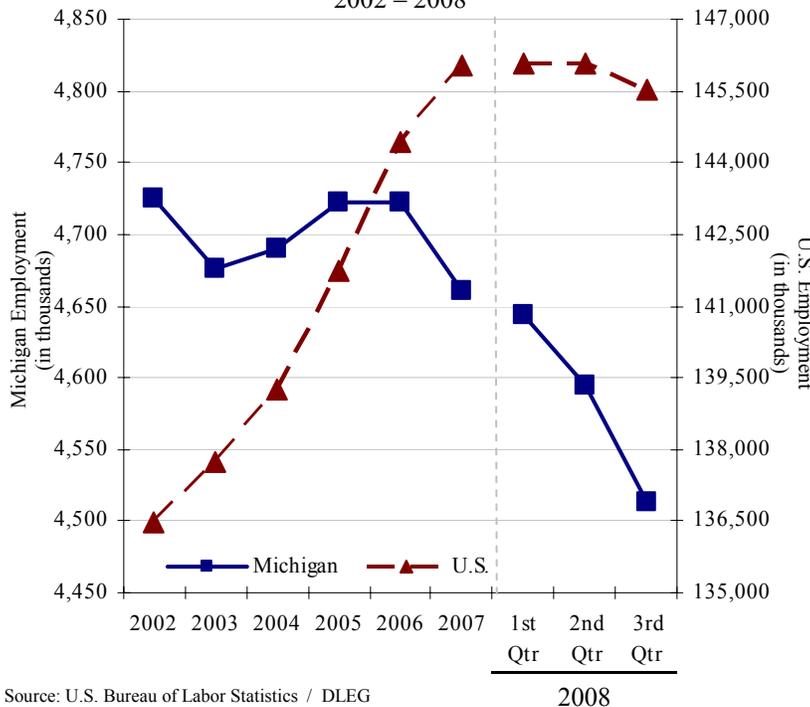
Michigan vs. U.S. Total Payroll Jobs
2002 – 2008



