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Page 1

### Q1 Contact Information for Nomination

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Name of Initiative the state (and/or partnership) is being nominated for:	<b>Registered Apprenticeship in Michigan</b>

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**Q2 1.** Provide a brief description of the nominee's significant contributions in one of the following areas (your primary focus): building the capacity of its workforce and labor market information functions; developing high impact products and services; OR making an impact on efforts in other states and nationally. Response Word Limit: 150

Apprenticeships are a significant component of the talent pipeline in Michigan. Also, registered apprenticeship programs provide a key pathway to high-demand, high-wage employment that does not require a 4-year degree. Yet, actionable information to expand apprenticeship is often unavailable or does not exist. To address this need, Michigan recently completed two apprenticeship-focused publications using data from the federal Registered Apprenticeship Partners Information Management Data System (RAPIDS). These products address several critical topics for policymakers including demographics of apprentices and how well programs serve vulnerable populations, the growth of non-traditional programs, and the outcomes of program completers. Moreover, Michigan's recent work linked administrative wage records with RAPIDS data for the first time, providing much more in-depth analysis of employment and wage outcomes of apprentices after program completion. Michigan believes these publications represent a significant contribution to developing high impact products and services.

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**Q3 2.** Provide a statement of results, accomplishments, impacts and any other appropriate information that demonstrates why the nominee’s efforts described in question #1 were an exceptional contribution. Response Word Limit: 200

Both publications have produced numerous insights into registered apprenticeship in Michigan. The first publication, “The State of Registered Apprenticeships in Michigan,” revealed that diversity in apprenticeship programs is beginning to increase and Michigan has experienced rapid growth in apprenticeship since 2015. Additionally, the report revealed that completion rates vary widely across programs and that those that complete programs earn considerably higher wages than other workers in the same occupation. The second publication, a feature article in “Michigan’s Labor Market News,” demonstrated additional findings, such as the distribution of apprenticeship programs across the state and relevant rankings on how Michigan compares to other states, as well as provided detailed information on state initiatives to expand apprenticeship.

Since the release of both publications during National Apprenticeship Week, the insights gained from these products have been shared with numerous apprenticeship stakeholders including policymakers, workforce development professionals, employers, and educators. Although released only two months ago, the stakeholders have already begun to leverage the products for programmatic decision making and have commissioned the creation of a new apprentice dashboard to provide regular updates to the critical metrics provided in the publications.

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**Q4 3.** Provide a brief description of the nominee’s significant contributions in any one of the other two areas listed under “criteria” that you did not focus on above. Response Word Limit: 200

Beyond contributions to high impact products and services, Michigan’s work in registered apprenticeship also represents a significant resource for making an impact on efforts in other states and nationally. Apprenticeship programs are of critical importance to national, state, and local labor markets, but data is often difficult to access. By leveraging RAPIDS data, Michigan’s work has provided a roadmap for other states on how to access apprenticeship records and turn apprenticeship data into actionable information. Additionally, Michigan has taken the rare step of linking these records with other data sources, demonstrating both the benefits of combining administrative wage records with apprenticeship data and how to analyze and transform these unique sources of data into information for policymakers.

Furthermore, the products provide a key resource for the USDOL, which has awarded Michigan multiple apprenticeship-related grants since 2016. Methodological decisions in Michigan’s analysis of registered apprenticeship were made with these grants, providing key metrics before and after the grants were awarded. The analysis provides a plethora of information to both Michigan and USDOL on the potential role of grant funding in program performance.

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**Q5 4.** Provide samples of work including creative materials, videos, graphics, documents, plans, etc. regarding the efforts and results you outlined in questions #1 and #2. File size limit is 16 MB. Only PDF, DOC, DOCX, PNG, JPG, JPEG, GIF files are supported.

**The State of Registered Apprenticeships in Michigan.pdf (4.4MB)**

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**Q6** Sample of Work #2 File size limit is 16 MB.

**Michigan's Labor Market News November 2019.pdf (11.3MB)**

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**Q7** Sample of Work #3 File size limit is 16 MB.

**Respondent skipped this question**

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**Q8** Sample of Work #4 File size limit is 16 MB.

**Respondent skipped this question**

**Q9** Sample of Work #5File size limit is 16 MB.

**Respondent skipped this question**

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**Q10** Please upload a statement of approval from the Agency Administrator

**Statement of Approval.pdf (72.7KB)**

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STATE OF MICHIGAN

GRETCHEN WHITMER  
GOVERNOR

DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET  
LANSING

TRICIA L. FOSTER  
DIRECTOR

January 8, 2020

National Association of State Workforce Agencies  
444 North Capitol Street NW, Suite 300  
Washington, DC 20001

Colleagues:

I am delighted to support Michigan's application for the Data Insights and Innovations Award at the 2020 Winter Policy Forum.

Our submission encompasses products targeted to support apprenticeships — a major national, state, and local priority in workforce development. We were excited to feature our work as a standalone report and as a feature in our flagship publication, Michigan's Labor Market News.

We appreciate your consideration and look forward to seeing everybody soon.

A handwritten signature in black ink that reads "Jason Palmer".

Jason Palmer  
Director  
Bureau of Labor Market Information and Strategic Initiatives



# MICHIGAN'S LABOR MARKET NEWS

VOL. 75, ISSUE NO. 9  
NOVEMBER 2019

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## **Registered Apprenticeships in Michigan**

Feature Article pg. 16

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## **Map of the Month: New Registered Apprentices and New Apprenticeship Programs by County**

pg. 15

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## **Partner Perspective: Michigan Department of Labor and Economic Opportunity, Workforce Development**

pg. 24

# Michigan payroll jobs down in September, but up over the past year.

SEPTEMBER 2019 JOBLESS RATE

MICHIGAN  
**4.2%**  
NATIONAL  
**3.5%**

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### IT'S BIGGER THAN DATA.

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

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

The state's jobless rate held steady at 4.2 percent in September, with little movement over the month observed in the overall labor force and its component parts (employment and unemployment). Since September 2018, the state's jobless rate was up 0.3 percentage points. September payrolls were lower by 5,700 with job reductions in *Manufacturing, Professional and business services, and Government. Trade, transportation, and utilities, Leisure and hospitality, and Construction* added jobs. Since September 2018, payroll jobs were up 24,800 or 0.6 percent.

Just in time for National Apprenticeship Week, our *Feature Article* provides a summary of our new report, "The State of Registered Apprenticeships in Michigan." We learn that in 2018, there were nearly 18,900 active apprentices in more than 1,100 programs across the state of Michigan. Our *Map of the Month* shows how new registered apprentices and new apprenticeship programs are distributed across the state and our *Relevant Rankings* details new apprentices by state and by Michigan county. Finally, we are pleased to share an apprenticeship-focused *Partner Perspective* from a valued partner in the Michigan Department of Labor and Economic Opportunity (LEO).

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

# MICHIGAN'S SEPTEMBER JOBLESS RATE UNCHANGED

Michigan's September seasonally adjusted jobless rate remained unchanged over the month at 4.2 percent. Total employment in the state was flat while unemployment edged down by 3,000. Michigan's total workforce fell slightly in September.

Michigan's September jobless rate was seven-tenths of a percentage point above the U.S. jobless rate of 3.5 percent. The national unemployment rate fell by two-tenths of a percentage point over the month. Over the year, the Michigan jobless rate advanced by three-tenths of a percentage point, while the national jobless rate moved down by two-tenths.

While the state's employment level remained unchanged over the month, total employment grew by 49,000, or 1.0 percent, over the year.

For the second consecutive month, total unemployment in Michigan fell, declining by 1.4 percent since August. Over the year, the number of unemployed in Michigan moved up by 16,000, or 8.3 percent, while the national number of unemployed fell by 3.6 percent.

Over the year, the state workforce advanced by 65,000, or 1.3 percent, similar to the national growth rate of 1.2 percent.

## After an 18-Year Low, Quarterly Jobless Rates Begin to Rise Slightly in 2019

The figure on the following page shows the seasonally adjusted quarterly jobless rates for Michigan during the three-year period from the third quarter 2016 through the third quarter

2019. The last two quarters of 2016 recorded jobless rates of 5.0 percent and 5.1 percent; rates nearly a full percentage point higher than the third quarter 2019 rate of 4.2 percent. With a few minor exceptions, the state's jobless rate declined nearly continuously during 2017 as total unemployment for the state began to fall.

2018 showed more quarterly jobless rate reductions for the state, culminating in a quarterly jobless rate of 3.9 percent during the third quarter. Such a low rate had not been seen in Michigan since the third quarter of 2000 (3.8 percent).

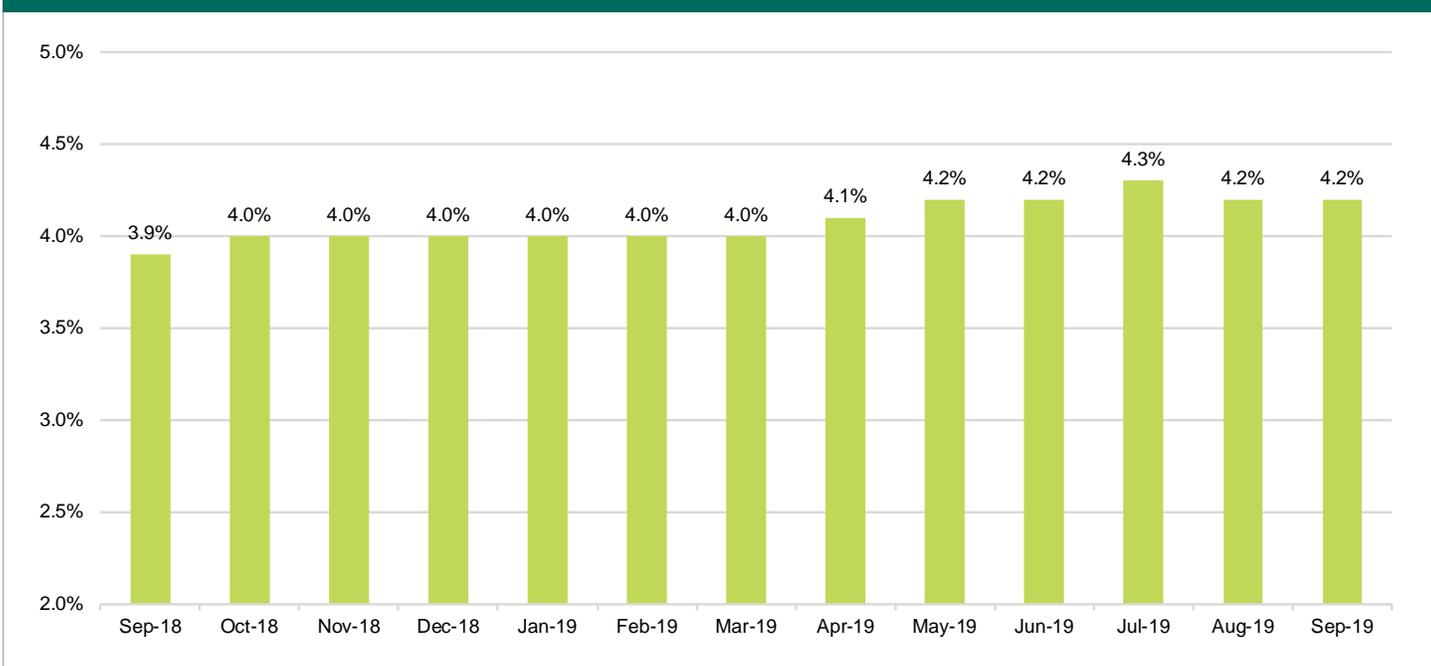
Michigan jobless rates have edged up to 4.2 percent in the second and third quarters of 2019.

**SHIBANI PUTATUNDA**  
Economic Specialist

### MICHIGAN LABOR FORCE ESTIMATES (SEASONALLY ADJUSTED)

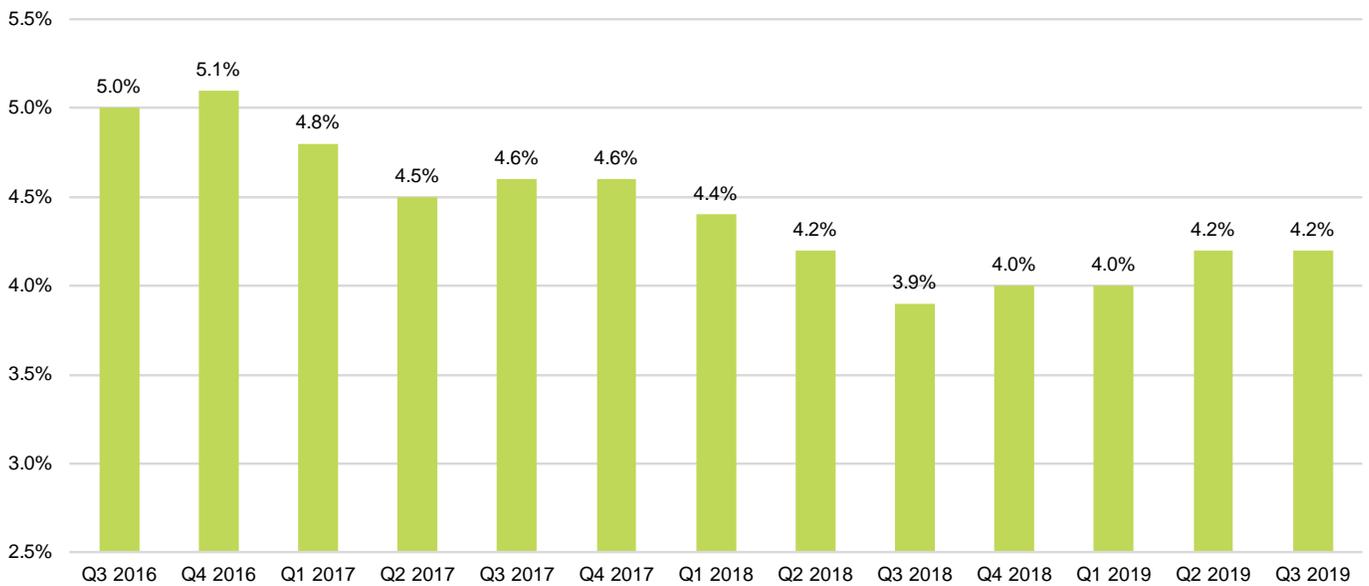
	SEPTEMBER 2019	AUGUST 2019	SEPTEMBER 2018	CHANGE OVER THE MONTH	CHANGE OVER THE YEAR
Labor Force	4,961,000	4,963,000	4,896,000	-2,000	+65,000
Employed	4,753,000	4,753,000	4,704,000	0	+49,000
Unemployed	208,000	211,000	192,000	-3,000	+16,000
Jobless Rate	4.2	4.2	3.9	0.0	+0.3

### MICHIGAN JOBLESS RATES, SEPTEMBER 2018–SEPTEMBER 2019





**MICHIGAN QUARTERLY JOBLESS RATES, THIRD QUARTER 2016–THIRD QUARTER 2019**



# MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

## Monthly Overview

Total nonfarm payroll jobs in Michigan declined by 5,700 in September to 4,443,800. The industry sectors with the largest monthly job reductions were *Manufacturing* (-3,900), *Professional and business services* (-3,000), and *Government* (-3,000). The broad sectors with September job gains were *Trade, transportation and utilities* (+3,200), *Leisure and hospitality* (+1,500), *Construction* (+1,100), and *Mining and logging* (+100). Job levels in the *Transportation equipment manufacturing* industry declined by 1,900 over the month. This reduction, however, was unrelated to the auto sector labor dispute that began during the month. For a more detailed explanation of this event, please see the note that accompanies the Michigan payroll jobs table.

## Over the Year Analysis

Between September 2018 and September 2019, total Michigan nonfarm jobs grew by 24,800 or 0.6 percent. This was significantly below the over-the-year 1.4 percent job expansion nationally during this period. In Michigan, payroll gains were recorded in all but three major industry sectors. The major sectors of *Leisure and hospitality* (+11,200), *Professional and business services* (+5,900), and *Government* (+5,300) experienced the largest job increases since September 2018. Smaller, yet notable, job gains also occurred in *Financial activities* (+4,900), *Other services* (+3,800), *Construction* (+3,800), and *Information* (+1,300). Job reductions over the past year occurred in *Education and health services* (-6,200), *Manufacturing* (-4,500), and *Trade, transportation and utilities* (-700).

