



MICHIGAN'S LABOR MARKET NEWS

VOL. 75, ISSUE NO. 2
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Michigan's 2018 Occupational Employment and Wage Trends

Feature Article pg. 16

Infographic of the Month: Michigan Science, Technology, Engineering, and Mathematics (STEM) Jobs

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Data Spotlight: Michigan Short-term Employment Projections

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Michigan jobless rate stable for fifth consecutive month

FEBRUARY 2019 JOBLESS RATE

MICHIGAN

4.0%

NATIONAL

3.8%

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IT'S BIGGER THAN DATA.

The Bureau of Labor Market Information and Strategic Initiatives is your one-stop shop for information and analysis on Michigan's population, labor market, and more.

- Our Federal-State Programs division runs the state's cooperative agreements with the U.S. Bureau of Labor Statistics and the U.S. Census Bureau, making us the official source for this information.
- Our Research and Evaluation division conducts workforce research and program evaluation, giving you the insight you need to make smarter decisions.

Michigan's jobless rate remained unchanged for the fifth consecutive month in February at 4.0 percent. Payroll jobs were little changed over the month in February, but were up by 41,200 compared to February 2018, with gains split between *Goods-producing* and *Service-providing* industry sectors.

Our *Feature Article* this month provides a summary of our just-released 2018 data from the Occupational Employment Statistics (OES) program. We learn that Michigan's median wage measured \$18.08 per hour in 2018, and ranked 24th nationally. Meanwhile, occupational employment in Michigan reached 4,317,800 and ranked 10th nationally. Importantly, these estimates would not be possible without the help of the nearly 11,000 Michigan businesses that take the time to participate in the survey each year. Thanks to these businesses, we are able to provide our partners, customers, and all Michigan residents vital information on nearly 800 detailed job titles.

Our *Infographic of the Month* highlights one subset of occupations: Science, Technology, Engineering, and Math occupations. This visualization provides some high-level information on total employment, wages, projected job growth, and female employment for these occupations. Finally, the *Data Spotlight* this month provides an overview Michigan's short-term industry and occupational employment projections from our Employment Projections (EP) program, which we released at the end of February. Total employment is expected to grow by 1.9 percent by the second quarter 2020, adding nearly 45,000 new jobs and generating almost 560,000 total openings each year. This summary provides some high-level analysis regarding which industries and occupational groups we expect to drive these projected gains.

We hope you enjoy this month's *Labor Market News*. Please let us know if there is something you would like to know more about.



JASON PALMER
DIRECTOR

Bureau of Labor Market Information
and Strategic Initiatives

MICHIGAN'S FEBRUARY UNEMPLOYMENT RATE HOLDS CONSTANT

For the fifth consecutive month, Michigan's seasonally adjusted unemployment rate was unchanged in February at 4.0 percent. Total employment rose significantly by 13,000 while unemployment moved down by 3,000 over the month. The result was a net labor force gain of 10,000 in February.

Michigan's February 2019 jobless rate was four-tenths below the state's February 2018 rate of 4.4 percent. Over the same period, the national unemployment rate edged down by three-tenths of a percentage point. The Michigan rate was two-tenths above the U.S rate of 3.8 percent in February.

Over the year, total Michigan employment increased by 47,000, or 1.0 percent, while the number of unemployed declined by 23,000, or 10.6 percent. During the same period, the national employment level rose by 1.1 percent while the number of unemployed decreased by 6.8 percent.

February 2019 marked the sixth consecutive month of workforce expansion in Michigan. Since August of 2018, the state's labor force grew by 32,000, or 0.7 percent. Total employment in February advanced by over 10,000 for the second month in a row. The February employment level of 4,731,000 was the state's highest level since April 2006.

Detroit Metropolitan Region Jobless Rate Stabilizes Over Past Year

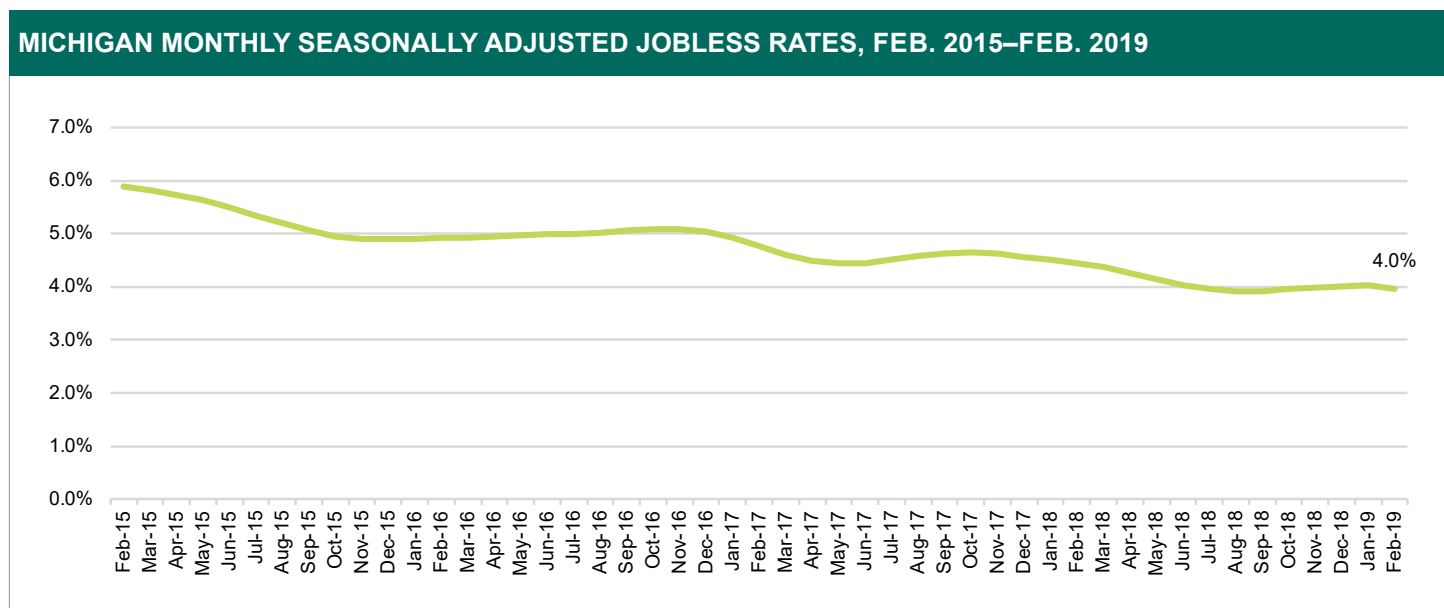
The chart on page 5 displays the monthly unemployment rate trend for the Detroit-Warren-Dearborn Metropolitan Statistical Area (MSA) for the four-year period from February 2015 to February 2019. Beginning in 2015 and proceeding through much of 2017, the Detroit metro area recorded steady reductions in the unemployment rate, culminating in a 17-year low rate of 3.7 percent in July and August of 2017. This was the lowest rate in the region since November of 2000. The total number of

unemployed of 78,000 for July and August 2017 was nearly 40 percent below its total of 126,000 in February 2015, and was also the lowest overall level of unemployment in the region since May of 2000.

From September to December of 2017, the jobless rate inched up to 4.0 percent, and remained at this level for the majority of 2018 and for February 2019. Modest gains in both the total number of employed and unemployed throughout 2018 resulted in overall workforce level advances nearly every month, thus allowing the Detroit MSA jobless rate to stabilize over the year. Between February 2018 and February of 2019, the region's employment level edged up by 1.3 percent and the unemployment total rose by 2.4 percent. The February 2019 labor force level of 2,145,000 was the region's highest workforce total since August of 2007.

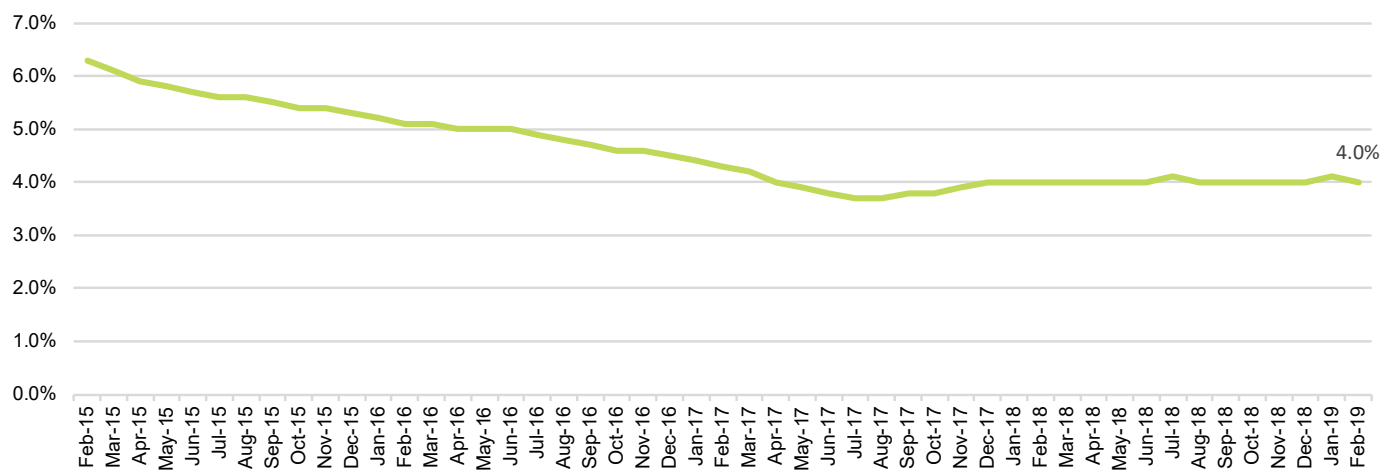
SHIBANI PUTATUNDA
Economic Analyst

MICHIGAN LABOR FORCE ESTIMATES (SEASONALLY ADJUSTED)					
	FEBRUARY 2019	JANUARY 2019	FEBRUARY 2018	CHANGE OVER THE MONTH	CHANGE OVER THE YEAR
Labor Force	4,926,000	4,916,000	4,902,000	+10,000	+24,000
Employed	4,731,000	4,718,000	4,684,000	+13,000	+47,000
Unemployed	195,000	198,000	218,000	-3,000	-23,000
Jobless Rate	4.0	4.0	4.4	0.0	-0.4





DETROIT MSA MONTHLY SEASONALLY ADJUSTED JOBLESS RATES FEB. 2015–FEB. 2019



MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

Monthly Overview

Michigan payroll jobs notched higher by 3,600 in February to total 4,447,500. Job gains were primarily concentrated in *Manufacturing* (5,700), *Government* (+1,300), and *Financial activities* (+1,200). The only major sector with a significant job cut in February was *Construction* (-4,700). Employment levels in the state's key *Transportation equipment manufacturing* sector rose by 8,300 in February, as workers were recalled from temporary layoff in January.

Over the Year Analysis

Since February 2018, total nonfarm payrolls rose by 41,200, or 0.9 percent. This was below the 1.7 percent rate of expansion nationally. In Michigan, over 80 percent of these job additions occurred in *Manufacturing* (+13,300), *Trade, transportation, and utilities* (+8,300), *Construction* (+5,900), and *Leisure and hospitality* (+5,800). Smaller, yet notable job gains were also recorded in *Financial activities* (+3,900), *Professional and business services* (+3,800), and *Other services* (+2,400). *Education and health services* had a job reduction since February 2018.

Significant Industry Employment Developments

MANUFACTURING

Payrolls in this sector rose by 5,700 over the month. This gain was entirely located in the *Durable goods* (+6,700) subsector, as workers were recalled in February from a large January temporary layoff in *Transportation equipment manufacturing* (+8,300). Jobs edged down over the month in the other subsector of *Nondurable goods* (-1,000). Part of this decrease was due to atypically large job reductions in *Food manufacturing* and *Plastics and rubber products manufacturing*. Between February 2018 and February 2019, *Manufacturing* employment gains totaled 13,300 (+2.1 percent). Nationally, job levels rose by 4,000 over the month and by 1.9 percent over the year.

ACCOMMODATION AND FOOD SERVICES

Employers in this sector added 600 workers to their payrolls during February. This followed a fairly large increase of 2,700 jobs in January. Part of the February gain was due to hiring in *Casino hotels* and *Limited-service eating places*.

On an annual average basis, 1,900 jobs were added by employers in this industry group which accounted for 3.8 percent of the 49,600 total nonfarm jobs added during 2018. Since reaching a recessionary low of 326,500 jobs in March 2010, payrolls have grown by 59,900 or by 18.3 percent. This was somewhat higher than the 16.1 percent advance in total payroll jobs during this period. Between February 2018 and February 2019, employment in this sector rose by 6,200 or by 1.6 percent. Nationally, payrolls were up by 4,000 jobs in February and by 2.2 percent over the year.

