

A woman with dark hair, wearing blue medical scrubs over a white shirt, is smiling and looking down. She has a stethoscope around her neck and is holding a blood pressure cuff. The background is a softly lit room with a window and a couch.

# MICHIGAN'S LABOR MARKET NEWS

VOL. 74, ISSUE NO.10  
DECEMBER 2018

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## **Occupational Supply and Demand in the Michigan Labor Market**

Feature Article pg. 16

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## **Michigan October Labor Market Trends: Unemployment Down, Payroll Jobs Rise**

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## **Map of the Month: Health Professions Program Completers by State**

pg. 15

Michigan payroll jobs up  
nearly 62,000 or 1.4 percent  
since October 2017.

OCTOBER 2018 JOBLESS RATE

MICHIGAN

3.9%

3.7%

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### IT'S BIGGER THAN DATA.

The Bureau of Labor Market Information and Strategic Initiatives is the official source for high quality demographic and labor market information for the state of Michigan and its regions. We administer the state's federal-state cooperative programs with the Bureau of Labor Statistics (BLS) and the Census Bureau and produce high-quality information and analysis through grants from the U.S. Department of Labor and from partner agencies in the state of Michigan. We provide our national, state, and local partners and customers with *accurate, objective, reliable, timely, accessible, and transparent* information and insights.



Michigan's October jobless rate measured 3.9 percent, dipping one-tenth of a percentage point over the month and continuing its downward trend in 2018. This was significantly below the 4.7 percent Michigan jobless rate registered in October 2017, and was slightly above the October national rate of 3.7 percent. Michigan's labor force remained unchanged over the month and was relatively stable over the year.

Payroll jobs edged up only 3,500 over the month statewide in October, but registered significant annual growth, adding nearly 62,000 jobs since October 2017. Annually, nearly all major industry sectors recorded job gains with *Professional and Business Services* (+13,500), *Manufacturing* (+10,500), and *Construction* (+10,000) accounting for over half of Michigan's job advances over the past year.

This month's edition of *Michigan's Labor Market News* features content focused on labor supply and demand. As the state and national labor markets continue to tighten, there is increasing attention on where gaps exist between the characteristics of available jobs and the skill sets of jobseekers. Our *Feature Article* this month provides insight on this topic, identifying Michigan occupations where there are potential surpluses and potential shortages of labor for jobs requiring different levels of education and training. The *Map of the Month* compares Michigan's number of healthcare and related education program completers to other states nationally, while our *Ask the Economist* answers a broad, but important question about sources of labor supply data.

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

# MICHIGAN'S OCTOBER 2018 UNEMPLOYMENT RATE EDGES DOWNWARD

Michigan's seasonally adjusted October jobless rate decreased slightly by one-tenth of a percentage point to 3.9 percent. Total employment moved upward slightly by 2,000 over the month while the number of unemployed declined by 2,000, which left the state's workforce flat in October.

Michigan's current jobless rate was significantly below the state's October 2017 rate of 4.7 percent. Michigan's jobless rate declined over the past year, exceeding the drop nationally (-0.4 percentage points). The Michigan jobless rate in October was two-tenths of a percentage point above the national rate of 3.7 percent.

October marked the second consecutive month that the number of unemployed in Michigan was below 200,000. The last time that occurred in the state was August and September 2000. However, Michigan's 2000 workforce was over 260,000 above the current levels. The last

month that the state's jobless rate was below 4.0 percent was in October 2000.

## As Michigan's Labor Market Tightens, Jobless Rates Flatten and Employment Growth Slows

Michigan's jobless rate fell sharply from 2009 to 2015, as the economy recovered from the national recession. However, from 2015 to 2017 Michigan's annual jobless rates declined by only eight-tenths of a percentage point in total, from 5.4 to 4.6 percent.

With ten months in the books, Michigan's year-to-date 2018 jobless rate of 4.3 percent indicates that the annual rate will most likely decline again in 2018. This will likely mark the ninth consecutive annual rate reduction, which would tie the 1992 through 2000 record for the state's longest run of annual rate cuts since at least 1976. If the 2018 annual rate stands near

4.3 percent, the typical annual rate decreases since 2015 will be four-tenths of a percentage point or less. As far as the state's unemployment rates are concerned, a good portion of Michigan's recovery from the Great Recession occurred by 2015. From 2009 to 2015, the state's jobless rate fell from 13.7 to 5.4 percent or 8.3 percentage points.

Michigan employment growth rates in 2017 (+1.3 percent) and year-to-date 2018 (+0.9 percent) were solid, but muted relative to the higher pace of the prior three years.

Michigan entered a new labor market phase over the past several years, marked by steady, incremental employment gains and modest unemployment reductions.

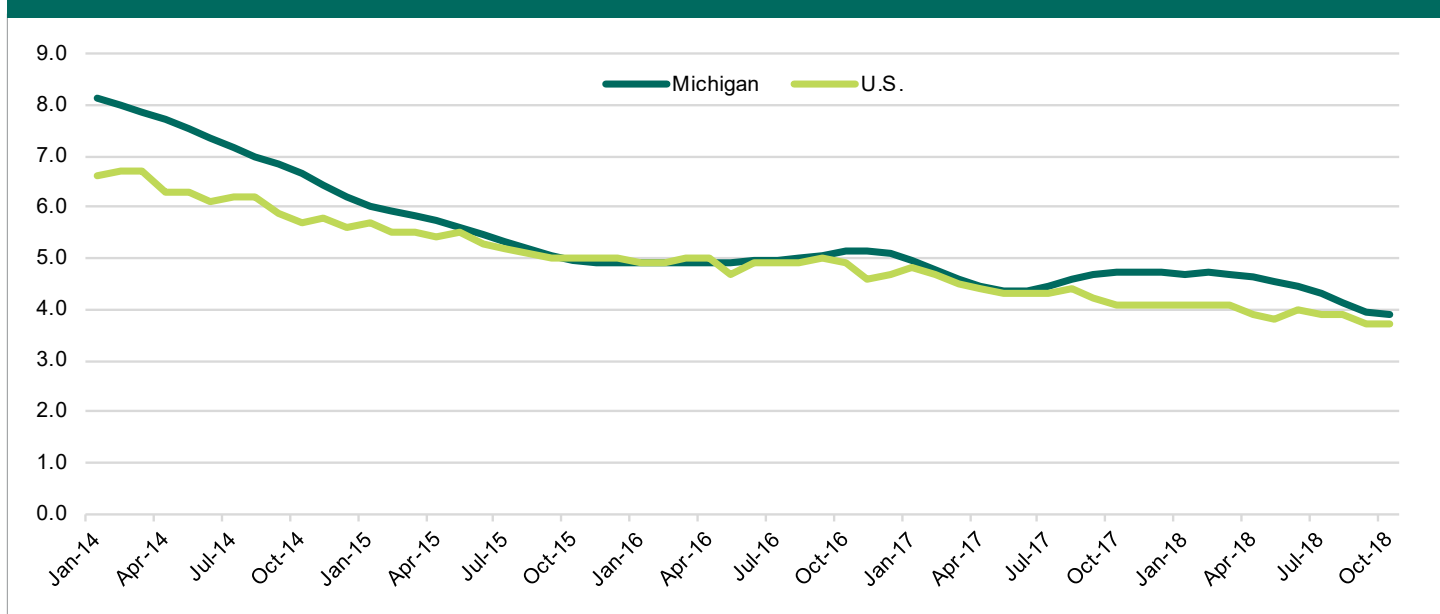
**JIM RHEIN**

Economic Specialist

### MICHIGAN LABOR FORCE ESTIMATES (SEASONALLY ADJUSTED)

	OCTOBER 2018	SEPTEMBER 2018	OCTOBER 2017	CHANGE OVER THE MONTH	CHANGE OVER THE YEAR
Labor Force	4,892,000	4,892,000	4,902,000	0	-10,000
Employed	4,700,000	4,698,000	4,670,000	2,000	+30,000
Unemployed	191,000	193,000	232,000	-2,000	-41,000
Jobless Rate	3.9	4.0	4.7	-0.1	-0.8

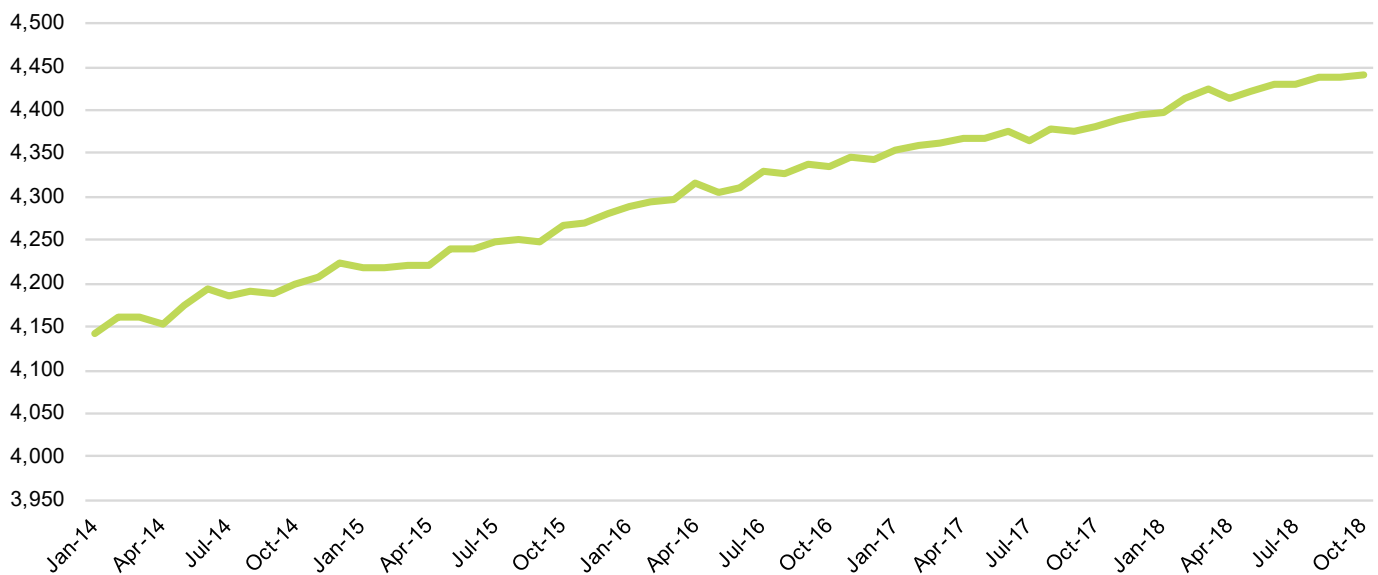
### MICHIGAN AND U.S. MONTHLY JOBLESS RATES (SEASONALLY ADJUSTED)







**MICHIGAN PAYROLL JOBS 2014 TO OCTOBER 2018** (SEASONALLY ADJUSTED) (DATA IN THOUSANDS)



# MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

## Monthly Overview

Total nonfarm job levels in Michigan were little changed in October, notching higher by 3,500 to 4,441,500. The largest payroll advances were recorded in the major sectors of *Manufacturing* (+2,000), *Government* (+1,600), and *Trade, transportation, and utilities* and *Leisure and hospitality* (+1,300 each). A small job gain occurred in *Professional and business services* (+700). These payroll additions were offset by job declines in *Education and health services* (-2,200) and *Construction* (-900). The *Transportation equipment manufacturing* sector was flat, adding 200 jobs in October.