## Michigan Third Quarter 2019 Job Performance

During the third quarter, Michigan payroll employment remained essentially unchanged, notching slightly higher by 900. Nationally, payroll jobs increased by 0.3 percent during the third quarter.

In Michigan, the broad industry sectors that added jobs during the third quarter included *Government* (+1.0 percent), *Professional and business services* (+0.6 percent), *Financial activities* (+0.5 percent), and *Other services* (+0.4 percent).

The broad sectors where employment declined or remained unchanged were *Education and health services* (-0.7 percent), *Manufacturing*

(-0.5 percent), *Information* (-0.4 percent), *Trade, transportation, and utilities* (-0.3 percent), *Construction* (-0.2 percent), *Leisure and hospitality* (-0.1 percent), and *Mining and logging* (0.0 percent).

Payroll jobs in the *Transportation equipment manufacturing* sector rose by 0.7 percent during the third quarter.

## Significant Industry Employment Developments

### RETAIL TRADE

The number of *Retail* jobs increased by 1,600 during September. This was only the second month this year in which employers added jobs, the other being January when 2,800 jobs were added. Part of the September increase was due to hiring in *General merchandise stores*. During the third quarter, *Retail trade* employment decreased by 1,900 or by 0.4 percent.

Between September 2018 and September 2019, the number of jobs in this sector declined by 4,500 or by 1.0 percent. The subsectors that accounted for much of this reduction were *General merchandise stores*, *Gasoline stations*, and *Health and personal care stores*. Nationally, job levels fell by 11,400 over the month and by 0.4 percent over the year.

### PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES

Job levels in this sector advanced by 1,000 to a series high of 307,400 in September. Part of this rise was due to an employment increase in *Management, scientific, and technical consulting services* and a much smaller than typical monthly decline in *Computer systems design and related services*. On a quarterly basis, payrolls have grown in 38 of the past 40 quarters with 3,900 jobs added during the third quarter of 2019. The employment growth during the July through September period of this year was primarily located in *Architectural, engineering, and related services*, *Computer systems design and related services*, and *Other professional, scientific, and technical services*.

Since September 2018, job levels advanced by 7,800 or by 2.6 percent. This accounted for nearly one in three (31.5 percent) of the total nonfarm jobs added in Michigan during this period. Nationally, employment rose by

12,800 over the month and by 3.1 percent since September 2018.

### OTHER SERVICES

Jobs in this sector contracted by 1,100 in September. This was the first month in 2019 with an employment decline while job levels remained unchanged in August. The September job cut was caused by larger than typical monthly reductions in the subsectors of *Repair and maintenance services*, *Personal and laundry services*, and *Religious, grantmaking, civic, professional, and similar organizations*. Job levels rose by 700 during the three-month period ending in September. Over the year, payrolls have increased by 3,800 or by 2.3 percent. Nationally, job levels declined by 3,000 over the month but moved up by 1.5 percent over the year.

## Metropolitan Statistical Areas (MSAs)

On a not seasonally adjusted basis, 13 of Michigan's 14 Metropolitan Statistical Areas (MSAs) recorded nonfarm job additions during September.

The metro areas with the largest gains were Lansing (+3.9 percent), Kalamazoo (+2.6 percent), and Ann Arbor (+2.6 percent). Above average payroll growth was also reported in Monroe (+2.2 percent), Battle Creek (+1.2 percent), Jackson (+0.7 percent), and Flint and Bay City (+0.6 percent each).

A modest reduction in total nonfarm jobs occurred in the Muskegon (-0.6 percent) MSA.

Common to most metro areas in September were payroll increases in the *Government* sector due to the start of the new academic year.

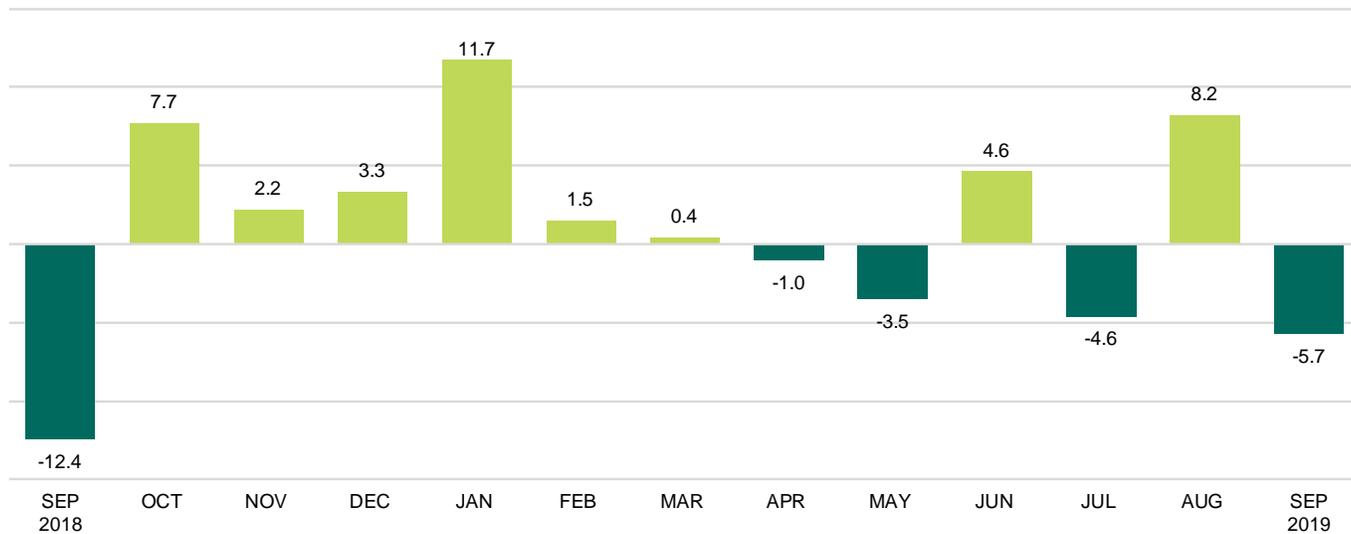
**JEFFREY AULA**  
Economic Analyst

## MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)

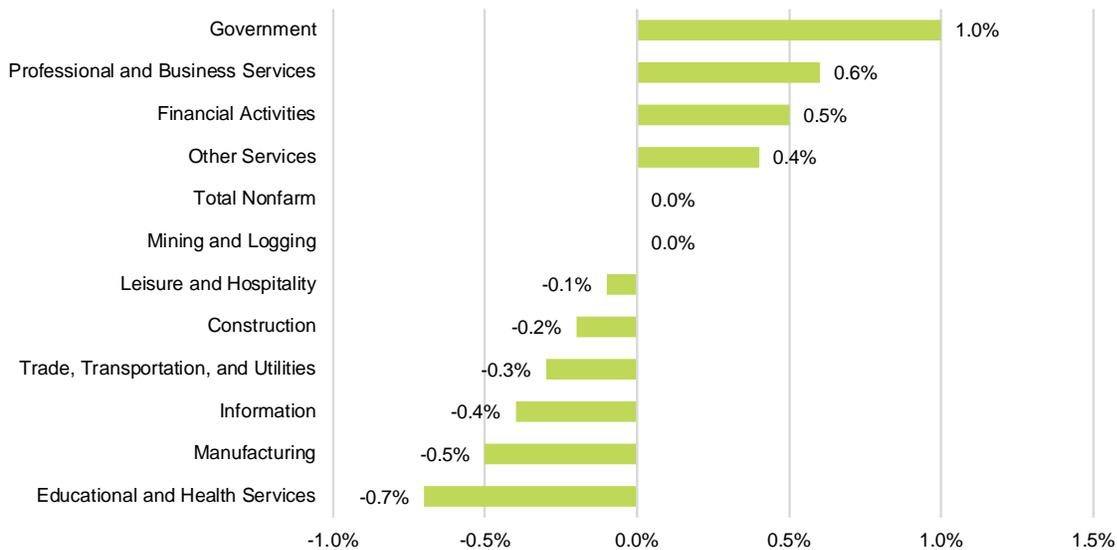
INDUSTRY	SEPTEMBER 2019	AUGUST 2019	SEPTEMBER 2018	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
<b>TOTAL NONFARM</b>	<b>4,443,800</b>	<b>4,449,500</b>	<b>4,419,000</b>	<b>-5,700</b>	<b>-0.1%</b>	<b>24,800</b>	<b>0.6%</b>
Total Private	3,830,100	3,832,800	3,810,600	-2,700	-0.1%	19,500	0.5%
Private Service-Providing	3,022,000	3,022,000	3,001,800	0	0.0%	20,200	0.7%
<b>GOODS-PRODUCING</b>	<b>808,100</b>	<b>810,800</b>	<b>808,800</b>	<b>-2,700</b>	<b>-0.3%</b>	<b>-700</b>	<b>-0.1%</b>
Mining, Logging, and Construction	180,100	178,900	176,300	1,200	0.7%	3,800	2.2%
Mining and Logging	7,300	7,200	7,300	100	1.4%	0	0.0%
Construction	172,800	171,700	169,000	1,100	0.6%	3,800	2.2%
Manufacturing	628,000	631,900	632,500	-3,900	-0.6%	-4,500	-0.7%
Durable Goods	477,800	480,900	480,000	-3,100	-0.6%	-2,200	-0.5%
Transportation Equipment Manufacturing	195,400	197,300	194,500	-1,900	-1.0%	900	0.5%
Non-Durable Goods	150,200	151,000	152,500	-800	-0.5%	-2,300	-1.5%
<b>SERVICE-PROVIDING</b>	<b>3,635,700</b>	<b>3,638,700</b>	<b>3,610,200</b>	<b>-3,000</b>	<b>-0.1%</b>	<b>25,500</b>	<b>0.7%</b>
Trade, Transportation, and Utilities	791,800	788,600	792,500	3,200	0.4%	-700	-0.1%
Wholesale Trade	173,600	173,100	172,300	500	0.3%	1,300	0.8%
Retail Trade	464,700	463,100	469,200	1,600	0.3%	-4,500	-1.0%
Transportation, Warehousing, and Utilities	153,500	152,400	151,000	1,100	0.7%	2,500	1.7%
Information	57,100	57,300	55,800	-200	-0.3%	1,300	2.3%
Financial Activities	223,900	224,000	219,000	-100	0.0%	4,900	2.2%
Finance and Insurance	166,000	166,400	163,900	-400	-0.2%	2,100	1.3%
Real Estate and Rental and Leasing	57,900	57,600	55,100	300	0.5%	2,800	5.1%
Professional and Business Services	665,100	668,100	659,200	-3,000	-0.4%	5,900	0.9%
Professional, Scientific, and Technical Services	307,400	306,400	299,600	1,000	0.3%	7,800	2.6%
Management of Companies and Enterprises	67,800	67,700	69,800	100	0.1%	-2,000	-2.9%
Administrative and Support and Waste Management and Remediation Services	289,900	294,000	289,800	-4,100	-1.4%	100	0.0%
Education and Health Services	670,600	670,900	676,800	-300	0.0%	-6,200	-0.9%
Educational Services	71,200	70,700	74,800	500	0.7%	-3,600	-4.8%
Health Care and Social Assistance	599,400	600,200	602,000	-800	-0.1%	-2,600	-0.4%
Leisure and Hospitality	443,400	441,900	432,200	1,500	0.3%	11,200	2.6%
Arts, Entertainment, and Recreation	52,100	52,600	53,100	-500	-1.0%	-1,000	-1.9%
Accommodation and Food Services	391,300	389,300	379,100	2,000	0.5%	12,200	3.2%
Other Services	170,100	171,200	166,300	-1,100	-0.6%	3,800	2.3%
Government	613,700	616,700	608,400	-3,000	-0.5%	5,300	0.9%
Federal Government	53,600	53,500	52,400	100	0.2%	1,200	2.3%
State Government	194,800	193,700	191,800	1,100	0.6%	3,000	1.6%
Local Government	365,300	369,500	364,200	-4,200	-1.1%	1,100	0.3%

**Please note:** The large auto industry labor dispute began on Monday, September 16. Industry jobs statistics published for the month of September 2019 reflect worker status for the week of September 8–14. Therefore, the labor dispute began after the September survey week, and had no measurable impact on the September jobs data. The impact of the strike on jobs will be seen in published October 2019 data.