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

Household Employment

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

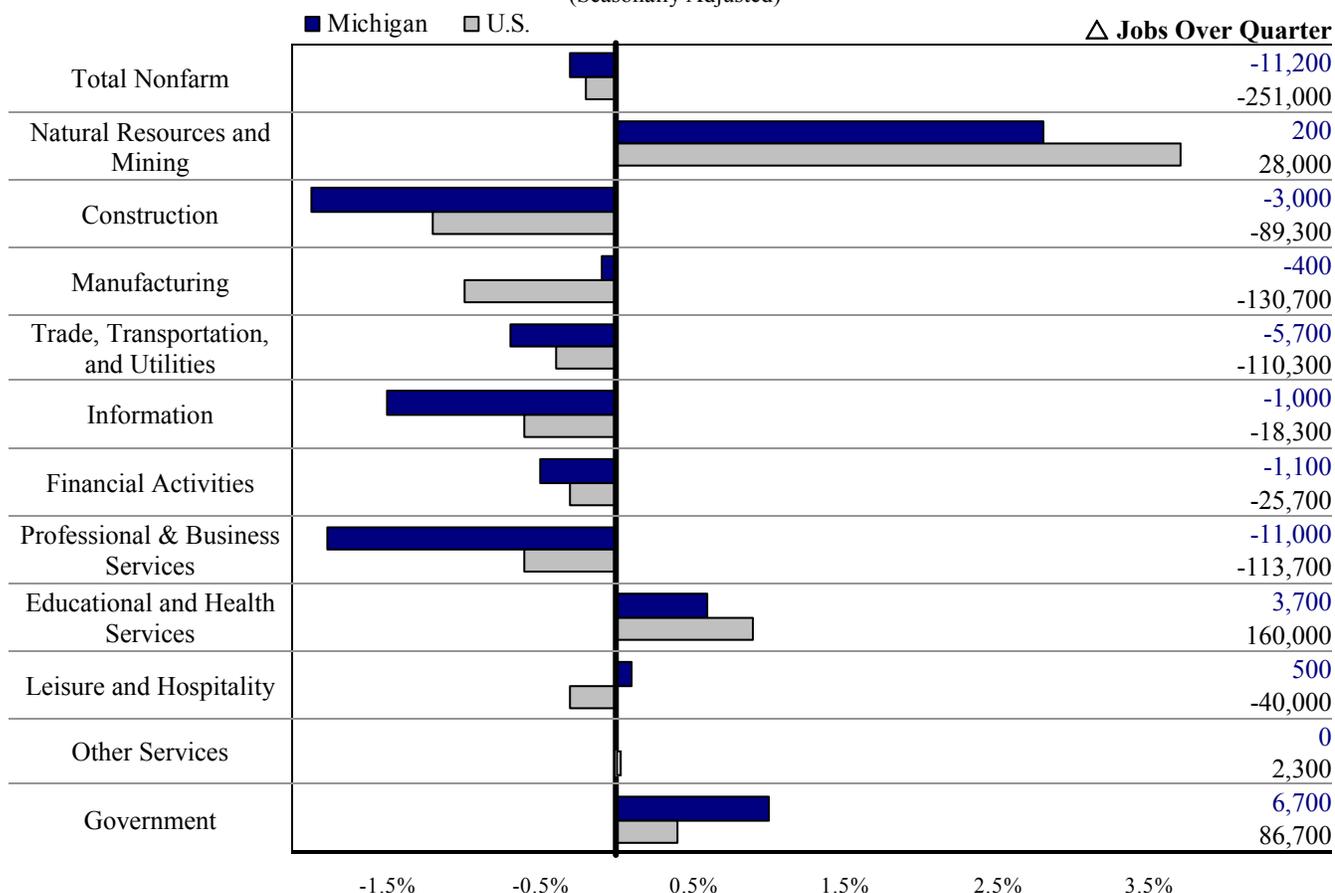


Source: U.S. Bureau of Labor Statistics / DLEG

- There are two government surveys that measure the state of the labor market. Both surveys showed widespread weakness in the Michigan labor market due to auto industry restructuring and a lack of U.S. economic growth. Job losses accelerated in Michigan and 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 lost 56,000 payroll jobs in 2008 as the auto sector was negatively impacted by a weakened national economy. Manufacturing accounted for 59 percent and Construction 23 percent of this reduction. The 2008 average monthly job cut (-6,200) was higher than last year's average (-5,000) for the same period.
- Since its peak level in June 2000, Michigan has lost 520,000 jobs. Manufacturing was the source of 65 percent of these job cuts.
- Nationally, after four years of job growth, private sector employment fell for 10 consecutive months (starting in December), totaling 983,000. Construction and Manufacturing accounted for 40 percent and 42 percent, respectively of this job decline.
- 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 and the U.S. displayed opposite trends in household employment. Michigan recorded a substantial employment cut of 62,000 or 1.3 percent, while national employment actually advanced by 1.1 percent.
- In 2008, the U.S. joined Michigan in registering household employment losses. A significant employment decline of over one million occurred nationally from October 2007-October 2008. Michigan employment counts dropped steadily in 2008, falling for nine consecutive months to 4,474,000 in October. This is the lowest recorded employment total in Michigan since early 1994.
- The University of Michigan RSQE November 2009 forecast predicts accelerating job cuts in Michigan of 124,000 in 2009, which would outpace job loss any year this decade. Job cuts are expected to remain substantial in 2010 (-49,000). If these forecasts hold, Michigan would record ten consecutive years of job loss.

Payroll Jobs by Industry Sector

Michigan vs. U.S.
Percent Change, 2nd Quarter 2008 – 3rd Quarter 2008
(Seasonally Adjusted)

