

MICHIGAN'S LABOR MARKET NEWS

A man with a beard, wearing an orange t-shirt, is focused on his work in a workshop. He is using a pair of pliers to work on a metal cup. The background shows the wooden framing of a building under construction.

VOL. 75, ISSUE NO. 5
JULY 2019

Employment Projections Through 2026 for Michigan Regions

Feature Article pg. 16

Infographic of the Month: Projected Regional Employment Growth by Education Level

pg. 15

Occupational Focus: Industrial Engineers

pg. 20

Michigan jobless rate inched up by a tenth of a percentage point in May.

MAY 2019 JOBLESS RATE

MICHIGAN
4.2%
NATIONAL
3.6%

TABLE OF CONTENTS

4	Michigan Employment and Unemployment Trends
6	Michigan Job Trends by Industry Sector
10	Regional Labor Market Analysis
15	Infographic of the Month: Projected Regional Employment Growth by Education Level
16	Feature Article: Employment Projections Through 2026 for Michigan Regions
20	Occupational Focus: Industrial Engineers
22	Michigan Online Job Advertisements
24	Relevant Rankings
26	Ask the Economist



BRUCE WEAVER
EDITOR
Economic Manager
WeaverB1@michigan.gov



KEVIN DOYLE
CONTRIBUTOR
Projections Specialist
DoyleK4@michigan.gov



MARCUS REASON
CONTRIBUTOR
Economic Analyst
ReasonM@michigan.gov



MARK REFFITT
PROJECT MANAGER
Economic Specialist
ReffittM@michigan.gov



EVAN LINSKEY
CONTRIBUTOR
Economic Analyst
LinskeyE@michigan.gov



DALIA SALLOUM
CONTRIBUTOR
Economic Analyst
SalloomD@michigan.gov



HAILEY BARRUS
DESIGNER
Communications Representative
BarrusH1@michigan.gov



LEONIDAS MUREMBYA
REGIONAL CONTRIBUTOR
Economic Specialist
MurembyaL@michigan.gov



JEFFREY AULA
CONTRIBUTOR
Economic Analyst
AulaJ@michigan.gov



SHIBANI PUTATUNDA
CONTRIBUTOR
Economic Analyst
PutatundaS@michigan.gov

COVER PHOTO: Claire Abendroth, Photographer
Talent and Economic Development Department of Michigan

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.

The state jobless rate inched up in May to 4.2 percent, largely reflecting an increase in the state's labor force. The uptick placed Michigan six-tenths of a percentage point above the national rate of 3.6 percent.

Michigan's jobless rate matched its May 2018 rate.

The state's total nonfarm job count fell slightly in May to 4,438,400. Job declines were the result of temporary layoffs in *Transportation equipment manufacturing* and job reductions in *Retail trade*. Over the year, payroll jobs were up 23,400 or 0.5 percent.

In this month's edition of *Michigan's Labor Market News*, we highlight our newly released regional employment projections. These 10-year projections identify the industries and occupations that are expected to see employment growth, and provide opportunities for jobseekers, through 2026.

Our *Infographic of the Month* uses the long-term Employment Projections Data to show projected employment growth by education level while our *Occupational Focus* highlights *Industrial engineers*, an example of a high-demand, high-wage job title. Finally, our *Ask the Economist* provides an overview of the *Career Outlook* brochures, which are based on our long-term employment projections.

We hope you enjoy this edition of *Michigan'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
PalmerJ2@michigan.gov

MAY MICHIGAN UNEMPLOYMENT RATE UP TO 4.2 PERCENT

The seasonally adjusted Michigan jobless rate inched up by a tenth of a percentage point in May to 4.2 percent. Total employment remained unchanged in May while the number of unemployed advanced by 5,000. The state's workforce rose for the ninth consecutive month.

The state's May 2019 jobless rate was six-tenths of a percentage point above the national rate of 3.6 percent.

Michigan's jobless rate remained unchanged over the year. The national unemployment rate declined by two-tenths of a percentage point since May 2018.

Over the year, total employment in the state rose by 46,000, or 1.0 percent. Overall unemployment edged up by 3,000, or 1.5 percent. The national total employment level advanced by 0.9 percent while unemployment declined by 3.9 percent during this period.

Michigan's workforce level continued to advance in May, but the monthly increase was about half the average growth of the prior four months. The state labor force moved up by 59,000, or

1.2 percent, since August of 2018. Michigan's unemployment level rose for the third consecutive month, reaching the highest level since April 2018.

Michigan Jobless Rate Down Since 2015, But Lags the Drop Nationally

A comparison of the monthly national versus Michigan jobless rates during the four-year period between May 2015 and May 2019 reveals deviating trends in 2017 and during the first five months of 2019.

During the second half of 2015, and most of 2016, unemployment rates in the U.S and Michigan were very similar, trending down from 5.6 percent in May 2015 to about 5.0 percent in September 2016.

November and December of 2015, as well as March of 2016, were the only three months during the four-year period of May 2015 to May 2019 that the national rate exceeded that of the state.

As of the fourth quarter of 2016, Michigan's jobless rate was above the national rate, as the

U.S. rate fell to 4.8 percent while the Michigan rate remained at 5.1 percent.

2017 saw a comparable trend, with similar jobless rates in the first half of the year, and the national rates moving well below the Michigan averages in the fall and winter of 2017. The national rate of 4.1 percent in December 2017 was a half a percentage point below the state rate.

Recent monthly data for 2019 displayed a similar deviation, with the largest difference for the four-year period of six-tenths of a percentage point recorded in May of 2019.

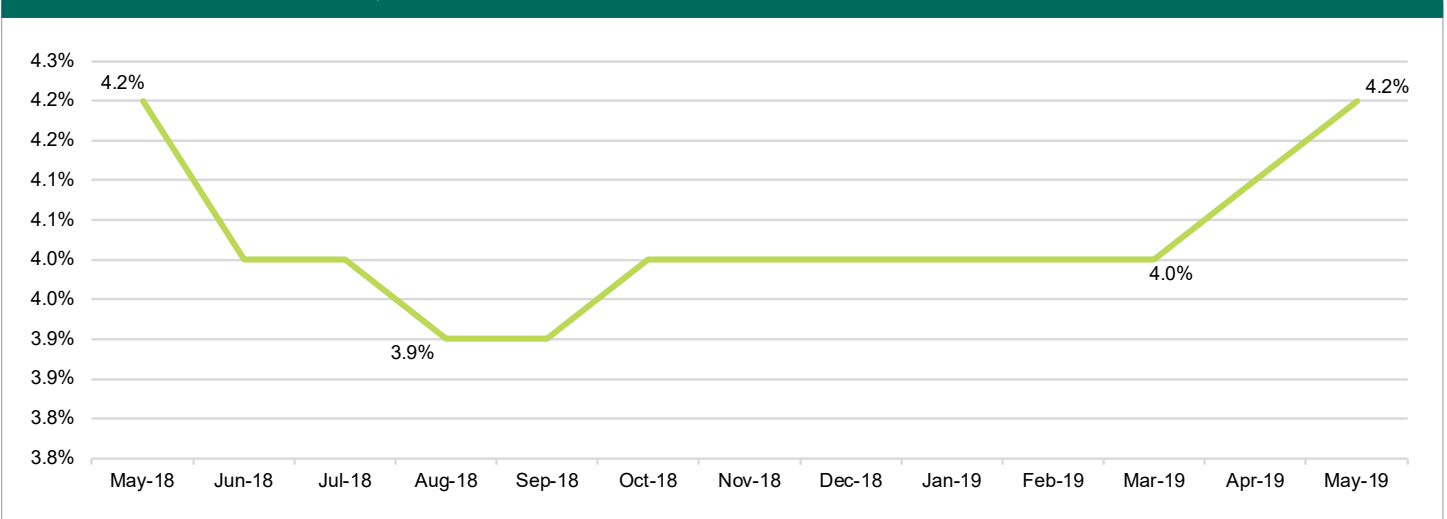
Over the four-year period between 2015 and 2019, both the Michigan and national jobless rates declined substantially. Between May 2015 and May of 2019, the statewide rate fell by 1.4 percentage points, from 5.6 to 4.2 percent. The national rate had an even more pronounced reduction, down by 2.0 percentage points since May of 2015.

SHIBANI PUTATUNDA
Economic Analyst

MICHIGAN LABOR FORCE ESTIMATES (SEASONALLY ADJUSTED)

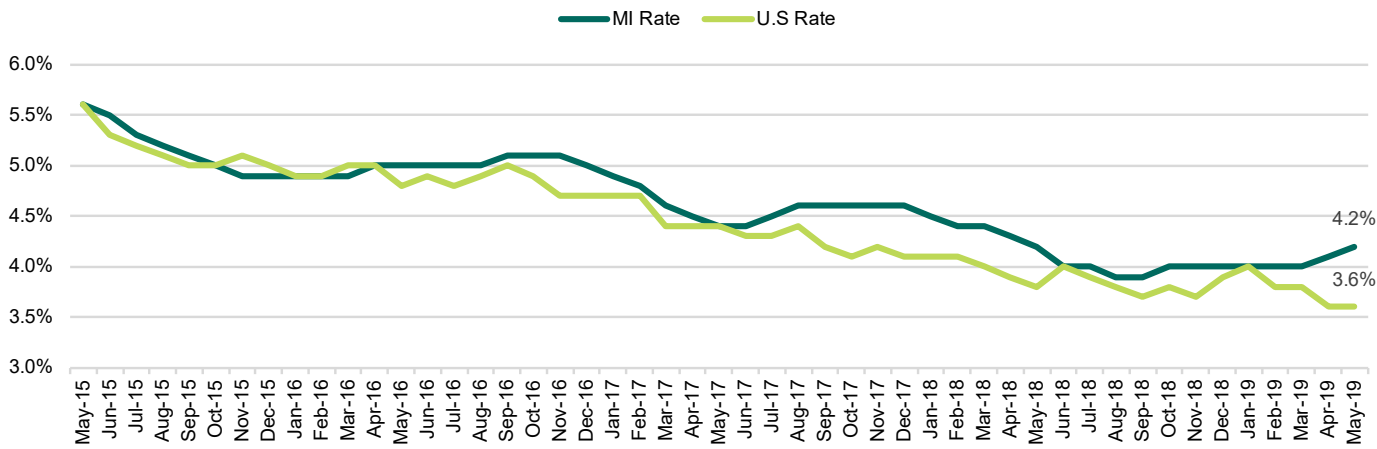
	MAY 2019	APRIL 2019	MAY 2018	CHANGE OVER THE MONTH	CHANGE OVER THE YEAR
Labor Force	4,953,000	4,947,000	4,904,000	+6,000	+49,000
Employed	4,746,000	4,746,000	4,700,000	0	+46,000
Unemployed	207,000	202,000	204,000	+5,000	+3,000
Jobless Rate	4.2	4.1	4.2	+0.1	0.0

MICHIGAN JOBLESS RATES, MAY 2018—MAY 2019





JOBLESS RATES 2015—2019, MICHIGAN VS. U.S.



MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

Monthly Overview

Total nonfarm payroll jobs in Michigan declined by 6,400 in May to 4,438,400. The broad sectors that accounted for most of this decrease were *Trade, transportation and utilities* (-5,400) and *Manufacturing* (-2,000). Job reductions were also reported in *Education and health services* (-1,600), *Government* (-1,400), *Construction* (-900), and *Other services* (-300).

These losses were offset somewhat by payroll additions in *Professional and business services* (+2,600), *Leisure and hospitality* (+1,800), and *Information* (+800). Job levels in *Mining and logging* and *Financial activities* remained unchanged over the month. Jobs fell in May in the *Transportation equipment manufacturing* sector (-2,400) due to a temporary retooling-related layoff.

Over the Year Analysis

Since May 2018, industry jobs in Michigan rose by 23,400 or 0.5 percent. This lagged behind the 1.6 percent job growth rate nationally during this period. In Michigan, job gains over the past year occurred in most major sectors. The exception was *Education and health services* (-5,600). The largest over-the-year additions were recorded in *Leisure and hospitality* (+9,800), *Manufacturing* (+4,200), *Financial activities* (+3,700), and *Construction* (+3,300). Notable payroll job gains also occurred in *Other services* (+2,500), *Professional and business services* (+2,400), and *Information* (+2,200).

Michigan vs. U.S. Job Change by Industry

In Michigan, total nonfarm payroll employment remained essentially unchanged (+0.1 percent) during the first five months of 2019, up by just 6,200 jobs. This was below the 0.5 percent growth rate nationally during this period and below the 0.7 percent expansion in Michigan during 2018.

Michigan industry sectors with job growth rates in excess of the national average since December 2018 included *Mining and logging*, *Information*, *Financial activities*, *Leisure and hospitality*, and *Other services*.

The broad sectors where Michigan has performed at or below the national average rate of job change so far in 2019 include *Government*, *Construction*, *Manufacturing*,

Trade, transportation, and utilities, *Professional and business services*, and *Education and health services*.

Significant Industry Employment Developments

LEISURE AND HOSPITALITY

Leisure and hospitality jobs increased by 1,800 in May. This gain occurred in both *Arts, entertainment, and recreation* (+1,300) and *Accommodation and food services* (+500). These subsectors consist of firms that have a strong seasonal component connected to the state's tourism industry, and initial hiring begins in the spring. Hiring was above average over the past three months in *Arts, entertainment, and recreation* and near average in *Accommodation and food services*. Since May 2018, jobs in the broad sector have expanded by 9,800 or by 2.3 percent. Most of this gain occurred in *Accommodation and food services* (+8,800). Nationally, employment moved up by 26,000 over the month and by 2.6 percent over the year.

DURABLE GOODS MANUFACTURING

Payrolls in *Durable goods manufacturing* declined by 2,000 jobs in May. This was primarily due to a temporary layoff in *Transportation equipment manufacturing* (-2,400). The monthly reduction in jobs was lessened somewhat by above average employment gains in the *Machinery manufacturing* and *Fabricated metal product manufacturing* industries. For the five-month period ending in May 2019, job levels in *Durable goods manufacturing* declined by 500 but were up by 6,300 since May 2018. Nationally, employment rose by 4,000 in May and by 1.8 percent over the year.

RETAIL TRADE

The number of *Retail* jobs dropped by 5,500 during May and marked the fourth consecutive month of contraction in this sector. Part of the May decrease reflected weaker-than-typical hiring in *Food and beverage stores*, *Miscellaneous store retailers*, and *Motor vehicle and parts dealers*. Payroll reductions in *Healthcare and personal care stores* and *General merchandise stores* were also a contributing factor. Between May 2018 and May 2019, *Retail trade* payrolls were down by 8,200 jobs or 1.7 percent. The subsectors that accounted for much of this reduction were *Clothing and clothing accessories stores*, *Sporting goods, hobby, book, and music stores*, and *General merchandise stores*.

Nationally, job levels fell by 7,600 over the month and by 0.5 percent over the year.

METROPOLITAN STATISTICAL AREAS (MSAS)

On a *not seasonally adjusted basis*, nonfarm jobs increased in 12 of the 14 Michigan metro areas during May. These job gains ranged from +0.2 percent in Saginaw and Kalamazoo to +1.7 percent in Muskegon. Michigan jobs rose by 1.0 percent over the month.

Besides Muskegon, above-average gains were recorded in Battle Creek (+1.2 percent), Detroit and Benton Harbor (+1.3 percent each), Jackson (+1.5 percent), and Midland (+1.6 percent). Strong seasonal job additions in *Leisure and hospitality* occurred in May in many of these areas.

The decline in total nonfarm jobs in the Flint metro area was primarily due to temporary layoffs in the auto sector, while the Ann Arbor metro area experienced a typical seasonal job decrease in area colleges and universities.

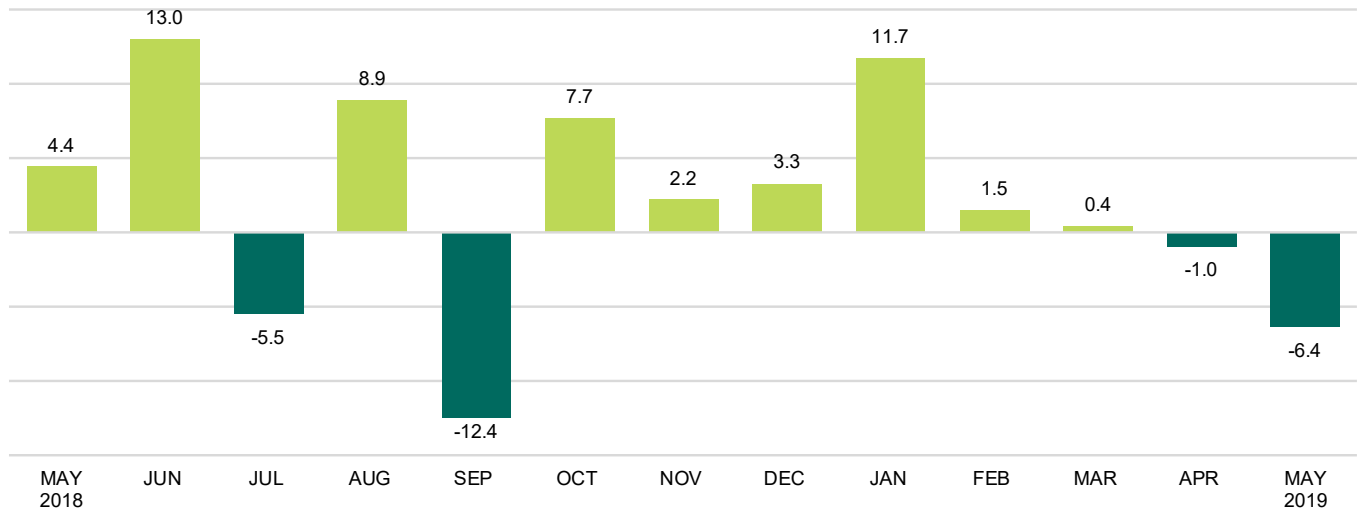
JEFFREY AULA
Economic Analyst



MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)

INDUSTRY	MAY 2019	APRIL 2019	MAY 2018	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	4,438,400	4,444,800	4,415,000	-6,400	-0.1%	23,400	0.5%
Total Private	3,832,100	3,837,100	3,809,300	-5,000	-0.1%	22,800	0.6%
Private Service-Providing	3,019,900	3,022,000	3,004,700	-2,100	-0.1%	15,200	0.5%
GOODS-PRODUCING	812,200	815,100	804,600	-2,900	-0.4%	7,600	0.9%
Mining, Logging, and Construction	179,600	180,500	176,200	-900	-0.5%	3,400	1.9%
Mining and Logging	7,300	7,300	7,200	0	0.0%	100	1.4%
Construction	172,300	173,200	169,000	-900	-0.5%	3,300	2.0%
Manufacturing	632,600	634,600	628,400	-2,000	-0.3%	4,200	0.7%
Durable Goods	481,600	483,800	475,300	-2,200	-0.5%	6,300	1.3%
Transportation Equipment Manufacturing	193,800	196,200	192,200	-2,400	-1.2%	1,600	0.8%
Non-Durable Goods	151,000	150,800	153,100	200	0.1%	-2,100	-1.4%
SERVICE-PROVIDING	3,626,200	3,629,700	3,610,400	-3,500	-0.1%	15,800	0.4%
Trade, Transportation, and Utilities	790,900	796,300	790,700	-5,400	-0.7%	200	0.0%
Wholesale Trade	173,000	172,800	171,800	200	0.1%	1,200	0.7%
Retail Trade	463,400	468,900	471,600	-5,500	-1.2%	-8,200	-1.7%
Transportation, Warehousing, and Utilities	154,500	154,600	147,300	-100	-0.1%	7,200	4.9%
Information	58,000	57,200	55,800	800	1.4%	2,200	3.9%
Financial Activities	222,100	222,100	218,400	0	0.0%	3,700	1.7%
Finance and Insurance	166,400	166,000	163,900	400	0.2%	2,500	1.5%
Real Estate and Rental and Leasing	55,700	56,100	54,500	-400	-0.7%	1,200	2.2%
Professional and Business Services	661,400	658,800	659,000	2,600	0.4%	2,400	0.4%
Professional, Scientific, and Technical Services	303,000	301,000	298,400	2,000	0.7%	4,600	1.5%
Management of Companies and Enterprises	68,400	68,400	68,600	0	0.0%	-200	-0.3%
Administrative and Support and Waste Management and Remediation Services	290,000	289,400	292,000	600	0.2%	-2,000	-0.7%
Education and Health Services	674,500	676,100	680,100	-1,600	-0.2%	-5,600	-0.8%
Educational Services	72,700	73,800	74,200	-1,100	-1.5%	-1,500	-2.0%
Health Care and Social Assistance	601,800	602,300	605,900	-500	-0.1%	-4,100	-0.7%
Leisure and Hospitality	443,400	441,600	433,600	1,800	0.4%	9,800	2.3%
Arts, Entertainment, and Recreation	54,300	53,000	53,300	1,300	2.5%	1,000	1.9%
Accommodation and Food Services	389,100	388,600	380,300	500	0.1%	8,800	2.3%
Other Services	169,600	169,900	167,100	-300	-0.2%	2,500	1.5%
Government	606,300	607,700	605,700	-1,400	-0.2%	600	0.1%
Federal Government	52,400	52,500	52,200	-100	-0.2%	200	0.4%
State Government	191,100	192,500	191,400	-1,400	-0.7%	-300	-0.2%
Local Government	362,800	362,700	362,100	100	0.0%	700	0.2%