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

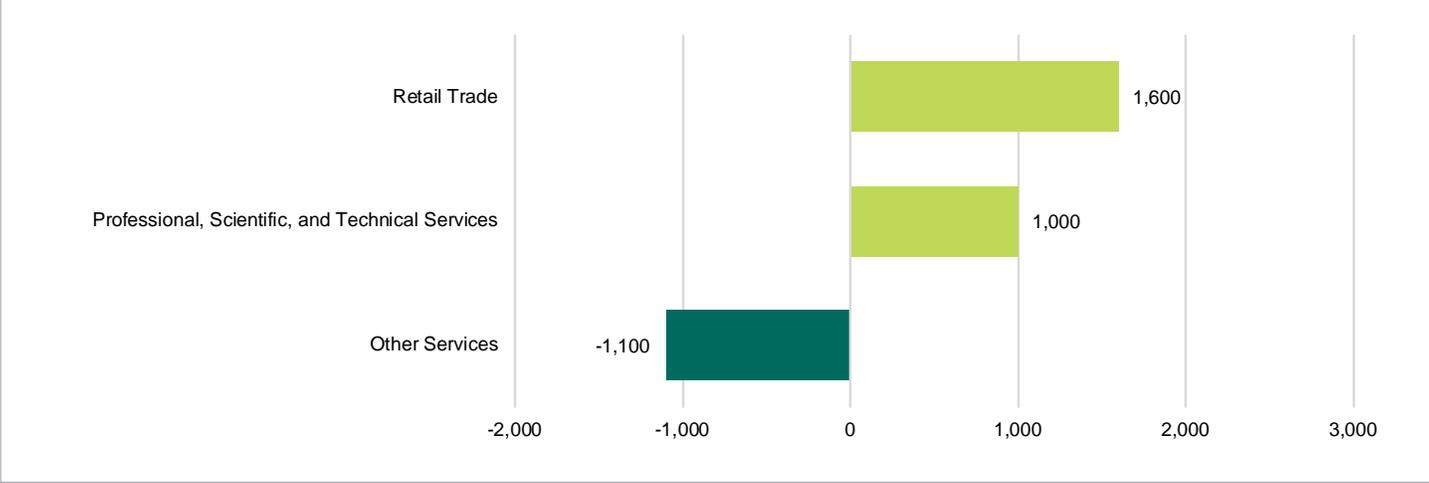


## PERCENTAGE JOB CHANGE, SECOND QUARTER 2019–THIRD QUARTER 2019 (IN THOUSANDS)

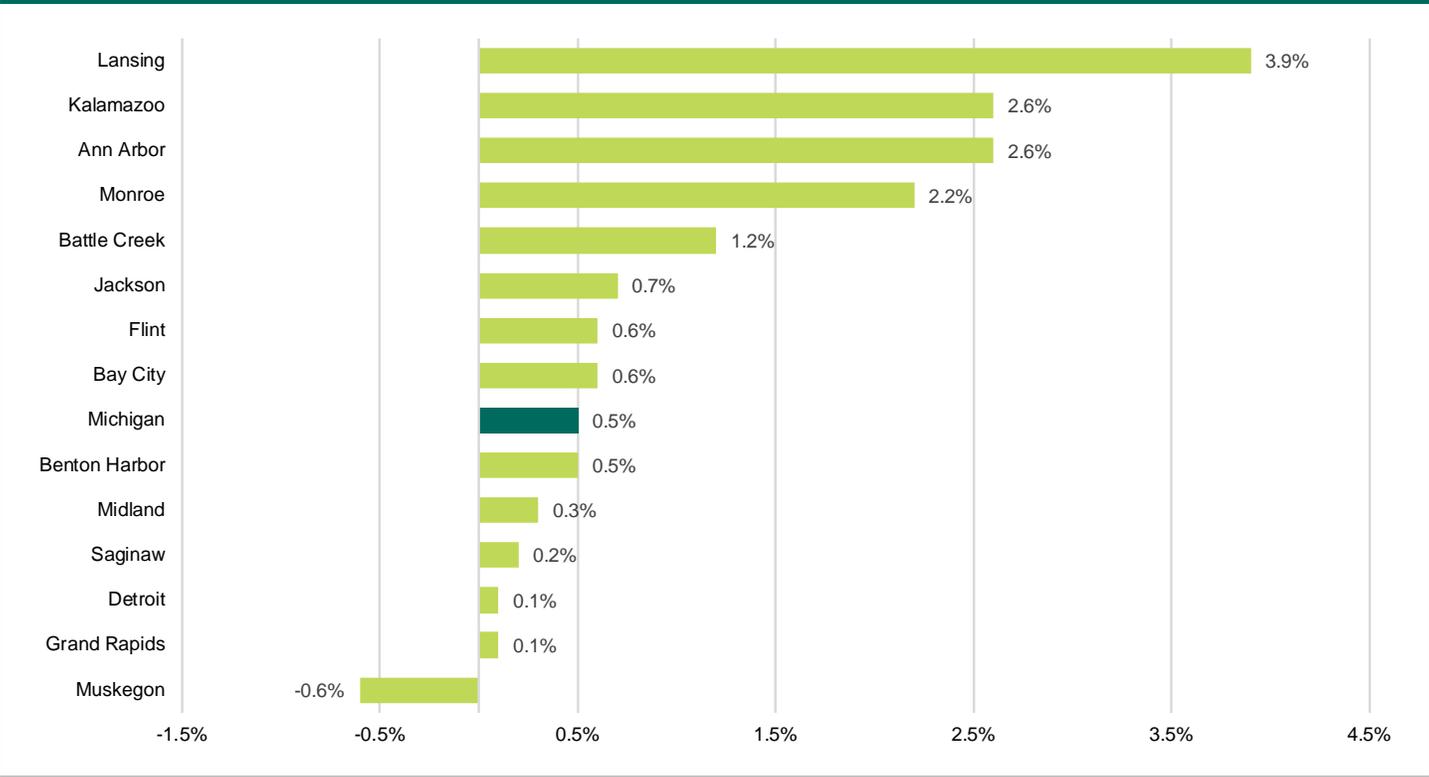




**MICHIGAN OVER THE MONTH JOB CHANGE BY SELECT INDUSTRY, AUGUST 2019–SEPTEMBER 2019**



**METROPOLITAN AREA JOB CHANGE, AUGUST 2019–SEPTEMBER 2019 (NOT SEASONALLY ADJUSTED)**



# REGIONAL LABOR MARKET ANALYSIS

## ANN ARBOR METROPOLITAN AREA

- Ann Arbor's unemployment rate fell by three-tenths of a percentage point over the month to 3.0 percent in September.
- The region's labor force advanced by 1.1 percent over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm jobs in the Ann Arbor region rose by 5,800 over the month, or 2.6 percent.
- A seasonal over-the-month increase of 6,600 jobs in the region's *Government* sector was slightly offset by minor declines in several other Ann Arbor industries.

### INDUSTRY TRENDS

- On a numerical basis, Ann Arbor exhibited the second largest over-the-month advance in payroll employment (behind the Lansing MSA), with the return of students to area colleges and universities.

## BAY CITY METROPOLITAN AREA

- The Bay City region jobless rate moved down by 0.6 percentage points between August and September to 4.0 percent.
- Bay City recorded the largest employment decline over the year out of all major Michigan labor market areas, down by 0.6 percent since September 2018.

### MONTHLY INDUSTRY DEVELOPMENTS

- The payroll job count in Bay City inched up by 200 over the month, or 0.6 percent, due to a 400-job seasonal increase in the region's *Government* sector.

### INDUSTRY TRENDS

- For the second consecutive month, *Retail trade* in Bay City was at an all-time low level of 4,800 jobs.

## FLINT METROPOLITAN AREA

- Joblessness in the Flint region fell by 0.6 percentage points over the month to 4.3 percent.
- The region's workforce dropped by 1.9 percent between August and September 2019.

### MONTHLY INDUSTRY DEVELOPMENTS

- Flint payroll jobs increased by 800 over the month, or 0.6 percent, essentially all due to a seasonal education-related advance in the region's *Local government* sector (+1,300).

### INDUSTRY TRENDS

- *Education and health services* in the Flint region reached its ten-year low level of 25,800 jobs in September.

## BATTLE CREEK METROPOLITAN AREA

- The jobless rate in the Battle Creek MSA declined by 0.6 percentage points in September to 3.9 percent, as fewer persons were active in the labor market. Employment levels in the region actually edged down 500 over the month.
- Since September 2018, employment and unemployment levels were little changed and the jobless rate edged up by 0.4 percentage points.

### MONTHLY INDUSTRY DEVELOPMENTS

- September job levels in the Battle Creek MSA were up 1.2 percent, mainly from a seasonal job improvement in private and public *Education* (+600).
- Since September 2018, jobs in the Battle Creek MSA were virtually flat. An employment gain of 200 in *Retail trade* was offset by a job cut in *Educational and health services*.

### INDUSTRY TRENDS

- Since 2010, jobs in *Transportation equipment manufacturing* rose substantially, but job levels were relatively flat since 2016.

## DETROIT-WARREN-DEARBORN METRO AREA

- The Detroit MSA unemployment rate declined by four-tenths of a percentage point in September to 4.1 percent.
- The number of unemployed in the Detroit MSA advanced by 5.9 percent over the year, a full percentage point below that of the state.

### MONTHLY INDUSTRY DEVELOPMENTS

- The Detroit MSA nonfarm job total moved up by 1,700 over the month, a slight gain of 0.1 percent.
- A monthly increase of 13,400 jobs in *Government* was largely offset by job cuts in multiple other regional industries, especially *Leisure and hospitality* (-6,700).

### INDUSTRY TRENDS

- The Detroit region's *Telecommunications* sector reached an all-time low level of 7,800 jobs in September.

## GRAND RAPIDS-WYOMING METRO AREA

- Joblessness in the Grand Rapids metro area decreased by 0.3 percentage points to 2.8 percent in September.
- Grand Rapids exhibited the lowest jobless rate out of all major Michigan labor market areas in September.

### MONTHLY INDUSTRY DEVELOPMENTS

- The Grand Rapids payroll job count moved up by 700 over the month, or just 0.1 percent.
- Jobs rose seasonally for the second consecutive month in the *Government* sector, as classes resumed at area colleges and universities.

### INDUSTRY TRENDS

- The region's job levels were up 1,200 over the year in September, well below the job growth levels recorded earlier in 2019.

## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	ANN ARBOR			BATTLE CREEK			BAY CITY		
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018
<b>PLACE OF RESIDENCE</b>									
Labor Force	194,500	194,400	192,400	61,900	62,800	61,700	49,300	50,200	49,400
Employment	188,700	188,000	187,000	59,500	60,000	59,600	47,300	47,900	47,600
Unemployment	5,800	6,400	5,400	2,400	2,800	2,200	2,000	2,300	1,800
Rate (percent)	3.0%	3.3%	2.8%	3.9%	4.5%	3.5%	4.0%	4.6%	3.6%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	226,600	220,800	224,600	58,100	57,400	58,200	35,100	34,900	35,700
Mining, Logging, and Construction	4,800	4,900	4,600	1,800	1,800	1,800	1,400	1,400	1,400
Manufacturing	15,200	15,400	15,100	11,900	12,000	11,900	4,600	4,600	4,600
Trade, Transportation, and Utilities	26,000	25,700	26,000	9,200	9,100	9,100	7,100	7,200	7,500
Wholesale Trade	6,300	6,300	6,200	*	*	*	*	*	*
Retail Trade	15,800	15,500	15,900	5,800	5,800	5,600	4,800	4,800	4,900
Information	5,400	5,500	5,300	*	*	*	400	400	400
Financial Activities	6,900	7,000	6,800	1,200	1,200	1,200	1,300	1,300	1,300
Professional and Business Services	30,300	30,800	30,100	6,100	5,900	6,100	2,600	2,600	2,700
Educational and Health Services	27,600	27,300	27,400	10,800	10,600	11,000	6,200	6,300	6,400
Leisure and Hospitality	19,000	19,300	18,600	4,500	4,600	4,500	4,500	4,500	4,400
Other Services	6,400	6,500	6,400	1,800	1,800	1,900	1,200	1,200	1,300
Government	85,000	78,400	84,300	10,400	10,000	10,400	5,800	5,400	5,700
<b>DETROIT-WARREN-DEARBORN</b>									
<b>FLINT</b>									
<b>GRAND RAPIDS-WYOMING</b>									
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018
<b>PLACE OF RESIDENCE</b>									
Labor Force	2,178,000	2,180,000	2,140,000	181,400	185,000	178,400	574,100	585,400	570,900
Employment	2,088,000	2,082,000	2,055,000	173,700	176,000	171,400	557,900	567,100	556,200
Unemployment	90,000	98,000	85,000	7,700	9,000	7,100	16,100	18,300	14,700
Rate (percent)	4.1%	4.5%	4.0%	4.3%	4.9%	4.0%	2.8%	3.1%	2.6%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	2,037,400	2,035,700	2,038,200	144,200	143,400	141,900	566,600	565,900	565,400
Mining, Logging, and Construction	81,300	82,200	77,800	6,400	6,500	6,100	25,900	26,700	25,800
Manufacturing	255,700	258,000	262,900	13,600	13,700	12,700	118,100	119,600	117,800
Trade, Transportation, and Utilities	376,700	377,800	374,400	29,600	29,700	29,600	97,900	98,300	97,500
Wholesale Trade	88,300	87,300	86,700	5,500	5,600	5,300	31,900	32,000	31,800
Retail Trade	208,100	210,000	209,500	19,500	19,500	20,200	49,900	50,300	49,600
Information	26,900	27,200	27,200	3,800	3,800	3,800	6,400	6,500	6,300
Financial Activities	117,800	117,200	116,000	6,000	6,000	6,100	26,500	27,200	26,400
Professional and Business Services	397,600	396,400	400,100	17,200	16,900	17,100	73,600	73,700	77,200
Educational and Health Services	311,200	312,700	316,000	25,800	25,900	26,400	93,200	91,300	93,100
Leisure and Hospitality	206,400	213,100	202,000	15,700	16,300	15,300	53,000	54,400	50,100
Other Services	75,300	76,000	75,500	5,400	5,600	5,400	22,400	22,700	22,300
Government	188,500	175,100	186,300	20,700	19,000	19,400	49,600	45,500	48,900
* Data Not Available									

## JACKSON METROPOLITAN AREA

- In Jackson, the area unemployment rate moved down by 0.6 percentage points in September, similar to the statewide trend. Both employment and unemployment levels fell seasonally over the month.
- Over the past year, labor market conditions in the Jackson region were stable, and the jobless rate remained very low.

### MONTHLY INDUSTRY DEVELOPMENTS

- September jobs in the Jackson metro area rose by 0.7 percent (+400) to a total of 58,700, mainly from a substantial employment gain of 700 in *Professional and business services*. The sectors of *Leisure and hospitality* and *Manufacturing* each cut 200 positions in September.

### INDUSTRY TRENDS

- Payroll jobs in the Jackson MSA were unchanged since September 2018. Despite this, a 200-job improvement was recorded in both *Leisure and hospitality* and in *Retail trade*.

## KALAMAZOO-PORTAGE METRO AREA

- Joblessness in the Kalamazoo-Portage metro area dropped by 0.4 percentage points in September to 3.4 percent. The rate drop was largely due to a seasonal withdrawal of summer jobseekers from the area workforce.
- Over the past year, the number of area unemployed rose by 600 or 11.8 percent.

### MONTHLY INDUSTRY DEVELOPMENTS

- September payroll job levels in the Kalamazoo-Portage MSA increased by 2.6 percent (+3,800), mostly from seasonal employment gains of 3,700 in private and public *Education*. Jobs in *Professional and business services* also advanced (+600).

### INDUSTRY TRENDS

- Since 2010, *Manufacturing* has added 4,300 positions to the Kalamazoo workforce; a growth rate of 23.2 percent.

## LANSING-EAST LANSING METRO AREA

- The Lansing MSA jobless rate receded by half a percentage point in September to 3.1 percent.
- Lansing was one of only two Michigan regions to exhibit a workforce advance over the month (along with Ann Arbor), increasing by 1.5 percent since August.

### MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm jobs in the Lansing region rose by 9,100 over the month, or 3.9 percent, due mainly to a gain of 8,500 jobs in the area's *Government* sector.

### INDUSTRY TRENDS

- On a numerical basis, Lansing's over-the-month payroll employment expansion of 9,100 far outpaced the over-the-month job growth of Michigan's other labor market areas.

## MIDLAND METROPOLITAN AREA

- The unemployment rate in the Midland MSA fell by four-tenths of a percentage point in September to 3.4 percent.
- Total unemployment in the region remained unchanged over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Midland payroll jobs inched up by 100 over the month, or 0.3 percent.

### INDUSTRY TRENDS

- On a percentage basis, the Midland region exhibited the second largest over-the-month seasonal gain in *Government* jobs, advancing by 15.4 percent in September.

## MONROE METROPOLITAN AREA

- Similar to statewide trends, the Monroe metro area unemployment rate declined by 0.6 percentage points in September to 3.3 percent.
- Monroe was the only major Michigan labor market area to record a jobless rate decline over the year, edging down by 0.2 percentage points since September 2018.

### MONTHLY INDUSTRY DEVELOPMENTS

- Job levels in Monroe rose by 900 over the month, or 2.2 percent, mainly due to a seasonal increase in *Government*.

### INDUSTRY TRENDS

- *Manufacturing* in the Monroe region matched its ten-year high level of 5,900 jobs in September.

## MUSKEGON METROPOLITAN AREA

- The Muskegon MSA jobless rate decreased by four-tenths of a percentage point over the month to 3.9 percent.
- Total employment advanced by 1.2 percent over the year, two-tenths of a percent above that of the state.

### MONTHLY INDUSTRY DEVELOPMENTS

- Muskegon nonfarm job levels receded by 400 over the month or 0.6 percent.
- An increase of 700 jobs in *Government* was offset by declines in multiple other regional industries.

### INDUSTRY TRENDS

- Muskegon was the only Michigan metro area to register a decline in nonfarm jobs over the month.

## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	JACKSON			KALAMAZOO-PORTAGE			LANSING-EAST LANSING		
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018
<b>PLACE OF RESIDENCE</b>									
Labor Force	73,300	74,300	72,900	167,900	168,700	167,100	249,000	245,400	245,800
Employment	70,700	71,300	70,500	162,200	162,300	161,900	241,200	236,600	238,700
Unemployment	2,500	2,900	2,400	5,700	6,500	5,100	7,800	8,800	7,100
Rate (percent)	3.4%	4.0%	3.3%	3.4%	3.8%	3.1%	3.1%	3.6%	2.9%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	58,700	58,300	58,700	151,100	147,300	150,500	241,000	231,900	238,600
Mining, Logging, and Construction	2,100	2,100	2,100	7,000	6,800	6,500	8,700	9,000	8,500
Manufacturing	10,000	10,200	9,900	22,800	23,000	22,800	20,000	20,100	20,000
Trade, Transportation, and Utilities	12,800	12,700	12,400	26,900	26,900	26,600	36,600	36,500	37,000
Wholesale Trade	*	*	*	6,700	6,700	6,600	6,600	6,600	6,600
Retail Trade	6,700	6,700	6,500	16,100	16,200	16,200	21,000	20,800	21,500
Information	300	300	300	800	800	800	2,700	2,800	2,700
Financial Activities	2,100	2,100	2,100	8,400	8,500	8,300	17,100	17,300	16,700
Professional and Business Services	5,700	5,000	5,900	16,700	16,100	17,600	24,000	23,200	23,800
Educational and Health Services	10,000	10,000	10,200	24,400	24,000	24,200	32,300	31,700	32,300
Leisure and Hospitality	5,500	5,700	5,300	17,000	17,400	16,700	20,000	20,000	19,600
Other Services	2,500	2,500	2,500	5,200	5,300	5,200	10,500	10,700	10,500
Government	7,700	7,700	8,000	21,900	18,500	21,800	69,100	60,600	67,500
<b>MIDLAND</b>									
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018
<b>PLACE OF RESIDENCE</b>									
Labor Force	39,900	40,600	39,900	74,800	75,600	75,100	77,800	79,800	76,800
Employment	38,600	39,100	38,700	72,300	72,600	72,400	74,800	76,400	73,900
Unemployment	1,300	1,500	1,300	2,500	3,000	2,600	3,100	3,400	2,900
Rate (percent)	3.4%	3.8%	3.1%	3.3%	3.9%	3.5%	3.9%	4.3%	3.8%
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	37,900	37,800	38,100	42,200	41,300	42,500	66,400	66,800	65,800
Mining, Logging, and Construction	*	*	*	2,500	2,300	2,500	2,700	2,700	2,500
Manufacturing	*	*	*	5,900	5,800	5,800	13,900	14,000	13,900
Trade, Transportation, and Utilities	*	*	*	10,500	10,400	10,700	14,300	14,400	13,900
Wholesale Trade	*	*	*	1,800	1,800	1,800	*	*	*
Retail Trade	*	*	*	4,700	4,700	4,800	11,400	11,400	11,200
Information	*	*	*	*	*	*	300	300	300
Financial Activities	*	*	*	900	900	900	1,700	1,800	1,800
Professional and Business Services	*	*	*	5,700	5,700	5,700	3,600	3,400	3,600
Educational and Health Services	*	*	*	4,900	4,800	5,100	12,000	12,100	12,100
Leisure and Hospitality	*	*	*	4,800	5,000	4,800	8,200	8,900	7,900
Other Services	*	*	*	1,400	1,400	1,400	2,200	2,400	2,300
Government	3,000	2,600	3,000	5,300	4,700	5,300	7,500	6,800	7,500
* Data Not Available									

## NILES-BENTON HARBOR METRO AREA

- Seasonal labor force reductions in the Niles-Benton Harbor MSA led to a monthly jobless rate cut of 0.7 percentage points to 3.5 percent. The number of unemployed fell seasonally, and despite the rate reduction, the number of employed dropped by 800.
- Since September 2018, the 1.6 percent employment advance in the Niles-Benton Harbor metro area tied for the highest among Michigan metro areas.

### MONTHLY INDUSTRY DEVELOPMENTS

- September payroll jobs in the Niles-Benton Harbor MSA inched up 300. *Education and Professional and business services* added jobs seasonally. However, jobs in *Leisure and hospitality* declined seasonally.
- Over the year, jobs in the Niles-Benton Harbor MSA advanced by 1.8 percent (+1,100).

### INDUSTRY TRENDS

- Area jobs in *Manufacturing* steadily moved up every year for seven straight years from 2011 to 2017.

## SAGINAW METROPOLITAN AREA

- The jobless rate in the Saginaw region fell by six-tenths of a percentage point over the month to 4.1 percent in September.
- Total unemployment rose by 6.1 percent over the year.

### MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Saginaw edged up by 200 over the month, or 0.2 percent.
- A 1,200 seasonal job addition in the region's *Government* sector was partially offset by declines in several other industries, including *Manufacturing* (-500) and *Leisure and hospitality* (-300).

### INDUSTRY TRENDS

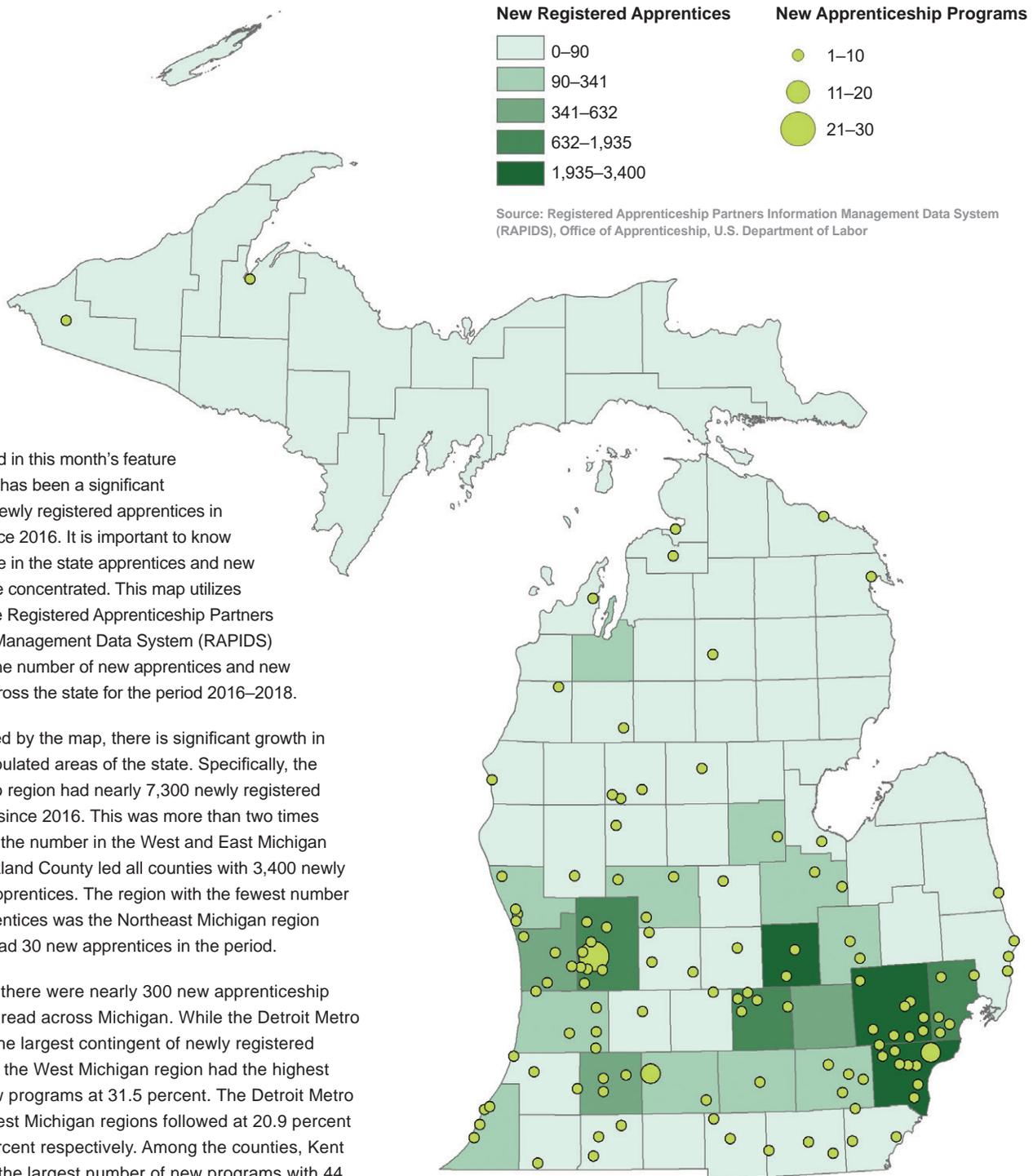
- For the third consecutive month, *Other services* in Saginaw exhibited its all-time low level of 3,100 jobs.

## CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	NILES-BENTON HARBOR			SAGINAW					
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018			
<b>PLACE OF RESIDENCE</b>									
Labor Force	73,600	75,000	72,400	85,800	87,400	85,400			
Employment	71,000	71,800	69,900	82,300	83,300	82,100			
Unemployment	2,600	3,200	2,500	3,500	4,100	3,300			
Rate (percent)	3.5%	4.2%	3.5%	4.1%	4.7%	3.9%			
<b>PLACE OF WORK</b>									
Total Nonfarm Jobs	63,900	63,600	62,800	88,100	87,900	88,100			
Mining, Logging, and Construction	2,300	2,300	2,300	3,300	3,400	3,300			
Manufacturing	13,600	13,700	13,200	12,200	12,700	12,500			
Trade, Transportation, and Utilities	10,800	10,700	10,800	16,700	16,600	16,700			
Wholesale Trade	*	*	*	2,000	2,000	2,100			
Retail Trade	7,000	6,900	6,800	12,000	11,900	11,900			
Information	500	500	500	1,300	1,300	1,300			
Financial Activities	2,500	2,500	2,500	3,600	3,700	3,600			
Professional and Business Services	5,700	5,400	5,600	11,400	11,400	11,200			
Educational and Health Services	9,500	9,200	9,200	15,700	15,800	15,800			
Leisure and Hospitality	8,000	8,600	7,900	9,500	9,800	9,200			
Other Services	2,300	2,400	2,300	3,100	3,100	3,200			
Government	8,700	8,300	8,500	11,300	10,100	11,300			
	UPPER PENINSULA		NORTHEAST MICHIGAN			NORTHWEST MICHIGAN			
	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018	SEP 2019	AUG 2019	SEP 2018
<b>PLACE OF RESIDENCE</b>									
Labor Force	138,100	139,200	137,400	83,000	85,300	82,300	151,500	159,600	149,100
Employment	132,600	132,400	132,400	79,300	80,900	78,800	146,300	153,700	144,300
Unemployment	5,500	6,800	5,000	3,700	4,400	3,500	5,200	5,900	4,800
Rate (percent)	4.0%	4.9%	3.6%	4.4%	5.2%	4.3%	3.4%	3.7%	3.2%

## MAP OF THE MONTH:

# NEW REGISTERED APPRENTICES AND NEW APPRENTICESHIP PROGRAMS BY COUNTY, 2016–2018



As mentioned in this month's feature article, there has been a significant increase in newly registered apprentices in Michigan since 2016. It is important to know exactly where in the state apprentices and new programs are concentrated. This map utilizes data from the Registered Apprenticeship Partners Information Management Data System (RAPIDS) to illustrate the number of new apprentices and new programs across the state for the period 2016–2018.

Demonstrated by the map, there is significant growth in the most populated areas of the state. Specifically, the Detroit Metro region had nearly 7,300 newly registered apprentices since 2016. This was more than two times greater than the number in the West and East Michigan regions. Oakland County led all counties with 3,400 newly registered apprentices. The region with the fewest number of new apprentices was the Northeast Michigan region which only had 30 new apprentices in the period.

Since 2016, there were nearly 300 new apprenticeship programs spread across Michigan. While the Detroit Metro region had the largest contingent of newly registered apprentices, the West Michigan region had the highest share of new programs at 31.5 percent. The Detroit Metro and Southwest Michigan regions followed at 20.9 percent and 17.1 percent respectively. Among the counties, Kent County had the largest number of new programs with 44.

**NICK GANDHI**  
Economic Analyst

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Demographic Analyst



# REGISTERED APPRENTICESHIPS IN MICHIGAN

By providing both classroom and on-the-job training, apprenticeship programs serve a vital role by preparing workers for critical occupations in the Michigan labor market. This article details demographic, occupation, wage, industry, and program information on apprenticeships in Michigan. Overall, the apprenticeship outlook is optimistic in Michigan, as the number of apprentices and programs is growing at an unprecedented rate, the diversity of people engaged in these programs is increasing, and the benefits of registered apprenticeship programs continue to accrue for workers and employers alike.

Apprenticeships are different from other types of work-based training because apprentices are hired by employers and receive a paycheck from the first day of work, with increasing wages over time. The programs can last from one to six years and focus on connecting education and work simultaneously. Every graduate of a registered apprenticeship program receives a nationally recognized credential: a portable qualification that signifies to employers that apprentices are fully trained for the job.

These programs are additionally beneficial to employers because they help businesses develop a highly skilled workforce and often are found to lower the cost of recruitment, reduce turnover rates, create a pipeline of qualified workers, and increase productivity. According to the U.S. Department of Labor (DOL), 91 percent of apprentices who complete an apprenticeship are still employed nine months later.

It is important to note, however, that not all apprenticeships are registered apprenticeships due to the voluntary registration of apprenticeship programs. Thus, this analysis does not represent all apprenticeships in Michigan.

## Data and Methodology

This study uses data from the Registered Apprenticeship Partners Information Management Data System (RAPIDS), which is managed by the DOL Office of Apprenticeship (OA). The RAPIDS database is the largest one of its kind for tabulating and analyzing apprenticeship programs, but again it is not all inclusive, since not all apprenticeships are

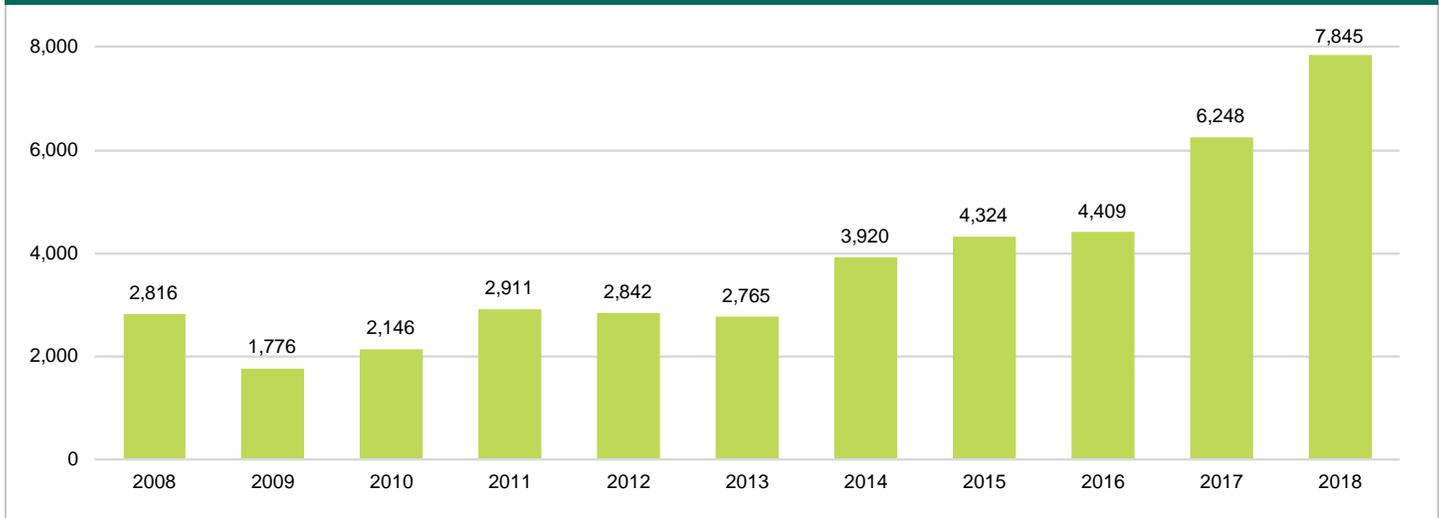
registered apprenticeships. This analysis focuses on apprentices and their sponsoring programs.

Two key time periods were identified for this article. The first incorporates the eight-year period from 2008 to 2015 and the latter consists of the shorter three-year period from 2016 to 2018. These time periods were chosen as there was a significant increase in resources for registered apprenticeships in Michigan beginning in 2016, including a number of discretionary and competitive grants as well as the establishment of Apprenticeship Success Coordinators and the Apprenticeship Learning Network.

An addition to this report is the inclusion of administrative wage records to measure the employment outcomes of registered apprentices. Measuring the earnings of apprentices after program completion is crucial to understanding the role of registered apprenticeship in the Michigan labor market. These wage records were linked with 2017 apprenticeship completer data to allow for the analysis of earnings one year after completion of a program.