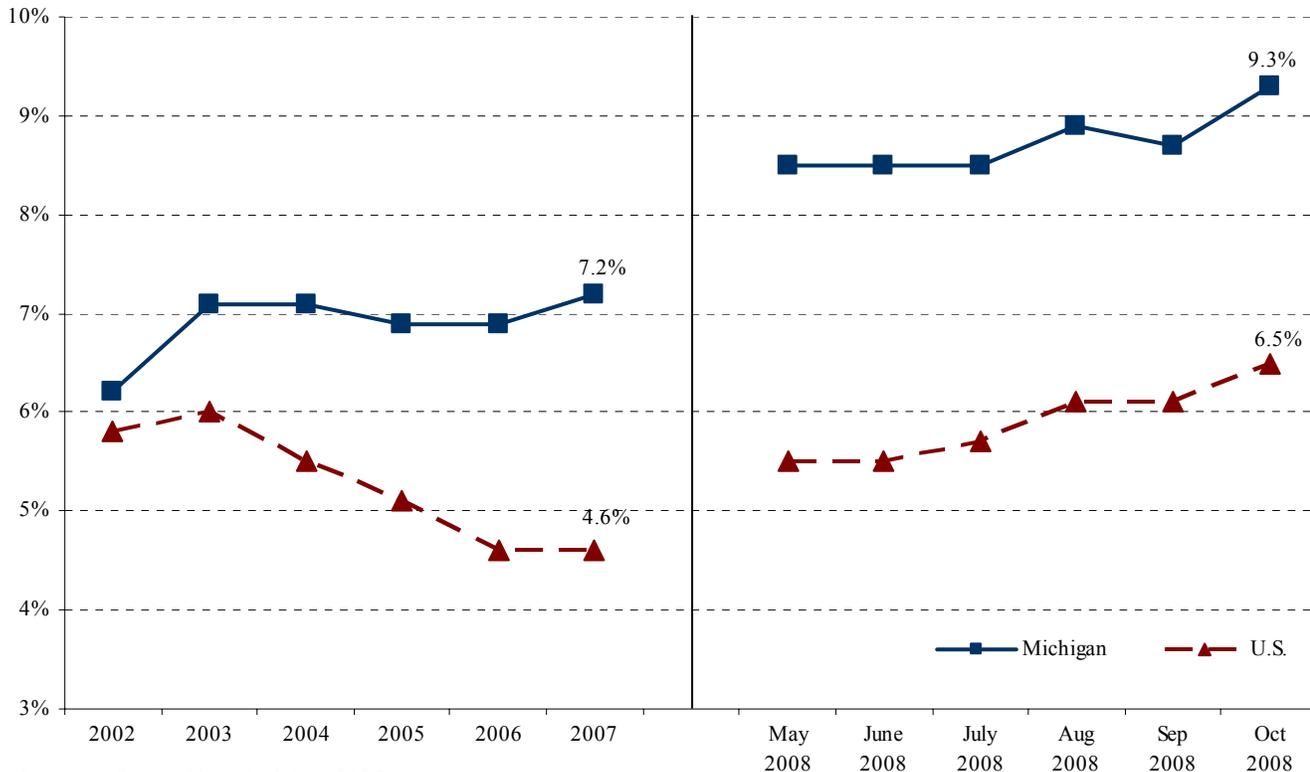


Source: U.S. Bureau of Labor Statistics / DLEG

- The divergence between job growth in Michigan and the U.S narrowed in the 3rd quarter 2008 due to a weak national economy and labor market. Over the year (3rd quarter 2007 to 3rd quarter 2008), Michigan lost 63,100 (-1.5 percent) jobs compared to a loss of 1.4 percent in the first quarter. Nationally, job decline accelerated to 310,000 (-0.2 percent) over the year in the 3rd quarter compared to a gain of 733,700 (+0.5 percent) in the first quarter.
- Michigan and the U.S. followed similar job trends by industry sector. The preliminary effects of the credit crunch led to widespread weakness, with both consumers and businesses cutting back on expenditures. Between the 2nd and 3rd quarter 2008, Michigan jobs edged down by 0.3 percent while U.S. jobs fell 0.2 percent. Leisure and Hospitality, the only sector where Michigan diverged from the national trend, recorded a small increase in the 3rd quarter. This job growth came from the *arts, entertainment and recreation* component, while *accommodation and food services* suffered losses.
- In the private sector, Education and Health Services continued to show resilience to the economic slowdown and expanded in Michigan and nationally. Over the year, the *health and social services* component grew by 8,400 (+1.6 percent) in Michigan, compared to 419,000 (+2.7 percent) nationally. Since 1999, this industry experienced continuous growth, expanding by 85,000 jobs (+19.4 percent) in Michigan. As employment in health and social services is related more to age demographics and public policy than economic factors, this sector continues to add jobs despite the slowing economy, as it did in the 2001 recession.
- The continued job loss in Michigan was consistent with a lack of national economic growth in the 3rd quarter. Even before the economic impact of the global financial crisis registered in October, the 3rd quarter national GDP report showed a contraction of 0.5 percent. Consumer expenditures, which represent 70 percent of the economy, dropped by 3.7 percent for the first time since 1991. Businesses spending on equipment and software fell by 5.7 percent and residential investment dropped for the 11th straight quarter by 18 percent. Spending on autos and light trucks, which directly affect the Michigan economy, fell by 15.0 percent compared to a year ago. Among the positive contributions to GDP were exports and defense expenditures.

Unemployment Rates

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



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

- From 2003-2007, Michigan’s jobless rate remained in a narrow band of 6.9 to 7.2 percent. Over this time period, the nation’s unemployment rate dropped steadily from 6.0 percent to 4.6 percent. The gap between the state and nation’s annual jobless rates widened from 0.4 percent in 2002 to 2.6 percent in 2007. Michigan auto-related job losses during this period contributed substantially to this gap.
- 2008 has brought sharply higher jobless rates to both Michigan and the U.S. Rates rose by 1.8 and 1.7 percentage points, respectively in Michigan and the U.S. from October 2007–October 2008. The percentage rise in the number of unemployed has actually been higher in the U.S. (+38 percent) than in Michigan (+23 percent) over the past year. Michigan’s labor force fell markedly over the past year (-1.5 percent), which has prevented the unemployment rate from rising even more.
- Average quarterly jobless rates rose sharply in the 3rd quarter 2008 versus the same quarter last year. During that time, the U.S. quarterly rate increased by 1.3 percentage points, with a Michigan gain of 1.5 percentage points. While Michigan’s jobless rate remains among the highest in the nation, the state and U.S. have been clearly impacted by an economic slowdown associated with factory job losses, depressed home values, and the national financial crisis.

Jobless Rates By Quarter

Month	Michigan	U.S.	Gap
July	8.5	5.7	2.8
August	8.9	6.1	2.8
September	8.7	6.1	2.6
3rd Qtr. 2008	8.7	6.0	2.7
April	6.9	5.0	1.9
May	8.5	5.5	3.0
June	8.5	5.5	3.0
2nd Qtr. 2008	8.0	5.3	2.7
July	7.1	4.7	2.4
August	7.2	4.7	2.5
September	7.3	4.7	2.6
3rd Qtr. 2007	7.2	4.7	2.5