MICHIGAN OVER THE MONTH PAYROLL JOB CHANGE (IN THOUSANDS)



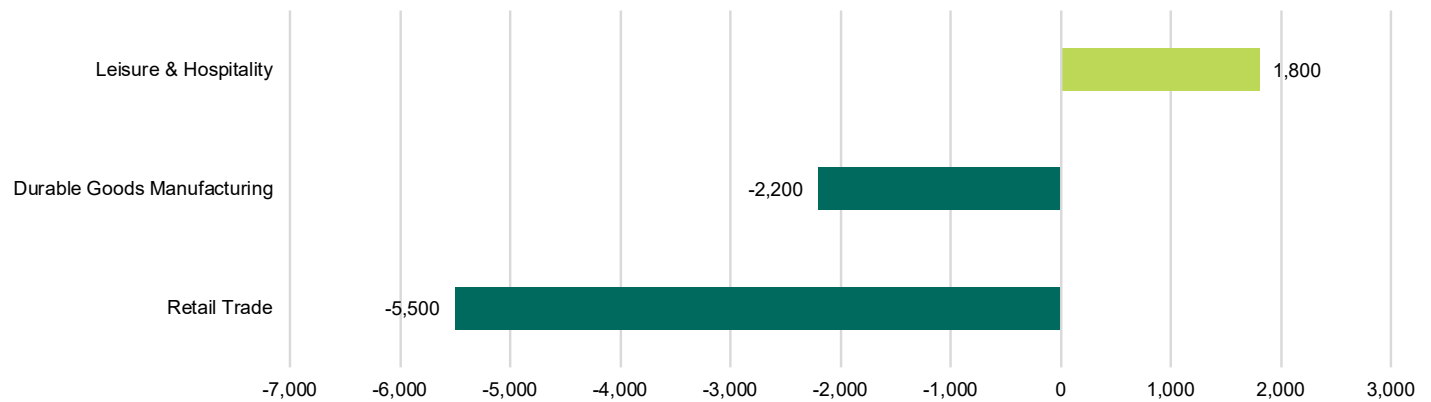
JOB CHANGE BY MAJOR INDUSTRY SECTOR, DECEMBER 2018–MAY 2019

MAJOR INDUSTRY SECTOR	MICHIGAN	U.S.
TOTAL NONFARM	0.1%	0.5%
Mining and Logging	2.8%	0.7%
Construction	-1.3%	1.1%
Manufacturing	-0.3%	0.2%
Trade, Transportation, and Utilities	-0.4%	0.1%
Information	4.1%	-1.1%
Financial Activities	0.9%	0.4%
Professional and Business Services	-0.1%	0.8%
Educational and Health Services	-0.4%	1.1%
Leisure and Hospitality	2.0%	1.0%
Other Services	1.8%	0.8%
Government	0.1%	0.1%

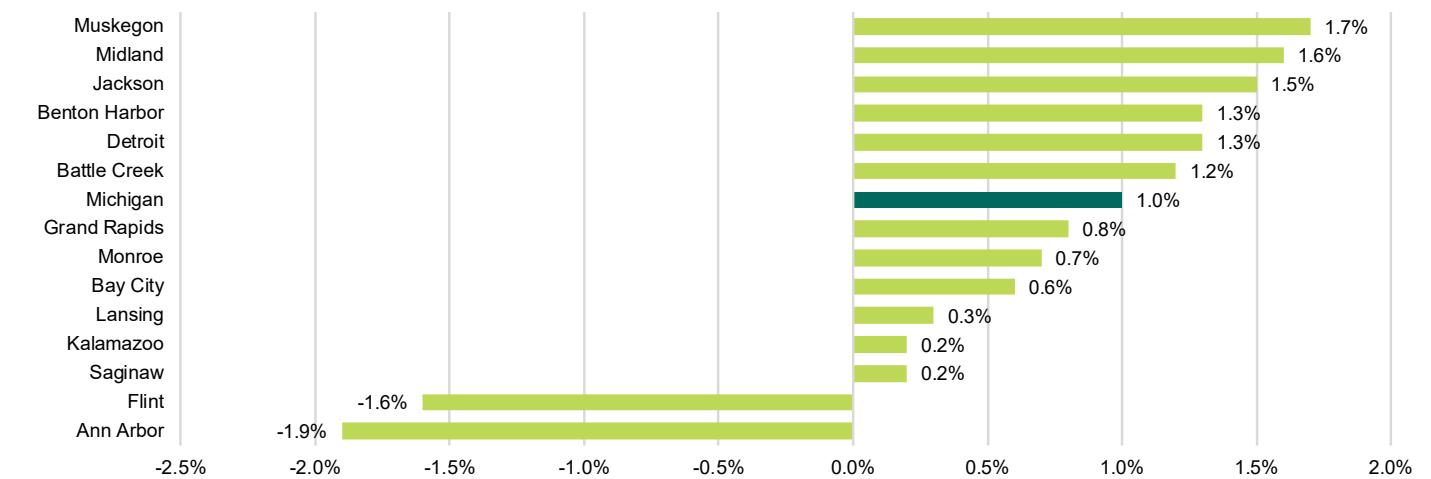




MICHIGAN OVER THE MONTH JOB CHANGE BY SELECT INDUSTRY, APRIL 2019–MAY 2019



METROPOLITAN AREA JOB CHANGE, APRIL 2019–MAY 2019 (NOT SEASONALLY ADJUSTED)



REGIONAL LABOR MARKET ANALYSIS

ANN ARBOR METROPOLITAN AREA

- Ann Arbor's jobless rate rose by four-tenths of a percentage point over the month to 2.9 percent in May.
- Ann Arbor was one of only two regions to exhibit a seasonal decline in workforce over the month (along with Kalamazoo-Portage), with a labor force reduction of 1.0 percent.

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in Ann Arbor fell by 4,300 over the month, or 1.9 percent, mainly due to a seasonal 6,500-job cut in *Government*.

INDUSTRY TRENDS

- The region's *Professional, scientific, and technical services* sector reached an all-time high level of 18,700 jobs in May.

BAY CITY METROPOLITAN AREA

- Bay City's unemployment rate remained unchanged over the month at 4.3 percent.
- The number of area unemployed was flat both over the month and over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Bay City's count of nonfarm jobs edged up by 200 over the month, or 0.6 percent.
- Minor gains in numerous regional industries were partially offset by seasonal job declines in *Government* (-200) and *Education and health services* (-100).

INDUSTRY TRENDS

- Bay City's *Education and health services* sector recorded a job peak in 2015, but has experienced some job reductions through 2018.

FLINT METROPOLITAN AREA

- The Flint unemployment rate increased sharply by 1.3 percentage points over the month to 5.6 percent.
- Flint exhibited the largest May jobless rate hike out of all Michigan regions.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm jobs in Flint fell by 2,300 over the month, or 1.6 percent, largely due to a temporary retooling layoff in the auto sector.

INDUSTRY TRENDS

- The region's *Financial activities* industry matched a ten-year low of 5,900 jobs in May.

BATTLE CREEK METROPOLITAN AREA

- Labor market conditions were stable in the Battle Creek metro area in May. The jobless rate edged up slightly to 3.8 percent, despite an employment gain of 500.
- Over the past year, the number of unemployed and the jobless rate were little changed, while employment rose by 400.

MONTHLY INDUSTRY DEVELOPMENTS

- May job levels in the Battle Creek MSA rose by 1.2 percent (+700) to a total of 58,800. Seasonal job additions were recorded in *Leisure and hospitality* (+300) and *Construction and mining* (+200).

- Since May 2018, Battle Creek job levels were little changed. *Retail trade, Government, and Manufacturing* added jobs.

INDUSTRY TRENDS

- Since 2010, jobs in *Private educational and health services* rose by 12.2 percent in the area, a little higher than the growth rate of 10.2 percent statewide.

DETROIT-WARREN-DEARBORN METRO AREA

- Joblessness in the Detroit metro region rose by 0.4 percentage points in May to 4.3 percent.
- The region's workforce edged up by 0.9 percent over the year, matching the advance statewide.

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in the Detroit MSA moved up by 27,300 over the month, or 1.3 percent.
- The largest numerical job gains were seen in industries such as *Leisure and hospitality* (+10,400) and *Professional and business services* (+6,100).

INDUSTRY TRENDS

- Detroit's *Wholesale trade* sector reached a ten-year high level of 87,800 jobs in May.

GRAND RAPIDS-WYOMING METRO AREA

- The jobless rate in Grand Rapids inched up by 0.3 percentage points between April and May to 2.8 percent.
- The Grand Rapids jobless rate in May was the lowest among Michigan major labor markets.

MONTHLY INDUSTRY DEVELOPMENTS

- Grand Rapids payroll jobs advanced by 4,400 in May, or 0.8 percent.

- The largest over-the-month numerical job gains were seen in *Leisure and hospitality* (+1,500) and *Manufacturing* (+1,400).