**FIGURE 1: NEW REGISTERED APPRENTICES BY YEAR, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

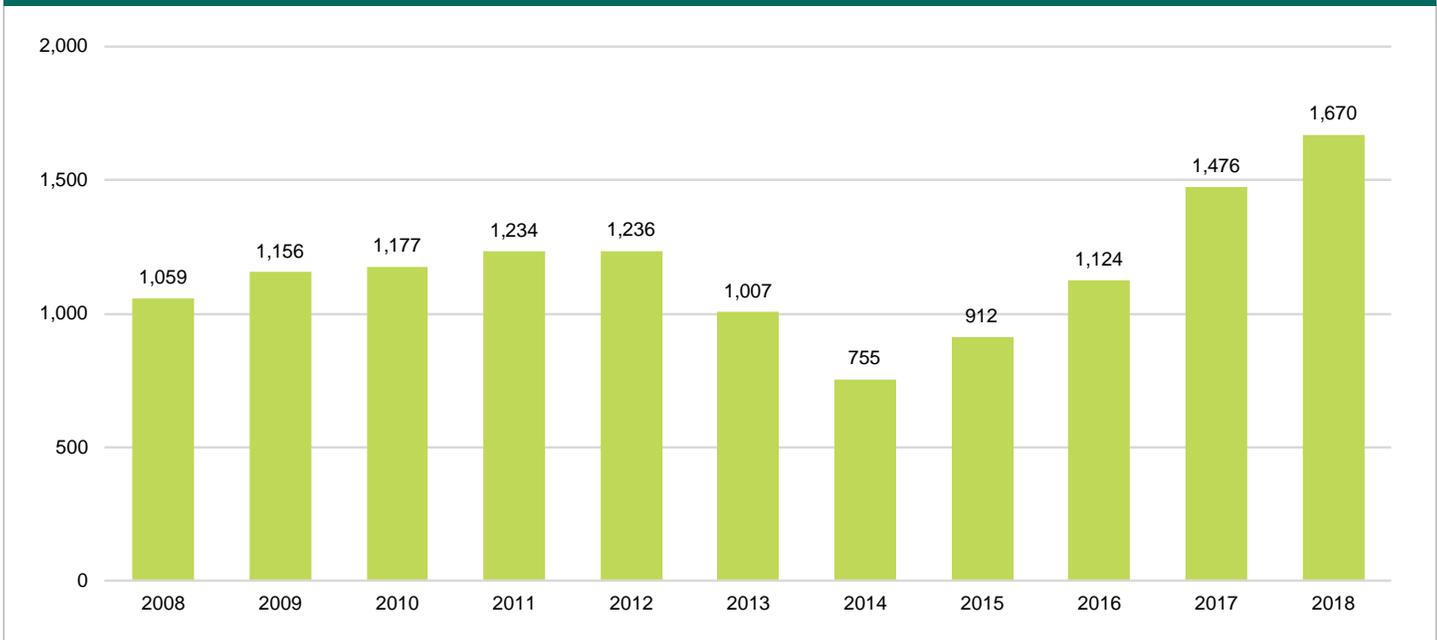
### Current State of Apprenticeships

On the national scale, Michigan is a leader in registered apprenticeships. Michigan ranks 4th nationally both in terms of the number of 2018 active apprentices and newly registered apprentices and 13th in terms of 2018 apprenticeship completers. The state also is home to the 5th most active apprenticeship programs in the nation.

In 2018, there were nearly 18,900 active apprentices in more than 1,100 programs across the state of Michigan. Most of these apprentices fall into traditional apprenticeship industries, *Manufacturing* and *Construction*, while the rest are in nontraditional apprenticeship industries such as *Retail trade*, *Health care and social assistance*, and energy-related industries.

To date, the largest cohort of newly registered apprentices began their programs in 2018, with over 7,800 new apprentices. In fact, the average number of new apprentices per year since 2016 (6,200) has more than doubled the rate from 2008 to 2015 (2,900). Similarly, the number of completers also has been on the rise in the past three years, while not as dramatically. From 2008 to 2015, nearly 1,100 apprentices

**FIGURE 2: APPRENTICESHIP COMPLETERS BY YEAR, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

completed their programs. This number has jumped to just over 1,400 in the latter period.

On top of the over 1,100 programs in the state in 2018, 120 of these were new programs. Many of these new programs were in the traditional apprenticeship industries of Manufacturing and Construction. Furthermore, West Michigan was home to the largest share of programs in the state with nearly 29 percent. The Detroit Metro and Southwest Michigan regions followed at 19.6 percent and 14 percent, respectively.

## Demographics

When analyzing apprentices in the state of Michigan, it is important to note the differences among demographic groups. This allows for identification of areas of progress and areas of opportunity for improvement.

### GENDER

From 2008 to 2015, 93.6 percent of newly registered apprentices were men, which is likely the result of the gender makeup of the traditional apprenticeship industries of *Construction* and *Manufacturing*. However, the period after (2016–2018) has seen an uptick in the number of new female registered apprentices; the share of females increased from 6.4 percent to 11.3 percent between the two periods, marking a significant increase. This was largely due to the emergence of new programs, although the share of females in traditional programs has increased slightly as well.

### RACE

Only 10.3 percent of new apprentices identified as a person of color from 2008 to 2015. The largest of this group was blacks at 8.7 percent. From 2016 to 2018, new apprentices who are a person of color made up 13.1 percent, with blacks making up 11 percent. Limitations on known racial profiles of apprentices complicates a more thorough analysis on race, however.

### EDUCATION

Among new registrants from 2008 to 2018, only 11.7 percent had postsecondary or technical training. Meanwhile, most newly registered apprentices were high school graduates (70.9 percent). Those with a GED comprised 6.6 percent, and those with less than a high school education composed 3.2 percent.

### YOUTH APPRENTICES

Youth apprentices (24 years or younger at time of enrollment) make up a sizable portion of the apprentice population. Overall, this share has increased slightly in the latter part of the period of analysis. From 2008 to 2015, this share sat at 31.8 percent. This has gone up to 34 percent in the latter period, as the raw number of youth apprentices has nearly matched that of the earlier timeframe. The share has seen a low point of 27.6 percent in 2011 and a high mark of 36.5 percent in 2014.

### VETERAN STATUS

This group is a critical part of the state's labor force. From 2008 to 2015, veterans made up 6.2 percent of all newly registered apprentices, increasing to 7.4 percent in 2017 before dipping to 5.4 percent in 2018.

## Occupations

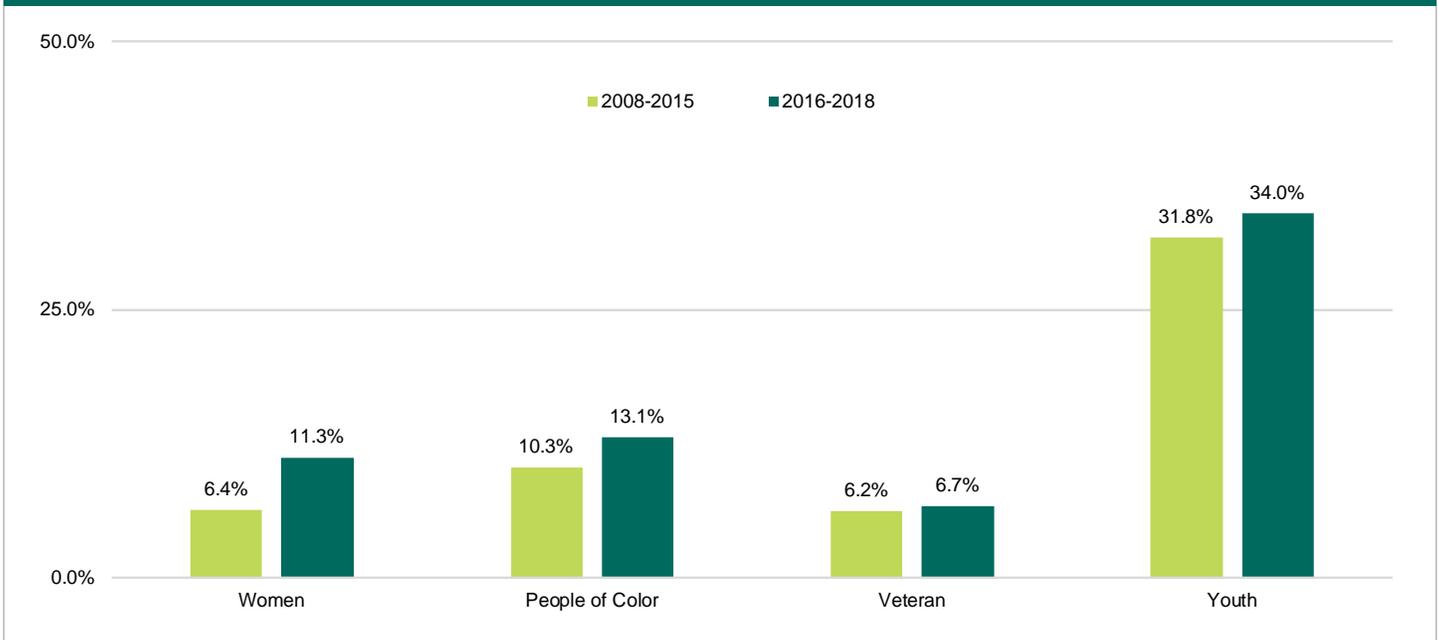
In total, there were nearly 18,900 active apprentices in 2018. And even though these apprentices are mostly spread throughout a select few occupations, there are a wide variety of jobs that have an apprenticeship program associated with them.

*Electricians* had the highest share of active apprentices at 22 percent (4,200). *Construction laborers* made up the second highest share with 15.1 percent (2,900), followed by *Carpenters* (8.8 percent) and *Plumbers, pipefitters, and steamfitters* (7.3 percent).

Among the roughly 12,600 apprenticeship completers from 2008 to 2018, 20.8 percent were *Electricians* (2,600). *Plumbers, pipefitters, and steamfitters* clocked in at 12.3 percent (1,500), followed by *Tool and die makers* (6.2 percent) and *Carpenters* (5.9 percent).

Newly registered apprentices followed a similar trend among top occupations as well, with *Electricians* (22.6 percent) and *Construction laborers* (16.1 percent) making up the largest shares.

**FIGURE 3: CHANGE IN APPRENTICE DEMOGRAPHICS, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Among top occupations, *First-line supervisors of retail sales workers* recorded no new apprentices for seven years during the time period. The bulk of the newly registered apprentices in this occupation was instead limited to two years, 2014 and 2018, where the occupation welcomed 550 and 651 newcomers, respectively.

Two other occupations have seen a dramatic rise in newly registered apprentices within the

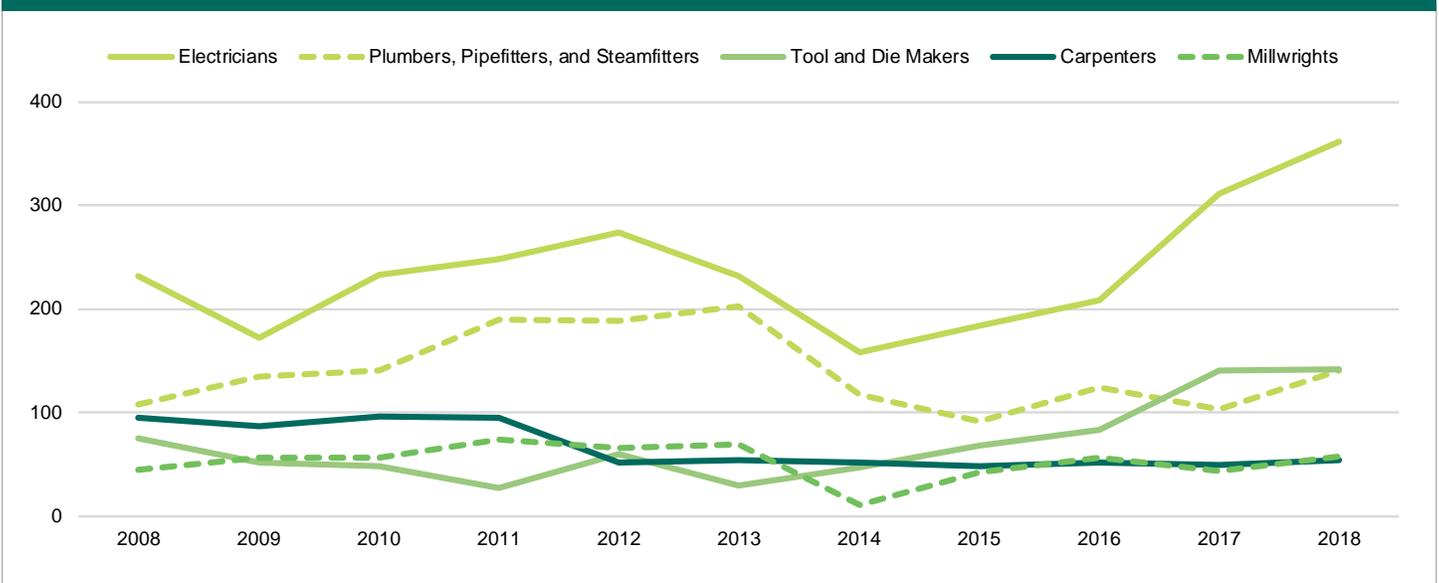
past few years. *Engineering technologists and technicians* saw an uptick of 169 new apprentices from 2015 to 2018 after having no apprentices in prior years. *Medical assistants* grew by 106 in 2017 and 2018 after registering only two in previous years.

A rise in new apprentices within the past few years across several occupations is a commonality among the smaller occupations.

This is especially true as the total number of apprentices has increased over the past few years after seeing a dip in the early to mid-2010s.

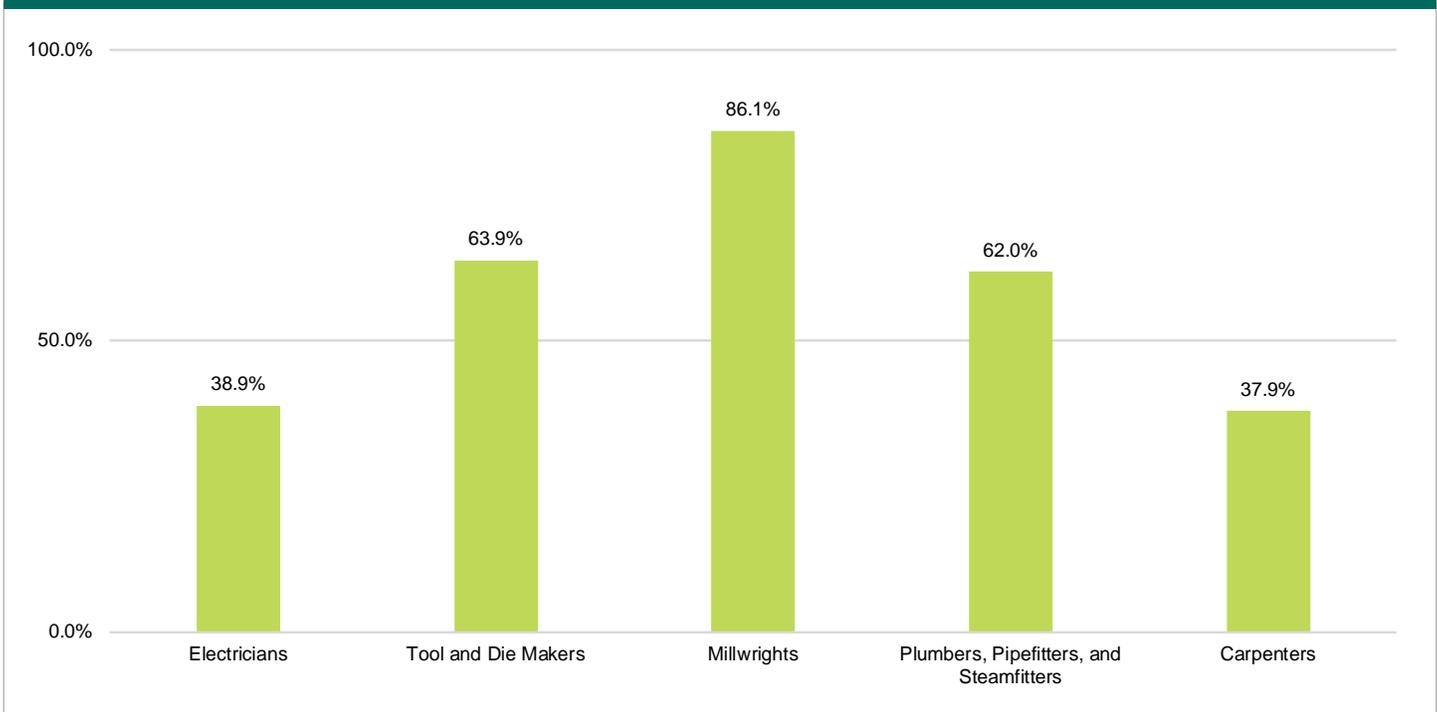
In addition to the number of completers, the completion rates (the share of new apprentices completing programs within the expected timeframe) of registered apprentices vary by occupation. Rates are measured as the percentage of new apprentices who complete

**FIGURE 4: APPRENTICESHIP COMPLETERS, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

**FIGURE 5: COMPLETION RATES FOR TOP OCCUPATIONS, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

their programs within the expected timeframe, measured as the length of the program plus a 50 percent extension. Figure 5 provides the completion rates for the top five largest apprenticeship occupations by completers in Michigan.