## Over the Year Analysis

Since October 2017, Michigan nonfarm jobs have grown by 61,800, or by 1.4 percent. This was below the 1.7 percent rate of gain nationally during this period. In Michigan, all major industry sectors except *Information* (-700) and *Mining and logging* (-100) added jobs over the year. The broad sectors of *Professional and business services* (+13,500), *Manufacturing* (+10,500), and *Construction* (+10,000) accounted for 55 percent of the over the year job expansion. Notable over the year increases also occurred in the major sectors of *Leisure and hospitality* (+9,300), *Education and health services* (+7,900), *Other services* (+3,900), *Government* (+2,900), *Trade, transportation, and utilities* (+2,600), and *Financial activities* (+2,000).

## Michigan Year-to-Date Job Trends

In Michigan, growth in total nonfarm payroll employment through the first ten months of 2018 (+1.1 percent) has somewhat lagged the advance nationally (+1.4 percent). Michigan has added 46,700 jobs during the January through October period. This compared to a gain of 35,700 jobs (+0.8 percent) during the same period in 2017.

Michigan outperformed the U.S. in percent job change in three broad industry sectors during the first ten months of this year. These included *Construction* (+4.1 percent vs. +3.5 percent), *Other services* (+1.7 percent vs. +1.1 percent), and *Leisure and hospitality* (+1.5 percent vs. +1.3 percent).

Michigan reported similar job trends to the nation in *Financial activities* and *Government*.

The major industry groups where Michigan has lagged the nation in job change over this period included *Mining and logging* (-1.4 percent vs. +8.3 percent), *Manufacturing* (+1.3 percent vs. +1.8 percent), *Trade, transportation, and utilities* (+0.4 percent vs. +1.0 percent), *Information* (-1.6 percent vs. -0.3 percent), *Professional and business services* (+1.6 percent vs. +2.3 percent), and *Education and health services* (+0.8 percent vs. +1.8 percent).

## Significant Industry Employment Developments

### MANUFACTURING

The number of *Manufacturing* jobs increased by 2,000 in October. The largest portion of this gain was recorded in the *Durable goods* (+1,400) subsector with an additional 600 jobs added in *Nondurable goods*. Within *Durable goods*, above average job additions occurred in *Fabricated metal product manufacturing*. Larger than typical hiring in *Food manufacturing* partially contributed to the increase in *Nondurable goods* jobs. Since October 2017, *Manufacturing* payrolls have grown by 10,500 or by 1.7 percent. The *Transportation equipment manufacturing* sector accounted for over half of this addition. Nationally, employment was up by 32,000 over the month and by 2.4 percent over the year.

### TRANSPORTATION, WAREHOUSING, AND UTILITIES

Job levels in this sector rose by 1,400 over the month. October is the first month of hiring for the upcoming holiday package delivery season. This year, much stronger than typical October job gains were recorded in *Transportation and warehousing*. The broad sector has added 4,600 jobs so far in 2018 which is more than double the 2,000 jobs added during the same 10-month period in 2017. Between October 2017 and October 2018, payrolls have advanced by 4,900 jobs or by 3.4 percent. A portion of this over the year increase occurred in *Truck transportation*. Nationally, jobs rose by 26,000 over the month and by 3.2 percent over the year.

### HEALTH CARE AND SOCIAL ASSISTANCE

Employment levels in this sector declined by 1,800 in October. This decrease was partially

due to an atypically large reduction in *Social assistance* payrolls and a smaller than typical increase in *Home health care services*. For the 10-month period ending in October, however, job levels in this sector were up by 4,400. This was significantly more than the 1,900 jobs added during the same period in 2017. Since October 2017, jobs in this sector have grown by 7,000 or by 1.2 percent. Much of this over the year job gain occurred in the *Home health care services* and *Social assistance subsectors*. Nationally, jobs moved up by 46,700 in October and by 2.2 percent over the year.

### METROPOLITAN STATISTICAL AREAS (MSAS)

On a *not seasonally adjusted basis*, 10 of Michigan's 14 Metropolitan Statistical Areas (MSAs) registered October job advances.

Nine of these metro areas reported job growth above the statewide average of 0.5 percent. These areas included *Lansing* (+1.3 percent), *Jackson* (+1.2 percent), *Ann Arbor* (+1.1 percent), *Saginaw* (+1.0 percent), *Kalamazoo, Flint, and Battle Creek* (+0.9 percent each), and *Monroe and Detroit* (+0.7 percent each).

Total nonfarm job levels remained unchanged in the *Bay City MSA* and declined in *Benton Harbor* (-0.2 percent), *Midland* (-0.3 percent), and *Muskegon* (-0.5 percent).

In two of the metro areas with the largest growth rates, *Lansing and Ann Arbor*, significant job additions were reported in the post-secondary component of *State government*. The *Midland and Muskegon MSAs* recorded job declines in *Private service providing* while *Benton Harbor* reported a decrease in *Good producing jobs*.

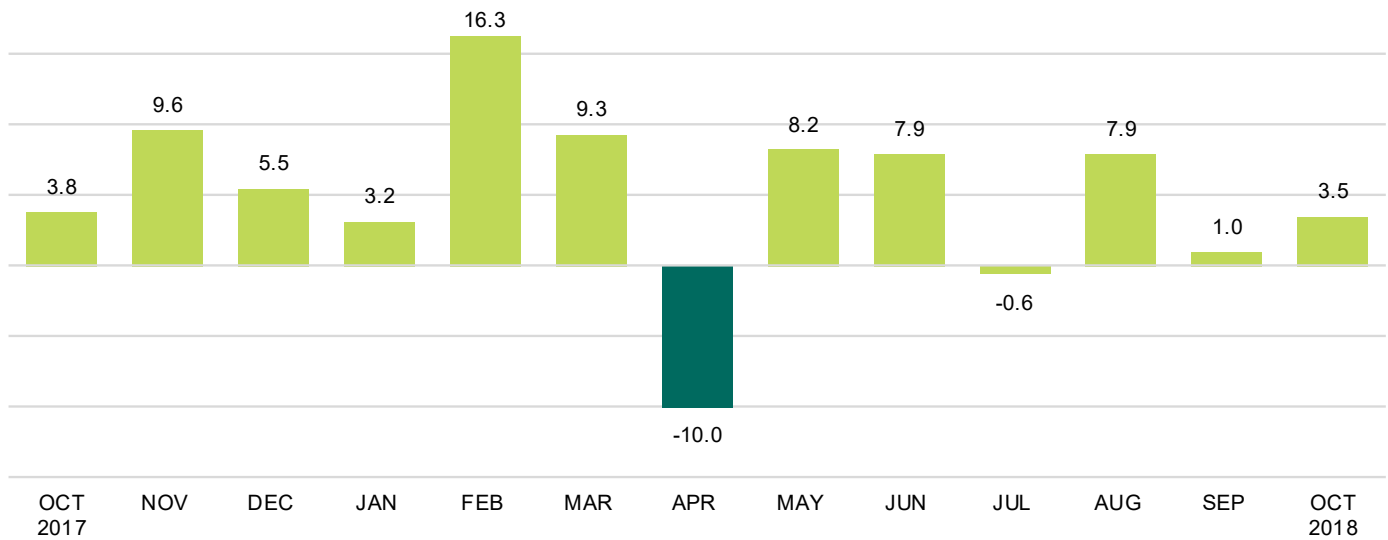
JEFFREY AULA  
Economic Analyst





MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)							
INDUSTRY	OCTOBER 2018	SEPTEMBER 2018	OCTOBER 2017	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
<b>TOTAL NONFARM</b>	<b>4,441,500</b>	<b>4,438,000</b>	<b>4,379,700</b>	<b>3,500</b>	<b>0.1%</b>	<b>61,800</b>	<b>1.4%</b>
Total Private	3,829,100	3,827,200	3,770,200	1,900	0.0%	58,900	1.6%
Private Service-Providing	3,021,900	3,021,000	2,983,400	900	0.0%	38,500	1.3%
<b>GOODS-PRODUCING</b>	<b>807,200</b>	<b>806,200</b>	<b>786,800</b>	<b>1,000</b>	<b>0.1%</b>	<b>20,400</b>	<b>2.6%</b>
Mining, Logging, and Construction	181,500	182,500	171,600	-1,000	-0.5%	9,900	5.8%
Mining and Logging	7,100	7,200	7,200	-100	-1.4%	-100	-1.4%
Construction	174,400	175,300	164,400	-900	-0.5%	10,000	6.1%
Manufacturing	625,700	623,700	615,200	2,000	0.3%	10,500	1.7%
Durable Goods	472,100	470,700	464,800	1,400	0.3%	7,300	1.6%
Transportation Equipment Manufacturing	192,000	191,800	186,500	200	0.1%	5,500	2.9%
Non-Durable Goods	153,600	153,000	150,400	600	0.4%	3,200	2.1%
<b>SERVICE-PROVIDING</b>	<b>3,634,300</b>	<b>3,631,800</b>	<b>3,592,900</b>	<b>2,500</b>	<b>0.1%</b>	<b>41,400</b>	<b>1.2%</b>
Trade, Transportation, and Utilities	791,300	790,000	788,700	1,300	0.2%	2,600	0.3%
Wholesale Trade	174,600	174,300	172,500	300	0.2%	2,100	1.2%
Retail Trade	469,200	469,600	473,600	-400	-0.1%	-4,400	-0.9%
Transportation, Warehousing, and Utilities	147,500	146,100	142,600	1,400	1.0%	4,900	3.4%
Information	55,100	55,400	55,800	-300	-0.5%	-700	-1.3%
Financial Activities	221,100	221,000	219,100	100	0.0%	2,000	0.9%
Finance and Insurance	165,600	165,700	164,100	-100	-0.1%	1,500	0.9%
Real Estate and Rental and Leasing	55,500	55,300	55,000	200	0.4%	500	0.9%
Professional and Business Services	660,100	659,400	646,600	700	0.1%	13,500	2.1%
Professional, Scientific, and Technical Services	298,200	297,400	292,000	800	0.3%	6,200	2.1%
Management of Companies and Enterprises	69,600	69,800	66,600	-200	-0.3%	3,000	4.5%
Administrative and Support and Waste Management and Remediation Services	292,300	292,200	288,000	100	0.0%	4,300	1.5%
Education and Health Services	677,000	679,200	669,100	-2,200	-0.3%	7,900	1.2%
Educational Services	73,900	74,300	73,000	-400	-0.5%	900	1.2%
Health Care and Social Assistance	603,100	604,900	596,100	-1,800	-0.3%	7,000	1.2%
Leisure and Hospitality	444,600	443,300	435,300	1,300	0.3%	9,300	2.1%
Arts, Entertainment, and Recreation	53,100	52,400	51,500	700	1.3%	1,600	3.1%
Accommodation and Food Services	391,500	390,900	383,800	600	0.2%	7,700	2.0%
Other Services	172,700	172,700	168,800	0	0.0%	3,900	2.3%
Government	612,400	610,800	609,500	1,600	0.3%	2,900	0.5%
Federal Government	52,300	52,300	52,500	0	0.0%	-200	-0.4%
State Government	198,000	195,800	195,200	2,200	1.1%	2,800	1.4%
Local Government	362,100	362,700	361,800	-600	-0.2%	300	0.1%