INDUSTRY TRENDS

- *Durable goods* in Grand Rapids matched an eighteen-year high level of 85,100 jobs in May, also achieved in January of 2019.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	ANN ARBOR			BATTLE CREEK			BAY CITY		
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE									
Labor Force	196,000	198,000	193,000	63,900	63,200	63,400	50,400	50,300	50,500
Employment	190,400	193,000	187,500	61,400	60,900	61,000	48,300	48,200	48,400
Unemployment	5,600	5,000	5,500	2,400	2,300	2,400	2,200	2,200	2,200
Rate (percent)	2.9	2.5	2.8	3.8	3.7	3.7	4.3	4.3	4.3
PLACE OF WORK									
Total Nonfarm Jobs	222,000	226,300	220,400	58,800	58,100	58,900	35,200	35,000	35,500
Mining, Logging, and Construction	4,700	4,300	4,500	1,700	1,500	1,800	1,300	1,200	1,300
Manufacturing	15,500	15,200	15,300	12,000	12,000	11,900	4,600	4,500	4,300
Trade, Transportation, and Utilities	25,800	25,900	25,700	9,200	9,000	8,900	7,300	7,200	7,600
Wholesale Trade	6,300	6,300	6,100	*	*	*	*	*	*
Retail Trade	15,600	15,700	16,000	5,900	5,800	5,700	4,800	4,800	5,100
Information	5,400	5,400	5,300	*	*	*	400	400	400
Financial Activities	7,000	6,900	7,200	1,200	1,200	1,200	1,300	1,300	1,400
Professional and Business Services	30,300	29,800	30,300	6,000	5,900	6,300	2,700	2,700	2,700
Educational and Health Services	28,100	28,000	28,400	11,000	11,100	11,100	6,300	6,400	6,600
Leisure and Hospitality	18,900	18,100	18,500	4,600	4,300	4,700	4,500	4,400	4,500
Other Services	6,500	6,400	6,400	1,800	1,800	1,900	1,300	1,200	1,300
Government	79,800	86,300	78,800	11,000	10,900	10,800	5,500	5,700	5,400
DETROIT-WARREN-DEARBORN									
FLINT									
GRAND RAPIDS-WYOMING									
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE									
Labor Force	2,141,000	2,134,000	2,121,000	185,000	184,500	182,100	591,000	587,300	584,100
Employment	2,049,000	2,051,000	2,047,000	174,700	176,600	174,200	574,800	572,400	568,600
Unemployment	92,000	84,000	74,000	10,300	7,900	7,900	16,300	14,900	15,600
Rate (percent)	4.3	3.9	3.5	5.6	4.3	4.3	2.8	2.5	2.7
PLACE OF WORK									
Total Nonfarm Jobs	2,054,200	2,026,900	2,043,500	140,400	142,700	141,800	573,200	568,800	570,200
Mining, Logging, and Construction	78,700	72,700	76,600	6,100	5,600	5,800	25,800	25,000	25,300
Manufacturing	261,000	259,800	259,500	9,500	13,200	12,500	119,500	118,100	117,700
Trade, Transportation, and Utilities	376,900	373,700	373,400	29,900	29,600	29,600	98,600	97,700	98,300
Wholesale Trade	87,800	86,800	87,000	5,500	5,400	5,200	32,200	32,000	32,300
Retail Trade	209,400	207,900	211,800	19,800	19,700	20,400	50,300	49,700	50,300
Information	27,300	27,000	26,800	3,800	3,800	3,800	6,500	6,500	6,400
Financial Activities	116,500	115,500	116,100	5,900	6,000	6,200	27,000	27,000	26,700
Professional and Business Services	398,100	392,000	402,600	17,700	17,500	16,900	77,100	75,900	80,500
Educational and Health Services	319,100	319,500	318,100	26,700	26,600	27,000	93,500	93,900	94,700
Leisure and Hospitality	210,900	200,500	204,600	15,900	15,500	15,700	54,200	52,700	51,300
Other Services	75,500	74,700	76,100	5,600	5,500	5,500	22,500	22,400	22,200
Government	190,200	191,500	189,700	19,300	19,400	18,800	48,500	49,600	47,100
* Data Not Available									

JACKSON METROPOLITAN AREA

- In May, the Jackson MSA jobless rate inched up to 3.4 percent, although total employment increased (+500). Unemployment edged up 100 over the month.
- Since May 2018, employment advanced by 1,100, and the jobless rate was stable.

MONTHLY INDUSTRY DEVELOPMENTS

- Jackson metro area jobs moved up in May by 900 or 1.5 percent. Several sectors added jobs in May, led by *Leisure and hospitality* and *Trade, transportation, and utilities*.
- Over the past year, jobs in Jackson increased by one percent or 600 positions. *Manufacturing* and *Government* employment edged up.

INDUSTRY TRENDS

- Since 2010, job levels in the *Private educational and health services* sector in Jackson have steadily advanced.

LANSING-EAST LANSING METRO AREA

- In May, the Lansing regional jobless rate edged up by two-tenths of a percentage point to 3.1 percent.
- Both the total workforce and total employment advanced by half a percent over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm employment in Lansing rose by 800 over the month, or 0.3 percent.
- Seasonal job gains in *Leisure and hospitality* and *Mining, logging and construction* were partially offset by a seasonal 800-job decline in *Government*.

INDUSTRY TRENDS

- *Healthcare and social assistance* jobs in Lansing have grown slowly since 2012, although job levels from 2016 to 2018 were little changed.

MONROE METROPOLITAN AREA

- Joblessness in the Monroe metro area rose by half a percentage point to 4.0 percent in May.
- The number of unemployed advanced by nearly fifteen percent over the month, well above the statewide rate of gain.

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in Monroe inched up by 300 over the month, or 0.7 percent, mainly due to a 300-job increase in the region's *Leisure and hospitality* industry.

INDUSTRY TRENDS

- For the fifth consecutive month, Monroe's *Education and health services* sector demonstrated a ten-year low of 5,000 jobs in May.

KALAMAZOO-PORTAGE METRO AREA

- Unlike most regions, labor force and employment levels decreased seasonally in May in the Kalamazoo-Portage MSA. This led to a small 0.2 percentage point uptick in the jobless rate to 3.3 percent.
- Since May 2018, the rate of labor force and employment growth in the Kalamazoo region has been similar to statewide trends.

MONTHLY INDUSTRY DEVELOPMENTS

- May payroll jobs in the region edged up 300. Seasonal job gains in *Leisure and hospitality* (+900), *Construction and mining* (+300), and *Retail trade* (+200) were partially offset by a seasonal employment cut in higher education.
- Since May 2018, jobs in the area slightly expanded by 800 (+0.5 percent).

INDUSTRY TRENDS

- Since 2010, jobs in *Private educational and health services* grew by 9.4 percent (vs. 10.2 percent statewide).

MIDLAND METROPOLITAN AREA

- The jobless rate in the Midland metro area was unchanged in May at 3.4 percent. This was half a percentage point below the statewide rate.
- Midland was one of only two Michigan regions to demonstrate a decline in workforce over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Midland's nonfarm job count rose by 600 between April and May of 2019, or 1.6 percent.

INDUSTRY TRENDS

- In May, Midland was tied with Flint in exhibiting the most pronounced percent over-the-year reduction (-1.0 percent) in jobs out of all Michigan metro areas.

MUSKEGON METROPOLITAN AREA

- The Muskegon metro area unemployment rate inched up by two-tenths of a percentage point in May to 3.9 percent.
- The region's total employment level advanced by 1.2 percent both over the month and over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Muskegon's nonfarm job count moved up significantly by 1,100 over the month, or 1.7 percent, largely due to an 800-job seasonal advancement in the region's *Leisure and hospitality* sector.

INDUSTRY TRENDS

- Muskegon exhibited the largest over-the-month percentage gain in payroll jobs out of all Michigan metro regions in May.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	JACKSON			KALAMAZOO-PORTAGE			LANSING-EAST LANSING		
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE									
Labor Force	76,300	75,700	75,300	170,000	170,400	168,700	252,800	252,300	251,500
Employment	73,700	73,200	72,600	164,300	165,100	163,100	245,000	244,900	243,800
Unemployment	2,600	2,500	2,600	5,700	5,300	5,600	7,800	7,300	7,700
Rate (percent)	3.4	3.3	3.5	3.3	3.1	3.3	3.1	2.9	3.1
PLACE OF WORK									
Total Nonfarm Jobs	60,500	59,600	59,900	150,800	150,500	150,000	239,800	239,000	240,200
Mining, Logging, and Construction	2,000	1,900	2,100	6,500	6,200	6,300	8,700	8,100	8,300
Manufacturing	10,200	10,200	10,000	23,100	23,000	22,800	19,900	20,000	20,200
Trade, Transportation, and Utilities	12,500	12,300	12,400	27,100	26,700	27,000	36,500	36,500	37,300
Wholesale Trade	*	*	*	6,800	6,700	6,800	6,700	6,700	6,700
Retail Trade	6,500	6,400	6,600	16,300	16,100	16,400	21,100	21,100	21,800
Information	300	300	300	800	800	800	2,800	2,700	3,000
Financial Activities	2,200	2,100	2,100	8,500	8,300	8,400	17,000	16,800	16,000
Professional and Business Services	6,300	6,200	6,400	17,700	17,500	17,700	23,200	23,100	24,200
Educational and Health Services	10,500	10,500	10,500	24,400	24,500	24,800	32,500	32,600	32,800
Leisure and Hospitality	5,600	5,400	5,500	17,000	16,100	16,700	19,900	19,300	20,000
Other Services	2,600	2,500	2,500	5,300	5,200	5,200	10,600	10,400	10,600
Government	8,300	8,200	8,100	20,400	22,200	20,300	68,700	69,500	67,800
MIDLAND									
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE									
Labor Force	41,100	40,600	41,300	77,300	76,800	75,700	79,500	78,400	78,700
Employment	39,700	39,200	39,800	74,200	74,000	72,900	76,400	75,500	75,500
Unemployment	1,400	1,400	1,400	3,100	2,700	2,800	3,100	2,900	3,200
Rate (percent)	3.4	3.4	3.5	4.0	3.5	3.7	3.9	3.7	4.1
PLACE OF WORK									
Total Nonfarm Jobs	38,400	37,800	38,800	42,400	42,100	41,700	66,400	65,300	65,800
Mining, Logging, and Construction	*	*	*	2,500	2,400	2,000	2,600	2,600	2,400
Manufacturing	*	*	*	5,700	5,700	5,500	13,900	13,900	14,000
Trade, Transportation, and Utilities	*	*	*	10,500	10,600	10,800	14,300	14,000	14,000
Wholesale Trade	*	*	*	1,800	1,900	1,900	*	*	*
Retail Trade	*	*	*	4,700	4,700	4,900	11,300	11,100	11,200
Information	*	*	*	*	*	*	300	300	300
Financial Activities	*	*	*	900	900	900	1,800	1,800	1,800
Professional and Business Services	*	*	*	5,700	5,700	5,600	3,700	3,700	3,900
Educational and Health Services	*	*	*	5,000	5,000	5,200	12,200	12,000	12,000
Leisure and Hospitality	*	*	*	4,900	4,600	4,700	8,200	7,400	7,800
Other Services	*	*	*	1,400	1,400	1,400	2,200	2,200	2,200
Government	3,100	3,000	3,000	5,400	5,500	5,300	7,200	7,400	7,400
* Data Not Available									

NILES-BENTON HARBOR METRO AREA

- May labor force in the Niles-Benton Harbor MSA was up 800. Employment rose 600, while unemployment inched up 200. The jobless rate edged up two tenths of a percentage point to 3.8 percent.
- Over the past year, employment rose 700, while unemployment and the jobless rate were unchanged.