Quarterly Rate Movements

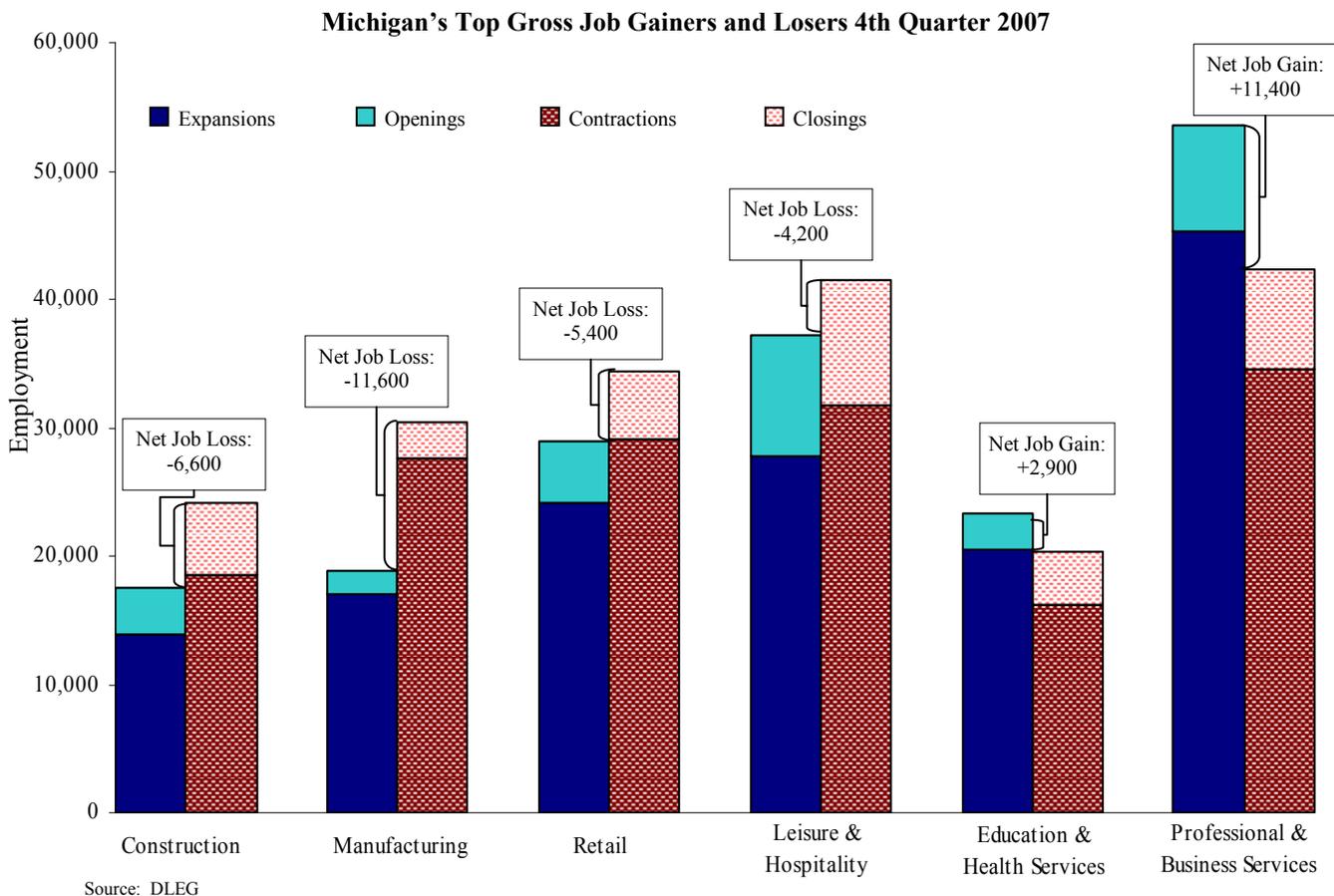
	Michigan	U.S.
3rd Qtr. 2008 Average Rate	8.7	6.0
Change Since Prior Qtr.	0.7	0.7
Change Since 3rd Qtr. 2007	1.5	1.3

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

Business Employment Dynamics

The Business Employment Dynamics (BED) data series includes gross job gains and gross job losses at the establishment level by 13 major industry sectors for Michigan. Gross job gains are the sum of employment increases from expansions at existing establishments and the addition of new jobs at opening establishments. Gross job losses are the result of contractions in employment at existing establishments and the loss of jobs at closing establishments. The difference is the net change in employment.

BED statistics track these employment changes at private business units from the third month of one quarter to the third month of the next. Gross job gain and loss data do not include government employees, private households, and establishments with zero employment.



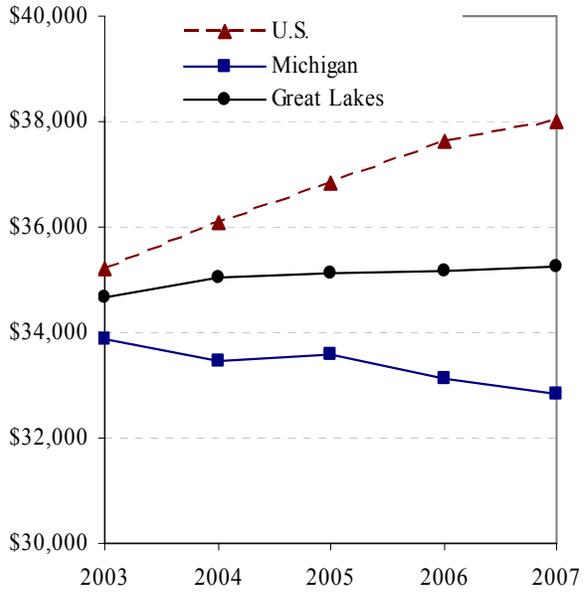
Seasonally adjusted data for September 2007 to December 2007 revealed:

- The number of job gains from expanding and opening private sector establishments was 232,400. Job losses from contracting and closing establishments totaled 242,700. This resulted in a net loss of 10,300 jobs during the period.
- Natural Resources and Mining (+100), Utilities (+100), Professional and Business Services (+11,400) and Education and Health Services (+2,900) were the major industry sectors showing gross job gains exceeding gross job losses in the state. The movement in Professional and Business Services primarily reflects a shift of education-related jobs to the private employment staffing sector.
- In Michigan, more than three out of every four gross job gains (77.2 percent) occurred within six major industry sectors: Construction; Manufacturing; Retail Trade; Professional and Business Services; Education and Health Services; and Leisure and Hospitality Services. These six sectors also accounted for approximately four out of every five of the gross job losses (79.6 percent) reported. National data for these six sectors accounted for 75.5 percent and 76.0 percent of gross job gains and gross job losses, respectively.
- The state's manufacturing sector registered the fifth largest gross job gains (+18,900) for the 4th quarter 2007. Approximately, 17,000 of these gains came from expansions at existing establishments, which include workers returning from layoffs. Gross job losses of 30,500 during the period offset the job gains as the prolonged decline in automotive related manufacturing industries continued to adversely affect the state's manufacturing sector. U.S. figures also show a net loss in manufacturing as gross job gains of 495,000 were outstripped by gross job losses of 561,000 during the period.