### Employment Outcomes

Administrative wage records allow for a variety of analysis on apprenticeship completers. These records, for example, can identify the percent employed one year after program completion, helping to improve understanding of apprenticeship program effectiveness.

In general, larger occupations tended to display lower employment percentages. For *Electricians*, 63.8 percent were employed one year after completion. *Tool and die makers* were at 70.4 percent, and *Plumbers, pipefitters, and steamfitters* had a rate of 82.9 percent. The lowest employment percentages were seen in *Electrical power-line installers and repairers* (33.3 percent), *Construction laborers* (50 percent), and *Machinists* (58.6 percent).

Beyond employment percentages, a key component of a registered apprenticeship is wage progression from the first to the last year of a program and post-completion wage rates. In 2018, the median hourly first-year wage for a newly registered apprentice was \$15.11. For

2018 completers, the median last-year wage sat at \$26.57, significantly greater than that of the statewide median wage of \$18.08 in 2018.

Among 2017 completers, the median annual wage one year after completion—the equivalent of a starting wage in any non-apprenticed occupation—was \$33.59. This was just shy of three times the overall 25th percentile wage (which is a proxy for starting wages across all occupations) in Michigan of \$12.06.

The difference in starting, exit, and post-apprenticeship wages among top occupations was also significant. *Electricians* had a median starting wage of \$13.55. In the last year of their apprenticeship, these apprentices were earning \$27.24. One year after completion, this wage spiked to \$36.17, as shown in Figure 6. By comparison, the median starting wage for *Electricians* across the state was \$20.69. *Plumbers, pipefitters, and steamfitters* displayed similar wage trends.

The largest difference between one-year-after-completion median wages and statewide median wages among top occupations was *Electrical power-line installers and repairers*. Upon one year after completion, the median wage was \$59.66. Comparatively, the statewide median wage was \$36.59.

### Traditional vs. Nontraditional Industries

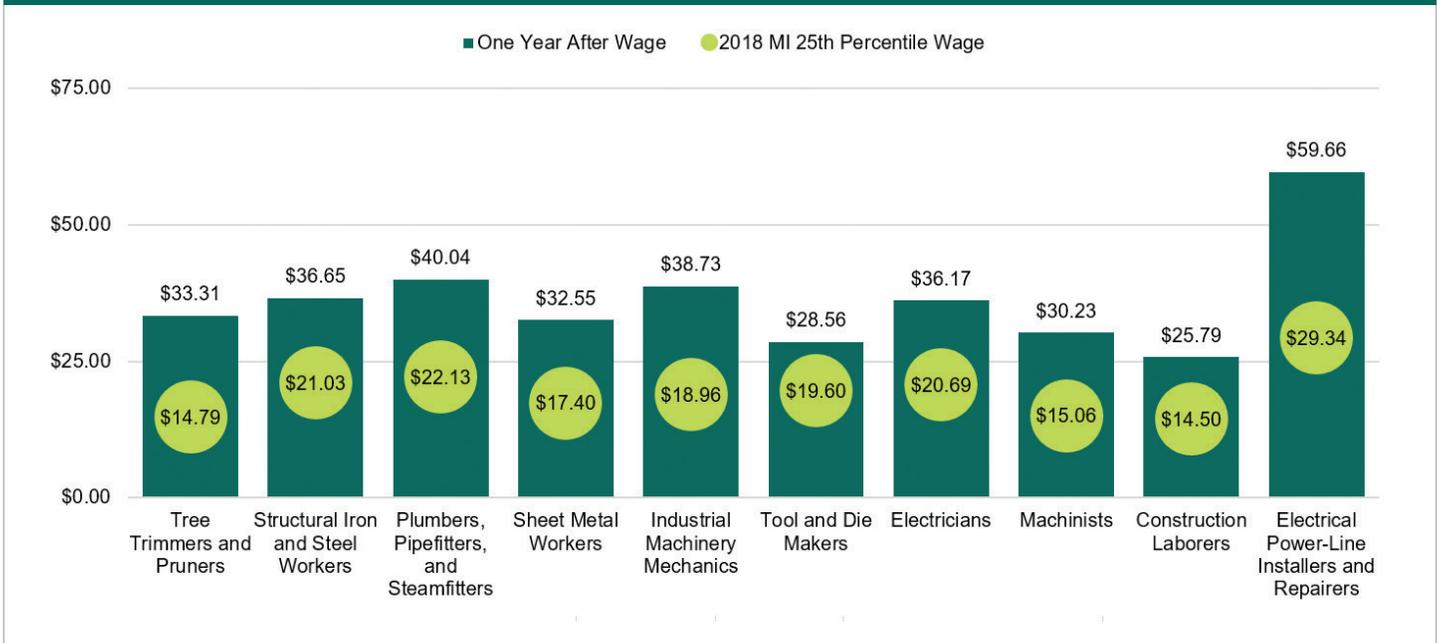
Because *Construction* and *Manufacturing* make up a large majority of registered apprenticeships in Michigan, registered apprenticeships are often thought of as apprentices in these industries. Because of this, such apprenticeships are often referred to as traditional apprenticeships. For the purposes of this article, apprenticeship programs in all other industry sectors are identified as nontraditional apprenticeships, which include industries such as *Retail trade*, *Educational services*, and *Health care and social assistance*. While these fields are important, together they make up a smaller share of apprentices.

#### TRADITIONAL APPRENTICES

*Construction* apprentices make up 59 percent of all active apprentices in Michigan. *Manufacturing* trails at 20 percent, but together these two industries make up nearly 79 percent of all active apprentices.

Since 2008, there have been just over 42,000 newly registered apprentices. Of this quantity, nearly 81 percent registered in traditional apprenticeships.

**FIGURE 6: EARNINGS ONE YEAR AFTER COMPLETING AN APPRENTICESHIP, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity; 2018 Occupational Employment Statistics (OES), Bureau of Labor Market Information and Strategic Initiatives, Michigan Department of Technology, Management & Budget

Since 2008, the *Construction* industry graduated the most apprentices statewide. This industry has been responsible for 58 percent (7,400) of these completers. *Manufacturing* followed with 22 percent (2,800).

### NONTRADITIONAL APPRENTICES

Among nontraditional apprenticeships, those in energy-related industries made up the largest share of newly registered apprenticeships from 2008 to 2018. This industry was responsible for 28.3 percent of all nontraditional newly registered apprentices. *Retail trade* was close behind at 25.4 percent over the same period.

In 2014 and 2018, dramatic increases in new apprentices were realized in *Retail trade*, with 680 and 1,040 new apprentices, respectively. This is compared to having fewer than 100 new additions in each of the other years. Also, having not recorded more than 10 new registered apprentices since 2008, *Health care and social assistance* added 590 new apprentices in 2018.

*Retail trade* is by far the largest industry among nontraditional completers, responsible for 38.8 percent of the share. This was mainly due to the large spikes in newly registered apprentices in 2014 and 2018. Energy-related industries and *Health care and social assistance* follow at 22.5 percent and 13.4 percent of the share, respectively.

### Conclusion

The addition of administrative wage records in this report has allowed for significant analysis on the employment outcomes of apprenticeship completers in the Michigan labor market. Coupling this with new data from the time after significant progress was made in the number of resources for Michigan apprenticeships makes for a compelling storyline regarding the importance of these programs to the economy.

While the traditional apprenticeship industries of *Construction* and *Manufacturing* make up the core of apprentices in Michigan, nontraditional apprenticeship industries are growing. This indicates a wide variety of apprenticeship opportunities across Michigan.

Furthermore, the demographic makeup of these newly registered apprentices is becoming more diverse. Between the two periods, the share of women, people of color, youth, and veterans have all increased. This is partly due to the exciting opportunities that nontraditional apprenticeships offer.

Lastly, apprenticeships have a positive effect in terms of earnings and provide ample opportunities for those who choose to participate. They offer significant wage progression throughout the program, and this progression, as shown earlier, carries over into

post-apprenticeship earnings. Most programs also boast high employment percentages after completion, which bodes well for those who may be struggling to find work.

For more information on apprenticeships in Michigan please see our full report, “The State of Registered Apprentices in Michigan,” in the research section of the LMISI website: <https://www.milmi.org/research>.

**NICK GANDHI**  
Economic Analyst

# SMALL GAIN IN ONLINE MICHIGAN JOB ADVERTISEMENTS IN SEPTEMBER

For the month of September, there were 143,294 seasonally adjusted online job advertisements in Michigan. This was a small uptick of only about 0.5 percent from the August job posting level of 142,532. Job ads were down markedly over the year with a decline of 11,124 or 7.2 percent.

## Supply/Demand Rate

The ratio of unemployed persons per job advertisement is known as the supply/demand rate. Michigan's supply/demand rate for September was 1.45, indicating that for every 145 available job seekers there were 100 online job advertisements. The Michigan supply/demand rate was slightly higher than the other Great Lakes states of Illinois (1.31), Indiana (1.23), Ohio (1.26), and Wisconsin (0.88). Michigan's rate was also higher than the national rate of 1.13. The rate has been rising steadily with few exceptions over the past 15 months. A year ago, the Michigan rate was lower at 1.24.

## Metro Area Ad Trends

Metro areas across the state had mixed job ad trends in September, with 5 of the 13 regions registering an increase. Regional monthly job ad movements ranged from a gain of 5.2 percent in Battle Creek (97 ads) to a decline of 2.9 percent in the Grand Rapids MSA (-466 ads).

## Non-Seasonally Adjusted Job Postings

Information is available on advertised jobs by detailed occupation as well as broad occupational groups from the Help Wanted Online Data Series, but the data is not seasonally adjusted.

## MOST ADVERTISED APPRENTICESHIP-RELATED OCCUPATIONS, SEPTEMBER 2019

OCCUPATION	VOLUME
Construction Laborers	411
Machinists	345
Electricians	299
Industrial Machinery Mechanics	276
Tree Trimmers and Pruners	175
Plumbers, Pipefitters, and Steamfitters	110
Tool and Die Makers	45
Electrical Power-line Installers and Repairers	28
Sheet Metal Workers	25
Structural Iron and Steel workers	6

## Ads by Occupation

Over the month, online ad levels for most major occupational groups held level or dropped slightly. *Sales* related ads had the largest monthly increase in Michigan, moving up by 2.8 percent. Seasonal major groups had ad reductions such as *Construction and repair* and *Farming fishing, and forestry*, down by 4.2 and 8.7 percent, respectively. *Professional* occupations continue to be the largest major group in terms of online job ads, comprising about one-quarter of all ads this month. Major groups with an increase in the number of ads this year included *Sales* as well as *Food preparation and serving* occupations.

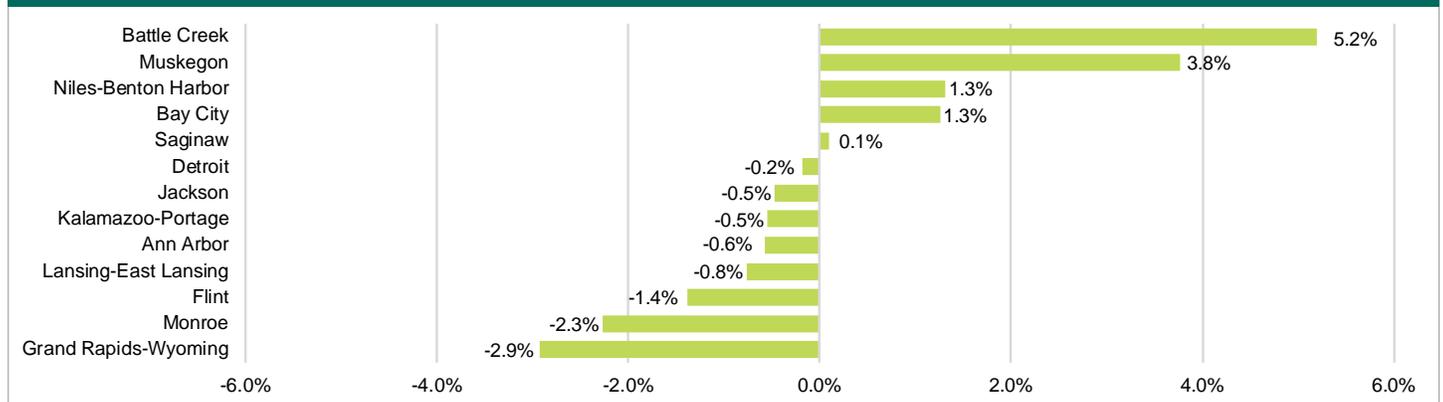
For detailed occupations, *Registered nurses* still led the way with 6,530 ads in September, with *First-line supervisors of retail sales workers* as a close second at 6,309.

## Apprenticeship-related Occupations

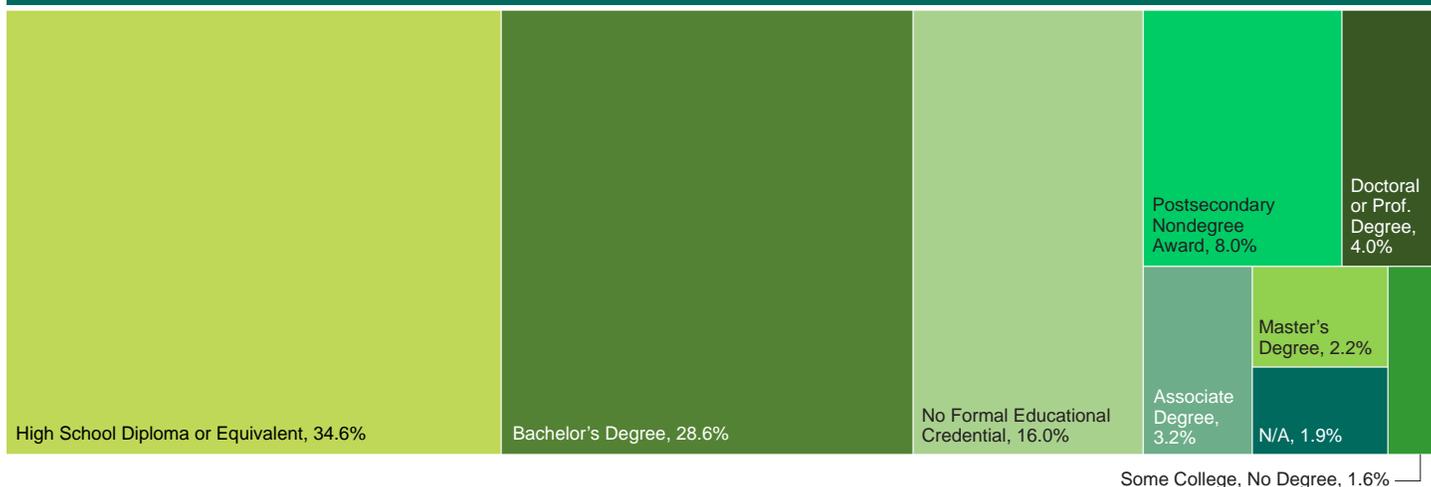
Occupations with a higher-than-average number of apprenticeship opportunities also appear in a number of job ads. Among occupations highlighted in the article on apprenticeships in this edition of *Michigan's Labor Market News*, *Construction laborers* led in terms of ad volume with 411. Notably, this was down from prior spring and summer months when ads peaked at 552 in May. *Machinists*, *Electricians*, and *Industrial machinery mechanics* followed with 345, 299, and 276 ads respectively this month. There were a total of 1,720 online job ads this month for the 10 apprenticeship occupations highlighted in the wage analysis in this edition's article on apprenticeships.