EDUCATION AND HEALTH SERVICES

Job levels in *Education and health services* edged down by 900 over the month. This contraction occurred in the *Health care and social assistance* (-1,100) subsector and was the result of atypical payroll reductions in *Home health care services* and *Hospitals*. Payrolls in *Education services* were essentially unchanged in February, notching higher by 200 positions. Unlike most broad sectors in Michigan which lost significant numbers of jobs during the last recession, employment levels in this broad sector continued to expand. Since September 2009, payrolls have grown by 69,100 jobs or by 11.4 percent. This compared to 15.9 percent growth in total nonfarm jobs during this period. Over the year, job totals declined by 2,900 or 0.4 percent. Nationally, employment increased by 4,000 over the month and by 2.1 percent over the year.

2018 Industry Comparison: Michigan vs. U.S.

In Michigan, total nonfarm payrolls grew by 1.1 percent during 2018. This was below the 1.7 percent U.S. growth rate over this period.

Out of the eleven broad industry sectors, Michigan experienced slightly higher job expansion than national growth rates in only two major industry sectors during 2018. These were *Manufacturing* (+2.2 percent vs. +2.0 percent) and *Government* (+0.5 percent vs. +0.4 percent).

The sectors where Michigan job growth was similar, yet somewhat below, the national pace included *Construction* (+4.3 percent vs. +4.6 percent) and *Trade, transportation, and utilities* (+0.6 percent vs. +0.9 percent).

Jobs were added in Michigan at a slower pace than the national average in the remaining broad industry sectors, apart from *Information* (-1.1 percent vs. 0.5 percent) which lost jobs in Michigan during 2018.

Metropolitan Statistical Areas (MSAs)

On a *not seasonally adjusted basis*, total nonfarm jobs advanced in 12 of the 14 Michigan Metropolitan Statistical Areas (MSA) during February. The exceptions were Saginaw, which was unchanged, and Bay City which declined by 0.9 percent.

Four metro areas reported job increases above the Michigan advance of 0.5 percent. The top job gains were recorded in the Ann Arbor (+1.5 percent) and Lansing (+1.2 percent) metro areas.

Four MSAs recorded job change at the statewide average while below average gains were reported in Grand Rapids (+0.3 percent), Muskegon, Flint, and Detroit (+0.2 percent each).

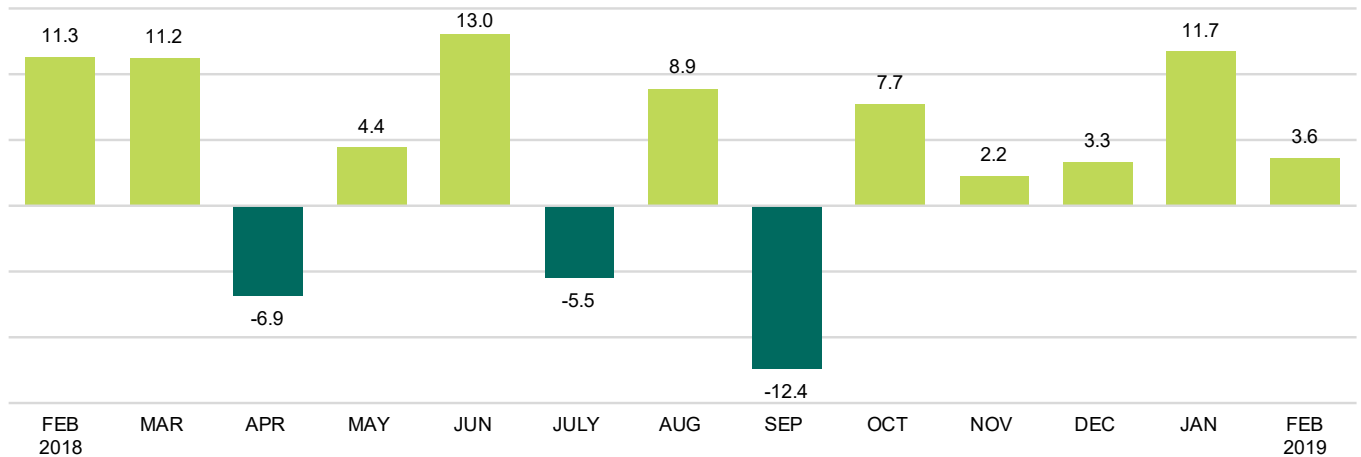
Nonfarm job additions in many of the metro areas were related to recalls in the *Manufacturing* sector and seasonal payroll increases in the education components of *State* and *Local government*.

JEFFREY AULA
Economic Analyst



MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)							
INDUSTRY	FEBRUARY 2019	JANUARY 2019	FEBRUARY 2018	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	4,447,500	4,443,900	4,406,300	3,600	0.1%	41,200	0.9%
Total Private	3,840,700	3,838,400	3,800,000	2,300	0.1%	40,700	1.1%
Private Service-Providing	3,022,700	3,021,400	3,001,100	1,300	0.0%	21,600	0.7%
GOODS-PRODUCING	818,000	817,000	798,900	1,000	0.1%	19,100	2.4%
Mining, Logging, and Construction	179,600	184,300	173,800	-4,700	-2.6%	5,800	3.3%
Mining and Logging	7,100	7,100	7,200	0	0.0%	-100	-1.4%
Construction	172,500	177,200	166,600	-4,700	-2.7%	5,900	3.5%
Manufacturing	638,400	632,700	625,100	5,700	0.9%	13,300	2.1%
Durable Goods	486,200	479,500	472,800	6,700	1.4%	13,400	2.8%
Transportation Equipment Manufacturing	196,500	188,200	191,900	8,300	4.4%	4,600	2.4%
Non-Durable Goods	152,200	153,200	152,300	-1,000	-0.7%	-100	-0.1%
SERVICE-PROVIDING	3,629,500	3,626,900	3,607,400	2,600	0.1%	22,100	0.6%
Trade, Transportation, and Utilities	798,100	798,200	789,800	-100	0.0%	8,300	1.1%
Wholesale Trade	171,500	171,900	172,100	-400	-0.2%	-600	-0.3%
Retail Trade	471,400	471,200	472,000	200	0.0%	-600	-0.1%
Transportation, Warehousing, and Utilities	155,200	155,100	145,700	100	0.1%	9,500	6.5%
Information	56,300	56,100	56,000	200	0.4%	300	0.5%
Financial Activities	222,100	220,900	218,200	1,200	0.5%	3,900	1.8%
Finance and Insurance	165,900	164,800	163,500	1,100	0.7%	2,400	1.5%
Real Estate and Rental and Leasing	56,200	56,100	54,700	100	0.2%	1,500	2.7%
Professional and Business Services	662,000	661,600	658,200	400	0.1%	3,800	0.6%
Professional, Scientific, and Technical Services	303,000	302,500	296,800	500	0.2%	6,200	2.1%
Management of Companies and Enterprises	69,000	69,400	68,100	-400	-0.6%	900	1.3%
Administrative and Support and Waste Management and Remediation Services	290,000	289,700	293,300	300	0.1%	-3,300	-1.1%
Education and Health Services	676,700	677,600	679,600	-900	-0.1%	-2,900	-0.4%
Educational Services	74,300	74,100	74,500	200	0.3%	-200	-0.3%
Health Care and Social Assistance	602,400	603,500	605,100	-1,100	-0.2%	-2,700	-0.4%
Leisure and Hospitality	439,400	439,200	433,600	200	0.0%	5,800	1.3%
Arts, Entertainment, and Recreation	53,000	53,400	53,400	-400	-0.7%	-400	-0.7%
Accommodation and Food Services	386,400	385,800	380,200	600	0.2%	6,200	1.6%
Other Services	168,100	167,800	165,700	300	0.2%	2,400	1.4%
Government	606,800	605,500	606,300	1,300	0.2%	500	0.1%
Federal Government	52,600	52,400	52,300	200	0.4%	300	0.6%
State Government	192,000	191,300	191,600	700	0.4%	400	0.2%
Local Government	362,200	361,800	362,400	400	0.1%	-200	-0.1%

MICHIGAN OVER THE MONTH PAYROLL JOB CHANGE (IN THOUSANDS)



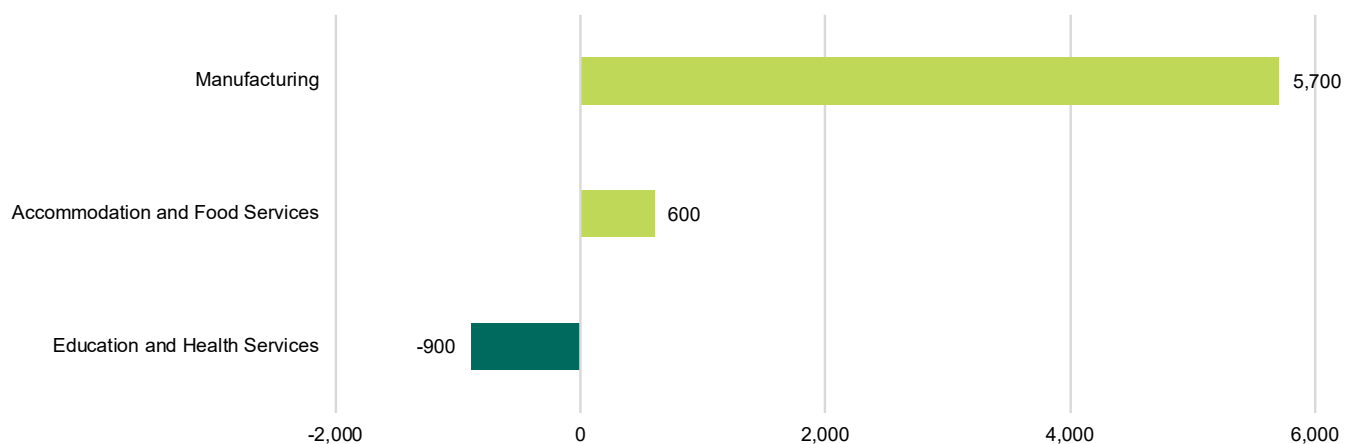
ANNUAL AVERAGE JOB CHANGE, 2018

INDUSTRY	MICHIGAN		U.S.	
	LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	49,600	1.1%	2,450,000	1.7%
Mining and Logging	100	0.6%	56,000	8.3%
Construction	7,100	4.3%	320,000	4.6%
Manufacturing	13,700	2.2%	250,000	2.0%
Trade, Transportation, and Utilities	5,000	0.6%	250,000	0.9%
Information	-600	-1.1%	14,000	0.5%
Financial Activities	1,500	0.7%	118,000	1.4%
Professional and Business Services	10,700	1.6%	491,000	2.4%
Educational and Health Services	7,200	1.1%	479,000	2.1%
Leisure and Hospitality	1,400	0.3%	297,000	1.9%
Other Services	900	0.5%	75,000	1.3%
Government	2,700	0.5%	99,000	0.4%

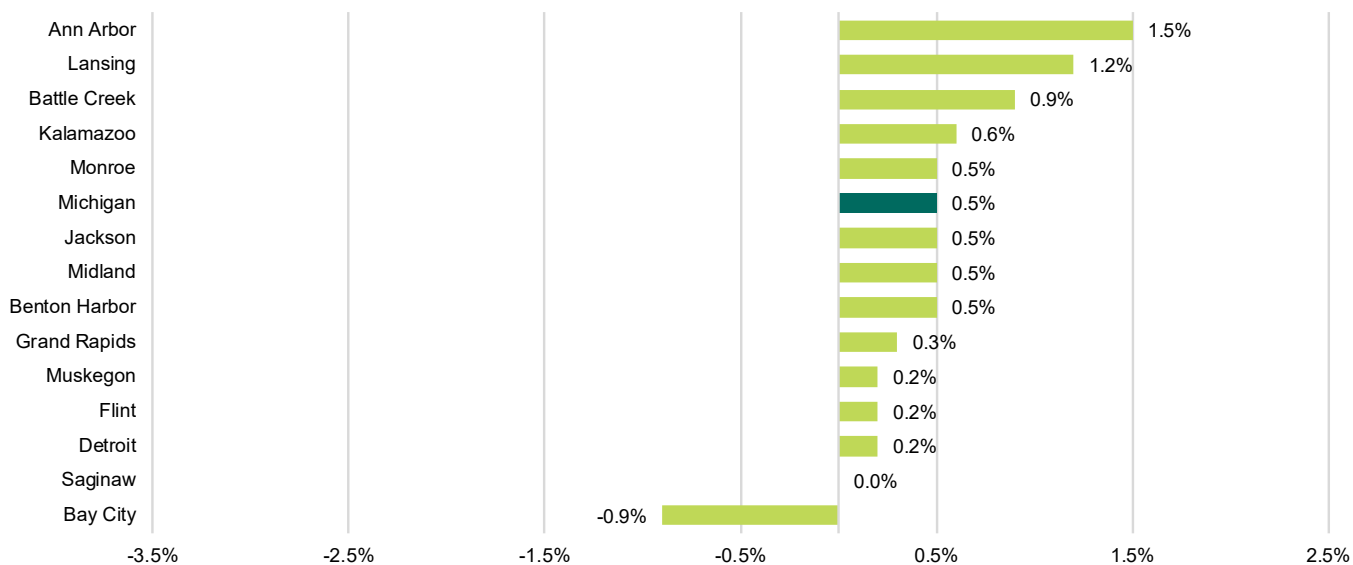




MICHIGAN OVER THE MONTH JOB CHANGE BY SELECT INDUSTRY, JANUARY 2019–FEBRUARY 2019



METROPOLITAN AREA JOB CHANGE, JANUARY 2019–FEBRUARY 2019 (NOT SEASONALLY ADJUSTED)



REGIONAL LABOR MARKET ANALYSIS

ANN ARBOR METROPOLITAN AREA

- The unemployment rate in Ann Arbor fell by two-tenths of a percentage point in February to 2.7 percent.
- The region was the only Michigan labor market area to exhibit a slight decline in employment over the year, edging down by 0.1 percent since February 2018.

MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm jobs in Ann Arbor rose by 3,200 over the month, or 1.5 percent, primarily due to a large seasonal increase in *Government* (+3,300).

INDUSTRY TRENDS

- Since June 2018, the region's *Wholesale trade* industry has had an all-time high job level of 6,200.
- Nonfarm jobs in Ann Arbor have increased an average of 3,400 per year over the last eight years (2010-2018).

BATTLE CREEK METROPOLITAN AREA

- In February, the jobless rate declined slightly by three tenths of a percentage point to 4.1 percent. This was primarily due to a seasonal employment gain of 1,100 over the month.
- Since February 2018, unemployment was down 600, while employment rose by 900; the jobless rate fell by a full percentage point.

MONTHLY INDUSTRY DEVELOPMENTS

- Battle Creek MSA job levels rose by 500 (+0.9 percent) in February, mainly due to a seasonal education-related employment rebound in *Government* (+300).
- Over the past year, jobs in the Battle Creek MSA have expanded at a rate of 1.4 percent (+800).

INDUSTRY TRENDS

- *Manufacturing* is the largest employer in the Battle Creek MSA. Since 2010, jobs in this sector advanced at less than the statewide rate (18 vs. 41 percent).

BAY CITY METROPOLITAN AREA

- In February, the Bay City jobless rate receded by half a percentage point to 5.2 percent.
- The region's workforce declined by 0.8 percent over the year

MONTHLY INDUSTRY DEVELOPMENTS

- Bay City's payroll job count moved down by 300 in February, or 0.9 percent, due to job cuts in *Trade, transportation and utilities* (-200) *Manufacturing* (-100), and *Professional and business services* (-100).

INDUSTRY TRENDS

- The region's *Trade, transportation, and utilities* sector matched its all-time low level of 7,300 jobs in February. Jobs in this industry have been in a long-term decline since peaking in the year 2000.

DETROIT-WARREN-DEARBORN METRO AREA

- The Detroit metro region unemployment rate fell by six-tenths of a percentage point over the month to 4.0 percent.
- The civilian labor force remained unchanged over the month and increased by 1.2 percent over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm employment in the Detroit MSA advanced by 3,900 over the month, or 0.2 percent, primarily because of a 7,200-job increase in the region's *Manufacturing* sector.
- This advance reflected job recalls in the auto industry.

INDUSTRY TRENDS

- Detroit's *Professional, scientific, and technical services* sector has been a major source of job expansion over the past year, and has added jobs in four out of the last five months.

FLINT METROPOLITAN AREA

- Joblessness in the Flint region fell by 0.5 percentage points over the month to 4.9 percent in February.
- Total employment rose by 1.0 percent over the month, which was two-tenths below the state advance of 1.2 percent.

MONTHLY INDUSTRY DEVELOPMENTS

- The payroll job count in Flint edged up by 300 in February, or 0.2 percent.
- *Manufacturing* exhibited the most pronounced over-the-month increase, up by 400 jobs since January.

INDUSTRY TRENDS

- *General merchandise stores* in Flint matched the prior low of 4,500 jobs, a level last seen in February of 2018.

GRAND RAPIDS-WYOMING METRO AREA

- The Grand Rapids MSA unemployment rate inched down by two-tenths of a percentage point to 2.9 percent in February.
- The region recorded an employment gain of 2.1 percent over the past year, which was well above the 1.6 percent growth rate statewide.

MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm jobs in Grand Rapids advanced by 1,500 over the month, or 0.3 percent, primarily due to large seasonal increases in *Government* (+1,900) and *Education and health services* (+600).

INDUSTRY TRENDS

- *Transportation equipment manufacturing* in Grand Rapids reached a twelve-year high level of 17,500 jobs in February.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	ANN ARBOR			BATTLE CREEK			BAY CITY		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE									
Labor Force	195,900	192,400	197,100	63,500	62,600	63,200	50,400	50,300	50,800
Employment	190,600	186,800	190,700	60,900	59,800	60,000	47,800	47,500	47,600
Unemployment	5,300	5,600	6,400	2,600	2,700	3,200	2,600	2,900	3,200
Rate (percent)	2.7%	2.9%	3.3%	4.1%	4.4%	5.1%	5.2%	5.7%	6.3%
PLACE OF WORK									
Total Nonfarm Jobs	223,100	219,900	223,700	58,200	57,700	57,400	34,700	35,000	34,800
Mining, Logging, and Construction	3,900	3,900	3,900	1,300	1,300	1,400	1,000	1,000	1,000
Manufacturing	15,200	15,200	14,800	12,200	12,200	11,900	4,500	4,600	4,400
Trade, Transportation, and Utilities	25,700	26,100	25,700	9,100	9,100	8,700	7,300	7,500	7,300
Wholesale Trade	6,200	6,200	6,000	*	*	*	*	*	*
Retail Trade	15,600	16,000	16,000	5,900	5,900	5,400	4,900	5,000	4,900
Information	5,300	5,300	5,300	*	*	*	400	400	400
Financial Activities	6,900	6,800	7,000	1,200	1,200	1,200	1,300	1,300	1,400
Professional and Business Services	29,400	29,700	29,600	6,100	6,000	6,200	2,600	2,700	2,600
Educational and Health Services	27,900	27,500	28,400	11,000	10,900	10,900	6,400	6,400	6,500
Leisure and Hospitality	17,500	17,400	17,600	4,100	4,100	4,000	4,200	4,200	4,400
Other Services	6,400	6,400	6,500	1,800	1,800	1,900	1,300	1,300	1,300
Government	84,900	81,600	84,900	11,000	10,700	10,800	5,700	5,600	5,500
	DETROIT-WARREN- DEARBORN			FLINT			GRAND RAPIDS-WYOMING		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE									
Labor Force	2,146,000	2,146,000	2,120,000	183,000	182,200	183,000	588,700	582,700	581,000
Employment	2,060,000	2,047,000	2,021,000	174,000	172,300	172,100	571,700	564,600	559,900
Unemployment	86,000	99,000	99,000	9,000	9,900	10,900	16,900	18,100	21,100
Rate (percent)	4.0%	4.6%	4.7%	4.9%	5.4%	6.0%	2.9%	3.1%	3.6%
PLACE OF WORK									
Total Nonfarm Jobs	2,009,900	2,047,600	1,989,700	140,400	140,100	138,900	567,300	565,800	557,300
Mining, Logging, and Construction	71,000	74,700	66,300	5,200	5,400	5,000	24,700	24,800	22,600
Manufacturing	254,100	262,700	254,300	12,900	12,500	12,500	118,800	119,200	116,200
Trade, Transportation, and Utilities	379,600	388,800	370,100	29,000	29,500	29,000	96,000	97,000	95,100
Wholesale Trade	87,100	87,500	85,900	5,400	5,400	5,100	31,500	31,700	31,600
Retail Trade	212,800	219,400	210,900	19,300	19,800	20,000	48,600	49,400	48,200
Information	27,000	27,200	27,100	3,800	3,800	3,900	6,400	6,400	6,200
Financial Activities	115,700	116,100	114,800	6,000	6,000	6,000	26,900	26,900	26,100
Professional and Business Services	394,500	398,200	391,100	17,100	16,900	16,600	77,000	76,700	78,200
Educational and Health Services	316,600	320,600	314,700	26,600	26,500	27,100	93,700	93,100	93,700
Leisure and Hospitality	191,400	194,000	192,100	15,100	15,100	14,800	51,400	51,200	48,000
Other Services	74,200	75,300	74,100	5,400	5,300	5,300	22,100	22,100	21,900
Government	185,800	190,000	185,100	19,300	19,100	18,700	50,300	48,400	49,300
* Data Not Available									

JACKSON METROPOLITAN AREA

- The Jackson metro area jobless rate edged down by 0.3 percentage points in February to 3.9 percent. Employment in the Jackson MSA rose by 1.2 percent (+900) over the month, while unemployment inched down 200.
- Since February 2018, the employment gain of 800 was matched by a reduction in the number of unemployed (-700).

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in the Jackson MSA inched up by 300 in February. Most of the gain was recorded in private *Educational and health services* (+300).
- Over the past year, jobs in the Jackson MSA rose by 1.6 percent (+900). Significant employment improvement was seen in *Professional and business services* (+600) and *Manufacturing* (+300).

INDUSTRY TRENDS

- Since 2010, *Manufacturing* jobs in the Jackson metro area grew at roughly the same rate (40 percent) as the state.

KALAMAZOO-PORTAGE METRO AREA

- February employment in the Kalamazoo-Portage MSA rose by 2,800, while unemployment inched down 500. The unemployment rate moved down slightly (-0.3 percentage points).
- Since February 2018, unemployment fell by 1,800, while employment advanced by 2,600. As a result, the jobless rate dropped by a full percentage point.

MONTHLY INDUSTRY DEVELOPMENTS

- Kalamazoo-Portage MSA job levels in February inched up by 900. Jobs in *Education* advanced by 1,300. However, *Retail trade* cut 400 positions.
- Jobs in the region continued to show significant growth over the past year (+1,500 or a full percent).

INDUSTRY TRENDS

- Since 2010, *Manufacturing* has added 4,900 jobs in the Kalamazoo-Portage MSA; a growth rate of 27 percent (versus 41 percent in Michigan).

LANSING-EAST LANSING METRO AREA

- The February 2019 jobless rate in the Lansing metro area receded by seven-tenths of a percentage point to 3.3 percent.
- The region had the largest over-the-month jobless rate decline of all major Michigan regions.

MONTHLY INDUSTRY DEVELOPMENTS

- The payroll job count in Lansing rose by 2,900 over the month, or 1.2 percent.
- The most pronounced over-the-month increase in jobs occurred in the *Government* sector (+2,300), as jobs rebounded seasonally in the education sector.

INDUSTRY TRENDS

- For the third consecutive month, *Professional, scientific, and technical services* in Lansing recorded a sixteen-year high level of 9,300 jobs.

MIDLAND METROPOLITAN AREA

- Midland's jobless rate fell by 0.3 percentage points in February to 4.0 percent.
- Total unemployment receded by nearly 24.0 percent over the year, and the jobless rate dropped significantly by 1.2 percentage points.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm jobs in the Midland region inched up by 200 over the month, an increase of 0.5 percent, essentially all due to a job gain in the *Private service providing* sector (+300).

INDUSTRY TRENDS

- Midland was the only Michigan region in February to exhibit no change in total nonfarm employment over the year.

MONROE METROPOLITAN AREA

- Joblessness in Monroe decreased by two-tenths of a percentage point to 4.2 percent in February.
- Total employment gains over the month and over the year were nearly identical, up 1.4 and 1.5 percent, respectively.

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Monroe rose by 200 over the month, or 0.5 percent, due to an increase in the region's *Mining, logging and construction* industry (+200).

INDUSTRY TRENDS

- Monroe *Retail trade* jobs averaged 4,900 in 2018 and have fallen steadily since 2013.

MUSKEGON METROPOLITAN AREA

- The Muskegon region unemployment rate decreased by 0.4 percentage points in February to 4.2 percent.
- The area's labor force moved up by 0.8 percent both over the month and over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm jobs in Muskegon edged up by 100 over the month, or 0.2 percent.
- A 200-job seasonal increase in *Government* was partially offset by declines in *Financial activities* and *Leisure and hospitality*.