Gross Domestic Product by Industry

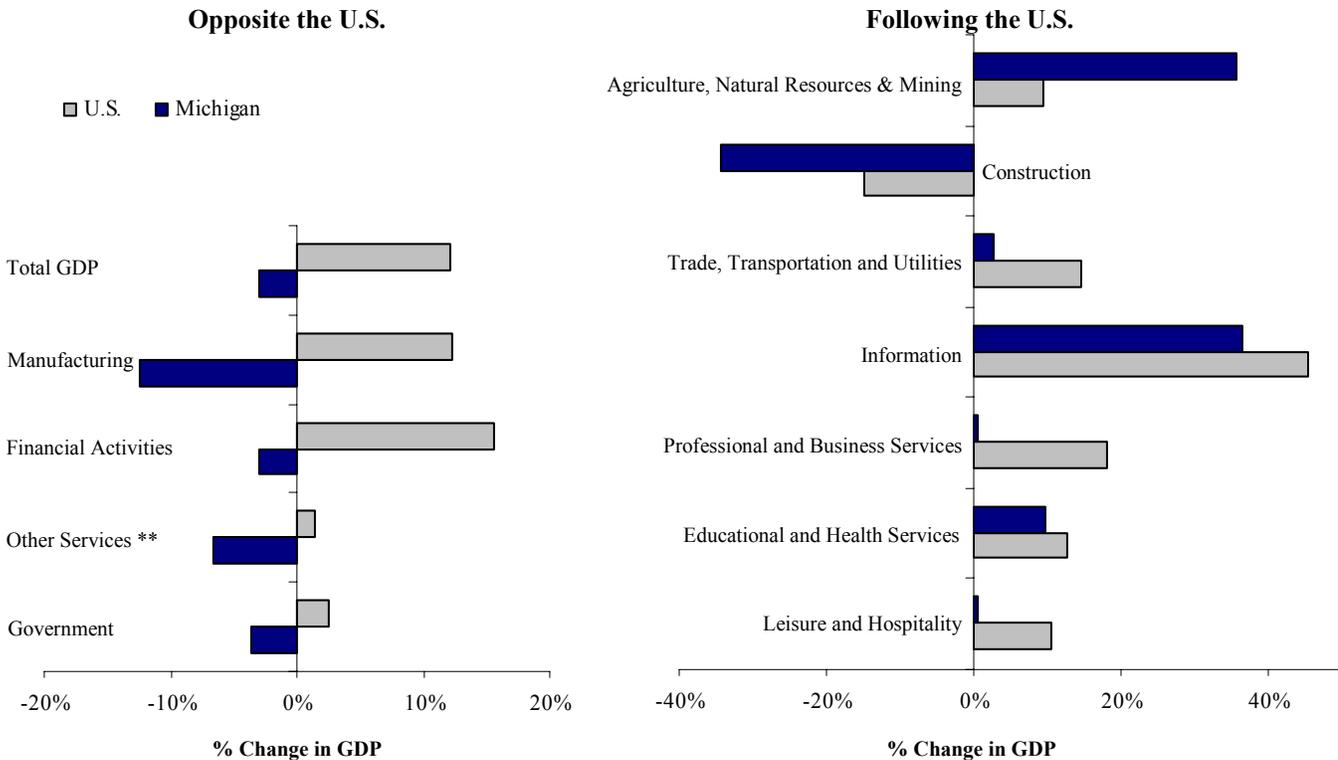
- Michigan's overall economy has been shrinking, in real terms, since 2003. Total gross domestic product for the state contracted 3 percent from 2003 to 2007, the most recent year for which statewide data is available. This compares to a national expansion of 12.1 percent. On a per capita basis, U.S. GDP rose steadily over this period, by nearly 8 percent. In contrast, Michigan per capita output is on the decline; off nearly 3 percent, or \$600 per person, since 2003. Per capita GDP in the Great Lakes* showed modest gains.
- Michigan's Information sector grew its share of the state's gross domestic product, and advanced 36.4 percent since 2003, totaling \$13.2 billion in 2007. Particularly rapid gains in broadcasting and telecommunications, as well as information and data processing led the advance.
- Manufacturing, Michigan's largest industry supersector, contracted by more than 12 percent from 2003 to 2007, driving the state's 3 percent decline in gross domestic product over that same period. Michigan's \$10.3 billion contraction in total GDP, directed by losses in manufacturing, stands in stark contrast to the nation, where a \$172 billion gain in manufacturing output contributed to an advance in GDP.
- Even before the onset of the 2008 credit crisis, a slowing nationwide economy led to widespread contraction of construction output: nearly 15 percent nationwide and over 34 percent in Michigan alone.

Inflation Adjusted Per Capita GDP: 2003 – 2007



Source: Bureau of Economic Analysis

Percent Change in GDP, 2003 – 2007 (Inflation Adjusted)



Source: Calculated from Bureau of Economic Analysis data

** "Other Services" includes firms in repair & maintenance, personal services, and membership & professional organizations