MONTHLY INDUSTRY DEVELOPMENTS

- A substantial May seasonal job gain was seen in *Leisure and hospitality* (+700). This largely caused the 1.3 percent monthly advance in overall jobs in May.
- Since May 2018, jobs in the Niles-Benton Harbor metro were stable, inching up by 200. Employment moved up in *Manufacturing* (+300) and *Government* (+200).

INDUSTRY TRENDS

- Since 2010, jobs in *Private educational and health services* have displayed little change, unlike the steady growth of 10.2 percent observed statewide.

SAGINAW METROPOLITAN AREA

- The Saginaw regional jobless rate rose by 0.3 percentage points over the month to 4.6 percent.
- The monthly jobless rate advance was due to 300 additional unemployed in May, as the number of area employed was unchanged.

MONTHLY INDUSTRY DEVELOPMENTS

- Saginaw jobs were up 0.2 percent in May, largely due to a 400-job gain in the metro area's *Leisure and hospitality industry*.

INDUSTRY TRENDS

- The Saginaw *Government* sector has had stable job levels since 2014, ranging from 10,800 to 11,000 positions.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	NILES-BENTON HARBOR			SAGINAW		
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE						
Labor Force	74,600	73,800	74,000	87,400	87,000	86,900
Employment	71,800	71,200	71,100	83,300	83,300	83,200
Unemployment	2,800	2,600	2,800	4,000	3,700	3,700
Rate (percent)	3.8	3.6	3.8	4.6	4.3	4.2
PLACE OF WORK						
Total Nonfarm Jobs	63,300	62,500	63,100	87,400	87,200	87,900
Mining, Logging, and Construction	2,300	2,200	2,400	3,200	3,000	3,100
Manufacturing	13,400	13,300	13,100	12,200	12,000	12,400
Trade, Transportation, and Utilities	10,600	10,600	10,800	16,700	16,600	16,500
Wholesale Trade	*	*	*	2,100	2,000	2,200
Retail Trade	6,800	6,800	6,700	11,900	12,000	11,700
Information	500	500	500	1,300	1,300	1,300
Financial Activities	2,500	2,500	2,500	3,600	3,600	3,700
Professional and Business Services	5,800	5,800	5,800	11,300	11,200	11,200
Educational and Health Services	9,300	9,500	9,400	15,800	15,900	15,900
Leisure and Hospitality	7,900	7,200	7,800	9,500	9,100	9,300
Other Services	2,300	2,300	2,300	3,200	3,200	3,300
Government	8,700	8,600	8,500	10,600	11,300	11,200

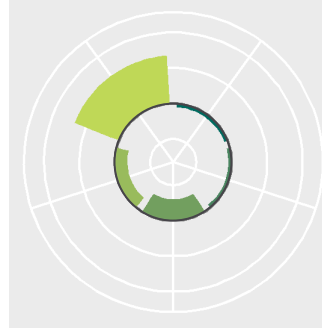
	UPPER PENINSULA			NORTHEAST MICHIGAN			NORTHWEST MICHIGAN		
	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018	MAY 2019	APR 2019	MAY 2018
PLACE OF RESIDENCE									
Labor Force	136,800	136,600	136,300	83,700	80,500	83,300	152,200	146,100	150,000
Employment	130,000	128,800	129,400	79,500	75,100	78,800	146,400	139,300	143,800
Unemployment	6,700	7,800	6,900	4,200	5,400	4,500	5,800	6,800	6,300
Rate (percent)	4.9	5.7	5.1	5.0	6.7	5.4	3.8	4.7	4.2

INFOGRAPHIC OF THE MONTH:

PROJECTED REGIONAL EMPLOYMENT GROWTH BY EDUCATION LEVEL

This infographic compares for each region the projected employment growth for five education levels to the overall projected employment growth for the region. If an education level's projected change is equal to the region's overall projected change, it will appear on the dark inner circle. If it changes more than the region's overall change, it radiates out from the dark circle. If it changes less than the region's overall change, it radiates inward. As you rotate clockwise around each circle, the education level rises.

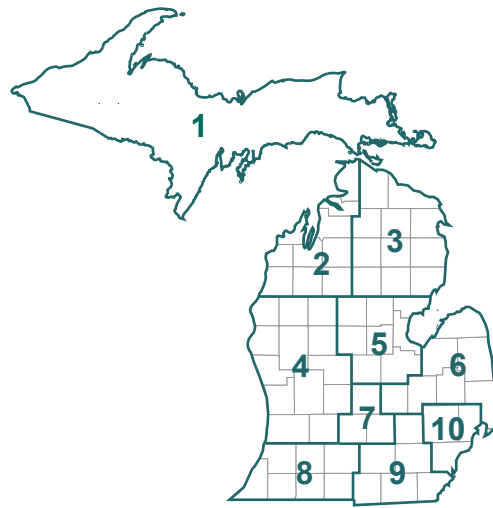
1 - Upper Peninsula



2 - Northwest Michigan



10 - Detroit Metro



3 - Northeast Michigan



9 - Southeast Michigan

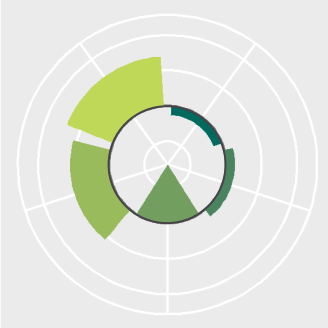


4 - West Michigan



- Less Than High School Diploma
- High School Diploma or Equivalent
- Post-Secondary Degree/ Moderate On-the-job Training
- Associate Degree/ Apprenticeship/Long-term On-the-job Training
- Bachelor's Degree or More

8 - Southwest Michigan



7 - South Central Michigan



6 - East Michigan



5 - East Central Michigan





EMPLOYMENT PROJECTIONS THROUGH 2026 FOR MICHIGAN REGIONS

Each July the Bureau of Labor Market Information and Strategic Initiatives releases long-term employment projections for the Michigan labor market. These projections alternate each year between statewide projections (in even-numbered years) and regional projections (in odd-numbered years). This July, the Bureau released long-term projections for Michigan's 10 Prosperity Regions for the period of 2016-2026.

Last July, we released the 2016-2026 Michigan statewide projections. The employment growth rate expected statewide through 2026 was 7 percent, an addition of 320,910 new jobs to the Michigan economy. In the new round of regional projections, we have modeled regional employment growth, seen in Figure 1, to aggregate total regional job gains and declines to equal the growth published in last year's statewide projections.

Another improvement to regional projections that has been introduced in this round has been made possible by the population projections published earlier this year by the Bureau of Labor Market Information and Strategic Initiatives. Population projections provide a basis upon which assumptions about labor force size can be made, which in turn govern an area's ceiling for total employment. This is especially important because long-term projections are

made with an assumption of full employment (i.e. unemployment rates similar to today's labor market), following the methodology used by state labor market information offices nationwide. The addition of population projections to the projections input data provides an important guideline for regional growth that was previously missing from statewide and regional projections.

Using regional population as a guide for total job growth is, however, one of the main reasons that total employment in several Prosperity Regions is expected to remain flat over the next 10 years. These regions are expected to see slightly negative and slightly positive percent job change over the entire projection period, and expected annualized change should amount to only 0.1 to 0.2 percent, negative or positive, per year. Over the course of the 10-year projection period, this is very slight forecast job change.

Major Industry Trends

At the broadest level, industry employment can be divided into two domains: *Goods-producing* industries and *Service-providing* industries. In most of the 10 Prosperity Regions, job expansion in *Service* industries is expected to outperform *Goods* industries, or, in the case of Prosperity Region 5, perform equally. Industries such as *Other information services*, *Ambulatory*

health care services, and *Social assistance* are examples of high-performing *Service* industries across the 10 regions.

That is not to say that there are not *Goods-producing* industries that are expected to record employment growth in the next 10 years. *Beverage and tobacco manufacturing* in Northwest Michigan, *Food manufacturing* in East Central Michigan, and *Miscellaneous manufacturing* in Southwest Michigan are some examples of *Goods-producing* industries that are expected to record high percent job gains over the projection period.

Trends by Major Occupational Group

HEALTHCARE

With only one exception, the *Health care practitioners and technical* occupational group is expected to be the fastest-growing group throughout Michigan's 10 regions. These occupations are becoming increasingly important as Michigan's population continues to age, especially in more rural areas. Strong expansion in this occupational group will create many additional job openings each year, with most regions expected to see at least 100 openings annually from employment growth alone.



There are a variety of occupations in the *Healthcare* major occupational group that are expected to both show high growth and offer many annual openings. Leading the group in terms of percent job additions in many areas are emerging occupations such as *Physician assistants*, expected to advance by about 34 percent in West Michigan, and *Nurse practitioners*, with a forecast job gain of 22 percent in East Michigan.