INDUSTRY TRENDS

- The region's *Financial activities* sector has had relatively stable job levels since 2010 of 1,700 to 1,900 positions.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	JACKSON			KALAMAZOO-PORTAGE			LANSING-EAST LANSING		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE									
Labor Force	74,900	74,000	74,800	170,500	168,100	169,700	251,100	247,400	252,700
Employment	72,000	70,900	71,200	164,400	161,600	161,800	242,800	237,500	242,400
Unemployment	2,900	3,100	3,600	6,100	6,600	7,900	8,300	9,800	10,300
Rate (percent)	3.9%	4.2%	4.8%	3.6%	3.9%	4.6%	3.3%	4.0%	4.1%
PLACE OF WORK									
Total Nonfarm Jobs	58,400	58,100	57,500	149,400	148,500	147,900	236,500	233,600	237,100
Mining, Logging, and Construction	1,700	1,800	1,800	6,000	6,100	5,600	7,300	7,500	6,900
Manufacturing	10,100	10,100	9,800	22,900	22,900	22,300	20,100	19,100	20,000
Trade, Transportation, and Utilities	12,200	12,200	12,200	26,300	26,800	25,900	36,200	36,800	37,200
Wholesale Trade	*	*	*	6,600	6,600	6,400	6,500	6,600	6,600
Retail Trade	6,400	6,300	6,500	15,800	16,200	15,900	21,000	21,300	21,800
Information	300	300	300	800	800	800	2,700	2,700	2,700
Financial Activities	2,100	2,100	2,000	8,300	8,300	8,200	16,700	16,700	16,300
Professional and Business Services	6,100	6,000	5,500	17,300	17,200	17,300	22,800	22,800	23,800
Educational and Health Services	10,400	10,100	10,400	24,400	24,200	24,600	32,500	32,300	32,800
Leisure and Hospitality	5,100	5,100	5,100	15,600	15,500	15,600	18,600	18,500	18,600
Other Services	2,500	2,500	2,500	5,200	5,200	5,200	10,400	10,300	10,200
Government	7,900	7,900	7,900	22,600	21,500	22,400	69,200	66,900	68,600
	MIDLAND			MONROE			MUSKEGON		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE									
Labor Force	40,400	40,000	40,900	76,500	75,600	75,900	78,400	77,800	77,800
Employment	38,800	38,300	38,700	73,300	72,300	72,200	75,000	74,200	73,500
Unemployment	1,600	1,700	2,100	3,200	3,400	3,700	3,300	3,600	4,300
Rate (percent)	4.0%	4.3%	5.2%	4.2%	4.4%	4.9%	4.2%	4.6%	5.5%
PLACE OF WORK									
Total Nonfarm Jobs	37,000	38,000	37,000	41,700	41,500	40,900	64,600	64,500	63,400
Mining, Logging, and Construction	*	*	*	2,300	2,100	1,800	2,300	2,300	2,200
Manufacturing	*	*	*	5,700	5,700	5,400	14,000	14,000	13,700
Trade, Transportation, and Utilities	*	*	*	10,500	10,600	10,800	14,000	14,000	13,400
Wholesale Trade	*	*	*	1,800	1,800	1,800	*	*	*
Retail Trade	*	*	*	4,700	4,800	4,900	11,000	11,100	10,700
Information	*	*	*	*	*	*	300	300	300
Financial Activities	*	*	*	900	900	900	1,700	1,800	1,700
Professional and Business Services	*	*	*	5,600	5,600	5,400	3,600	3,600	3,900
Educational and Health Services	*	*	*	5,000	5,000	5,200	12,100	12,000	11,800
Leisure and Hospitality	*	*	*	4,400	4,400	4,100	7,000	7,100	6,800
Other Services	*	*	*	1,400	1,400	1,400	2,200	2,200	2,200
Government	3,000	3,000	3,000	5,400	5,400	5,400	7,400	7,200	7,400
* Data Not Available									

NILES-BENTON HARBOR METRO AREA

- The jobless rate in the Niles-Benton Harbor MSA inched down in February by four tenths of a percentage point to 4.4 percent, as employment in the region rose by 1,100 and the number of unemployed went down 300.
- Since February 2018, employment edged up slightly by 300, while unemployment fell by 800. The jobless rate dropped by 1.1 percentage points.

MONTHLY INDUSTRY DEVELOPMENTS

- February nonfarm payroll employment in the Niles-Benton Harbor MSA edged up by 300, breaking the seven-month trend of job reductions in the area.
- Since February 2018, nonfarm payroll employment in the Niles-Benton Harbor MSA was largely unchanged (-100).

INDUSTRY TRENDS

- *Manufacturing* employs about 22 percent of the workforce in the Niles-Benton Harbor MSA, making it the single largest employer in the area. Since 2010, *Manufacturing* jobs in the area grew at half the statewide rate of 41 percent.

SAGINAW METROPOLITAN AREA

- Joblessness in the Saginaw MSA receded by five-tenths of a percentage point over the month to 5.1 percent in February.
- The number of unemployed in the region decreased by approximately 15.0 percent over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm jobs in the Saginaw region remained unchanged over the month.
- Increases in *Government* (+300) and *Manufacturing* (+200) were offset by a seasonal 500-job decline in *Trade, transportation, and utilities*.

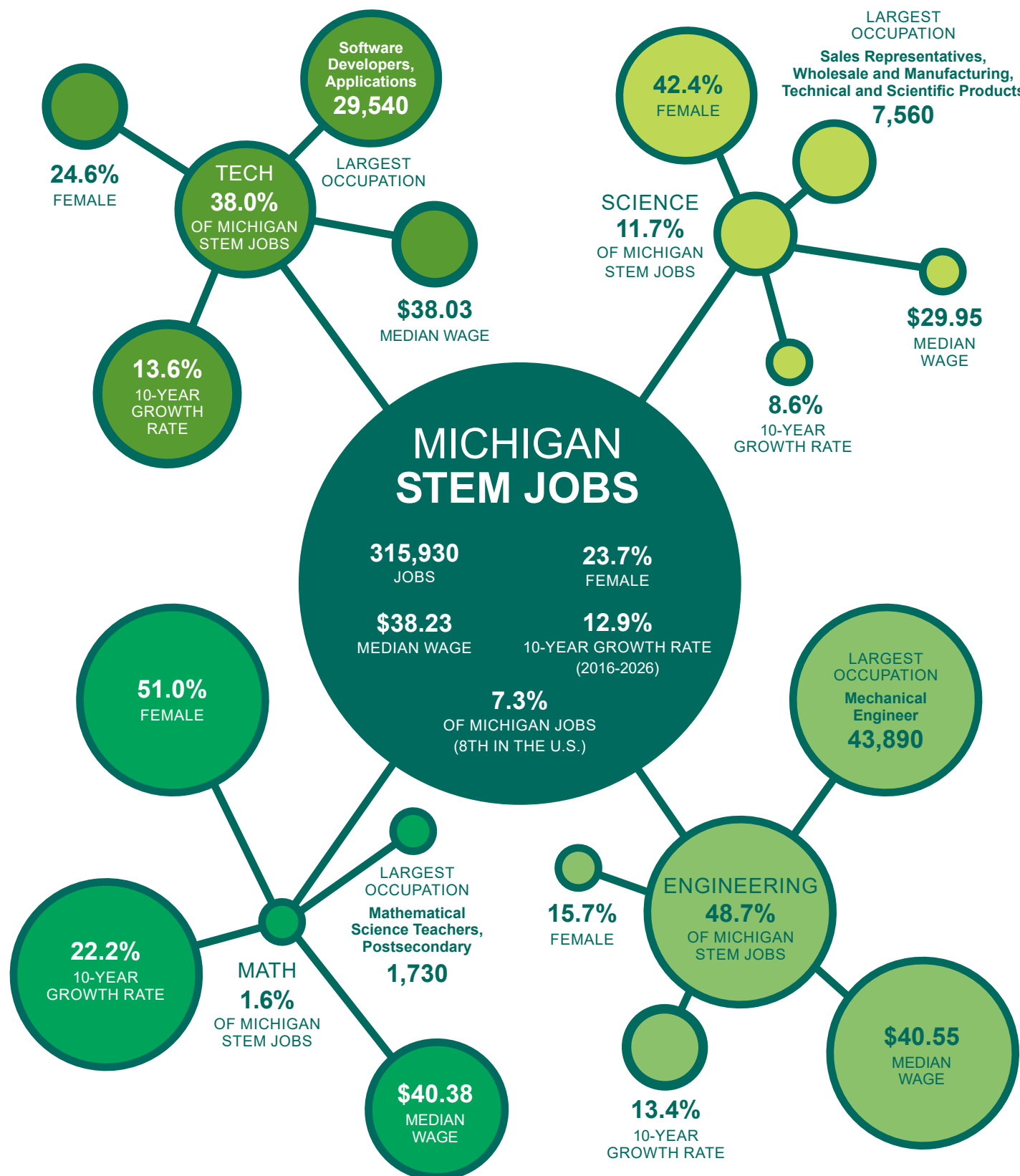
INDUSTRY TRENDS

- Saginaw was the only Michigan region in February to exhibit no monthly change in total nonfarm employment.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	NILES-BENTON HARBOR			SAGINAW		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE						
Labor Force	72,700	71,900	73,200	87,200	86,800	87,500
Employment	69,500	68,400	69,200	82,800	82,000	82,300
Unemployment	3,200	3,500	4,000	4,400	4,900	5,200
Rate (percent)	4.4%	4.8%	5.5%	5.1%	5.6%	6.0%
PLACE OF WORK						
Total Nonfarm Jobs	60,600	60,300	60,700	86,700	86,700	86,400
Mining, Logging, and Construction	2,000	1,800	2,400	2,700	2,800	2,500
Manufacturing	13,300	13,200	13,100	12,200	12,000	12,400
Trade, Transportation, and Utilities	10,200	10,400	10,300	16,500	17,000	16,100
Wholesale Trade	*	*	*	2,000	2,000	2,100
Retail Trade	6,600	6,700	6,400	11,900	12,300	11,500
Information	500	500	500	1,300	1,300	1,400
Financial Activities	2,400	2,500	2,400	3,600	3,600	3,700
Professional and Business Services	5,500	5,400	5,500	11,000	11,000	11,100
Educational and Health Services	9,300	9,200	9,100	16,000	15,900	16,200
Leisure and Hospitality	6,500	6,600	6,600	8,800	8,800	8,700
Other Services	2,300	2,300	2,300	3,300	3,300	3,100
Government	8,600	8,400	8,500	11,300	11,000	11,200
	UPPER PENINSULA			NORTHEAST MICHIGAN		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
PLACE OF RESIDENCE						
Labor Force	138,400	134,800	139,300	81,300	80,900	81,900
Employment	129,800	125,600	128,800	74,400	73,600	73,400
Unemployment	8,700	9,200	10,500	6,900	7,300	8,500
Rate (percent)	6.3%	6.8%	7.6%	8.5%	9.0%	10.3%
				NORTHWEST MICHIGAN		
	FEB 2019	JAN 2019	FEB 2018	FEB 2019	JAN 2019	FEB 2018
Labor Force	147,800	146,700	146,400			
Employment	139,500	138,000	136,100			
Unemployment	8,300	8,700	10,200			
Rate (percent)	5.6%	5.9%	7.0%			

MICHIGAN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) JOBS





MICHIGAN'S 2018 OCCUPATIONAL EMPLOYMENT AND WAGE TRENDS

Introduction

Each year, the Bureau of Labor Market Information and Strategic Initiatives conducts the Occupational Employment Statistics (OES) survey, which is a federal-state cooperative program with the U.S. Bureau of Labor Statistics (BLS). This program annually surveys approximately 400,000 nonfarm establishments nationwide, including 11,000 in Michigan to collect employment and wage information for over 800 Standard Occupational Classification (SOC) job titles. This is the only official survey that provides employment levels and annual and hourly wages for individual occupations for the nation, states, and metro and nonmetropolitan areas.

Michigan and the U.S.

According to the recently-released 2018 OES data, Michigan's occupational employment was 4,318,000, roughly a one percent increase over last year. This estimate will likely be lower than other employment measures, as OES data does not reflect agricultural employment or the self-employed. The overall statewide median hourly wage was \$18.08, slightly lower than the national median wage of \$18.58. Michigan's median wage ranked 24th among all other

states and territories, unchanged from the previous year.

Occupational wages in Michigan ranged from \$9.71 at the 10th percentile up to \$43.91 at the 90th percentile. This means that 80 percent of all jobs in Michigan earned a wage between these values. The major occupational group, *Management occupations* had the highest wage range, from \$24.09 to \$94.88. Conversely, *Food preparation and serving* occupations had the lowest range, from \$9.32 to \$16.27.