## MICHIGAN OVER THE MONTH PAYROLL JOB CHANGE (IN THOUSANDS)



## JOB CHANGE BY MAJOR INDUSTRY SECTOR, MICHIGAN VS. U.S (JANUARY 2018 THROUGH OCTOBER 2018)

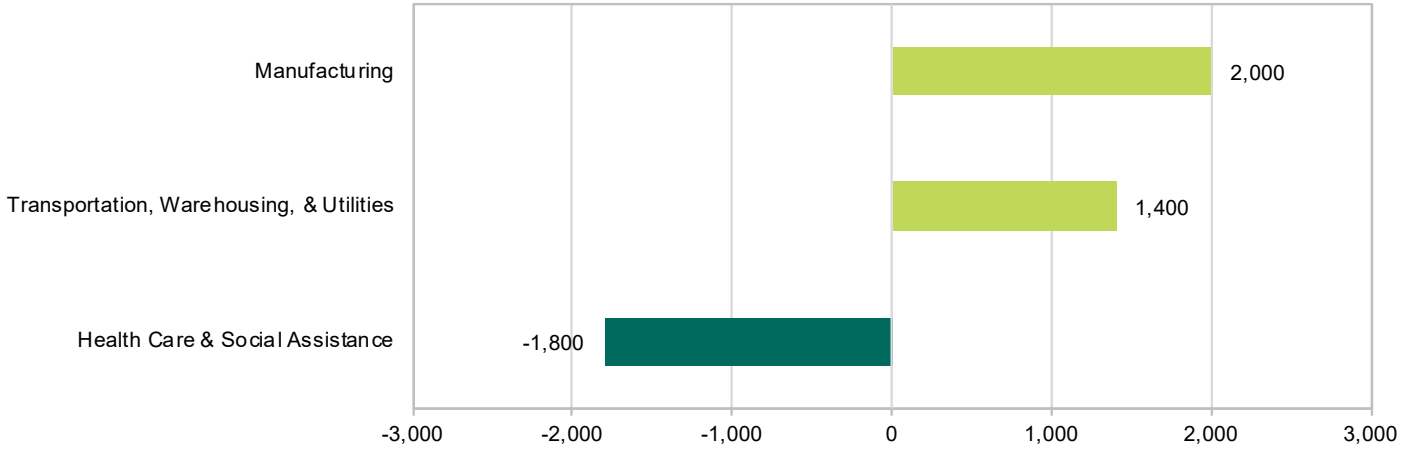
	MICHIGAN		U.S.	
	LEVEL	PERCENT	LEVEL	PERCENT
<b>Total Nonfarm</b>	<b>46,700</b>	<b>1.1%</b>	<b>2,125,000</b>	<b>1.4%</b>
Mining and Logging	-100	-1.4%	58,000	8.3%
Construction	6,800	4.1%	246,000	3.5%
Manufacturing	7,900	1.3%	227,000	1.8%
Trade, Transportation, and Utilities	3,100	0.4%	272,000	1.0%
Information	-900	-1.6%	-7,000	-0.3%
Financial Activities	2,300	1.1%	98,000	1.2%
Professional and Business Services	10,300	1.6%	469,000	2.3%
Educational and Health Services	5,300	0.8%	431,000	1.8%
Leisure and Hospitality	6,700	1.5%	203,000	1.3%
Other Services	2,900	1.7%	62,000	1.1%
Government	2,400	0.4%	66,000	0.3%



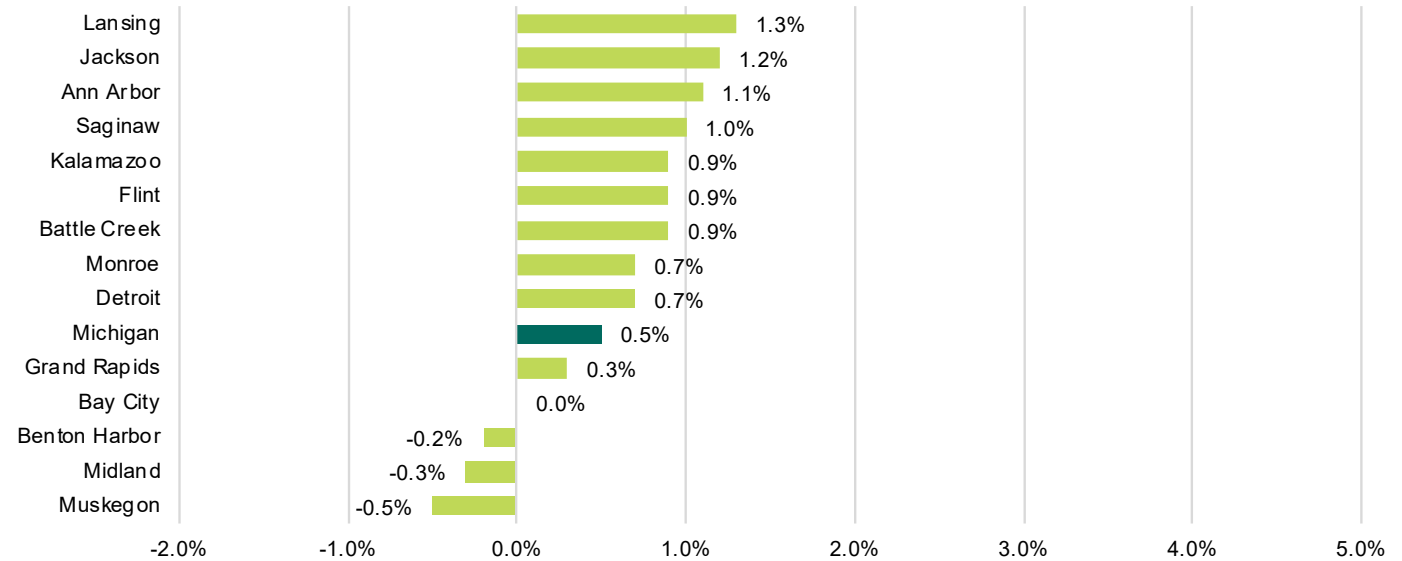




**MICHIGAN OVER THE MONTH JOB CHANGE BY SELECT INDUSTRY (SEPTEMBER 2018-OCTOBER 2018)**



**METROPOLITAN AREA JOB CHANGE - SEPTEMBER 2018 - OCTOBER 2018 (NOT SEASONALLY ADJUSTED)**



# REGIONAL LABOR MARKET ANALYSIS

## ANN ARBOR METROPOLITAN AREA

- Ann Arbor metro area unemployment inched up by one-tenth of a percentage point in October, to 2.9 percent.
- The civilian labor force rose by 1.0 percent both over the month and over the year, an increase double that of the state's at 0.5 percent for both time periods.

### MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in Ann Arbor rose by 2,500, or 1.1 percent, in October.
- Industries exhibiting the largest over-the-month seasonal advances included *Government* (+1,900) and *Professional and business services* (+700).

### INDUSTRY TRENDS

- For the second consecutive month, *Other services* in Ann Arbor reached its ten-year low level of 6,300 jobs.

## BAY CITY METROPOLITAN AREA

- The Bay City jobless rate was unchanged over the month, remaining at 3.7 percent in October.
- The number of unemployed declined by 17.4 percent over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm employment remained unchanged in Bay City over the month, staying at a level of 36,000 jobs.
- A minor monthly gain in *Retail trade* jobs was offset by an equal decline in *Mining, logging and construction*.

### INDUSTRY TRENDS

- For the second successive month, Bay City's *Manufacturing* sector recorded a 13-year high level of 4,800 jobs.

## FLINT METROPOLITAN AREA

- Flint's jobless rate moved up slightly by 0.1 percentage points over the month to 4.1 percent in October.
- Total employment rose by 0.5 percent over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Flint's payroll job count advanced by 1,300 in October (+0.9 percent), primarily due to seasonal job hikes in *Education and health services* (+700) and *Government* (+300).

### INDUSTRY TRENDS

- Flint reached its all-time low level of 6,000 jobs in *Financial activities* in October, a level last seen in March 2018. Jobs declined annually in this sector from 2013-2016.

## BATTLE CREEK METROPOLITAN AREA

- The Battle Creek MSA jobless rate remained unchanged in October at 3.6 percent. Employment inched up 500, while the number of unemployed was stable.
- Since October 2017, unemployment fell by 600, while employment advanced by 600. As a result, the jobless rate dropped by nine tenths of a percentage point.

### MONTHLY INDUSTRY DEVELOPMENTS

- October nonfarm payroll jobs in the Battle Creek MSA advanced by 500 to a total of 59,300, mostly due to seasonal job gains in *Government* and in *Retail trade*.
- Since October 2017, jobs in *Manufacturing* continued to improve (+600 or 5.0 percent). Employment in other sectors was flat or down.

### INDUSTRY TRENDS

- *Government* employment in the Battle Creek MSA was relatively flat since about 2013. Annual job levels in this sector from 2013-2017 were around 10,500.

## DETROIT-WARREN-DEARBORN METRO AREA

- The Detroit metro area unemployment rate increased by 0.7 percentage points over the month to 4.4 percent in October.
- The region had the largest over-the-month jobless rate gain in October among Michigan metro areas.

### MONTHLY INDUSTRY DEVELOPMENTS

- Payroll employment in the Detroit metro area rose by 13,700, or 0.7 percent, in October.
- Employment gains were seen in many major industries with the notable exception of *Leisure and hospitality* (-2,400).

### INDUSTRY TRENDS

- *Education and health services* reached an all-time high of 317,700 jobs in the region in October.

## GRAND RAPIDS-WYOMING METRO AREA

- Labor market conditions were stable in October, as the Grand Rapids regional jobless rate was unchanged at 2.6 percent.
- Ottawa, Kent, and Barry counties were among the six counties in Michigan with the lowest jobless rates in October.

### MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm jobs in Grand Rapids rose by 1,900 over the month, or 0.3 percent.
- Employment gains were seen in most major industry sectors, with the exception of a seasonal decline in *Leisure and hospitality* (-1,000).

### INDUSTRY TRENDS

- *Ambulatory health care services* in Grand Rapids registered its all-time high of 22,700 jobs for the third consecutive month in October.



## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	ANN ARBOR			BATTLE CREEK			BAY CITY		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>									
Labor Force	197,000	195,100	195,000	63,000	62,500	62,900	50,300	50,000	50,500
Employment	191,300	189,600	188,300	60,700	60,200	60,100	48,400	48,200	48,200
Unemployment	5,800	5,500	6,600	2,300	2,200	2,900	1,900	1,800	2,300
Rate (percent)	2.9%	2.8%	3.4%	3.6%	3.6%	4.5%	3.7%	3.7%	4.6%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	229,400	226,900	225,600	59,300	58,800	58,500	36,000	36,000	36,200
Mining, Logging, and Construction	4,900	5,000	4,600	1,800	1,800	1,800	1,200	1,300	1,200
Manufacturing	15,400	15,400	14,800	12,700	12,700	12,100	4,800	4,800	4,600
Trade, Transportation, and Utilities	26,000	25,800	26,300	9,400	9,200	9,300	7,600	7,500	7,600
Wholesale Trade	6,100	6,100	6,100	*	*	*	*	*	*
Retail Trade	16,100	15,900	16,500	5,800	5,700	5,800	5,200	5,100	5,200
Information	5,100	5,200	5,100	*	*	*	500	500	500
Financial Activities	7,200	7,200	7,100	1,200	1,200	1,200	1,300	1,300	1,300
Professional and Business Services	30,600	29,900	30,100	6,300	6,300	6,300	2,700	2,700	2,700
Educational and Health Services	28,000	27,800	27,700	10,900	10,800	10,900	6,600	6,600	6,700
Leisure and Hospitality	18,100	18,400	17,800	4,400	4,500	4,400	4,300	4,300	4,500
Other Services	6,300	6,300	6,300	1,900	1,900	1,900	1,300	1,300	1,400
Government	87,800	85,900	85,800	10,600	10,400	10,600	5,700	5,700	5,700
	DETROIT-WARREN-DEARBORN			FLINT			GRAND RAPIDS-WYOMING		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>									
Labor Force	2,137,000	2,126,000	2,122,000	181,000	179,600	181,700	577,600	575,600	569,500
Employment	2,044,000	2,047,000	2,030,000	173,500	172,400	172,600	562,400	560,600	551,000
Unemployment	93,000	79,000	92,000	7,500	7,300	9,100	15,300	15,000	18,500
Rate (percent)	4.4%	3.7%	4.3%	4.1%	4.0%	5.0%	2.6%	2.6%	3.3%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	2,039,700	2,026,000	2,018,400	143,200	141,900	142,700	572,400	570,500	558,900
Mining, Logging, and Construction	81,100	80,700	77,000	6,300	6,100	5,600	27,700	27,500	24,600
Manufacturing	256,900	256,300	252,500	11,900	12,000	12,400	117,900	117,500	115,300
Trade, Transportation, and Utilities	372,600	368,800	370,700	29,800	29,900	30,000	96,400	96,300	96,600
Wholesale Trade	88,100	87,800	86,600	6,000	6,000	5,800	31,900	31,800	31,300
Retail Trade	210,800	208,300	212,800	19,800	19,900	20,300	48,700	48,800	49,900
Information	26,400	26,700	27,200	3,900	3,800	4,000	5,400	5,400	5,400
Financial Activities	115,000	115,700	116,200	6,000	6,100	6,100	25,800	25,800	26,000
Professional and Business Services	396,700	391,400	393,900	16,300	16,100	15,700	80,700	80,000	79,700
Educational and Health Services	317,700	313,900	313,600	28,800	28,100	29,000	94,000	93,600	91,400
Leisure and Hospitality	206,800	209,200	201,100	15,300	15,200	15,200	51,100	52,100	48,400
Other Services	76,100	76,400	76,400	5,400	5,400	5,400	22,600	22,600	22,400
Government	190,400	186,900	189,800	19,500	19,200	19,300	50,800	49,700	49,100
* Data Not Available									

## JACKSON METROPOLITAN AREA

- In October, employment in the Jackson MSA was up 700, while unemployment was stable. The unemployment rate remained unchanged at 3.4 percent.
- Over the past year, unemployment fell by 500, while employment was stable. The jobless rate declined by seven tenths of a percentage point.

### MONTHLY INDUSTRY DEVELOPMENTS

- October jobs in private *Educational and health services* rose by 400 in Jackson, and employment in *Manufacturing* advanced by 200. However, *Leisure and hospitality* edged down seasonally by 100 positions.
- Since October 2017, employment in *Retail trade* decreased.

### INDUSTRY TRENDS

- Jackson area *Government* jobs have been in a steady decline, dropping by 800 from 2011-2017.

## KALAMAZOO-PORTAGE METRO AREA

- The October unemployment rate in the Kalamazoo-Portage metro area was flat at 3.2 percent. This rate remained below the statewide average of 3.8 percent.
- Over the past year, unemployment dropped by 1,300, while employment improved by 1,100, resulting in a fall of seven tenths of a percentage point in the jobless rate.

### MONTHLY INDUSTRY DEVELOPMENTS

- In October, *Educational services* (private and public) added jobs seasonally in the Kalamazoo-Portage MSA, and employment in *Retail trade* rose by 400. However, *Leisure and hospitality* cut 300 positions.

### INDUSTRY TRENDS

- Since 2009, *Government* employment in the Kalamazoo-Portage MSA fell by 7.8 percent (vs. 4.9 percent statewide); and most of the decline was in *Local government*.

## LANSING-EAST LANSING METRO AREA

- Joblessness in the Lansing metro area inched up by a tenth of a percentage point over the month, to 3.0 percent.
- Total employment in the region exhibited a sharp seasonal October advance of 1.2 percent, the largest over-the-month gain among Michigan major areas.

### MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Lansing rose by 3,200 over the month, or 1.3 percent, primarily due to increases in *Government* (+2,300) and *Professional and business services* (+500).

### INDUSTRY TRENDS

- Total nonfarm jobs in the region reached an all-time high level of 2,441,000 in October.
- Over the past year, jobs rose in most broad industry sectors.

## MIDLAND METROPOLITAN AREA

- Joblessness in the Midland region inched up by 0.1 percentage points between September and October to 3.3 percent.
- The civilian labor force, total employment, and the number of unemployed all remained essentially unchanged in October.

### MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm employment in Midland receded by 100 jobs over the month, a decline of 0.3 percent.

### INDUSTRY TRENDS

- Midland was one of only three Michigan regions to exhibit a decline in payroll jobs over the month (along with Muskegon and Niles-Benton Harbor).

## MONROE METROPOLITAN AREA

- Monroe's unemployment rate rose by four-tenths of a percentage point over the month, to 4.0 percent.
- The civilian labor force increased by 1.1 percent over the month but remained unchanged over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- The count of nonfarm jobs in Monroe edged up by 300 in October, or 0.7 percent, essentially all due to minor increases in *Government* (+200) and *Mining, logging and construction* (+100).

### INDUSTRY TRENDS

- *Manufacturing* jobs in Monroe have stabilized since 2015, averaging 5,600 in 2017.

## MUSKEGON METROPOLITAN AREA

- The jobless rate in Muskegon edged up by a tenth of a percentage point between September and October, to 4.0 percent.
- Muskegon was the only Michigan region to recede in total employment over the year, inching down by 0.1 percent since October 2017.

### MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Muskegon declined by 300 over the month, or 0.5 percent, with minor reductions seen in several industry sectors in the region.

### INDUSTRY TRENDS

- Muskegon's *Mining, logging and construction* industry reached its twelve-year high level of 2,400 jobs in October.



## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	JACKSON			KALAMAZOO-PORTAGE			LANSING-EAST LANSING		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>									
Labor Force	73,600	72,800	74,100	167,700	166,300	168,000	251,700	248,700	249,700
Employment	71,100	70,400	71,000	162,400	161,100	161,300	244,200	241,400	240,200
Unemployment	2,500	2,400	3,000	5,300	5,300	6,600	7,500	7,300	9,400
Rate (percent)	3.4%	3.4%	4.1%	3.2%	3.2%	3.9%	3.0%	2.9%	3.8%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	58,700	58,000	58,900	151,800	150,500	150,400	244,100	240,900	239,400
Mining, Logging, and Construction	2,200	2,200	2,000	7,800	7,700	7,000	8,400	8,400	7,800
Manufacturing	10,400	10,200	10,000	21,700	21,700	21,700	21,000	21,100	19,800
Trade, Transportation, and Utilities	12,100	12,100	12,600	27,800	27,300	27,200	38,700	38,900	38,400
Wholesale Trade	*	*	*	7,500	7,500	7,300	6,000	6,000	5,900
Retail Trade	6,200	6,200	6,700	16,500	16,100	16,200	22,500	22,400	22,300
Information	300	300	300	800	800	900	2,600	2,600	2,600
Financial Activities	2,000	2,000	2,000	8,500	8,500	8,400	16,800	16,800	16,500
Professional and Business Services	5,000	4,900	5,100	16,800	16,700	17,200	24,500	24,000	23,300
Educational and Health Services	10,900	10,500	11,000	24,600	24,400	24,200	32,700	32,500	32,500
Leisure and Hospitality	5,400	5,500	5,400	16,100	16,400	15,900	18,700	18,300	19,100
Other Services	2,500	2,500	2,500	5,200	5,200	5,300	10,200	10,100	10,200
Government	7,900	7,800	8,000	22,500	21,800	22,600	70,500	68,200	69,200
	MIDLAND			MONROE			MUSKEGON		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>									
Labor Force	39,900	39,900	39,800	76,800	76,000	76,800	76,600	76,700	77,400
Employment	38,600	38,600	38,200	73,700	73,300	73,100	73,500	73,800	73,600
Unemployment	1,300	1,300	1,600	3,100	2,700	3,700	3,100	3,000	3,800
Rate (percent)	3.3%	3.2%	4.1%	4.0%	3.6%	4.9%	4.0%	3.9%	4.9%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	37,700	37,800	37,300	43,500	43,200	43,000	64,600	64,900	65,000
Mining, Logging, and Construction	*	*	*	2,200	2,100	2,100	2,400	2,300	2,200
Manufacturing	*	*	*	5,500	5,500	5,600	14,000	14,100	13,700
Trade, Transportation, and Utilities	*	*	*	11,200	11,200	11,200	13,100	13,200	13,800
Wholesale Trade	*	*	*	1,900	1,900	1,900	*	*	*
Retail Trade	*	*	*	5,300	5,300	5,400	10,500	10,700	11,200
Information	*	*	*	*	*	*	800	800	800
Financial Activities	*	*	*	1,000	1,000	1,000	1,700	1,700	1,700
Professional and Business Services	*	*	*	5,600	5,600	5,500	3,700	3,600	3,700
Educational and Health Services	*	*	*	5,200	5,200	5,100	12,000	11,900	12,100
Leisure and Hospitality	*	*	*	4,900	5,000	4,700	7,500	7,800	7,300
Other Services	*	*	*	1,500	1,500	1,500	2,100	2,200	2,200
Government	3,100	3,100	3,000	5,700	5,500	5,600	7,300	7,300	7,500
* Data Not Available									

## NILES-BENTON HARBOR METRO AREA

- The October jobless rate in the Niles-Benton Harbor region was stable at 3.6 percent. Both employment and the number of unemployed remained unchanged.
- Since October 2017, the local jobless rate declined by six tenths of a percentage point, slightly outpacing the reduction statewide.

### MONTHLY INDUSTRY DEVELOPMENTS

- Jobs in the Niles-Benton Harbor MSA were virtually flat in October. Monthly job advances in *Educational and health services* were offset by seasonal job reductions in *Leisure and hospitality*.
- Since October 2017, the region added 500 jobs, for an over the year gain of 0.8 percent.

### INDUSTRY TRENDS

- *Government* jobs in the Niles-Benton Harbor MSA followed the statewide pattern since October 2009, dropping by 5.5 percent (-500), compared to 4.9 percent statewide.

## SAGINAW METROPOLITAN AREA

- Saginaw's jobless rate remained unchanged over the month at 3.9 percent.
- The number of unemployed in the region remained unchanged over the month but declined by about 17 percent over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm employment in Saginaw rose by 900 in October, or 1.0 percent, led by gains in *Professional and business services* and *Trade, transportation, and utilities*.

### INDUSTRY TRENDS

- Jobs in *Financial activities* have been stable since 2014, and have averaged 3,700 so far in 2018.

## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

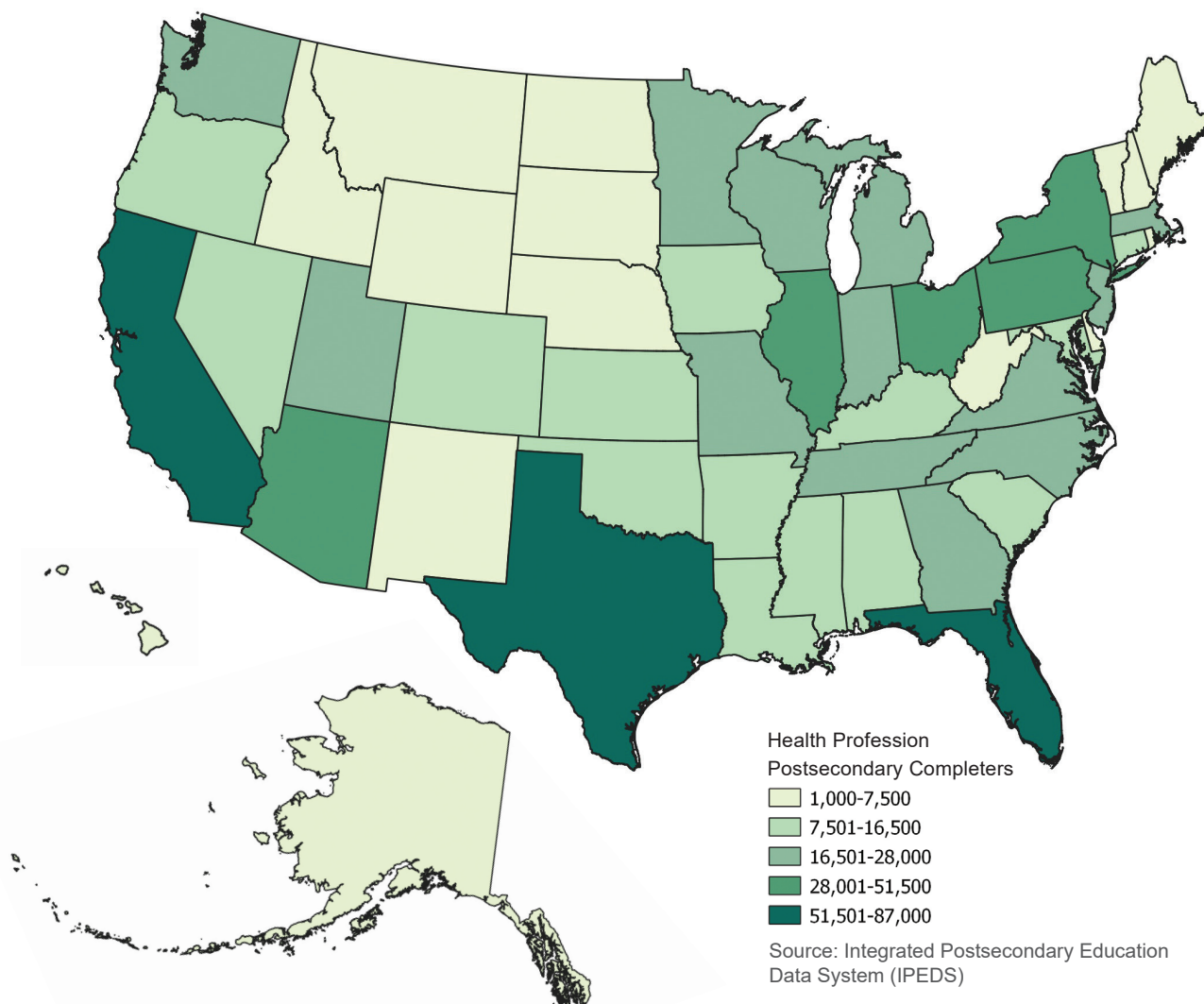
	NILES-BENTON HARBOR			SAGINAW		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>						
Labor Force	72,800	72,800	72,900	87,300	86,700	87,000
Employment	70,200	70,200	69,800	83,900	83,300	82,800
Unemployment	2,600	2,600	3,100	3,400	3,400	4,100
Rate (percent)	3.6%	3.6%	4.2%	3.9%	3.9%	4.7%
<b>PLACE OF WORK</b>						
Total Nonfarm Jobs	63,100	63,200	62,600	90,400	89,500	89,100
Mining, Logging, and Construction	2,000	2,100	1,900	3,300	3,300	3,100
Manufacturing	13,800	14,000	13,400	12,500	12,500	12,400
Trade, Transportation, and Utilities	11,300	11,200	10,900	17,000	16,700	17,200
Wholesale Trade	*	*	*	2,000	2,100	2,200
Retail Trade	6,800	6,800	6,900	12,300	12,000	12,400
Information	500	500	500	1,200	1,200	1,200
Financial Activities	2,500	2,500	2,500	3,600	3,600	3,700
Professional and Business Services	4,800	4,700	5,300	12,300	11,900	11,500
Educational and Health Services	9,700	9,400	9,700	16,200	16,000	16,300
Leisure and Hospitality	7,600	8,000	7,400	9,000	9,100	9,000
Other Services	2,300	2,300	2,300	3,300	3,300	3,300
Government	8,600	8,500	8,700	12,000	11,900	11,400

	UPPER PENINSULA			NORTHEAST MICHIGAN			NORTHWEST MICHIGAN		
	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017	OCT 2018	SEPT 2018	OCT 2017
<b>PLACE OF RESIDENCE</b>									
Labor Force	137,800	138,100	138,500	81,400	82,500	81,900	148,900	150,600	148,700
Employment	132,500	133,000	132,000	77,700	78,900	77,400	143,800	145,600	142,500
Unemployment	5,300	5,100	6,500	3,700	3,600	4,500	5,000	5,000	6,200
Rate (percent)	3.8%	3.7%	4.7%	4.6%	4.4%	5.5%	3.4%	3.3%	4.2%



MAP OF THE MONTH:

# HEALTH PROFESSIONS PROGRAM COMPLETERS BY STATE



## Health Professions and Related Program Completers

This map displays data obtained from the Integrated Postsecondary Education Data System (IPEDS) to show the total number of program completers in Health Professions and related programs by state in 2017. Program completers include students who have completed any type of certificate in Health Professions and related occupations, or a degree at the associate's level or above.

In 2017, there were nearly 933,400 completers in Health-related programs among the nation's 50

states. The state with the most Health program completers was California with more than 86,800, followed by Florida with 68,400 and Texas with 64,300. Michigan ranked 10th highest with over 25,400 Health program completers, above the bordering states of Wisconsin (21,300) and Indiana (19,200), and significantly lower than Ohio's nearly 41,100 completers.

## Share of Health Professions Completers

Michigan had more than 131,300 total program completers, of which 19.4 percent were in the Health Professions and related field. Nationally,

Michigan ranked only 31st in the share of all program completers in the Health Professions field. Just over half of the nation's states had more than 20 percent of total program completers in the Health Professions and related category. Nevada topped the list with Health Professions and related completers accounting for 31.7 percent of its more than 24,800 reported completers. Kentucky and Utah followed closely with 27.9 and 27.8 percent, respectively.

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# AN ANALYSIS OF OCCUPATIONAL SUPPLY AND DEMAND IN THE MICHIGAN LABOR MARKET

Balancing the supply and demand of workers in the labor market is of critical importance to the Michigan economy. If the market demands more workers than are currently trained and available, the goal of creating more and better jobs in the Michigan labor market is constrained. Alternatively, if there are an oversupply of trained workers, these workers may have difficulty finding jobs, especially jobs that effectively use their skills. Consequently, achieving labor market alignment is crucial to building an economy that meets the needs of firms and workers alike. In this article, Michigan builds off work other states have done regarding labor supply and demand relationships.

## Methods

In this analysis, occupations were assigned scores for supply and demand determined from composite indices. These scores ranged from 1 to 5. Variables used to create these indices are listed in Table 1. Shortages, alignments, or surpluses were then determined based on the differences between the supply and demand scores. This is referred to as the talent gap. For example, *Nursing assistants* were found to have a demand score of 5 and a supply score of only 4, so they were determined to have a weak shortage. *Information security analysts* have a

demand score of 4 and a supply score of 2, so they were determined to have a strong shortage. Because data for one measure of labor supply, program completers, are only available for occupations typically requiring some sort of post-secondary award, the analysis had to be split into two parts. This led to one analysis for non-degreed occupations and another analysis for degreed occupations. Occupations were dropped from the analyses if they did not typically require any education or training beyond high school or if employment statewide was below 1,000. Given these exclusions, 366 of the 746 detailed occupations in the state were incorporated across the two analyses.

## Non-Degreed Occupations

This section analyzes occupations that typically require less than a post-secondary certificate, but still require some form of education and/or training beyond high school, according to the Bureau of Labor Statistics. Occupations were also examined that may require a post-secondary certificate but are more reliant on training experience. Throughout this report, these occupations will be referred to as non-degreed occupations, or NDOs. In the NDO analysis, resume data from Michigan's labor exchange, MiTalent Connect, were used in supply calculations in place of education program completers.

TABLE 1: MICHIGAN SUPPLY AND DEMAND VARIABLES	
SUPPLY	DEMAND
Employment (2017)	Online Job Postings (2017)
Employment Change (2014-2017)	Annual Projected Openings
Program Completers (2017)	Projected Growth Rate
Program Completers Change (2014-2017)	
MiTalent Connect Resumes (2017)	





Looking at the overall alignment of non-degreed occupations, 54 occupations (25 percent) of the 220 NDOs analyzed demonstrate some level of shortage. 119 (54 percent) of NDOs appeared to have supply and demand aligned. The remaining 21 percent had some level of surplus.

This report also looks at the number of workers in occupations. Non-degreed occupations evaluated in this section employ more than 2.6 million workers in Michigan and of those, about 17 percent of workers were in occupations that have some level of shortage, 13 percent showed a surplus, and the remaining 70 percent

of workers were in aligned occupations. On average, non-degreed occupations employ roughly 12,000 workers. It should be noted that not all occupations are the same size.

#### ALIGNED NON-DEGREED OCCUPATIONS

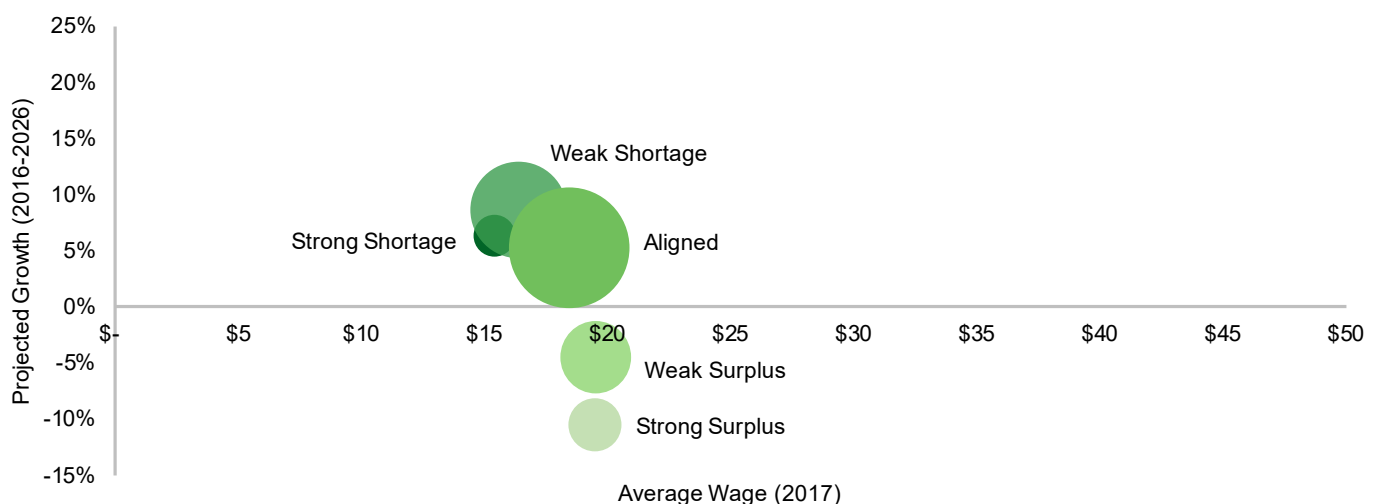
Over half of all non-degreed occupations in this analysis were found to be aligned. Many of the largest occupations, in terms of employment, demonstrate alignment between supply and demand. 13 of the top 15 largest occupations in the analysis were aligned including *Retail salespersons*, *Combined food preparation and serving workers, including fast food*, and

*Office clerks, general*. The *Administrative support* major group had the highest count of total occupations aligned in the NDOs, but this partially stemmed from the large number of occupations in this major group. When looking at employment levels, 70 percent of the employees were in occupations that are balanced.