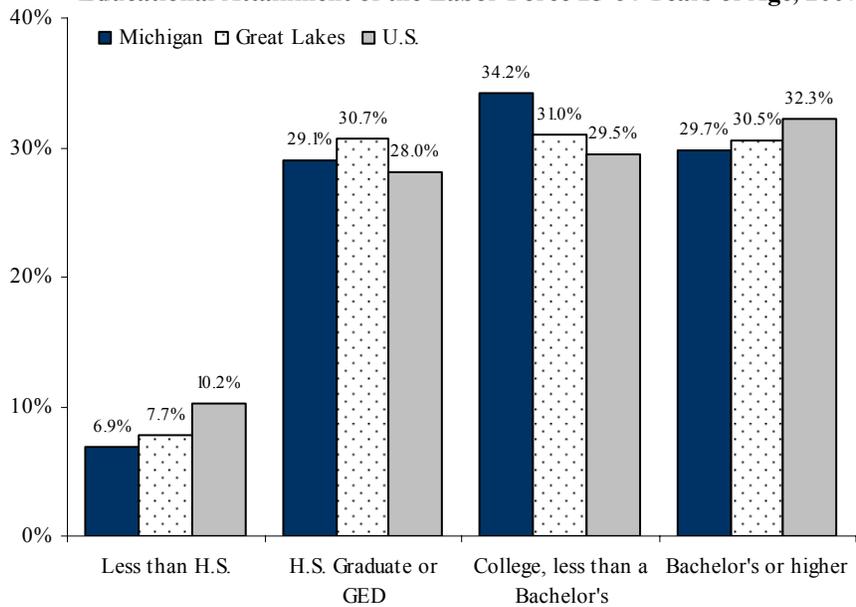


* For this publication the Great Lakes states are defined as Illinois, Indiana, Michigan, Ohio, and Wisconsin.

Workforce Education

- Over 1.2 million people in Michigan’s labor force held at least a bachelor’s degree in 2007, accounting for about 30 percent of the state’s total civilian workforce between the ages of 25 and 64. This share slightly trailed the U.S. average, and was essentially the same as 2006 (29.4 percent).
- Michigan had a higher share of the workforce with at least some college, but no bachelor’s degree (34 percent versus less than 30 percent nationally). This would include those holding technical certificates or associate’s degrees. The Michigan jobless rate of 7.3 percent for these individuals, however, was higher than the Great Lakes (5.5 percent) and national (4.7 percent) averages.
- Individuals with only a high school diploma or less suffered the most in terms of finding work, with double-digit jobless rates in 2007. Fortunately for Michigan, the share of the total workforce that failed to complete high school (6.9 percent) was lower than both the regional (7.7 percent) and national averages (10.2 percent).
- Even in a state with a struggling economy, those with at least a bachelor’s degree enjoyed a relatively low jobless rate (3.4 percent), less than half the overall rate in 2007.

Educational Attainment of the Labor Force 25-64 Years of Age, 2007



Source: U.S. Census Bureau, 2007 American Community Survey

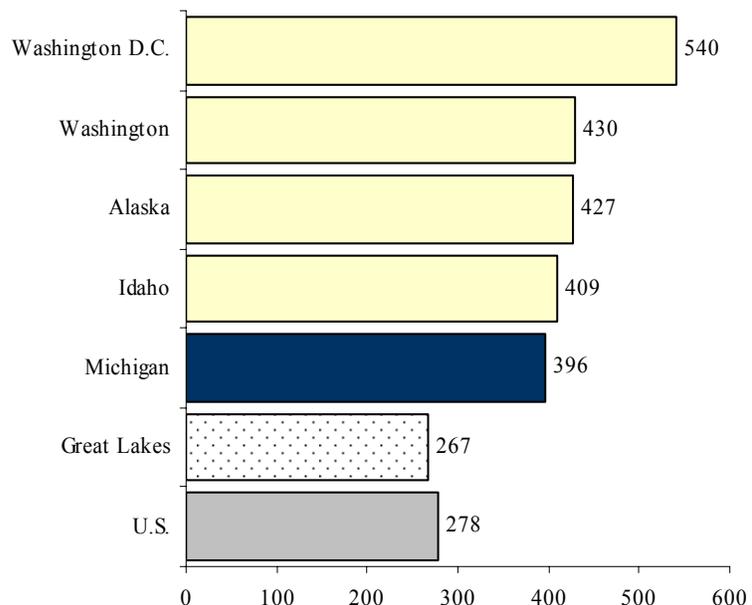
Less than H.S.	18.8%
H.S. Graduate	10.4%
College, No Degree	7.3%
Bachelor's or Higher	3.4%

Source: U.S. Census Bureau, 2007 American Community Survey

Engineering and Scientific Occupations

- Nearly 4 percent of all jobs in Michigan were classified as scientific or engineering, as the state had the 5th highest share nationally (see chart). Despite ranking behind Washington D.C. and three other states in terms of job share, Michigan employs nearly as many scientists and engineers (80 percent of the total) as these top four areas combined.
- As in 2006, Michigan was also ranked 5th nationwide in the total number of science and engineering jobs with nearly 167,000. California led the nation in the volume of these jobs, with an estimated half million scientists and engineers in 2007. With a continued nationwide emphasis on high technology and alternative energy, it is expected that employment in these occupations will continue to grow.
- One out of every twenty engineers nationally is employed in Michigan, though this ratio is much lower in terms of scientists (one of 40). The concentration of engineering jobs in Michigan is directly related to the state auto sector. Michigan accounts for 4.4 percent of total science and engineering jobs nationwide.