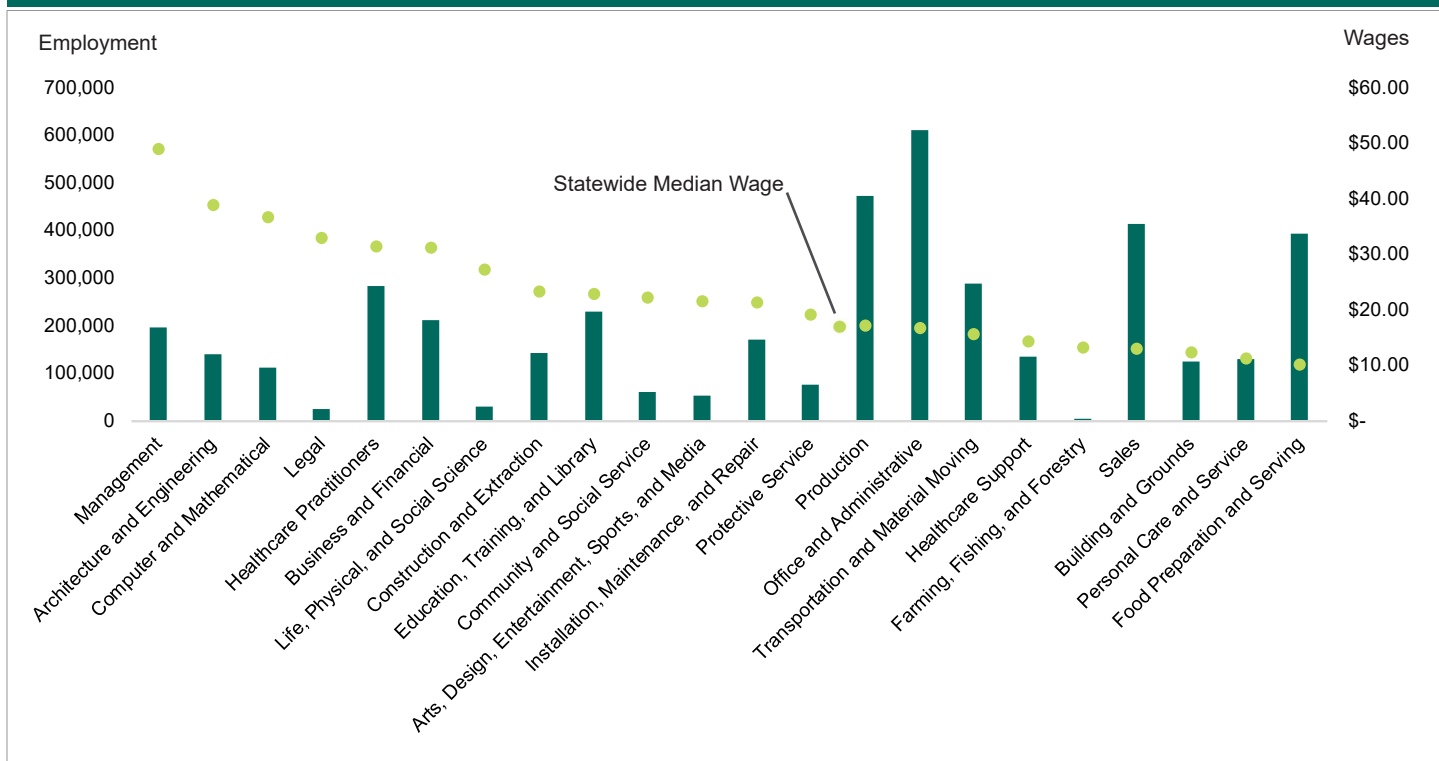
Because of these wide variances in wages, sometimes the median does not provide a complete wage picture for an occupation or group. For example, *Sales and related* occupations had one of the lowest medians in the state at \$12.94, but due to the high variance in these occupations, hourly wages ranged from \$9.46 to \$38.19. While there are many low wage occupations in the group, such as *Retail salespersons* and *Cashiers*, there are also higher wage occupations that rely on commission, such as *Insurance sales agents* and *Sales representatives, wholesale and manufacturing, technical and scientific products*.

Figure 1 shows the employment and median wages for all 22 major Michigan occupational groups. Most of the occupational groups had wage rates above the statewide median. The occupational groups with below average wages consist of job titles that typically require little or no training or education beyond high school. However, many of these groups were among the largest by employment level, and the top five occupational groups by job count all had wages below the statewide average.

As expected, the highest wage major group was *Management* occupations, which had a median hourly wage over \$10 higher than the next group. The highest non-management groups both included many Science, Technology, Engineering, and Math (STEM) occupations: *Architecture and engineering* occupations, and *Computer and mathematical* occupations. Both groups had a median wage that was more than double the statewide median.

Office and administrative support occupations had the highest job count in the state, comprising about 14 percent of all occupational employment in Michigan. This was the case everywhere in the U.S., except for Washington

FIGURE 1: WAGES AND EMPLOYMENT OF MAJOR GROUPS BY MEDIAN WAGE



D.C. The next largest group in Michigan was *Production* occupations, accounting for about 11 percent of jobs. This exceeded the share of jobs in most of the rest of the nation due to the prominence of the manufacturing sector in Michigan. The percentage of *Production*

occupations in Michigan was the fourth highest among states in the U.S., trailing only Indiana, Wisconsin, and Alabama.

Figure 2 shows the distribution of jobs by hourly wage in Michigan. One of the largest

over-the-year changes was seen in the under \$10 category. In 2017, about 16 percent of all occupations paid that amount or less, but in 2018, that share had dropped to only about 12 percent. This was likely due to the increase in the minimum wage in Michigan. In 2018 the

FIGURE 2: MICHIGAN DISTRIBUTION OF JOBS BY HOURLY WAGE

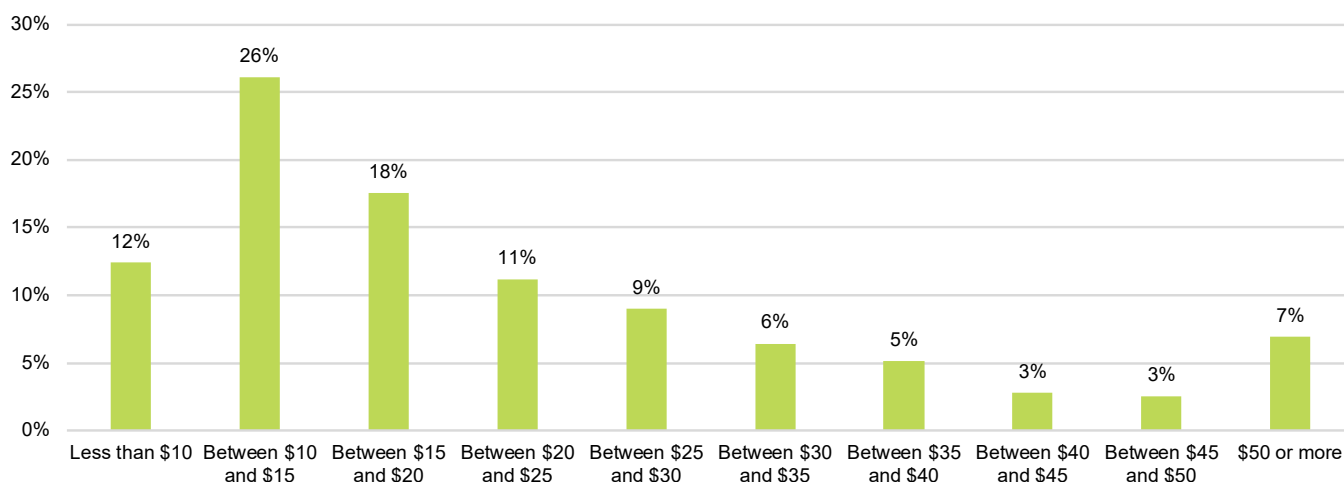
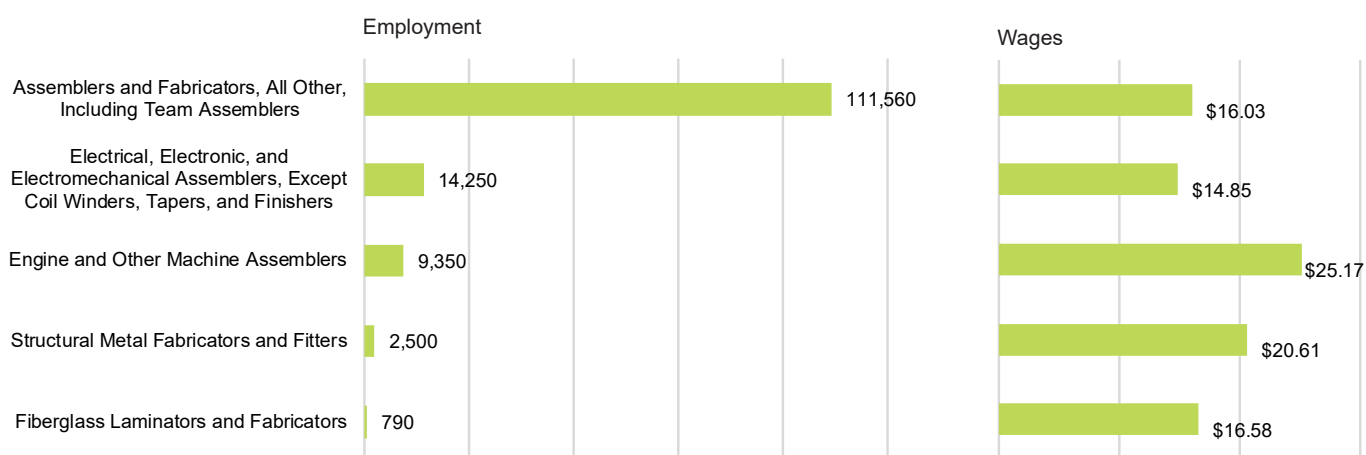


FIGURE 3: TOP ASSEMBLER AND FABRICATOR OCCUPATIONS BY EMPLOYMENT



minimum wage was \$9.25 and had advanced each of the past several years, creating more opportunity to earn over this threshold. The job shares in the rest of the wage categories were little changed in 2018. The high percentage of jobs earning under \$20 per hour (56 percent) is due to several low-wage occupations with high job counts, such as *Combined food preparation and service workers* (fast food workers), *Cashiers*, *Retail salespersons*, and *Office clerks, general*.

Occupational Minor Groups:

Beyond the broader groups previously mentioned, the SOC classification system also combines occupations into 94 minor groups. These are small groups that are comprised of related individual occupational titles. Highlighting a few of these minor groups can give a broader

view than looking at specific occupations. The following minor groups are an important part of Michigan's economy, and were selected either for their high employment, high concentration, or high wages.

ASSEMBLERS AND FABRICATORS

Assemblers and fabricators were the second largest minor group of the *Production* occupations category with 138,770 jobs in Michigan. This was almost 30 percent of production employment, and 3.2 percent of all jobs in Michigan. This greatly exceeded national percentages, as this group only made up 1.3 percent of all employment nationally. The median wage for this group was \$16.45, above the nationwide median of \$15.78 for this group, but below the overall statewide median wage for all occupations.

This group consists mostly of one occupation, *Assemblers and fabricators, all other, including team assemblers*. This was the largest *Production* occupation, and the third largest occupation in Michigan, with 111,560 positions. While it was the largest occupation in the group, it did have one of the lower median wages at \$16.03, which was about \$2 below the state median. The occupation with the highest wage in the group was *Engine and other machine assemblers* with a median wage of \$25.17. And while not having nearly the employment level of the larger occupation, there were still 9,350 jobs in this occupation in Michigan. This was the highest of any state and made up 19.4 percent of all jobs in this occupation nationally.