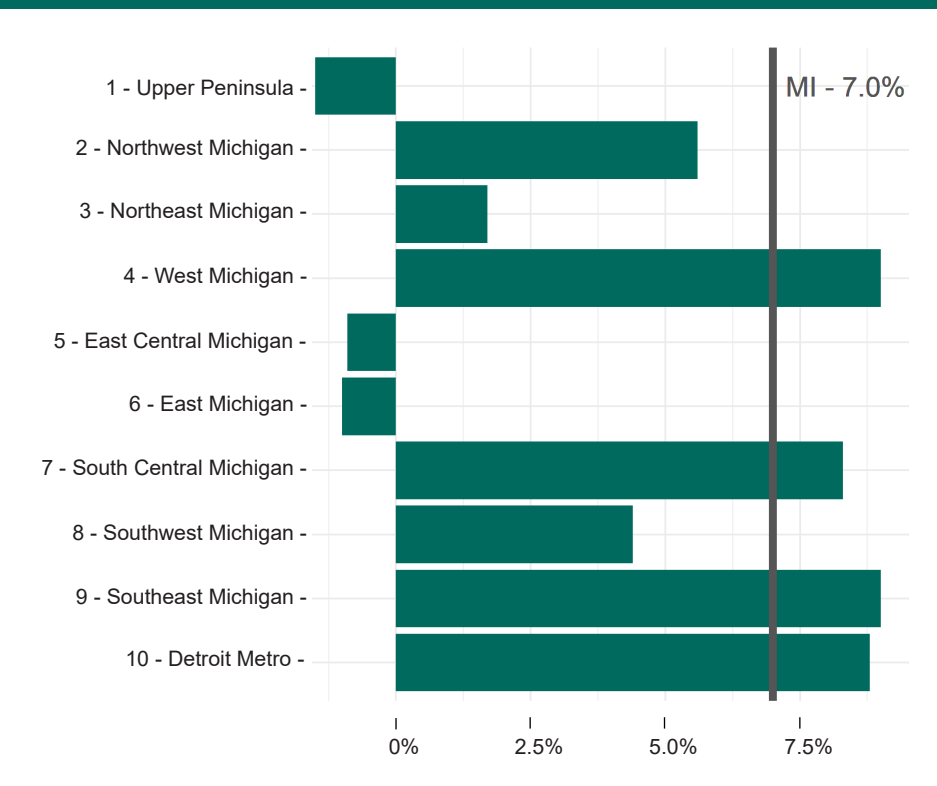
While these two occupations require more than a bachelor's degree, there are many opportunities in *Healthcare* that require fewer years of education. *Home health aides*, with no education required beyond high school, are expected to generate 150 openings annually in the Upper Peninsula, mostly due to job growth but also due to exits from the occupation. In the Northeast Michigan region, *Nursing assistants* are expected to have 90 openings annually.

PROFESSIONAL

The *Professional* occupations major group is another that is expected to be a strong source of job additions for many regions, and is expected to see the highest growth in metropolitan areas of Michigan. In the West, South Central, Southeast, and Detroit Metro regions, growth in this occupational group is expected to exceed 12 percent.

Among these regions, annual openings in the group are expected to range from 5,500 in South Central Michigan to 40,000 in the Detroit Metro area.

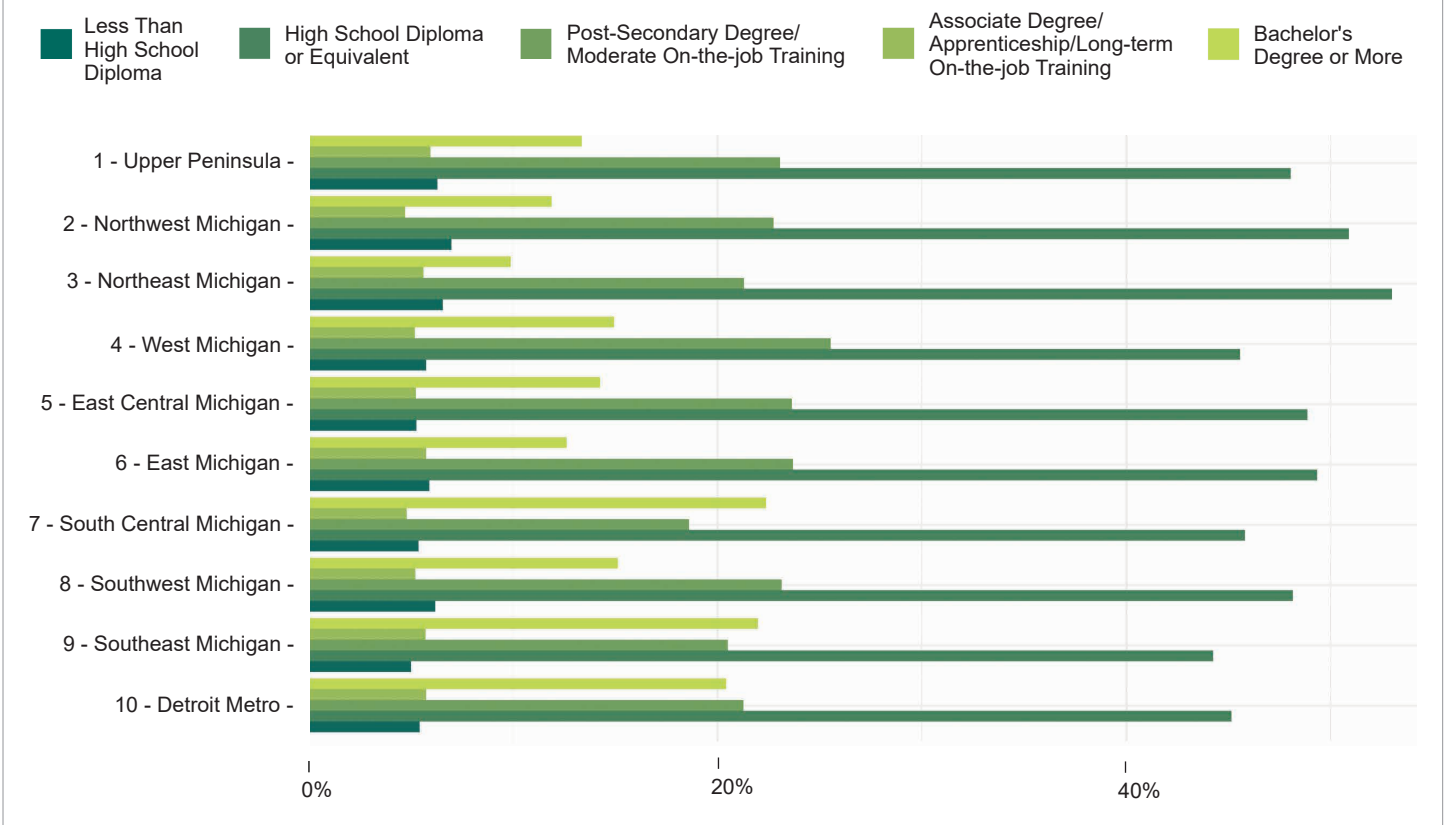
FIGURE 1: PROJECTED 10-YEAR PERCENT EMPLOYMENT CHANGE, 2016–2026



The *Professional* occupations group has a wide array of jobs, ranging from *Accountants* to *IT security analysts* to *Lawyers* to *News analysts, reporters, and journalists*. Many of the occupations expected to generate the most annual openings, however, are

education-related. *Elementary school teachers, Teacher assistants*, and other occupations in the *Education, training, and library* group are expected to generate between 17 and 35 percent of the annual openings within the *Professional* group.

FIGURE 2: JOB OPENINGS BY EDUCATION



In addition to having many job openings available per year, some of the *Professional* occupations expected to create the greatest number of new jobs through 2026 include *Industrial engineers, Accountants and auditors, and Market research analysts*. Various IT-related jobs such as *IT security analysts* and *Software applications developers* are expected to appear at the top of the list of high-growth *Professional* occupations in seven of the 10 regions.

SERVICE

Service occupations are another group integral to many regions in the state. This diverse set of occupations is expected to outperform regional total job growth by an average of about 2.5 percentage points in each of the 10 Prosperity Regions. These positions are also available to a wider share of the workforce than many *Healthcare* and *Professional* occupations. About 85 percent of the annual job openings in this occupational group are available for job seekers who do not have education or training beyond high school. While these jobs do not typically pay as well as *Healthcare* or *Professional* occupations, their main advantage is that they can be obtained by those who have not had the opportunity or desire to pursue additional education.

While most *Service* job openings are expected to be for occupations requiring at most a high school diploma and on-the-job training, about one in 10 annual openings for the group throughout the 10 regions will be for jobs requiring either at least some post-secondary education or moderate term on-the-job training. *Correctional officers, Police and sheriff's patrol officers, and Hairdressers, hairstylists, and cosmetologists* are the occupations in this group which are notable throughout the projections for the 10 regions. For example, these three occupations alone will be responsible for about 220 annual job openings in the Upper Peninsula.

Projections by Education

The new regional employment projections show a familiar relationship between growth and level of education. In general, occupations requiring additional education are projected to register above average rates of job expansion. In fact, occupations that require at least a bachelor's degree are expected to add jobs at a rate that will be three percentage points above the respective regional growth rate. Additionally, these jobs are expected to generate about 15 percent of each region's total annual openings – signaling that in addition to strong growth, there may be many

opportunities for employment in jobs requiring a bachelor's degree.

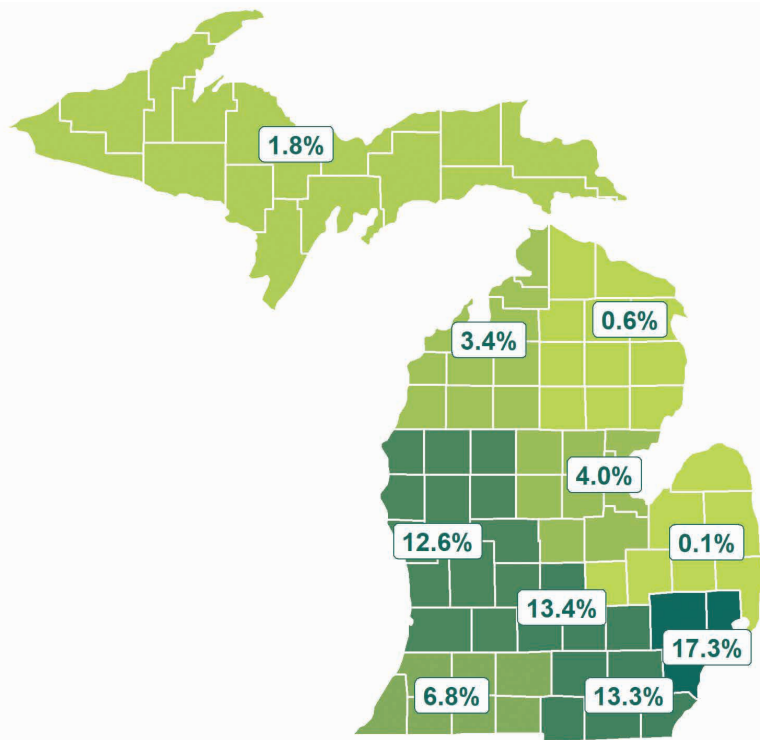
Jobs that require either an associate degree, an apprenticeship, or long-term on-the-job training are also expected to see higher-than-average rates of gain in most Michigan regions (the only exception is the Upper Peninsula). On average, these jobs are expected to advance by nearly two percent faster than average regional job levels.