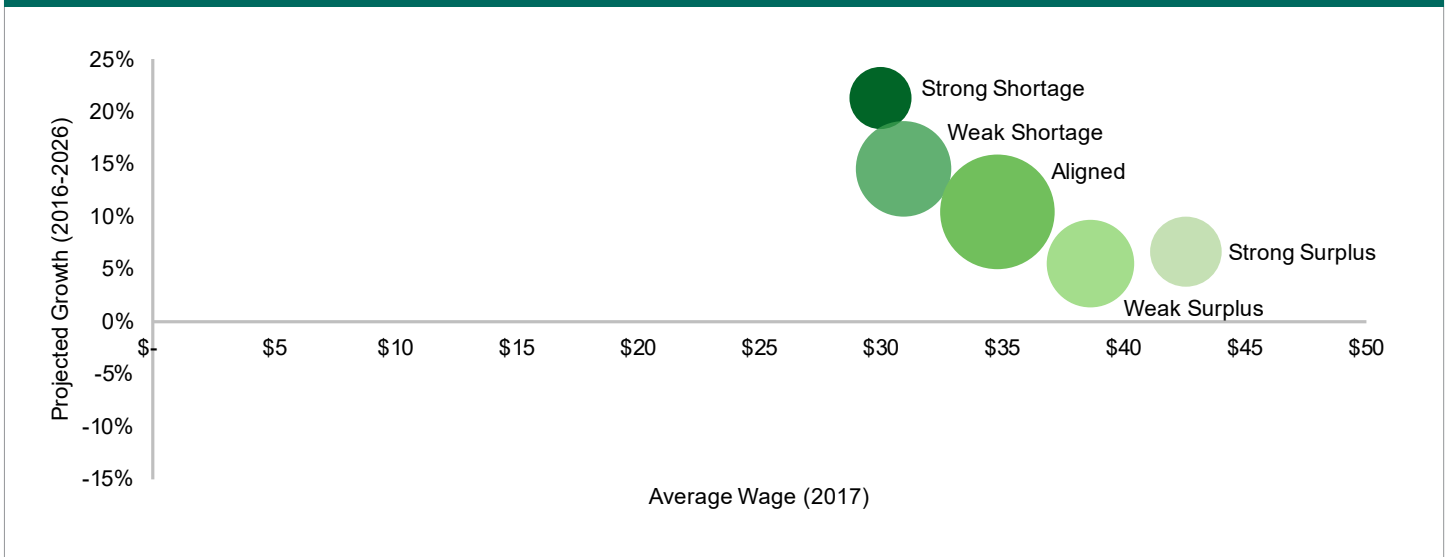
#### SHORTAGE NON-DEGREED OCCUPATIONS

Shortages come from a variety of major occupational groups with no broad group having more than 11 percent of total shortage job titles. *Food preparation*, *Personal care*,

**FIGURE 1: ALIGNMENT OF NON-DEGREED OCCUPATIONS BY WAGE AND PROJECTED GROWTH RATE**



**FIGURE 2: ALIGNMENT OF DEGREED OCCUPATION BY WAGE AND PROJECTED GROWTH RATE**



and *Administrative support* each had six shortage occupations, but these were some of the largest major groups in the analysis. Some notable weak shortages in non-degreed occupations include *Home health aides*, *Plumbers, pipefitters, and steamfitters*, and *Welders, cutters, solderers, and brazers*. Non-degreed shortage occupations with some of the largest 2017 employment values include *Janitors and cleaners*, *Restaurants cooks*, and *Home health aides*.

### SURPLUS NON-DEGREED OCCUPATIONS

Roughly 21 percent (47 of 220) of the non-degreed occupations exhibit a surplus. These occupations display a larger supply value than demand. By far, the largest major occupation group with this misalignment was *Production* with more than half of the 48 occupations demonstrating a surplus. The next major group with the largest concentration was *Office and administrative support* where 10 of the occupations (24 percent) had a surplus. No other major group had more than 2 occupations with some level of a surplus. There were 43 weak surpluses and 4 strong surpluses. *Production* occupations represented 23 of the weak surpluses and all 4 of the strongest surpluses. These 27 *Production* surplus occupations had an average employment of about 5,900 in 2017, or half the size of the average non-degreed occupation. Almost half of non-degreed occupations with some level of surplus had the word “operator” in the title.

### NON-DEGREED OCCUPATION TRENDS AND MAJOR GROUP ANALYSIS

In total, 220 occupations were included in the NDO analysis. As percentages, 54 percent of

NDOs were found to be in alignment, 21 percent showed a surplus, and 25 percent demonstrated a shortage. *Production* was the most notable major occupation group with 56 percent of occupations showing a surplus. The next most notable group was *Office and administrative support*, where 41 occupations had some level of a surplus. Shortages were spread throughout several occupational groups, but with concentrations in *Food preparation*, *Personal care*, and *Transportation*.

Figure 1 displays a noticeable difference in both the projected growth and wages of non-degreed occupations across differing levels of alignment. Specifically, occupations with shortages have higher projected growth as well as lower wages than aligned occupations. Those with surpluses show the exact opposite, with negative projected growth, but higher wage levels. This seems to indicate that people are either crowding toward higher paying jobs or perhaps listed these higher paying jobs in their MiTalent Connect resumes. Projected growth is a variable in the demand index, so the y-axis distribution is somewhat expected. The size of the circle denotes projected average annual openings.

## Degreed Occupations

Complimenting the previous section, this section analyzes degreed occupations (DOs). These occupations all require a postsecondary credential, from “postsecondary award” and “no on the job training” up to doctoral degrees. Of the 146 DOs, 56 (38 percent) show some level of shortage. Nearly half (48 percent) of occupations demonstrate alignment between supply and demand. Only 20 occupations (14 percent) show some level of surplus.

Degreed occupations consist of roughly 1.1 million Michigan workers. Of those, 26 percent were in occupations with shortages and only 11 percent of employees were in occupations with surpluses. The remaining 63 percent of employees were in occupations that are aligned. On average, degreed occupations contain about 7,200 employees. This is notably lower than the NDOs which employ, on average, almost 12,000 workers.

### ALIGNED DEGREED OCCUPATIONS

Just slightly under half of all degreed occupations were aligned. 8 of the top 10 largest occupations by employment were found to be in balance with 4 of the top 5 aligned (*Registered nurses*, *General and operations managers*, *Mechanical engineers*, and *Elementary school teachers, except special education*). *Nursing assistants* were the third largest degreed occupation and have a shortage. The *Healthcare practitioners*, *Management*, and *Educational* major groups contained some of the highest numbers of aligned occupations and workers.

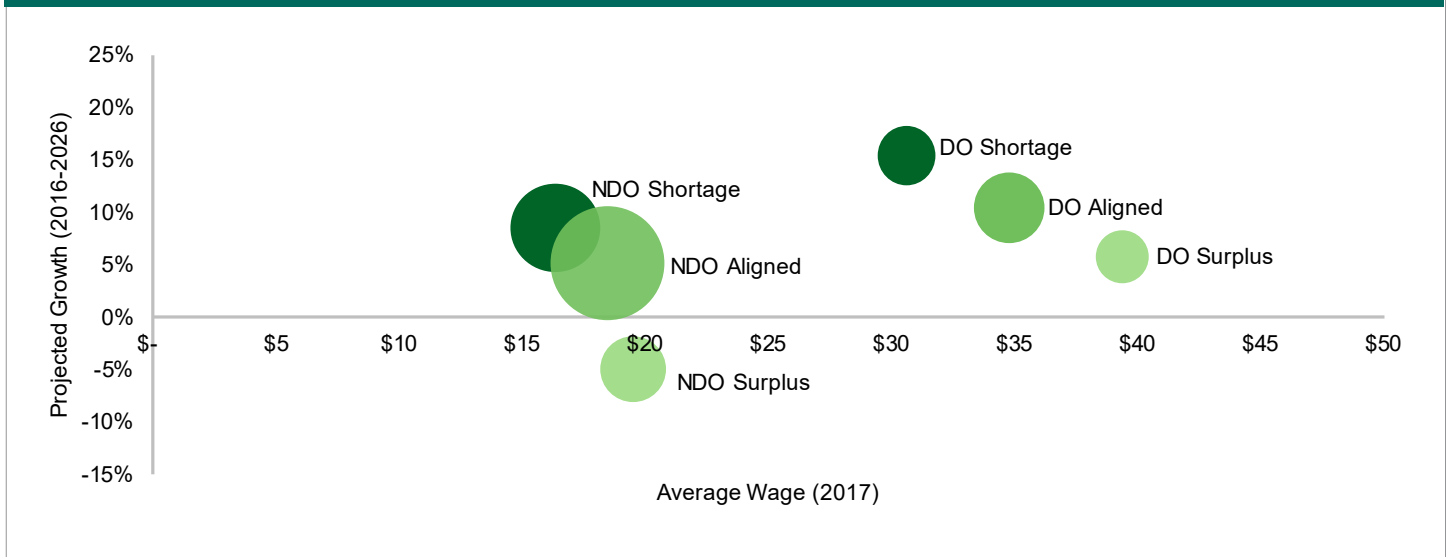
63 percent of all degreed employees were in balanced occupations which totaled nearly 660,000 workers. These occupations may remain attractive to future job seekers with job openings from growth as well as openings caused by older workers changing careers or leaving the labor force.

### SHORTAGE DEGREED OCCUPATIONS

Weak shortages appeared in 51 of the 146 degreed occupations (35 percent) and come from a variety of major groups. The largest number of shortages come from *Education*, *training and library* occupations and *Healthcare*



**FIGURE 3: ALIGNMENT OF ALL OCCUPATIONS BY WAGE AND PROJECTED GROWTH RATE**



*practitioner* occupations. Of the 12 education occupations with shortages, 8 of them were postsecondary instructors from a variety of fields. *Kindergarten teachers, except special education, Middle school teachers, except special and career/technical education, Career/technical education teachers, secondary school*, as well as *Librarians* were the remaining 4 and are all integral in communities across the state. In *Healthcare practitioner* occupations, *Licensed practical and licensed vocational nurse, Dental hygienists, and Physical therapists* are larger than the average degreed occupation and have shortages. Some degreed occupations with shortages are extremely large like the two *Healthcare support* occupations *Nursing assistants* and *Medical assistants*, which employ more than 50,000 and nearly 22,800 respectively.

### SURPLUS DEGREED OCCUPATIONS

Between the two analyses, a surplus in degreed occupations was easily the smallest of any of the levels of misalignment. Of the 146 degreed occupations, only 16 (11 percent) showed a weak surplus. These 16 occupations were spread throughout occupational groups with the largest grouping in the *Management* occupations, which had 5 occupations with surpluses. These 5 surpluses represent 28 percent of all *Management* occupations in the degreed analysis. No trend appeared in the *Management* occupations which ranged from several different industries (*Chief executives, Administrative services managers, Industrial production managers, Architectural and Engineering managers, and Education administrators, postsecondary*). *Business, Social services, and Arts* occupations each had two weak surpluses.