Number of Scientists and Engineers per 10,000 Jobs, May 2007

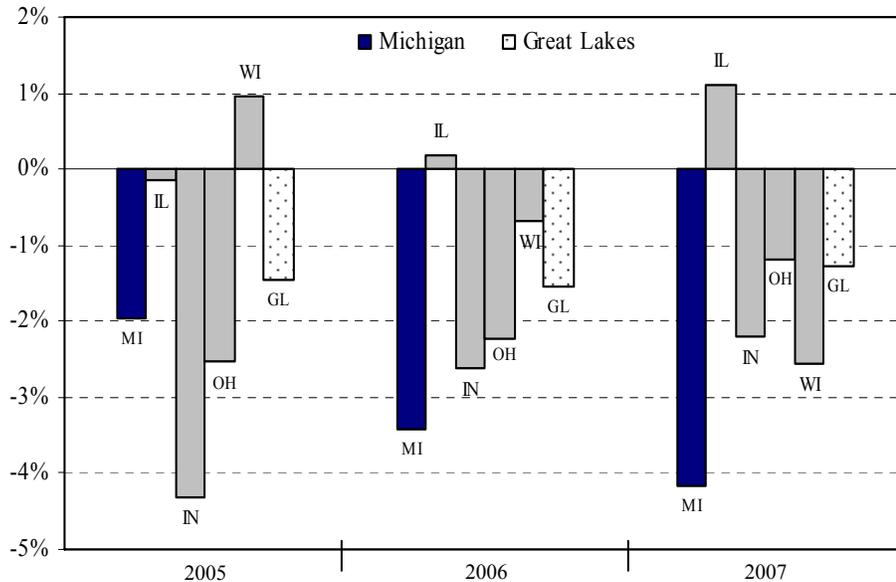


Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics

Migration of Young Knowledge Population

- Net retention of Michigan's young, highly educated population declined for the second year in a row, yielding a net-migration rate of -4.2 percent in 2007. This widening gap was the result of an increasing level of out-migration, coupled with a slowdown of movement for highly educated young in-migrants. Nearly 35,000 young knowledge workers left the state during 2007, while 18,000 entered from another state or abroad - the lowest national rate of in-migration.
- Michigan's performance was again indicative of a high level of out-migration from Great Lakes states. A look at young knowledge migration for the region as a whole offers a different perspective, however, as there exists a high level of the young knowledge population migrating *within* the Great Lakes states. In 2007, 3 of every 10 persons moving from a Great Lakes state remained within the region, more than 40,000 in total. Not surprisingly, nearly 40 percent of movement within the region locates in Illinois, with Michigan drawing just under 14 percent of regional talent.
- The 2007 survey also allows for analysis of group quarters housing (military barracks, dormitories, and institutions). When factoring in such housing units, Michigan's net-migration for 2007 stands at -4.3 percent, a probable result of increased outward activity among college students. Virginia is one of the most apparent gainers when it comes to young knowledge workers living in group quarters. Virginia houses eight Navy installations, eight U.S. Army or Marine Corps bases, as well as Langley Air Force Base.

Net-Migration of Persons Aged 22-34 with College Degrees, 2005 - 2007

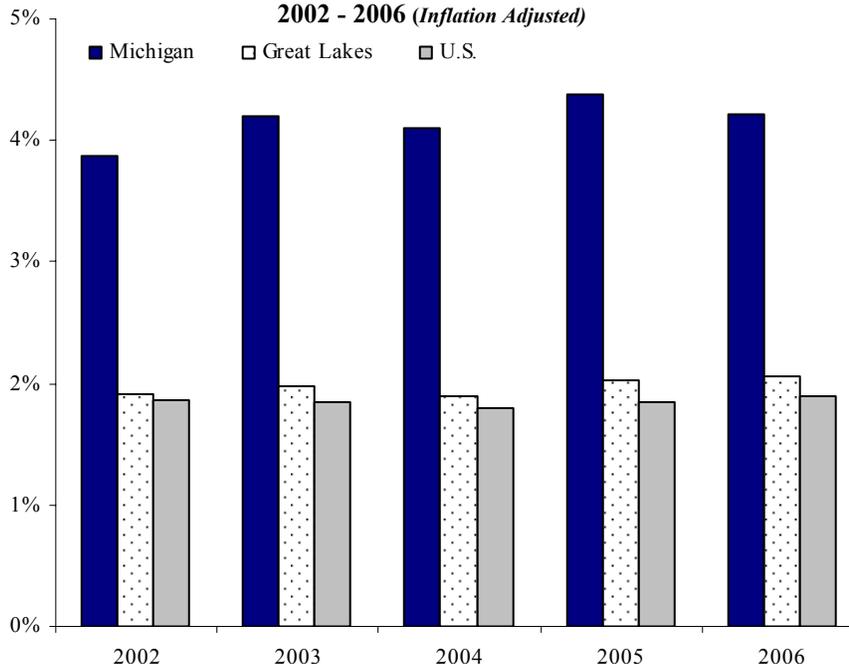


Source: U.S. Census Bureau, American Community Survey

Industrial R&D

- A slowdown in 2006 statewide R&D expenditures dropped Michigan one position, to second in the nation, in the share of R&D spending per dollar of gross domestic product by state. Michigan's industrial R&D spending declined nearly 5 percent from 2005 to 2006, lagging the national growth of 5.9 percent. Still, only Massachusetts ranked higher as a percent of total gross domestic product, and only California ranked higher on a dollar basis.
- More than 90 percent of Michigan's \$16.5 billion in 2006 R&D spending took place in manufacturing related fields, compared to just 70 percent nationwide. Research related to transportation equipment accounted for almost \$12.3 billion in expenditures in Michigan, an estimated 76 percent of total U.S. automotive related R&D expenditure. Chemicals manufacturing added an additional \$1.3 billion.