While occupations within this group are expected to register job growth rates similar to those requiring a bachelor's degree or more, they represent a fairly small slice of the regional job markets. In terms of annual openings, jobs requiring this level of education comprise only 5 percent of annual total openings in most regions.

Jobs requiring only a post-secondary certificate, some college, or moderate on-the-job training are not expected to fare as well as more highly specialized occupations. These jobs are expected to expand slower than average in regions across the state.

Jobs requiring this level of education are expected to generate, on the low end, 1,600 annual job openings in Northeast Lower Michigan, and on the high end, 47,000 openings

FIGURE 3: PROJECTED 10-YEAR PERCENT STEM EMPLOYMENT CHANGE, 2016–2026



in the Detroit Metro area. In percentage terms, jobs requiring this level of education are expected to generate just over 20 percent of each region's total annual openings through 2026.

STEM Jobs

STEM occupations are expected to register faster job expansion than the total regional rate with the exception of Northeast and Northwest Lower Michigan. For example, the group is expected to grow 4.9 percent more than the regional rate in East Central Michigan and 3.3 percent faster in the Upper Peninsula. The group's highest outperformance of regional expectations is in the Metro Detroit region, where STEM jobs are expected to grow 8.5 percent faster than total regional jobs through 2026. Job advances in the Metro Detroit region can, at least in part, be attributed to a gain of 7,180 jobs, or 11.6 percent in STEM-related *Healthcare practitioner and technical* occupations. A similarly high growth rate of 10.8 percent in *Healthcare practitioner and technical* is one of the driving factors in the East Central region's strong expected STEM job expansion.

Throughout most of the state, as much as half of the total annual openings for STEM jobs will come from *Architecture and engineering* occupations, highlighting the group's importance in Michigan.

The proportion of all STEM job openings found within this group ranges from 20 percent in South Central Michigan to 50 percent in the Metro Detroit area. Within the set of occupations, as many as half of the annual job openings may come from the *Drafters, engineering technicians, and mapping technicians* occupations, an especially notable figure because the group generally requires less education than the bachelor's degree-only *Engineers* minor occupational group.

Computer and mathematical occupations, and more specifically, *Computer* occupations, are typically the second-highest source of STEM openings for the 10 regions. At its lowest, this group contributes nearly 20 percent of Northeast Lower Michigan's STEM job openings, but at its peak in South Central Michigan, this group is expected to contain just over 40 percent of all STEM job openings.

Professional Trades

Professional trades occupations, highlighted in the State of Michigan's Going Pro ad campaign, are another group of jobs that are expected to exceed total regional growth rates in all 10 of the Prosperity Regions. Expected to expand by an average of 2.5 percent more than the regional rate, this group of jobs is projected to advance by more than 10 percent in the West,

South Central, Southeast, and Detroit Metro regions, while moving up just under 10 percent in Northwest Lower Michigan. Additionally, these positions are expected to outperform the regional growth rate by 3 to 3.5 percent in East and East Central Michigan.

Between 45 and 60 percent of the annual openings from the professional trades occupations come from occupations in the *Construction and repair* group of jobs. Throughout the state, *Maintenance and repair workers, Electricians, and Automotive service technicians and mechanics* are generating many of the openings in this group throughout the state.

Another source of many annual openings in the professional trades is *Healthcare practitioners and technical* occupations. Throughout the 10 regions, among the top jobs for annual openings in this broad group is a mix of *Registered nurses, Licensed practical and licensed vocational nurses, and Dental hygienists*. The job titles of *Licensed practical and licensed vocational nurses* and *Dental hygienists* highlight an important reason for analyzing top occupations by annual openings. In a few regions, these occupations are expected to have fewer total jobs in 2026 than in 2016, but many new entrants will still be needed to fill vacant positions over the 10-year period.

Conclusion

Each regional economy within Michigan is unique. Whether it is a highly metropolitan economy with numerous fast-growing *Professional* occupations or a northern Michigan region with a concentration of *Service* occupations, a region's unique job structure can be illustrated using these occupational projections.

There are examples of high-demand job titles in every Michigan region and in most broad occupational groups, and now data users can gain a little more assistance by utilizing the Bureau of Labor Market Information and Strategic Initiatives' new *Regional Career Outlook through 2026* publications. These brochures list high-growth, high-wage occupations by many education levels and occupational groups for each of the 10 Prosperity Regions. To learn more about the *Regional Career Outlook* publications, see this month's *Ask The Economist* on page 26. The brochures are available to be viewed and downloaded on the research page of www.michigan.gov/lmi.

KEVIN DOYLE

Projections Specialist



OCCUPATIONAL FOCUS

INDUSTRIAL ENGINEERS

A person employed as an *Industrial engineer* will design, develop, test, and evaluate systems for managing industrial production processes, including human work factors, quality control, inventory control, and production coordination.

According to Michigan's long-term occupational projections (2016-2026), jobs for *Industrial engineers* are expected to increase by 18.2 percent, or 1.7 percent annually. As mentioned in the feature article, the Bureau of Labor Market Information & Strategic Initiatives has recently released Michigan's long-term regional projections (2016-2026), showing *Industrial engineers* to have an overall bright outlook in all 10 prosperity regions.

Occupational Highlights:

- *Industrial engineers* are *Operations engineers*, *Process engineers*, and *Supply chain engineers*.

- The typical education required for an *Industrial engineer* is a bachelor's degree.
- According to the Bureau of Labor Statistics (BLS), *Industrial engineers* are classified under the Science, Technology, Engineering, and Mathematics group, commonly known as STEM occupations. An *Industrial engineer's* skill set is generally constructed around the use of different types of software, while also requiring knowledge of production and processing, mathematics, and mechanical and design production techniques and tools.
- In 2018, there were 31,520 *Industrial engineers* in Michigan with a median wage of \$42.40 per hour, or about \$88,190 per year.
- Short-term statewide occupational projections (2018 Q2 – 2020 Q2) show that the average number of annual job openings for *Industrial engineers* will be about 2,490. Of those

openings, 1,890 are to replace workers and 600 are due to job expansion.

- The average number of annual job openings for *Industrial engineers* will be about 2,200, as indicated by the statewide long-term (2016 – 2026) occupational projections. Nearly 80 percent of all annual openings are expected to come from the need to replace workers, while the remaining 20 percent will result from job expansion.
- Regionally, wages for *Industrial engineers* range from a low of \$34.17 in Northwest Lower Michigan to a high of \$44.86 in the Detroit Metro region. Southeast Michigan also has a high wage of \$41.34.

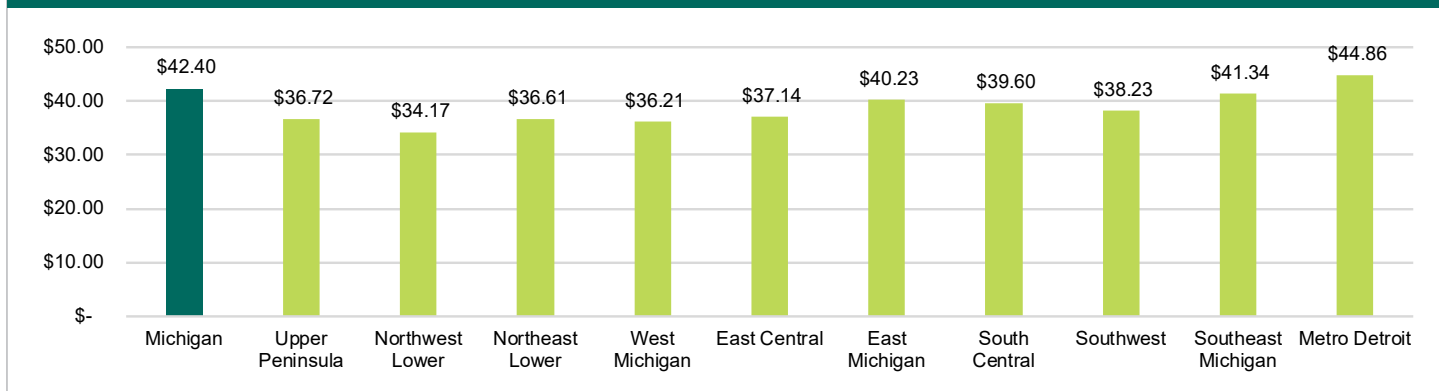
DALIA SALLOUM
Economic Analyst

INDUSTRIAL ENGINEERS - JOB OPENINGS AND PERCENT JOB GROWTH BY MICHIGAN REGION, 2016–2026

REGION	TOTAL EMPLOYED	ANNUAL OPENINGS	JOB GROWTH %
Metro Detroit	15,620	875	25.7
West	4,285	195	16.6
Southeast	3,340	175	23.2
Southwest	1,080	45	12.5
East	650	25	10.8
East Central	645	25	9.3
South Central	465	20	18.3
Upper Peninsula	310	10	1.6
Northwest	285	10	12.3
Northeast	65	5	7.7

Source: Based on 2016–2026 Regional Occupational

MEDIAN WAGE FOR INDUSTRIAL ENGINEERS BY MICHIGAN PROSPERITY REGION, 2018



Source: DTMB-BLMISI, Occupational Employment Statistics (OES)

JOB ADS FOR PROFESSIONAL OCCUPATIONS LEAD THE WAY IN MICHIGAN IN MAY 2019

According to the Conference Board's Help Wanted Online Data Series, the total number of May 2019 job advertisements in Michigan stood at 153,103. This number ranked third among Michigan's neighboring states. Illinois had the highest number of ads (209,391) followed by Ohio, Michigan, Wisconsin, and Indiana (94,714).

Rates and Position Types

Michigan's supply-demand rate, or the number of unemployed persons per job advertisement, was at 1.35 for May. The advertisement rate, which measures the number of job ads per 100 labor force participants, was 3.09. A rate greater than 1.0 indicates at least one job advertisement is available per 100 people in the labor force.

May job ads were largely dominated by full-time positions which accounted for 71.8 percent of all advertisements. About 24 percent of the ads were for part-time work, 2.9 percent were contract positions, and 1.3 percent were for internships. 28.9 percent of job ads were posted for less than 30 days and 19.4 percent were 30-60 days old.

Non-seasonally Adjusted Job 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*.

Among select major occupations in the state, *Professional* jobs continued to have the greatest number of job advertisements with 44,015. Jobs in *Healthcare* contributed 25,147 ads with 6,898 coming from jobs for *Nurses*. *Service* jobs made up 20,702 postings while *Sales* jobs accounted for 19,437 ads.