### DEGREED OCCUPATION TRENDS AND MAJOR GROUP ANALYSIS

In total there were 146 occupations in the degreed occupations analysis. Employees in the *Healthcare practitioners* major group made up 21 percent of all employees (19 percent of occupations) in the degreed analysis. Of these 65 percent of employees were in aligned occupations while 28 percent were in occupations with shortages and the remaining 7 percent were in occupations with surpluses. None of the well-represented major groups in the degreed analysis heavily leaned toward having surpluses.

Figure 2 shows differences in projected growth and wages for degreed occupations across the varying levels of alignment. Like non-degreed occupations, surplus positions had a higher average wage than those in alignment or with shortages. Those with a shortage have higher average projected growth rates than those with surpluses. Projected growth is a factor in calculating occupational alignment while wage is not. Again, it appears that workers and students may be crowding toward occupations with higher wages even if these may not have projected growth rates as high as other occupations. The size of the circle denotes projected average annual openings.

Figure 3 addresses degreed and non-degreed occupations concurrently. In the chart, it is evident that all levels of degreed occupations have higher average wages than any level of non-degreed occupations. Non-degreed occupations are typically larger and have higher rates of turnover leading to more average annual openings than degreed occupations.

It is also notable that degreed occupations that show a surplus have the lowest 10-year growth rate of any degreed occupation group but are projected to expand more quickly (5.8%) than aligned non-degreed occupations (5.2%).

### Conclusion

While it has been stated that the Michigan labor market has a shortage of workers, this analysis has demonstrated that the reality is a bit more complicated. All occupations continue to have some demand for new workers, but this demand may or may not line up with supply. New workers are needed to fill holes left by existing employees retiring, moving to new occupations, or due to occupational growth, but that alone is not evidence of a worker shortage. Indeed, most occupations in this analysis were aligned or showed at most a weak form of misalignment. Non-degreed occupations were 54 percent aligned while 70 percent of employees were in aligned occupations. For degreed occupations, 48 percent of these job titles were in alignment while 63 percent of workers were employed in these aligned occupations. Only 6 of the 220 non-degreed occupations had a strong misalignment, while 9 of the 146 degreed occupations had a strong misalignment. Overall, this analysis has shown the inherent complexity of the supply and demand of workers in the Michigan labor market, and that the existence of talent shortages should be evaluated on an occupational basis rather than for the labor market as a whole.

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## OCCUPATIONAL FOCUS:

# PHYSICAL THERAPIST ASSISTANTS

According to Michigan's long-term occupational projections (2016-2026), the occupational group with the largest expected percentage job growth will be *Healthcare Support occupations*. One of the expanding occupations in this occupational group is *Physical therapist assistants*. A person employed as a *Physical therapist assistant* will assist *Physical therapists* in providing physical therapy treatments and procedures to their patients. In addition, they may assist in the development of treatment plans, document treatment, modify treatments depending on the patient's status, and carry out routine functions of the occupation, in accordance with State law. The following are highlights about the *Physical therapist assistant* occupation in Michigan.

### Occupational Highlights

- *Physical therapist assistants* are also known as *Home health physical therapist assistants*, *Physical therapy technicians*, or *Licensed physical therapist assistants*.
- The typical education needed for a *Physical therapist assistant* is an associate's degree.
- *Physical therapist assistants* work directly with patients, which is why their skills are generally constructed around social perceptiveness, active listening, speaking effectively, and monitoring and assessing the progress of patients under the direction of *Physical therapists*.
- In 2017, there were 3,870 *Physical therapist assistants* in Michigan with an average median wage of \$24.56 per hour, or about \$51,090 per year.
- Nationally, Michigan ranks 8th in total employment, following the top five states of Texas (7,240), Ohio (5,900), Florida (5,880), Pennsylvania (5,180), and California (5,120).
- Short-term occupational projections show that the average number of annual job openings for *Physical therapist assistants* will be about 540. The need to replace workers (+250) and job expansion (+190) will each account for a similar share of annual job openings.
- Between 2016 and 2026, job opportunities in Michigan will grow more than four times as fast as total statewide occupations. *Physical therapist assistant* jobs will increase by 30.7 percent (+1,160) by 2026, while Michigan jobs overall are expected to rise by 7.0 percent over the decade.
- The average number of annual job openings for *Physical therapist assistants* will be about 630, as indicated by the long-term occupational projections. Nearly half of the annual openings are expected to come from employment expansion, while the remaining half will account for the need to replace workers.
- Among the top five occupations that have a high growth rate in the *Healthcare Support occupation* major group, *Physical therapist assistants* have the second highest projected job growth rate, second to *Home health aides* (44.0 percent).

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### TOP FIVE OCCUPATIONS BY GROWTH RATE IN HEALTHCARE SUPPORT OCCUPATIONS GROUP\*

OCCUPATION CODE	OCCUPATION TITLE	TOTAL EMPLOYED	TOTAL ANNUAL OPENINGS	ANNUAL AVERAGE WAGE
31-1011	Home Health Aides	12,990	5,310	44.0%
31-2021	Physical Therapist Assistants	1,160	630	30.7%
31-2022	Physical Therapist Aides	500	270	30.7%
31-9011	Massage Therapists	1,030	520	28.6%
31-9092	Medical Assistants	6,160	3,250	28.1%

\*Based on 2016-2026 Occupational Projections

### TOTAL EMPLOYMENT OF PHYSICAL THERAPIST ASSISTANTS – SELECTED RANKINGS BY STATE, 2017

RANK	STATE	TOTAL EMPLOYMENT
1	Texas	7,240
2	Ohio	5,900
3	Florida	5,880
4	Pennsylvania	5,180
5	California	5,120
8	Michigan	3,870
45	Hawaii	210
46	Vermont	190
47	Wyoming	170
48	Montana	160
49	North Dakota	140



# JOB ADVERTISEMENTS DROP IN OCTOBER

Seasonally adjusted job advertisements fell in Michigan by 6.9 percent or 9,240 ads. Five of the past six months have posted a reduction in online ads, for a total ad decline of 125,100. Although a decrease in job ads is not unusual for October, the number of ads lost is the largest recorded for the month since at least 2005.

Michigan's regional states of Illinois, Indiana, Ohio, and Wisconsin also registered lower job postings in October, with an average 6.8 percent reduction. Indiana had the largest contraction of 8.5 percent (-7,040 ads) with Illinois posting the smallest drop of 5.2 percent (-9,530 ads). The regional average decline in advertisements was greater than the national decrease of 5.6 percent.

## Ad Rate Monthly Trends

The number of unemployed persons per job posting, referred to as the supply-demand rate, was up to 1.54 in October. The increased rate was driven by the reduction in job ads over the month. The national supply-demand rate also rose to 1.33.

The ad rate, which is the number of job postings per 100 individuals in the labor force, posted a large drop to 2.56. The 0.18 reduction over the month was the largest recorded for October since at least 2005. The lower ad rate was also a result

of fewer job ads in October. A monthly change of this magnitude is unusual for Michigan, but has occurred in other months of the historical series, including a similar increase in July 2018.

## Non-seasonally Adjusted Job Advertisements

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

Both total available ads and total new ads also fell in October. Total available ads dropped by 8,800 (-6.3 percent). Among major occupational groups, online ads for *Service*, *Management*, and *Sales* jobs saw large percentage reductions of 12.7, 10.8, and 9.0 percent respectively (-1,600, -1,100, and -1,400 advertisements). Postings for *Professional* jobs had the largest numeric drop of 2,850 (-6.6 percent).

Total new ads moved down slightly over the month by 850 ads (-1.7 percent). Job postings for *Healthcare* and *Production* occupations recorded the only positive change in new ads of 850 and 50 respectively (+15.0 and +2.0 percent). *Service*-related job advertisements posted a large reduction of 12.8 percent (-700 ads) as did ads for jobs in *Sales* (-450 ads or -9.6 percent).

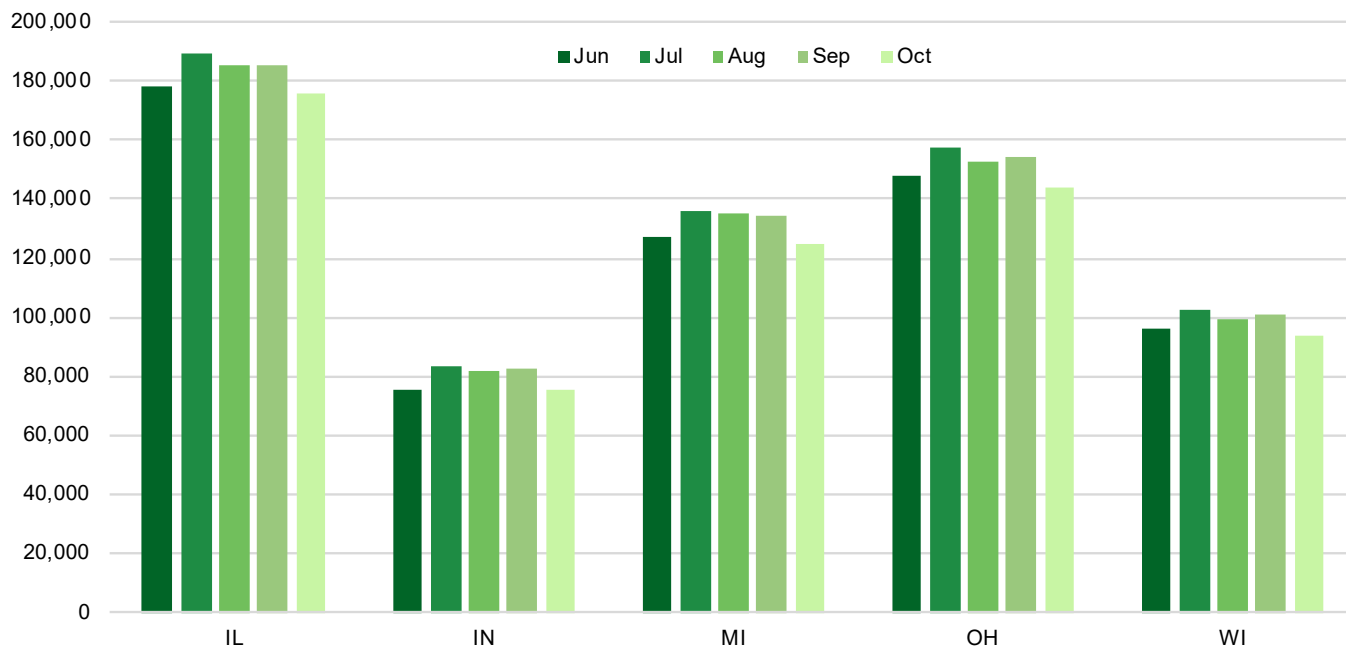
Fewer non-seasonally adjusted job advertisements were recorded in October among most Metropolitan Statistical Areas (MSAs). Only the Midland MSA saw an increase of job ads (+2.5 percent) while all other MSAs posted ad declines. Job postings in the Battle Creek and Flint MSAs recorded the largest percentage reductions of 8.6 and 8.0 percent respectively (-156 and -246 ads). The Detroit-Warren-Dearborn MSA saw the largest numeric drop in ads of -4,442 (-6.6 percent).

About three-quarters of job postings were for full-time employment. About one in five ads were for part-time work while one in twenty were for contract positions. About one-third of ads were online 30 days or less with one-fifth of ads posted for 120 days or longer.