FIGURE 4: TOP ENGINEERING OCCUPATIONS BY EMPLOYMENT

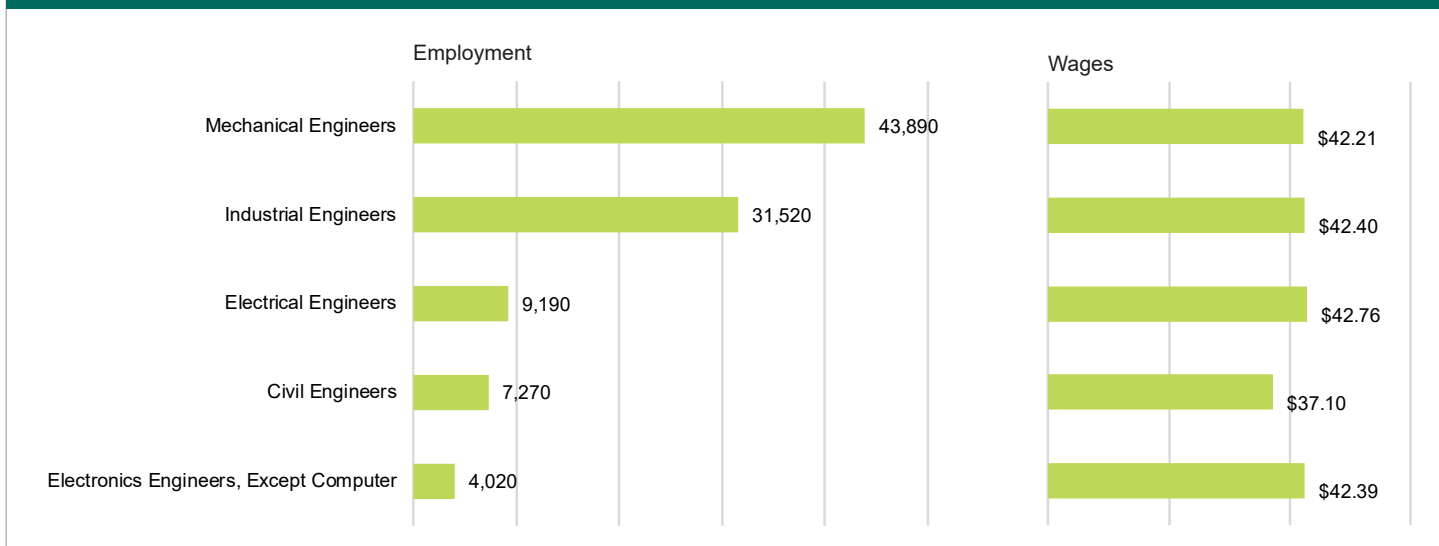
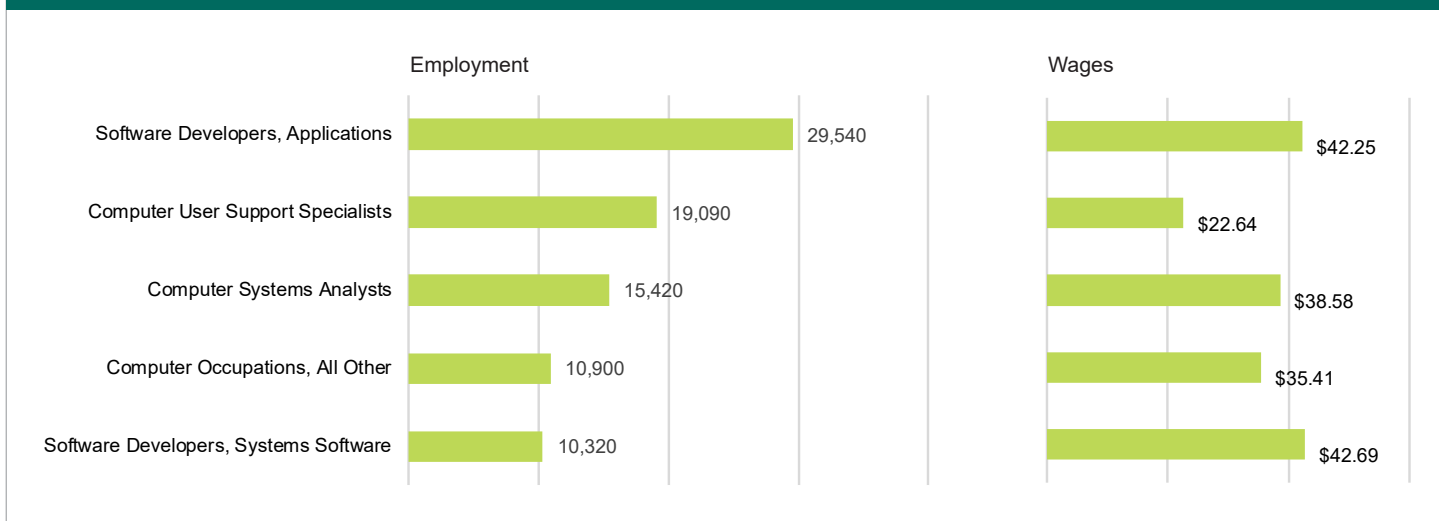


FIGURE 5: TOP COMPUTER OCCUPATIONS BY EMPLOYMENT



ENGINEERS

Engineers were the largest minor group primarily composed of STEM occupations, and the 13th largest minor group in Michigan. The group had 113,430 jobs, which was 2.6 percent of all employment in Michigan. This was more than double the percentage nationally. The median hourly wage for *Engineers*, \$41.91, was lower than the national median of \$44.75 for this group, but was more than double the statewide median wage.

This group was dominated by two occupations, *Mechanical engineers* and *Industrial engineers*. The concentrations of jobs in these two occupations were the highest in the nation, primarily due to Michigan's large manufacturing sector and the many corporate headquarters and research and development divisions located in Michigan. The median Michigan hourly wages for

these two occupations were \$42.21 for *Mechanical engineers* and \$42.40 for *Industrial engineers*, which were very similar to the national averages. While these two engineering occupations were near the national wages, some other engineering job titles had wages that were well below national levels. There were three engineering occupations that had a median hourly wage over \$55 nationally: *Petroleum*, *Aerospace*, and *Computer hardware*. Michigan did not have any *Engineers* with a median above \$50/hour, explaining why Michigan's median wage for this occupational group was below the national level.

COMPUTER OCCUPATIONS

Computer occupations was the second largest minor group primarily composed of STEM occupations, just slightly behind *Engineers*. Their job count of 109,650 was 2.5 percent of

total occupational employment in Michigan. Unlike *Engineers*, which significantly outpaced the national job share, *Computer* occupations trailed the nation at 2.9 percent. The median hourly wage for this group, \$36.44, was about double the statewide median, but it did lag behind the national wage, and was below the Michigan median wage for *Engineers* by about 10 percent.

The largest occupation in this group was *Software developers, applications*. Unlike the other groups, the distribution of *Computer* occupations in Michigan looked very similar to the national composition. *Computer* occupations also differed from *Engineers* in that not all the occupations in the group require at least a bachelor's degree, which is one reason why the median wage for this group was lower than that for *Engineers*. For example, *Computer*

FIGURE 6: TOP HEALTHCARE DIAGNOSING AND TREATING PRACTITIONER OCCUPATIONS BY EMPLOYMENT

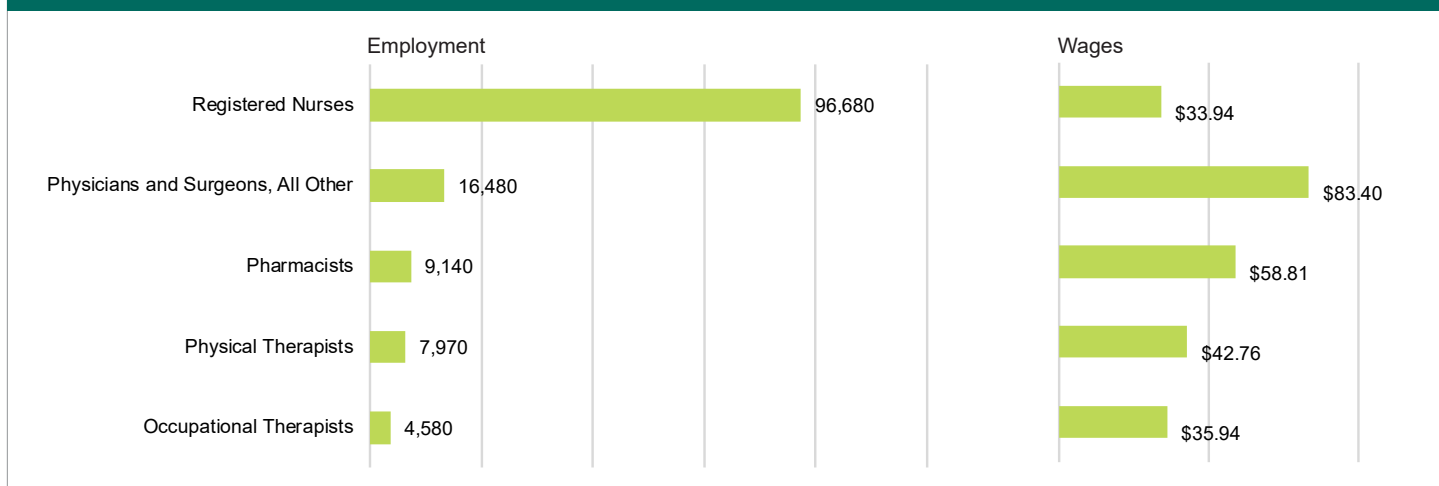
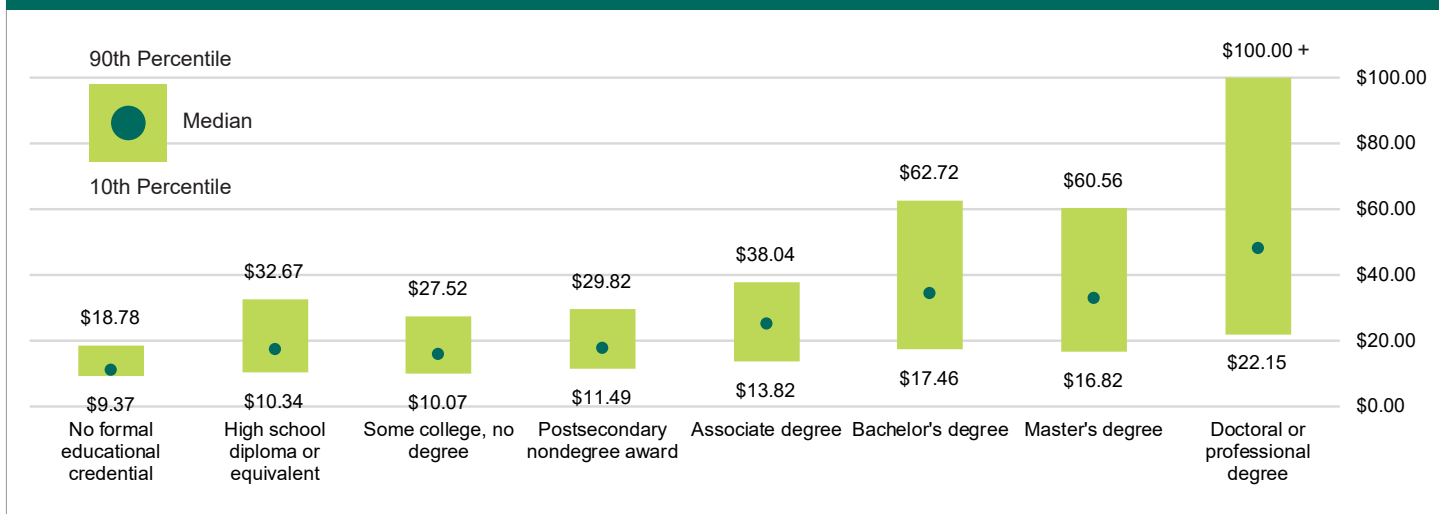


FIGURE 7: WAGE RANGES FOR JOBS BY EDUCATIONAL REQUIREMENT



user support specialists (\$22.64) and *Computer network support specialists* (\$27.47) are lower level occupations that do not require a bachelor's degree. These two occupations made up about 20 percent of jobs in the group, and had the two lowest average wages.

HEALTHCARE DIAGNOSING AND TREATING PRACTITIONERS

Health diagnosing and treating practitioners was the third largest occupational minor group in the state, showing how prominent health care is in our economy. This category had fewer jobs than only *Retail sales workers* and *Food and beverage serving workers*. The group made up 4.2 percent of employment in the state, which was higher than the national percentage of 3.7 percent. This group's median

hourly wage of \$36.74 was slightly below the national median of \$38.94.

This group contained the 4th largest occupation in the state, *Registered nurses* with 96,680 employees. This is the only Michigan occupation in the top 10 by employment to require education beyond high school. Because of this, *Registered nurses'* statewide median hourly wage of \$33.94 was more than double that of any other occupation in the top 10. But this group is not defined by one large occupation, because it has many occupations with diverse educational requirements. There are several occupations that only require an associate degree, such as *Radiation therapists* and *Respiratory therapists*, and there are numerous physician positions that require a doctoral or professional degree.

Because of this, there was a very large variance in wages in this group ranging from the lowest, *Exercise physiologists* at \$22.96, to the highest, *Anesthesiologists* with a mean* of \$125.63.

Educational Attainment

The Bureau of Labor Statistics provides information on the typical educational requirements for each of the detailed occupations in the SOC system. An analysis of wages by education clearly demonstrates that occupations requiring higher educational attainment typically receive higher average wages. Occupations that require a bachelor's degree or above have higher median wages, higher entry level wages, and much higher experienced wages, which demonstrates their increased earning potential.

* There is no median for many of the highest wage occupations because the OES survey uses wage ranges instead of point data, and most of the employees in these occupations fall in the highest wage range, making it impossible to produce a reliable median.