The top 5 detailed occupations generating the most job ads in May 2019 in Michigan included the following:

- *Registered nurses* (6,898 ads)
- *First-line supervisors of retail sales workers* (5,623)
- *Retail salespersons* (5,155)
- *Customer service representatives* (3,723)
- *Heavy and tractor-trailer truck drivers* (3,608)

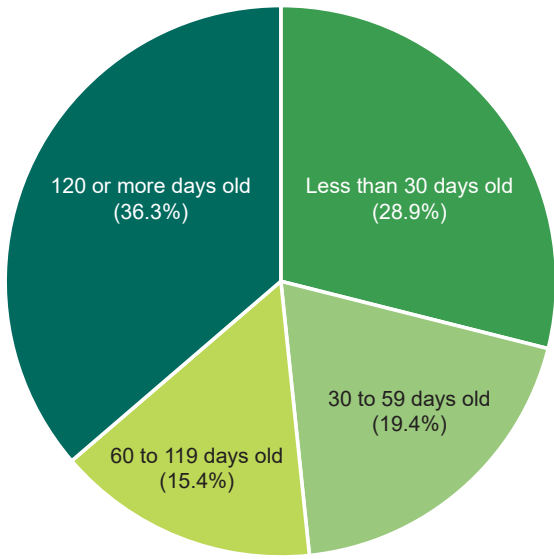
As expected, the Detroit-Warren-Dearborn Metropolitan Statistical Area (MSA) had the highest number of jobs ads (71,750), accounting for over half of the Michigan total and nearly four times the number in the next largest metro area (Grand Rapids-Wyoming). The Lansing-East Lansing, Ann Arbor, and Kalamazoo-Portage regions had the next highest number of job ads (13,648, 8,200, and 5,821 respectively). The nine remaining MSAs had job ads of 3,900 or fewer and combined to make up roughly 14 percent of the Michigan total.

The top 50 occupations with the most job advertisements typically require the following levels of education: bachelor's degree (17), high school diploma or equivalent (20), no formal educational credential (7), postsecondary nondegree award (4), some college/no degree (2). Eighteen of those top 50 occupations require short-term on-the-job training and five require moderate-term on-the-job training.

MARCUS REASON
Economic Analyst

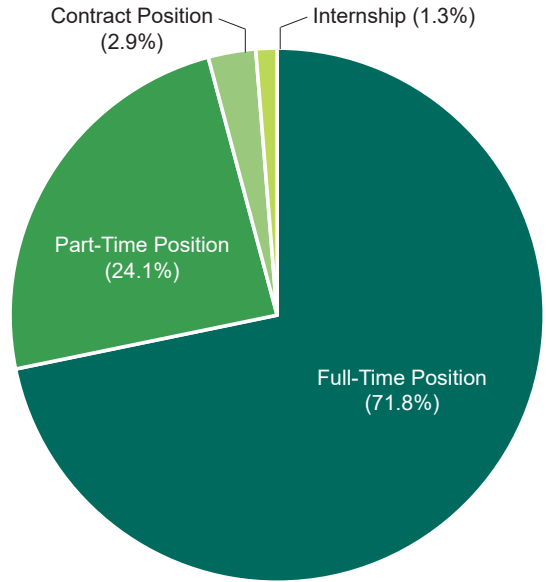


JOB AD DURATION



Source: The Conference Board's Help Wanted Online

JOB AD TYPE



Source: The Conference Board's Help Wanted Online

EDUCATION REQUIREMENTS OF TOP 50 ADS



Source: The Conference Board's Help Wanted Online

TOP JOB ADVERTISEMENTS, MAY 2019

TOP MAJOR OCCUPATIONAL GROUPS

Sales and Related
Healthcare Practitioners & Technical
Office and Administrative Support
Computer and Mathematical
Food Preparation

TOP OCCUPATIONS

Registered Nurses
First-Line Supervisors of Retail Sales Workers
Retail Salespersons
Software Developers, Application
Customer Service Representatives

TOP EMPLOYERS

Beaumont Health System
Spectrum Health
Lansing School District
Henry Ford Health
Trinity Health

Source: The Conference Board's Help Wanted Online

RELEVANT RANKINGS

STATES RANKED BY PROJECTED 10-YEAR EMPLOYMENT GROWTH RATE			
RANK	STATE	PROJECTED 10-YEAR JOB CHANGE	PROJECTED 10-YEAR JOB CHANGE (%)
1	Utah	433,700	29.1
2	Colorado	565,420	20.4
3	Nevada	268,690	19.9
4	Arizona	542,790	18.6
5	Washington	626,310	17.0
23	New Jersey	352,730	8.2
24	Montana	39,890	8.0
25	Maryland	211,290	7.7
26	Indiana	240,210	7.6
27	Massachusetts	274,670	7.4
30	Michigan	320,910	7.0
46	Alaska	17,010	5.1
47	Ohio	253,340	4.4
48	Kansas	63,720	4.3
49	Vermont	10,390	2.8
50	Maine	100	0.0

Source: U.S. BLS, Employment Projections, Projections Central

MICHIGAN PROSPERITY REGIONS RANKED BY PROJECTED 10-YEAR JOB GROWTH RATE

RANK	PROSPERITY REGION	PROJECTED 10-YEAR JOB CHANGE	PROJECTED 10-YEAR JOB CHANGE (%)
1 (T)	West Michigan	69,606	9.0
1 (T)	Southeast Michigan	40,279	9.0
3	Detroit Metro	165,704	8.8
4	South Central Michigan	18,705	8.3
5	Northwest Michigan	7,591	5.6
6	Southwest Michigan	14,788	4.4
7	Northeast Michigan	1,134	1.7
8	East Central Michigan	-1,999	-0.9
9	East Michigan	-2,646	-1.0
10	Upper Peninsula	-1,768	-1.5

Source: DTMB-LMISI Employment Projections 2026



ASK THE ECONOMIST

Q: Speaking of employment projections, I recently saw your *Regional Career Outlooks*. What are those all about?

A: That's right, the Bureau of Labor Market Information and Strategic Initiatives just released the *Regional Career Outlook Through 2026*.

This product is created from the Regional Employment Projections data and mirrors the content of the statewide *Career Outlook* publications, while providing detailed information for each of Michigan's 10 Prosperity Regions.

How were these produced?

Like the statewide publication produced last year, the regional lists of in-demand jobs were made with a straightforward and transparent methodology. All occupations were ranked on five factors: Exit Job Openings, Transfer Openings, Change Openings, Projected Job Growth Rate, and Median Wage. The five factors were then used to calculate a score for each occupation. This process was repeated for each of Michigan's 10 Prosperity Regions.

Other factors considered were a wage floor (set at the region's median wage) and a minimum employment level (based on actual regional employment). It is important to note that some occupations have negative growth rates, but due to a large numbers of job openings and high median wages, these occupations can still appear on the lists. For example, if an occupation is projected to edge down from 1,000 jobs to 980 over the 10-year period, this occupation can still be a source of good jobs in a region. Also, there are many "good jobs" in Michigan's regions that did not make the *Regional Career Outlook* brochures.

What's the difference between the five panels?

Each *Regional Career Outlook* brochure has a total of five panels. Four of the panels provide in-demand occupations broken down by education and training requirements. The fifth panel highlights Science, Technology, Engineering, and Math (STEM) occupations, as defined by Bureau of Labor Statistics (BLS).

- The lowest level of education/training displayed in the publication is high school diploma or equivalent & short-term training. This is also the only panel that does not require an occupation to be above the wage floor (described above) to make the cut. Occupations on this list typically have lower wages, but can provide opportunities for jobseekers interested in entry-level positions. Several occupations appear in all 10 regions

including *Construction laborers*, *Home health aides*, and *Personal care aides*.

- The next tier are occupations that require a postsecondary certificate and-or moderate term training. This level of training can typically be achieved in less than a year but longer than one month. *Trailer truck drivers*, *Operating engineers*, and *Police officers*, among other occupations, appear in all 10 regions.
- The third highest in-demand occupation list by educational/training attainment is populated with jobs that typically require an associate degree, training of more than a year, or an apprenticeship. These lists are dominated by occupations that also appear as part of Michigan's Going PRO campaign, as identified with a Going PRO badge. *Electricians*, *HVAC mechanics and installers*, as well as *Physical therapist assistants* appear in all 10 regions, among other occupations.

To find out more about the program, please visit <https://www.going-pro.com/>.

- The bachelor's degree or higher list has the highest level of required education/training, and these occupations are often among the fastest growing and those with the highest wage. Six occupations appear in all 10 regions, including *Accountants and auditors*, *Industrial engineers*, and *Registered nurses*. This list also typically has the most overlap with the STEM occupations due to the high level of education needed to work in science-related fields.
- The last list is made up of STEM occupations. These jobs are often part of the green economy, as defined by O*Net are identified with a "green job" badge. Eight of the 10 regions have higher projected growth among STEM occupations than the all occupation average, except for the Northwest and Northeast Michigan regions. These STEM occupations typically include engineers, engineering technicians, and jobs related to information technology.

While a consistent methodology was used to identify in-demand jobs by Michigan region, this process still yielded unique sets of occupations in most regions. This demonstrates the diverse nature of job concentrations and job trends

across different regions of the state. In fact, over 100 in-demand occupations appear in only one or two regional brochures. For example, *Motorboat mechanics and service technicians* appear in this publication only in Northeast Michigan, *Cabinetmakers and bench carpenters* appear only in West Michigan, and *Lawyers* are highlighted in the South Central and Detroit Metro regions.

Where can I see the brochures?

These brochures can be found at or <https://www.milmi.org/research>. If you wish to order a supply of printed brochures, or if you have any questions or suggestions, please reach out to your regional contact at <https://www.milmi.org/contact>.

EVAN LINSKEY
Economic Analyst



STATE OF MICHIGAN

Department of Technology, Management & Budget

Bureau of Labor Market Information and Strategic Initiatives

Detroit Office

Cadillac Place
3032 West Grand Boulevard
Suite 9-150
Detroit, Michigan 48202
(313) 456-3100

Lansing Office

Victor Office Building, Floor 5
201 North Washington Square
Lansing, Michigan 48933
(517) 335-2472

In accordance with Michigan Law and the Americans with Disabilities Act requirements, an alternate format of this printed material may be obtained by contacting: Bruce Weaver, Economic Manager, Department of Technology, Management & Budget, Bureau of Labor Market Information and Strategic Initiatives, 3032 West Grand Boulevard, Suite 9-150, Detroit Michigan 48202, (313) 456-3091 or weaverb1@michigan.gov.