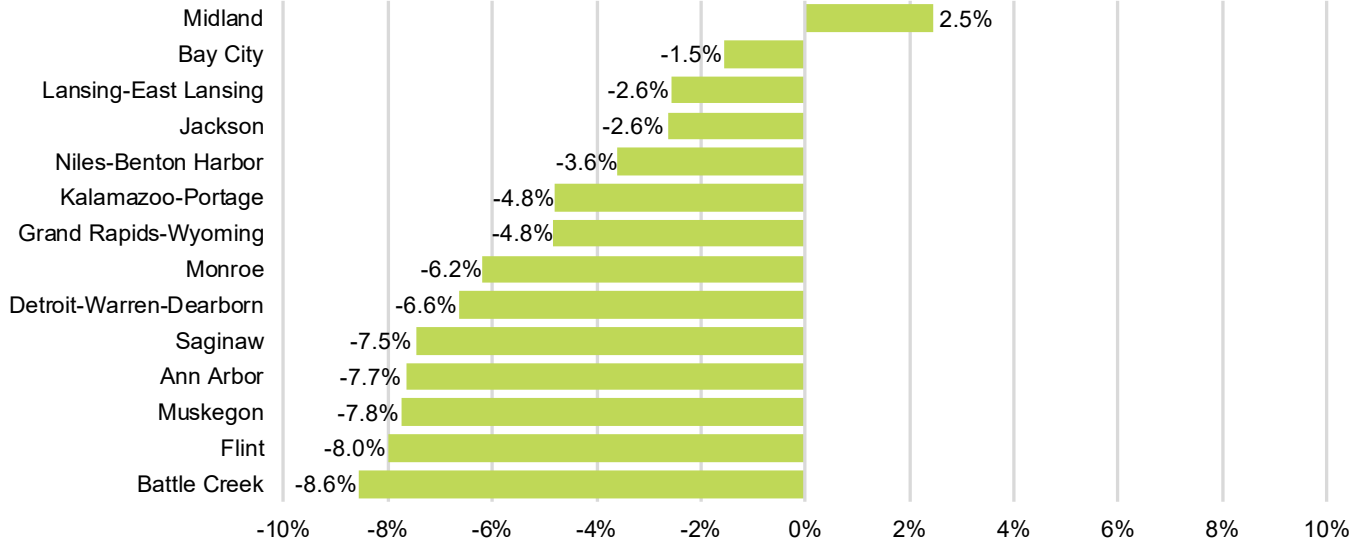
Among the top 50 occupations with the highest number of job advertisements, 17 required a bachelor's degree with 18 requiring an associate's degree or postsecondary non-degree award. Short-term on-the-job training was required in 17 ads and 5 required moderate-term on-the-job training.

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## MONTHLY CHANGE IN JOB ADS - SELECTED STATES



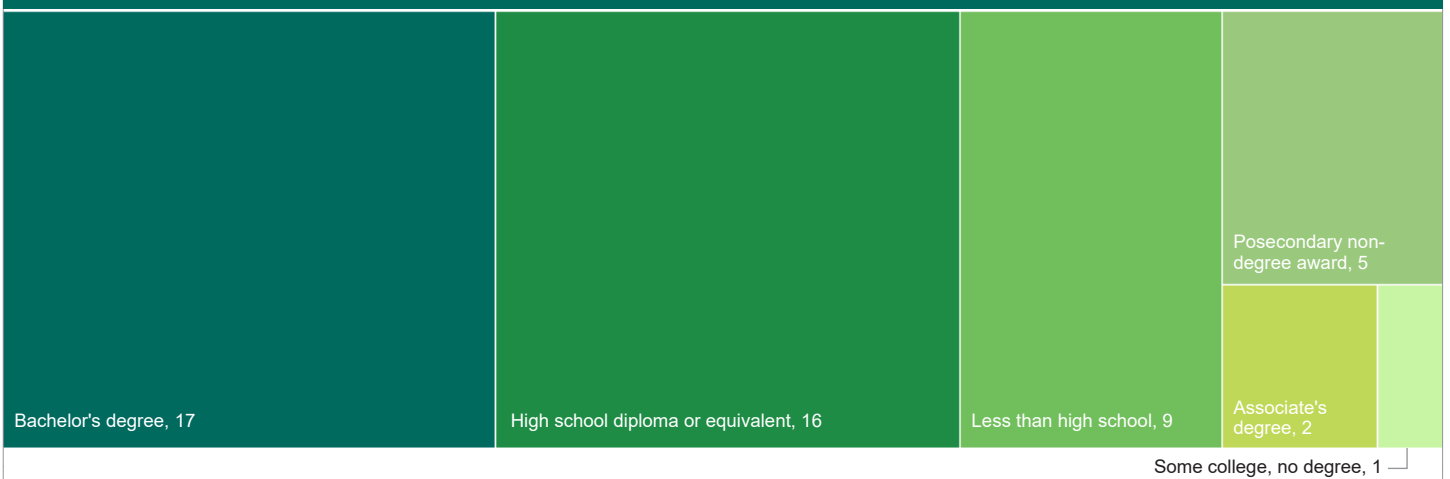
## MONTHLY CHANGE IN JOB ADS BY METRO AREA (NOT SEASONALLY ADJUSTED)



## TOTAL AVAILABLE ADS (NOT SEASONALLY ADJUSTED)

OCCUPATION CATEGORIES	OCTOBER 2018	SEPTEMBER 2018	OCTOBER 2017	OVER THE MONTH	
				LEVEL	PERCENT
<b>TOTAL</b>	<b>130,400</b>	<b>139,200</b>	<b>141,050</b>	<b>-8,800</b>	<b>-6.3%</b>
Professional	40,050	42,900	40,950	-2,850	-6.6%
Healthcare	18,800	18,750	22,350	50	0.3%
Sales	14,200	15,600	15,100	-1,400	-9.0%
Administrative Support	13,050	13,400	13,900	-350	-2.6%
Management	9,050	10,150	9,500	-1,100	-10.8%
Service	11,000	12,600	12,200	-1,600	-12.7%
Construction and Repair	8,950	9,550	9,450	-600	-6.3%
Production	6,500	6,950	6,850	-450	-6.5%
Transportation	8,400	8,850	10,450	-450	-5.1%
Farming, Fishing, and Forestry	400	450	300	-50	-11.1%

## EDUCATION REQUIREMENTS OF TOP 50 ADS



# RELEVANT RANKINGS

TEN LARGEST OCCUPATIONS WITH A SHORTAGE THAT TYPICALLY DO NOT REQUIRE A DEGREE/CERTIFICATION			
OCCUPATION	TYPICAL EDUCATION NEEDED	TYPICAL ON-THE-JOB TRAINING NEEDED	2017 EMPLOYMENT
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	No formal educational credential	Short-term on-the-job training	58,480
Cooks, Restaurant	No formal educational credential	Moderate-term on-the-job training	37,090
Home Health Aides	High school diploma or equivalent	Short-term on-the-job training	27,100
Maids and Housekeeping Cleaners	No formal educational credential	Short-term on-the-job training	24,360
Helpers--Production Workers	High school diploma or equivalent	Short-term on-the-job training	18,210
Bartenders	No formal educational credential	Short-term on-the-job training	18,180
Bus Drivers, School or Special Client	High school diploma or equivalent	Short-term on-the-job training	12,750
Recreation Workers	High school diploma or equivalent	Short-term on-the-job training	12,380
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	No formal educational credential	Short-term on-the-job training	12,320
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent	Apprenticeship	12,250

Source: DTMB, Bureau of Labor Market Information and Strategic Initiatives



## TEN LARGEST OCCUPATIONS WITH A SHORTAGE THAT TYPICALLY REQUIRE A DEGREE/CERTIFICATION

OCCUPATION	TYPICAL EDUCATION NEEDED	TYPICAL ON-THE-JOB TRAINING NEEDED	2017 EMPLOYMENT
Nursing Assistants	Postsecondary non-degree award	None	50,070
Medical Assistants	Postsecondary non-degree award	None	22,790
Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	14,920
Middle School Teachers, Except Special and Career/Technical Education	Bachelor's degree	None	13,010
Medical and Health Services Managers	Bachelor's degree	None	10,940
Dental Hygienists	Associate's degree	None	10,090
Dental Assistants	Postsecondary non-degree award	None	9,550
Physical Therapists	Doctoral or professional degree	None	8,250
Securities, Commodities, and Financial Services Sales Agents	Bachelor's degree	Moderate-term on-the-job training	7,970
Educational, Guidance, School, and Vocational Counselors	Master's degree	None	6,340

Source: DTMB, Bureau of Labor Market Information and Strategic Initiatives



## ASK THE ECONOMIST

**Q: Can you tell me more about  
measures of labor supply?**



## Why Think About Labor Supply?

Traditionally, sources of labor market information have been focused on the demand side of the labor market. Employer-based job counts by occupation or industry exist for every state. Most state labor market information agencies also produce and publish employment projections by industry and occupation, which serve as estimates of future long-term demand. Short-term job demand is captured by real-time job ad postings (such as those featured in this publication each month) as well as two-year employment projections data.

However, as the Michigan economy continues a sustained period of economic recovery into a period of low unemployment, finding qualified workers can be an issue for employers. This has caused an increased focus on labor supply. But, for a number of reasons the supply of labor in a labor market has been a tricky measurement to gauge. Labor supply has a variety of different measurements. Workers can come from those who have recently completed education/training programs, those working currently, or those currently unemployed.

## Educational Program Completers

Educational program completer data comes from the Integrated Postsecondary Education Data System (IPEDS), managed by the U.S. Department of Education. Students complete programs which are categorized into a system called the Classification of Instructional Programs (CIP). Examples of CIP codes are 51.3902 (Nursing Assistant/Aide and Patient Care Assistant/Aide) or 27.0501 (Statistics, General). These codes then need to be associated with occupations to analyze labor supply. For example, those graduating with a degree in "Statistics, General" typically qualify to be *Actuaries, Survey researchers, Statisticians, Natural sciences managers, or Mathematical science teachers (postsecondary)*. Award level is an important variable in this data. If someone completes an associate's degree in a nursing-related program, they are not able to be a nursing instructor in a postsecondary institution. If someone completes a master's degree in nursing, they will not likely be seeking a *Nursing assistant* position. Newly educated workers continue to be a crucial source of talent needed to fill job openings.

This data is available for every academic year. Completers for the prior year are released in the fall each year. Using yearly data, it is possible

to track trends which can be indicative of a changing labor force. For instance, the number of students completing programs that lead to becoming *Software developers, applications* have increased 41 percent in Michigan from 2014 to 2017. This shows a growing level of potential labor supply for this occupation. Program completer counts can take years to change and typically expand slowly. One response to this could be additions of new programs or schools. For example, Michigan has several medical schools and recently has opened a few new ones. This can lead to jumps in program completers when the first graduating classes come through, so this data can be useful but needs to be well understood.

## Current Employed Workers

Data from the Occupational Employment Statistics (OES) program is produced from a survey implemented through a federal-state cooperative agreement between the State of Michigan and the Bureau of Labor Statistics. The survey produces employment counts and wage rates for occupations by SOC code in various geographies. Employment numbers represent supply as the count shows not all jobs available, but all that have been filled. The feature article of this issue used employment size of an occupation in the supply index. Those interested in developing a workforce can also look at other similar occupations as a source of labor supply. Some of the 50,070 *Nursing assistants* in 2017 may be *Registered nurses* in the future with proper incentives or assistance.

## Persons Currently Out of Work

An additional source of labor supply would be those currently unemployed. The State of Michigan's labor exchange, Pure Michigan Talent Connect, gathers resumes which can be used to analyze labor supply. It is assumed that if the need arose these Michiganders who are not currently working would be able to fill job vacancies where they had prior experience. This resume data is not available publicly. When filling job openings, Pure Michigan Talent Connect can serve as an important resource for both posting job openings and accessing the talent currently out of the job market.

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