FIGURE 8: CONCENTRATION BY EDUCATIONAL ATTAINMENT

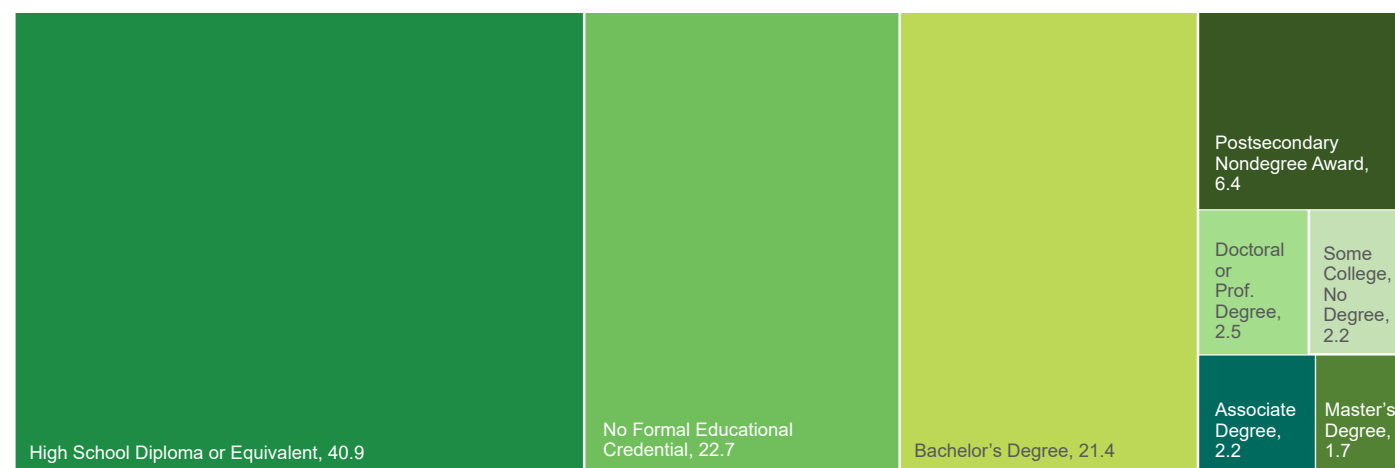


Figure 7 shows that while median wages typically advance as the education required for an occupation increases, the wage benefit was most evident at the higher levels of the pay scale for more experienced workers or for higher wage occupations. There was a big wage gap between the jobs that required at least a bachelor's degree and the jobs that did not. At the 90th percentile, jobs that require a bachelor's degree had wages that were nearly double those for jobs needing lower levels of educational attainment other than an associate degree.

Figure 7 also shows a sizeable gain in wages for jobs requiring at least a high school diploma or equivalent, compared with jobs requiring no formal credential. A wage advance is less evident for jobs requiring some college or a postsecondary nondegree award, although a wage increase exists for jobs requiring an associate degree.

Figure 8 shows the distribution of jobs by educational requirement in Michigan. While Michigan ranked slightly above average for the share of jobs requiring a bachelor's degree, and ranked very well for STEM positions, many jobs have modest educational requirements. Occupations requiring only a high school diploma or less or no formal credential made up almost two-thirds of jobs in Michigan, while about one-quarter required a bachelor's degree or higher. These shares were very similar to the nation at almost every educational level. Michigan ranked 7th overall among states and territories with the lowest percentage of jobs requiring no formal education.

Michigan had almost one million jobs that required a bachelor's degree, which was 21.4 percent of all jobs in the state. These are often the "knowledge jobs" critical to the state economy. Michigan's

proportion was very similar to the nation overall and ranked 21st among all U.S. states and territories, matching the ranking of one year ago.

Michigan had several metro areas that ranked very highly for bachelor's degree job concentration. Ann Arbor was the area that had the highest share of jobs requiring a bachelor's degree at 29.4 percent, ranking 9th out of 529 U.S. metro and nonmetropolitan areas. Related to this, Ann Arbor was also the metro region with the highest median wage in Michigan at \$19.90. The next highest metro areas in the share of jobs requiring a bachelor's degree were Midland (26.0 percent), ranking 22nd, Lansing (24.4 percent), which ranked 39th, and Detroit (24 percent), ranking 45th. Michigan's area with the lowest concentration of jobs requiring a bachelor's degree was the Northeast Lower Peninsula (13.6 percent), ranking 505th nationally. This area also had the lowest median wage in the state at \$14.56.

STEM

STEM is a subgroup of occupations that require postsecondary education. Most of these technical occupations require at least a bachelor's degree. These occupations tend to be well paid, with a median hourly wage for STEM occupations in Michigan at \$38.23, more than double the median wage of all occupations.

Michigan ranked very strongly in terms of the percentage of STEM jobs (7.3 percent of all occupations), which was the 8th highest in the U.S. This was largely due to the strength of *Engineering* jobs in Michigan, discussed in a previous section.

There were three Michigan metro areas that ranked highly for STEM concentration in

Michigan: Ann Arbor, Detroit, and Midland. All three areas had a STEM job share of at least 9 percent, with Ann Arbor leading the way at 11 percent. Of 529 metro and nonmetropolitan areas in the U.S., Ann Arbor ranked 14th, Detroit 25th, and Midland 31st in the STEM share of jobs. However, in terms of total STEM employment, the Detroit region led the way, with about 60 percent of all STEM jobs in Michigan. At \$41.17, the Detroit region also had the highest median wage for STEM jobs in the state.

Public Sector Jobs

Michigan had 573,950 public sector jobs, making up 13.3 percent of all occupational employment in Michigan, but below the national share of 15.0 percent. The median hourly wage for public sector jobs in Michigan was \$23.86, which while above the overall statewide median was below the national public sector wage of \$24.49. The primary reason for the higher average wages in the public sector was the composition of occupations in this group. Of the 10 largest occupations in the state, only one requires a bachelor's degree and five require no formal education. For the top 10 largest occupations in the public sector, five require a bachelor's degree and all of them require at least a high school diploma.

More Information

For more information on the OES program or additional data on employment and wages in Michigan and its regions, please contact the Bureau of Labor Market Information and Strategic Initiatives or the author of this article.

ROB WALKOWICZ
Economic Specialist

SEASONALLY ADJUSTED MICHIGAN JOB ADS DECLINE IN FEBRUARY

For the fourth straight year, Michigan recorded a reduction in seasonally adjusted job advertisements from January to February. The 0.6 percent drop to about 151,400 was the smallest February reduction of the previous three years.

Nationally, job ads rose 3.2 percent in February. Job posting trends among Michigan's regional states were mixed for the month. Illinois, Ohio, and Indiana recorded monthly job advertisement gains (+2.6, +3.0, and +2.4 percent respectively), while Wisconsin had a reduction in postings (-1.7 percent).

Ad Rate Contracts in February

Michigan's ad rate, or the number of job advertisements per 100 people in the labor force, was down slightly over the month to 3.07. The lower rate resulted from fewer job ads and an increase in the labor force in February. The national ad rate also exhibited a reduction to 3.21.

The number of unemployed persons per job advertisement, also referred to as the supply/

demand rate, edged down for the third straight month to 1.29. The supply/demand rate declined over the month as the number of Michigan unemployed fell more than the drop in job ads.

Non-seasonally Adjusted Ads

Information is available on advertised jobs by broad occupational group from the Help Wanted Online Data Series, but the data is *not seasonally adjusted*.

Non-seasonally adjusted job advertisements were up in February in 12 of 14 Michigan metro areas. Ann Arbor posted the largest percentage gain in ads of 14.5 percent (+992 ads) followed by Detroit and Monroe at 10.5 percent each (+6,523 and +130 ads respectively). Only Muskegon and Bay City posted fewer job ads over the month (-2.2 and -2.6 percent respectively).

Total non-seasonally adjusted job advertisements advanced over the month by 8.2 percent (+10,879 ads) to 143,387. All major occupational categories posted a monthly

increase in job ads. The largest numeric gain in postings was among *Professional* jobs (+3,413 ads) and *Service* jobs (+1,327). The largest percentage additions were in *Farming, fishing, and forestry* (+42.7 percent) and *Transportation* (+16.9 percent).

Job ads for full-time positions continue to lead, comprising 7 in 10 of all ads. Part-time job ads made up 21 percent of job postings followed by those for contract jobs (6 percent) and internships (1 percent).

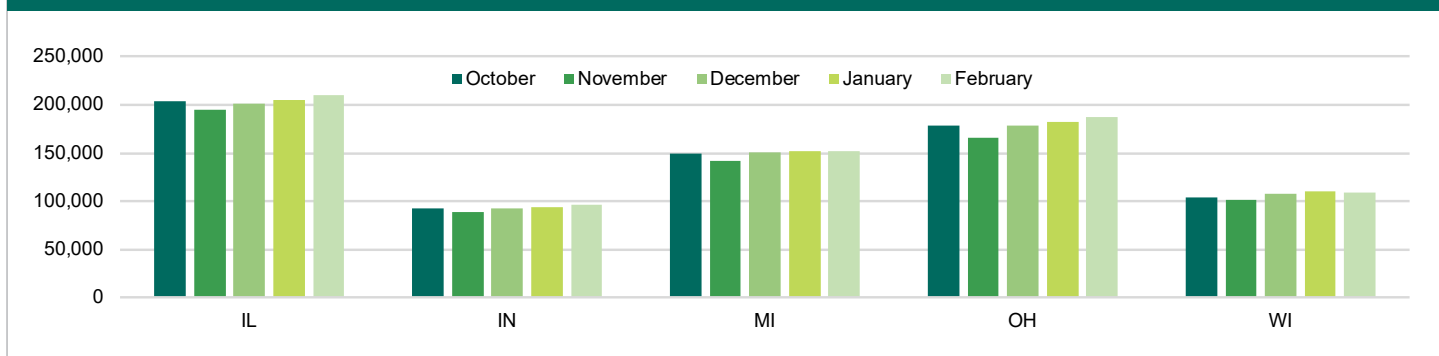
Among the top 50 occupations with the most job ads, 19 required a bachelor's degree, 20 required a high school diploma or equivalent, and 7 required no formal education credential. Eight of the top 50 job postings required moderate term on-the-job training, 17 required short-term training, with the remaining showing no training requirement.

MARCUS REASON
Economic Analyst

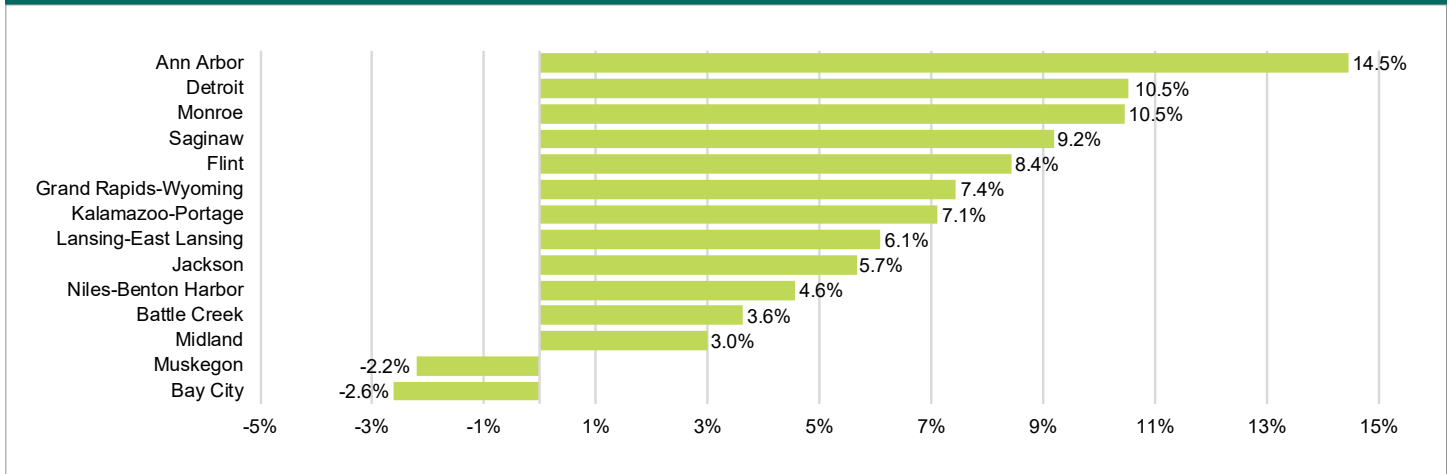
EDUCATION REQUIREMENTS OF TOP 50 ADS



MONTHLY CHANGE IN JOB ADS, SELECTED STATES



MONTHLY CHANGE IN JOB ADS BY METRO AREA



JOB ADS BY OCCUPATION (NOT SEASONALLY ADJUSTED)