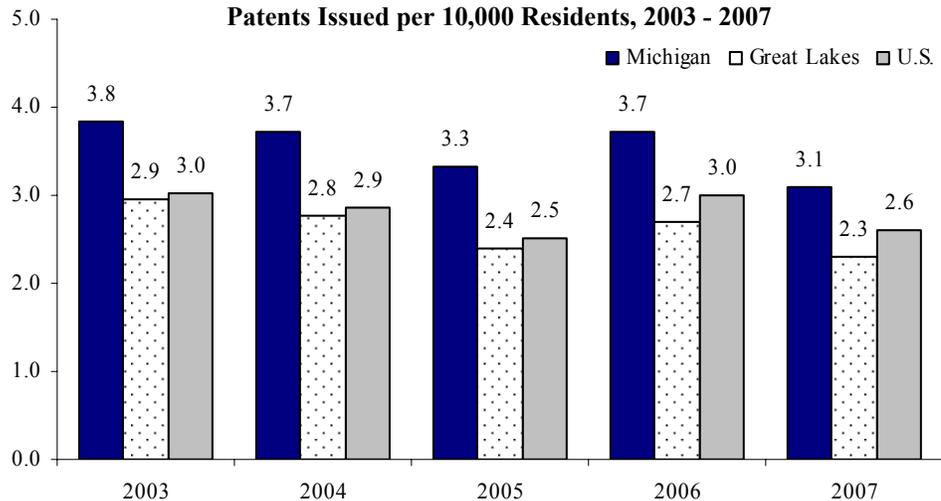
Total Funds for Industrial R&D as a Percent of Gross Domestic Product, 2002 - 2006 (Inflation Adjusted)



Source: National Science Foundation and U.S. Bureau of Economic Analysis

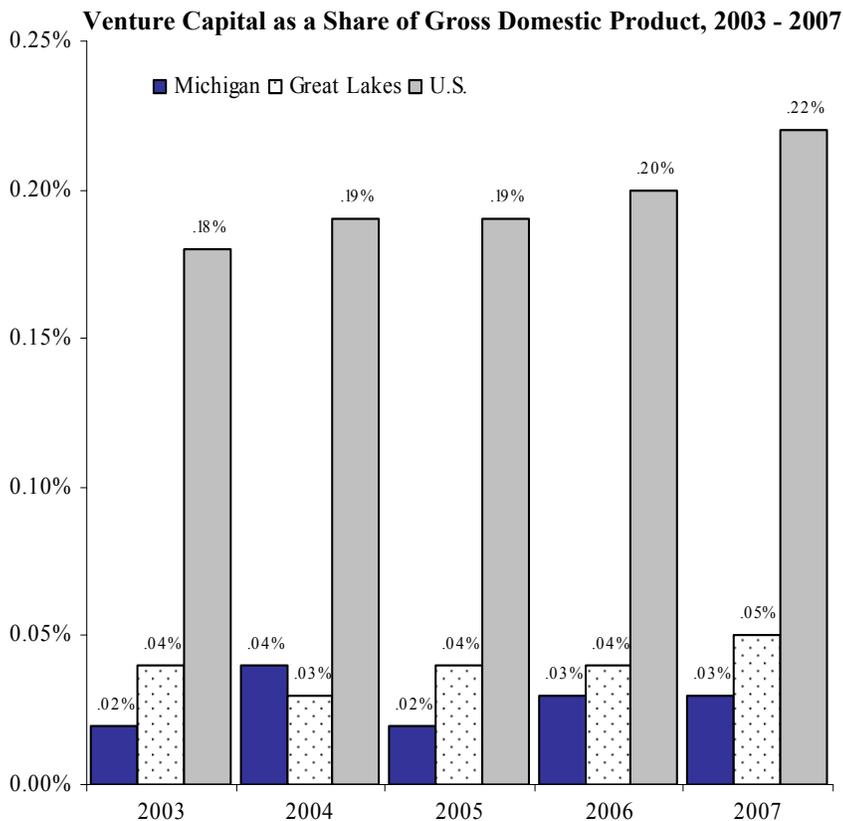
Patents

- Michigan continues to lead all the Great Lakes states in the number of patents issued, leading the second place state, Illinois, by more than 8 percent. Michigan also continues to lead all the Great Lakes states in patents issued per capita, leading the second place state, Wisconsin, by more than 0.6 patents per 10,000 residents.
- On a per capita basis, Michigan ranked 12th nationally in patents in 2007. The state's relative ranking has remained largely unchanged over the past seven years; it was ranked 11th overall in 2000. Idaho, Vermont and Massachusetts again led the U.S. in patents per capita in 2007, but ranked lower in total number of patents by state.
- Between 2006 and 2007 Michigan saw a decrease of more than 16 percent in the number of patents issued compared to an 11 percent decline for the U.S. In 2007, Michigan had 3,141 patents issued, ranking 6th overall, falling from 5th in 2006. Michigan's national ranking in total patents edged down not because of increased patent activity in other states, but more due to a relatively larger decline in patents issued in Michigan.



Source: U.S. Patent and Trademark Office and U.S. Census Bureau

Venture Capital



Sources: PwC/NVCA MoneyTree Report, Bureau of Economic Analysis

- Overall, 2007 was a below average year in terms of venture capital investments for Michigan with \$105 million. This was down from \$117 million in 2006. Michigan saw a decrease in venture capital as a percentage of GDP, whereas, both the Great Lakes and U.S. increased. 2007 marked the highest level of venture capital invested in the U.S. since the dot com bubble in 2000. In Michigan, 2007 investments outpaced only two of the last seven years.
- Among the Great Lakes states, Michigan dropped from second to third in total venture capital dollars invested behind Ohio, which saw a nearly 330 percent increase in 2007 with added emphasis in software and medical devices and equipment. This highly volatile movement is typical of year over year venture capital changes. Michigan was last in venture capital as a fraction of GDP in 2007 for Great Lakes states.
- There were a few bright spots in Michigan. Year over year, Michigan had a \$43 million increase in biotechnology investments (from \$24 million to \$67 million) and nearly doubled the investments in electronics (\$3.5 million to \$6 million). When compared to national averages, Michigan gets a disproportionate amount of its venture capital from biotechnology and business products and services arenas.

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

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.