**EVAN LINSKEY**  
Economic Analyst

## MONTHLY CHANGE IN JOB ADS BY METRO AREA



## TYPICAL EDUCATIONAL REQUIREMENT FOR ALL JOB POSTINGS, MICHIGAN



## LABOR DEMAND BY OCCUPATION (NOT SEASONALLY ADJUSTED)

OCCUPATION CATEGORIES	SEP 2019	AUG 2019	SEP 2018	OVER THE MONTH	
				LEVEL	PERCENT
<b>TOTAL</b>	<b>149,398</b>	<b>150,665</b>	<b>160,971</b>	<b>-1,267</b>	<b>-0.8%</b>
Administrative Support	15,621	15,555	15,634	66	0.4%
Office and Administrative Support	15,621	15,555	15,634	66	0.4%
Construction and Repair	8,440	8,814	9,457	-374	-4.2%
Construction and Extraction	2,251	2,374	2,786	-123	-5.2%
Installation, Maintenance, and Repair	6,189	6,440	6,671	-251	-3.9%
Farming, Fishing, and Forestry	357	391	488	-34	-8.7%
Farming, Fishing, and Forestry	357	391	488	-34	-8.7%
Healthcare	23,964	24,010	25,750	-46	-0.2%
Healthcare Practitioners and Technical	18,210	18,373	19,514	-163	-0.9%
Healthcare Support	5,754	5,637	6,236	117	2.1%
Management	9,807	10,302	11,244	-495	-4.8%
Management	9,807	10,302	11,244	-495	-4.8%
Production	4,443	4,565	5,634	-122	-2.7%
Production	4,443	4,565	5,634	-122	-2.7%
Professional	38,194	38,529	41,818	-335	-0.9%
Architecture and Engineering	6,800	6,723	8,249	77	1.1%
Arts, Design, Entertainment, Sports, and Media	2,596	2,781	2,784	-185	-6.7%
Business and Financial Operations	6,994	6,885	7,583	109	1.6%
Community and Social Services	3,111	3,298	3,410	-187	-5.7%
Computer and Mathematical	10,516	10,393	11,476	123	1.2%
Education, Training, and Library	6,309	6,457	6,331	-148	-2.3%
Legal	339	378	415	-39	-10.3%
Life, Physical, and Social Science	1,529	1,614	1,570	-85	-5.3%
Sales	21,453	20,872	20,797	581	2.8%
Sales and Related	21,453	20,872	20,797	581	2.8%
Service	23,030	23,098	24,032	-68	-0.3%
Building and Grounds Cleaning and Maintenance	6,994	6,885	7,583	109	1.6%
Food Preparation and Serving Related	11,140	11,373	10,849	-233	-2.0%
Personal Care and Service	2,398	2,388	2,788	10	0.4%
Protective Service	2,498	2,452	2,812	46	1.9%
Transportation	7,649	7,980	9,517	-331	-4.1%
Transportation and Material Moving	7,649	7,980	9,517	-331	-4.1%

# RELEVANT RANKINGS

REGISTERED APPRENTICESHIPS BY STATE				
RANK	STATE	ACTIVE APPRENTICES	NEW APPRENTICES	COMPLETERS
1	California	89,949	34,303	12,584
2	South Carolina	20,763	7,042	2,158
3	Ohio	19,081	8,958	2,227
4	Michigan	18,873	7,845	1,670
5	New York	18,337	3,638	3,026
23	North Carolina	7,039	3,307	1,147
24	Colorado	6,315	3,617	865
25	Arkansas	5,750	2,534	399
26	Tennessee	5,590	1,956	730
27	Connecticut	5,528	2,172	48
46	Delaware	1,394	592	163
47	North Dakota	1,038	331	146
48	Maine	602	312	47
49	South Dakota	526	409	143
50	Wyoming	402	193	77

**Note:** The number of apprentices reflect fiscal year 2018 counts. Michigan apprenticeship counts calculated for this report were compared with counts of other states as reported by the U.S. Department of Labor.

Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

## REGISTERED APPRENTICESHIPS – TOP 15 COUNTIES, MICHIGAN

RANK	COUNTY	ACTIVE REGISTERED APPRENTICES (2018)	NEW REGISTERED APPRENTICES (2018)	COMPLETERS (2018)
1	Oakland County	3,790	1,111	303
2	Wayne County	3,267	1,628	89
3	Shiawassee County	2,751	947	62
4	Ingham County	1,713	1,050	215
5	Macomb County	1,389	545	203
6	Kent County	1,216	623	161
7	Ottawa County	619	209	82
8	Livingston County	598	210	47
9	Kalamazoo County	414	207	53
10	Genesee County	347	108	25
11	Saginaw County	246	84	48
12	Washtenaw County	241	100	33
13	Allegan County	237	90	49
14	Calhoun County	233	113	33
15	Jackson County	188	77	26

Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor



## PARTNER PERSPECTIVE

The Bureau of Labor Market Information and Strategic Initiatives provides a wealth of information and insights to help support programs and policies throughout the state. This month's *Partner Perspective* highlights the work being done at the Michigan Department of Labor and Economic Opportunity to support registered apprenticeship programs in Michigan.

# CELEBRATING REGISTERED APPRENTICESHIP SUCCESS IN MICHIGAN

Registered Apprenticeships are a strategic approach to creating a pipeline of professional workers through work-based learning and benefits employers, apprentices and our economy. The training model combines job related, classroom-based learning, with paid on-the-job training in high-skill, high-wage, in-demand industry occupations.

For employers, apprenticeships represent an investment in their staff and the companies themselves. According to a 2017 study, employers gain an average of \$1.47 in productivity for every \$1 spent on an apprenticeship program. That same study found that apprenticeships also reduce worker turnover and increase employee loyalty.

The challenge facing Michigan business and education leaders is overcoming the lack of awareness and misperceptions that exist with apprenticeships. Recently, the Department of Labor and Economic Opportunity (LEO) commissioned a statewide survey that revealed Michigan high school students and young adults are three times more likely than their parents to say they are not sure what an apprenticeship is.

Among the survey findings:

- Students ages 14–30 are significantly more knowledgeable about the options of community colleges and four-year universities than apprenticeships.
- At least 55 percent of parents say they are not knowledgeable about apprenticeship benefits.
- Only 21 percent of parents view an apprenticeship as a good option after high school for their child or children.

Despite these challenges, Michigan is among the national leaders in Registered Apprenticeships (RAs) and the state's apprenticeship network continues to grow. This ensures that students and jobseekers gain in-demand skills without extensive tuition debt, while employers get the talent needed to grow and thrive, creating more and better jobs. RAs are a proven catalyst in addressing the skilled workforce talent gap. Apprenticeships provide exceptional career paths that address unique employer needs while offering training, income, and credentials to employees, in direct alignment with the Governor's new statewide goal to increase the number of Michiganders with a postsecondary credential from 45 to 60 percent by 2030.

In partnership with the U.S. Department of Labor (USDOL) Office of Apprenticeship (OA), the State of Michigan has contributed to

apprenticeship expansion through support of (1) sector partnerships; (2) employer incentives; (3) the establishment of the Apprenticeship Learning Network (ALN), and the (4) launch and implementation of the Apprenticeship Success Coordinator (ASC) function within the Michigan Works! System, all cultivating new RA opportunities across the state. These efforts are administered through the State Apprenticeship Expansion Section of the Industry Engagement Division within the Department of Labor and Economic Opportunity-Workforce Development (LEO-WD).

LEO-WD's apprenticeship expansion efforts support quality and innovative RA training programs that align with the Workforce Innovation and Opportunity Act (WIOA). Major areas of alignment include: high-quality career exploration and career pathway development, continued support for educational attainment, opportunities for skills training in high-demand occupations, and outreach and recruitment including specific approaches to increase apprenticeship opportunities for low income individuals and underrepresented populations including youth, women, communities of color, Native Americans, Veterans, persons with disabilities, and ex-offenders. The emphasis on sector partnerships related to in-demand industries and/or occupations, demand-driven decision making to inform local Workforce Development Boards, regional coordination/planning, and employer engagement is consistent with the broader vision that supports an integrated service delivery system and provides the framework through which state and local areas can leverage federal, state, and local resources for RA.

LEO-WD also partnered with the USDOL/OA, the Workforce Intelligence Network, MWAs, and the state's broader apprenticeship network, to implement the Apprenticeship Learning Network (ALN). The ALN is a multi-module learning network for employers and intermediaries focused on teaching tools and tactics for expanding RA; by engaging women and underserved populations; growing apprenticeships in targeted industries and occupations; and celebrating RA success. Five ALN modules have been made available to date covering topics such as: 1) Components and requirements of RAs, 2) Registration process, 3) Engaging prospective apprenticeship employer sponsors, 4) Braiding and leveraging resources 5) Serving as an intermediary sponsor, and 6) Apprenticeships and WIOA.

Considered as a best practice nationally, the Apprenticeship Success Coordinator (ASC)

function delivered through the Michigan Works! system provides assistance to potential employers, sponsors and apprentices with effectively exploring, partnering, developing, registering, launching, and operating new opportunities for apprenticeship readiness, pre-apprenticeship and RA. Between January 2016 through December 2018, ASCs contributed towards establishing close to 1,300 new registered apprentices, including a number of underrepresented populations.

Building on the foundation and momentum of these statewide RA best practices, LEO-WD has been awarded several discretionary/competitive grants since 2016, including 1) Apprenticeship Accelerator Grant, 2) State Apprenticeship Expansion Grant, 3) State Apprenticeship Expansion Grant – Continuation, and 4) Apprenticeship State Expansion Grant. Through these grant opportunities, Michigan has expanded new registered apprenticeship programs and apprentices in advanced manufacturing, agriculture, education, energy, healthcare and information technology.

LEO-WD has committed to cultivating at least 1,300 additional new RAs through June of 2022.

Another approach to Registered Apprenticeship in Michigan is the adoption, promotion, and support of Apprenticeship Intermediaries. These provide industry and/or occupation-specific expertise to support employers in a particular industry sector, coordinate partner responsibilities, provide program administration to aggregate demand for apprentices, particularly for small and medium-sized employers that may not have the capacity to operate programs on their own, and assist with instruction and supportive services. (For a list of Michigan's current USDOL Registered Apprenticeship Intermediaries, please contact us.)

To learn more about Michigan Registered Apprenticeships visit [www.mitalent.org/apprenticeships](http://www.mitalent.org/apprenticeships).



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# THE STATE OF **REGISTERED** **APPRENTICESHIPS** IN MICHIGAN

STATE OF MICHIGAN  
Department of Technology, Management & Budget  
Bureau of Labor Market Information and Strategic Initiatives

# THE STATE OF REGISTERED APPRENTICESHIPS IN MICHIGAN

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Apprenticeship Photography:  
Claire Abendroth, Photographer  
Michigan Department of Labor and  
Economic Opportunity

## IT'S BIGGER THAN DATA.

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## Executive Summary

# Registered apprenticeships in Michigan are experiencing rapid growth.

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**From 2008 to 2015, over an eight-year period, Michigan gained 23,500 newly registered apprentices, an average of over 2,900 per year.** Since 2016, this number has increased to nearly 6,200 new apprentices per year, with over 18,500 between 2016 and 2018.

**The number of apprenticeship program completers per year has also increased since 2015.** From 2016 to 2018, there were over 1,400 completers per year, up from nearly 1,100 per year prior.

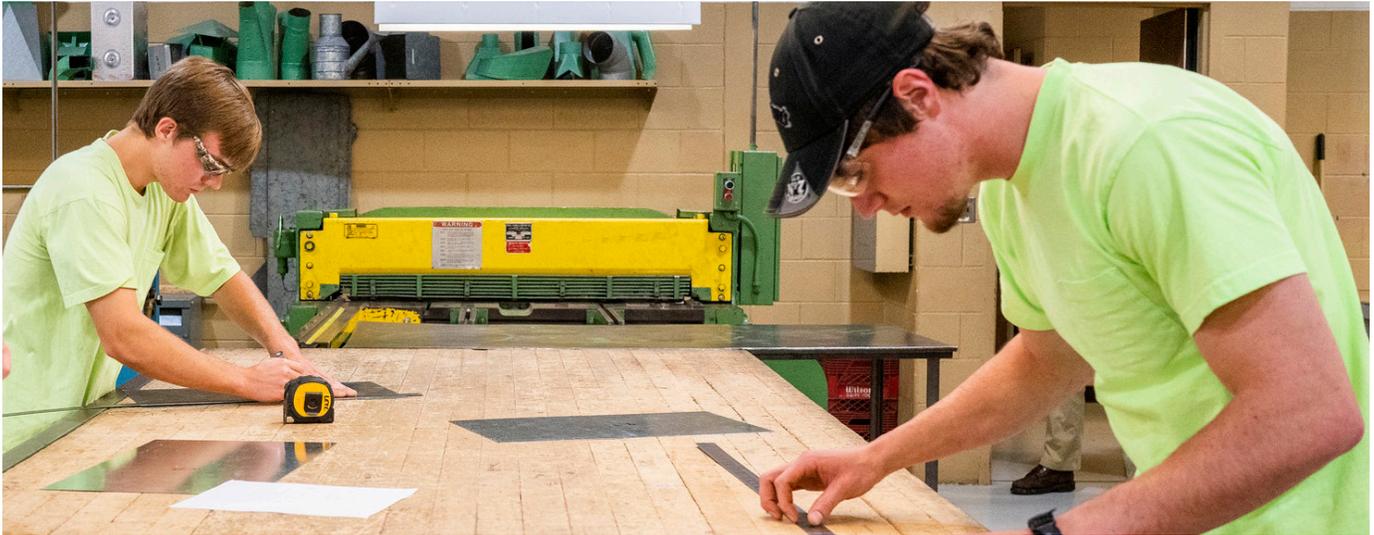
**Among differing demographic groups, newly registered apprentices are gradually becoming more diverse.** Since 2016, new registrants who are a person of color has gone up 2.8 percentage points to 13.1 percent. The number of women has increased 4.9 percentage points to 11.3 percent in the same time frame. Furthermore, the share of veterans has inched up 0.5 percentage points to 6.7 percent.

**Electricians has remained the top occupation amongst newly registered apprentices and has seen enrollment increase to over 1,000 per year since 2015.** Similar increases have occurred in other large occupations such as *Construction laborers, Plumbers, pipefitters, and steamfitters, and Carpenters.*

**Many of these occupations also report significant wage progression from the first to last year of an apprenticeship.** The median first-year wage for 2018 newly registered apprentices was \$15.11. For 2018 completers, the median last year of apprenticeship wage was \$26.57.

**For the first time, administrative wage records were linked with apprenticeship data.** This creates an opportunity to analyze wage progression one year after leaving an apprenticeship program for 2017 completers. The wages earned by these completers were typically much higher than what they were in the last year of their apprenticeship and greater than the typical statewide starting wage. For these completers of apprenticeship programs, the median wage one-year post completion was \$33.59.

**Traditional apprenticeship industries, which are those found in Construction and Manufacturing, make up a significant portion of apprentices across the state.** However, this share has decreased slightly since 2016. This is partly because nontraditional industries, such as Energy and Retail trade, have claimed a higher share of newly registered apprentices. From 2016 to 2018, newly registered nontraditional apprenticeships made up 22.2 percent of the total, marking a 5 percentage point increase from the 2008–2015 period.