OCCUPATION CATEGORIES	FEBRUARY 2019	JANUARY 2019	FEBRUARY 2018	OVER THE MONTH	
				LEVEL	PERCENT
TOTAL	143,387	132,508	154,652	10,879	8.2%
Administrative Support	14,082	13,104	15,183	978	7.5%
Office and Administrative Support	14,082	13,104	15,183	978	7.5%
Construction and Repair	7,774	7,004	9,328	770	11.0%
Construction and Extraction	1,957	1,663	2,866	294	17.7%
Installation, Maintenance, and Repair	5,817	5,341	6,462	476	8.9%
Farming, Fishing, and Forestry	421	295	372	126	42.7%
Farming, Fishing, and Forestry	421	295	372	126	42.7%
Healthcare	22,923	22,172	27,100	751	3.4%
Healthcare Practitioners and Technical	17,025	16,684	20,639	341	2.0%
Healthcare Support	5,898	5,488	6,461	410	7.5%
Management	10,038	9,122	10,487	916	10.0%
Management	10,038	9,122	10,487	916	10.0%
Production	4,507	4,249	5,593	258	6.1%
Production	4,507	4,249	5,593	258	6.1%
Professional	38,736	35,323	39,922	3,413	9.7%
Architecture and Engineering	7,499	6,709	8,042	790	11.8%
Arts, Design, Entertainment, Sports, and Media	2,717	2,380	2,970	337	14.2%
Business and Financial Operations	7,186	6,569	7,479	617	9.4%
Community and Social Services	2,876	2,807	3,089	69	2.5%
Computer and Mathematical	11,284	9,900	11,124	1,384	14.0%
Education, Training, and Library	5,350	5,267	5,559	83	1.6%
Legal	381	342	333	39	11.4%
Life, Physical, and Social Science	1,443	1,349	1,326	94	7.0%
Sales	18,315	17,252	19,547	1,063	6.2%
Sales and Related	18,315	17,252	19,547	1,063	6.2%
Service	17,757	16,430	17,715	1,327	8.1%
Building and Grounds Cleaning and Maintenance	3,160	2,723	3,898	437	16.0%
Food Preparation and Serving Related	10,064	9,448	8,625	616	6.5%
Personal Care and Service	2,436	2,209	2,700	227	10.3%
Protective Service	2,097	2,050	2,492	47	2.3%
Transportation	8,834	7,557	9,405	1,277	16.9%
Transportation and Material Moving	8,834	7,557	9,405	1,277	16.9%

RELEVANT RANKINGS

MEDIAN WAGE HOURLY WAGE BY STATE			
RANK	AREA	MEDIAN	TOTAL EMPLOYMENT
1	District of Columbia	\$34.46	712,370
2	Massachusetts	\$23.40	3,571,360
3	Alaska	\$23.09	315,250
4	Connecticut	\$22.56	1,660,200
5	Washington	\$22.17	3,259,150
23	Wisconsin	\$18.25	2,848,560
24	Michigan	\$18.08	4,317,830
25	Ohio	\$17.96	5,416,810
26(T)	Maine	\$17.85	605,550
26(T)	Nebraska	\$17.85	978,290
47	South Dakota	\$16.08	422,310
48	Louisiana	\$16.05	1,913,770
49	West Virginia	\$15.69	696,620
50	Arkansas	\$15.31	1,210,120
51	Mississippi	\$14.70	1,123,830

Source: DTMB, Bureau of Labor Market Information and Strategic Initiatives, Occupational Employment Statistics (OES)

MEDIAN HOURLY WAGE BY MAJOR GROUP

MAJOR GROUP	MEDIAN WAGE	NATIONAL RANK
Management Occupations	\$48.90	19
Architecture and Engineering Occupations	\$38.88	17
Computer and Mathematical Occupations	\$36.55	27
Legal Occupations	\$32.98	28
Healthcare Practitioners and Technical Occupations	\$31.26	22
Business and Financial Operations Occupations	\$31.14	24
Life, Physical, and Social Science Occupations	\$27.16	36
Construction and Extraction Occupations	\$23.26	19
Education, Training, and Library Occupations	\$22.78	28
Community and Social Service Occupations	\$22.08	19
Arts, Design, Entertainment, Sports, and Media Occupations	\$21.57	21
Installation, Maintenance, and Repair Occupations	\$21.28	28
Protective Service Occupations	\$19.02	29
Michigan	\$18.08	24
Production Occupations	\$17.10	30
Office and Administrative Support Occupations	\$16.73	26
Transportation and Material Moving Occupations	\$15.67	29
Healthcare Support Occupations	\$14.27	24
Farming, Fishing, and Forestry Occupations	\$13.09	41
Sales and Related Occupations	\$12.94	27
Building and Grounds Cleaning and Maintenance Occupations	\$12.26	28
Personal Care and Service Occupations	\$11.23	30
Food Preparation and Serving Related Occupations	\$10.09	32

Source: DTMB, Bureau of Labor Market Information and Strategic Initiatives, Occupational Employment Statistics (OES)

DATA SPOTLIGHT: MICHIGAN SHORT-TERM EMPLOYMENT PROJECTIONS

Each year, the Bureau of Labor Market Information and Strategic Initiatives releases short-term employment projections that run through the second quarter of the following year and cover both industries and occupations in Michigan. In February, the Bureau released short-term employment projections for the period of the second quarter 2018 through the second quarter of 2020. The projections, much like the current series of long-term employment projections, see Michigan continuing to record relatively strong employment growth through the middle of 2020.

Michigan employment is projected to expand by 89,820, or 1.9 percent, over the two-year period. Although the pace of growth is somewhat lower than the previous 2017 Q2 - 2019 Q2 growth rate, the difference is attributable to the positive performance of the labor market. The rate of employment growth is expected to decline not due to a downturn in the labor market but rather as a result of a strong market. It is becoming more difficult to increase employment levels due to the tightness of the job market, as employers attempt to fill job vacancies.

Industry

The fastest-growing sectors over the two-year period, seen in Table 1, are expected to be *Construction* and *Government*, while the sectors expected to be the greatest contributors to employment growth are *Education and health services* and *Professional and business services*. Both *Education and health services* and *Professional and business services* are large sectors that are adding jobs at a similar rate to the statewide average, but add many more jobs than average due to their large employment size. No entire sector is expected to see a decline in employment over the 2-year period, but the slowest-growing areas of employment are expected to be *Information* and *Natural resources and mining*.

Growth in the *Construction* sector is expected to be fastest in the *Construction of buildings* industry, with nearly 60 percent of new jobs in the industry stemming from *Residential building construction*. The portion of the *Construction* sector employed in *Specialty trade contractors* will add the most jobs in this sector.

Jobs in the *Manufacturing* sector are expected to expand slightly slower than total employment through the second quarter of 2020, with

TABLE 1: MICHIGAN INDUSTRY SECTOR PROJECTIONS

SECTOR	2018 Q2	2020 Q2	2-YEAR NUMERIC CHANGE	2-YEAR PERCENT CHANGE
Total, All Industries	4,710,580	4,800,400	89,820	1.9%
Self Employed Workers, All Jobs	223,100	228,380	5,280	2.4%
Natural Resources and Mining	61,880	62,570	690	1.1%
Construction	171,470	178,930	7,460	4.4%
Manufacturing	630,730	639,850	9,120	1.4%
Trade, Transportation, and Utilities	787,360	798,340	10,980	1.4%
Information	56,460	57,000	540	1.0%
Financial Activities	204,460	209,140	4,680	2.3%
Professional and Business Services	666,850	679,310	12,460	1.9%
Educational and Health Services	1,017,810	1,036,480	18,670	1.8%
Leisure and Hospitality	441,160	447,230	6,070	1.4%
Other Services (except Government)	184,270	187,150	2,880	1.6%
Government	265,030	276,020	10,990	4.1%

most of its 9,120 projected job increase coming from *Durable goods manufacturing* and *Miscellaneous manufacturing*. The *Transportation equipment manufacturing* industry, an important influence on Michigan's economy, is expected to expand jobs by 1.6 percent over the period, just below the statewide rate of 1.9 percent. *Miscellaneous manufacturing* is expected to contribute about one in every three new jobs in the *Manufacturing* sector, expanding by 3,390, or 12.8 percent. *Miscellaneous manufacturing* contains employers creating a wide variety of products, including medical equipment and supplies, jewelry, sporting goods, and musical instruments, as examples.

The *Retail trade* industry is expected to remain relatively flat over the two-year period. Within the industry, the fastest-growing areas are expected to be *Miscellaneous store retailers* and *Nonstore retailers*, up by nearly 6 percent and 5 percent, respectively. Conversely, the largest percentage decreases in employment are expected to be in *Sporting goods, hobby, book, and music stores* and *Clothing and clothing accessory stores*, two areas that have been

hard hit by retail spending increasingly moving to e-commerce.

Expected job increases in the *Education and health services* sector are largely driven by expectations for growth in *Health care and social assistance*. These gains are expected to be spread relatively evenly across the industry, with the greatest number of projected employment advances coming from *Ambulatory health care services*. Gains in the sector contributed by *Educational services* (including public education) will largely be driven by *Colleges, universities, and professional schools*, offsetting losses expected at the *Elementary and secondary school* level.

Leisure and hospitality, an extremely important sector for many parts of the state, is expected to grow below the statewide average, adding 6,070 new jobs to the sector for a 1.4 percent increase in employment. *Accommodation and food service* will contribute most of these new jobs, with a majority of those coming from *Food service and drinking places*. Employment in the *Accommodation* portion of the industry will expand at a similar rate, but is expected to contribute just over 500 new jobs to the sector.

TABLE 2: OCCUPATIONS WITH THE GREATEST NUMBER OF NEW JOBS REQUIRING LESS THAN A BACHELOR'S DEGREE AND AT LEAST SOME TRAINING BEYOND HIGH SCHOOL

SOC TITLE	2018 Q2	2020 Q2	2-YEAR NUMERIC CHANGE	2-YEAR PERCENT CHANGE	ANNUAL AVERAGE JOB OPENINGS
Personal Care Aides	43,960	46,370	2,410	5.5%	7,520
Home Health Aides	28,090	29,900	1,810	6.4%	4,130
Heavy and Tractor-Trailer Truck Drivers	58,310	59,830	1,520	2.6%	6,970
Customer Service Representatives	93,100	94,460	1,360	1.5%	12,510
Light Truck or Delivery Services Drivers	31,300	32,510	1,210	3.9%	3,960
Carpenters	28,620	29,790	1,170	4.1%	3,210
Sales Representatives, Wholesale and Manufacturing	53,240	54,410	1,170	2.2%	5,960
Nursing Assistants	53,010	54,030	1,020	1.9%	6,470
Maintenance and Repair Workers, General	44,750	45,660	910	2.0%	4,810
Electricians	24,930	25,710	780	3.1%	3,150

In a notable exception to recent trends, *Government* will be the source of a large number of new jobs in the second quarter of 2020. This is due to the coincidence of the projection period with the 2020 Decennial Census. Census counts are sources of huge influxes of temporary employment in every state's public sector, which can be seen in the 10,570-job increase expected in Michigan's *Federal government administration, excluding post office employment*. These jobs are limited in term and most frequently appear in the form of Census Enumerators, employees who visit and interview Census non-respondents in order to provide the federal government with the most complete count of U.S. residents possible. At the state and local levels of government, there is expected to be little change in employment.

Occupation

Projections of employment by occupation show many of the same trends seen in the industry projections, such as high growth expected for health- and construction-related jobs, but they also provide pieces of additional information that deliver valuable insight for jobseekers and workforce professionals. This extra information comes in the form of expected annual openings for each occupation. Annual openings data show the level of new workers needed in an occupation due to others' exit from the labor force or transfer to another occupational area.

The greatest sources of annual job openings are expected to come from *Office and administrative support* and *Food preparation and serving related occupations*. Due to a near-equal mix of labor

force exits and occupational transfers, these groups, respectively, are expected to have about 83,000 and 70,700 openings for new entrants each year. These two occupational groups have another common factor—most of the openings within these groups are for occupations which require little education and training, such as *Combined food preparation and serving workers* (most frequently found in fast food), and *Office clerks, general*. While these types of occupations do not offer high wages, they do offer a job opportunity for workers who do not have the training or education needed for other types of occupations.

As previously noted, *Construction and extraction occupations*, the occupational group most closely tied to the *Construction* industry, will be a strong source of Michigan employment gains. The group will also provide many opportunities for new workers, having about 20,000 openings each year. The majority of these openings are expected to come from workers transferring to other occupational groups. Within the large *Construction and extraction group*, the greatest number of annual openings are expected in *Construction laborers*, *Carpenters*, and *Electricians*.

In fact, the greatest utility of the short-term projections for job-seekers may be for occupations such as *Carpenters*, *Electricians*, and *others* in Table 2. Within the narrow, 2-year projection period, occupations which require a bachelor's degree may not be available to some, due to the time it takes to complete

a degree. However, occupations such as *Carpenters* and *Electricians* are potentially attainable for these workers as the projection endpoint is near the time of potential entry into these occupations. Additionally, occupations which require less than a bachelor's degree are expected to be the fastest-growing educational group over the 2-year period. Some other examples of fast-growing occupations that require less than a four-year degree include *Personal care aides*, *Home health aides*, and *Heavy and tractor-trailer truck drivers*.

This Summer: Regional Projections

In early July, the Bureau of Labor Market Information and Strategic Initiatives will release long-term projections for Michigan's ten Prosperity Regions. This data will cover the same 2016-2026 time period as the statewide employment projections released in July of 2018. Like the statewide projections and the newly released short-term projections, they will include breakdowns of data by both industry and occupation. To receive updates on these data as soon as they are available, sign up for our emails from the GovDelivery system using the link found on our homepage at www.michigan.gov/lmi.

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