## Introduction

By providing both classroom and on-the-job training, apprenticeship programs serve a vital role by preparing workers for critical occupations in the Michigan labor market. This report on apprenticeships in Michigan, which details demographic, occupation, wage, industry, and program information, builds on a previous report published by the Bureau of Labor Market Information and Strategic Initiatives (LMISI) in 2016. Similar to the analysis from three years ago, this report continues to present an optimistic outlook for apprenticeships in Michigan. The number of apprentices and programs are growing at an unprecedented rate, the diversity of people engaged in these programs is increasing, and the benefits of registered apprenticeship programs continue to accrue for workers and employers alike.

Apprenticeships are different from other types of work-based training because apprentices are hired by employers and receive a paycheck from the first day of work, with increasing wages over time. The programs can last from one to six years and focus on connecting education and work simultaneously. Every graduate of a registered apprenticeship program receives a nationally recognized credential: a portable qualification that

signifies to employers that apprentices are fully trained for the job. These programs are additionally beneficial to employers because they help businesses develop a highly skilled workforce and often are found to lower the cost of recruitment, reduce turnover rates, create a pipeline of qualified workers, and increase productivity. According to the U.S. Department of Labor (DOL), 91 percent of apprentices who complete an apprenticeship are still employed nine months later.<sup>1</sup>

It is important to note, however, that not all apprenticeships are registered apprenticeships due to the voluntary registration of apprenticeship programs. Thus, this report does not represent all apprenticeships in Michigan.

<sup>1</sup> Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

**Registered apprenticeships** are “innovative work-based learning and postsecondary earn-and-learn models that meet national standards for registration with the DOL (or federally recognized State Apprenticeships Agencies).” These standards include evidence of:

Source: U.S. Department of Labor (DOL)

1. Business involvement
2. Structured on-the-job training
3. Related instruction
4. Rewards for skill gains
5. National occupational credential



## Data and Methodology

This study uses data from the Registered Apprenticeship Partners Information Management Data System (RAPIDS), which is managed by the DOL Office of Apprenticeship (OA). The RAPIDS database is the largest one of its kind for tabulating and analyzing apprenticeship programs, but again it is not all inclusive, since not all apprenticeships are registered apprenticeships. This analysis focuses on apprentices and their sponsoring programs. “New” apprentices refer to those who have registered during the fiscal year of analysis, using the begin date rather than the registration date. When the OA counts “active” apprentices, they include those who are registered, suspended, and reinstated. Similarly, active apprenticeship programs include registered, suspended, and reinstated programs, which must have had activity in the last 12 months. Finally, analyzing “completers” requires looking at those whose completion occurred in the fiscal year of analysis. In each of these cases, we follow the methodology set out by the OA in order to achieve comparable results.

For the purposes of this report, two key time periods were identified for analysis. The first incorporates the eight-year

period from 2008 to 2015 and the latter consists of the shorter three-year period from 2016 to 2018 (data for 2019 was not available at the time of the completion of this report). These time periods were chosen as there was a significant increase in resources for registered apprenticeships in Michigan beginning in 2016, including a number of discretionary and competitive grants as well as the establishment of Apprenticeship Success Coordinators and the Apprenticeship Learning Network. Evaluating these two time periods provides insights into the potential role of these resources in shaping registered apprenticeship in Michigan.

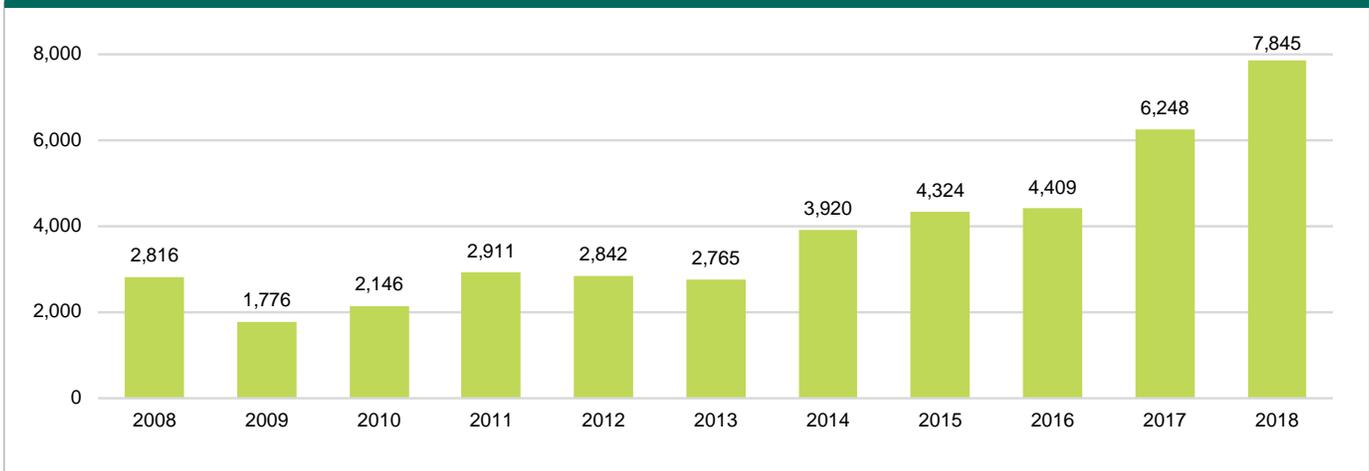
Finally, a new addition to this report is the inclusion of administrative wage records to measure the employment outcomes of registered apprentices. While it is known that wage progression throughout an apprenticeship is a key component, measuring the earnings of apprentices after program completion is crucial to understanding the role of registered apprenticeship in the Michigan labor market. These wage records were linked with 2017 apprenticeship completer data to allow for the analysis of earnings one year after completion of a program.

**New apprentices** refer to those who have registered during the fiscal year of analysis, using the begin date rather than the registration date.

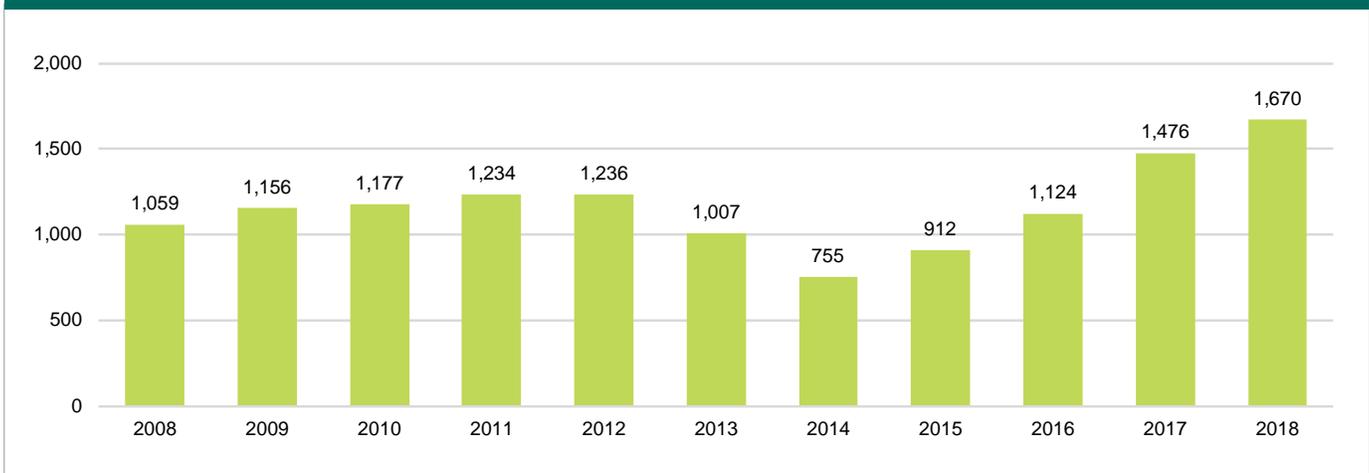
**Active apprentices** include those who are registered, suspended, and reinstated.

**Completers** are those whose completion occurred in the fiscal year of analysis.

**FIGURE 1: NEW REGISTERED APPRENTICES BY YEAR, MICHIGAN**



**FIGURE 2: APPRENTICESHIP COMPLETERS BY YEAR, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

## Current State of Apprenticeships

In 2018, there were nearly 18,900 active apprentices in more than 1,100 programs across the state of Michigan. Most of these apprentices fall into traditional apprenticeship industries, Manufacturing and Construction, while the rest are in nontraditional apprenticeship industries such as Retail trade, Health care and social assistance, and Energy.

To date, the largest cohort of newly registered apprentices began their programs in 2018, with over 7,800 new apprentices. In fact, the average number of new apprentices per year since 2016 (6,200) has more than doubled the rate from 2008 to 2015 (2,900). Similarly, the number of completers also has been on the rise in the past three years, while not as dramatically. From 2008 to 2015, nearly 1,100 apprentices completed their programs. This number has jumped to just over 1,400 in the latter period.

On top of the over 1,100 programs in the state in 2018, 120 of these were new programs. Many of these new programs were in the traditional apprenticeship industries of Manufacturing and Construction. Furthermore, West Michigan was home to the largest share of programs in the state with nearly 29 percent. The Detroit Metro and Southwest Michigan regions followed at 19.6 percent and 14 percent, respectively. On the national scale, Michigan is a leader in registered apprenticeships. Michigan ranks fourth nationally both in terms of the number of 2018 active apprentices and newly registered apprentices and 13th in terms of 2018 apprenticeship completers. The state also is home to the fifth most active apprenticeship programs in the nation.

# Demographics

When analyzing apprentices in the state of Michigan, it is important to note the differences amongst demographic groups. This allows for identification of areas of progress and areas of opportunity for improvement.

## Gender

From 2008 to 2015, 93.6 percent of newly registered apprentices were men, which is likely the result of gender makeup of the traditional apprenticeship industries of Construction and Manufacturing. However, the period after (2016–2018) has seen an uptick in the number of new female registered apprentices; the share of females increased from 6.4 percent to 11.3 percent between the two periods, marking a significant increase.

Most of the spikes in new female registered apprentices are due to the emergence of new programs. Such examples include 2014 and 2018 when these shares climbed to 14.6 percent and 20.7 percent, respectively. This was mainly due to programs focused on *First-line supervisors of retail sales workers*, which were large programs with a share of new female registered apprentices at 64.7 percent and 76.7 percent, respectively. However, even in traditional apprenticeship occupations, such as *Electricians*, the share of females registering has increased slightly. This share increased from 2.2 percent between 2008 and 2015 to 3.1 percent for the 2016–2018 period.

Furthermore, the median age for newly registered female apprentices was 30.3 from 2008 to 2018. During the same period, the median age for men was younger at 27.5. Overall, the median age for all new apprentices was 28.7.

## Race

Only 10.3 percent of new apprentices identified as a person of color from 2008 to 2015. The largest of this group was blacks at 8.7 percent. From 2016 to 2018, new apprentices who are a person of color made up 13.1 percent, with blacks making up 11 percent.

It is important to note a large share of unknown racial backgrounds, however, through the entirety of the time periods. In 2014, just over 35 percent of all newly registered apprentices had an unknown racial profile. This number has since decreased, down to 16.2 percent in 2018.

## Education

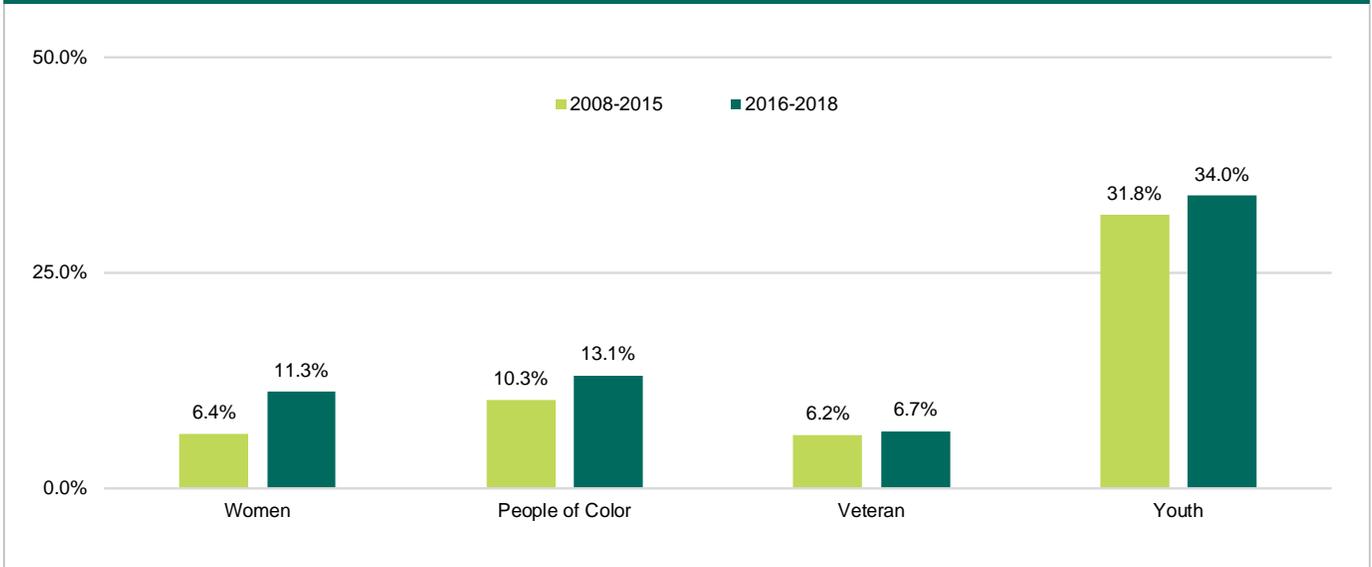
Among new registrants from 2008 to 2018, only 11.7 percent had postsecondary or technical training. Meanwhile, most newly registered apprentices were high school graduates (70.9 percent). Those with a GED comprised 6.6 percent, and those with less than a high school education composed 3.2 percent.

While most newly registered apprentices were men, a similar share of men and women were high school graduates (both roughly 71 percent). A slightly larger share of men (11.8 percent) have received postsecondary or technical training than women (10.2 percent) while also displaying higher shares in less than a high school education and GED. There was a significantly higher share of women with unknown educational background.

When broken down by race, a much larger share of white newly registered apprentices earned a high school diploma (76 percent) than any other race. Only 67 percent of black newly registered apprentices and 69.6 percent of all other races are a high school graduate.

A much higher share of minorities obtained a GED compared to that of white newly registered apprentices (6.3 percent). New black registered apprentices have a share of 12.4 percent while all other races are at 11.1 percent. Newly registered black apprentices have the highest share with postsecondary or technical training at 14.5 percent.

**FIGURE 3: CHANGE IN APPRENTICE DEMOGRAPHICS, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

### Youth Apprentices

Youth apprentices make up a sizable portion of the apprentice population. For this study, an apprentice is considered part of this group if they were age 24 or younger at the time of enrollment in an apprenticeship program. This number has varied slightly among newly registered apprentices from 2008 to 2018, with a share during this period of 32.8 percent. The share has seen a low point of 27.6 percent in 2011 and a high mark of 36.5 percent in 2014.

Overall, this share has increased slightly in the latter part of the period of the study. From 2008 to 2015, this share sat at 31.8 percent. This has gone up to 34 percent in the latter period, as the raw number of youth apprentices has nearly matched that of the earlier timeframe.

### Veteran Status

An important group among apprentices is the veteran population. This group is a critical part of the state's labor force. From 2008 to 2015, this group made up 6.2 percent of all newly registered apprentices. In 2016 and 2017, this share increased to 7.9 percent and 7.4 percent, respectively. This number dipped to 5.4 percent in 2018, however. In total, since 2016, veterans made up 6.7 percent of newly registered apprentices.

Some of these gains are offset by dips in larger occupations. Among *Electricians*, the veteran share of newly registered apprentices has declined in the past few years. From 2008 to 2015, 5.9 percent of all new registrants were veterans. This share dropped to 3.8 percent from 2016 to 2018. This is similar to several other occupations, such as *Construction laborers*, where the veteran share dipped from 5.5 percent to 1.6 percent between the time frames. These slight declines in veteran representation among large occupations could be due to the rapid of expansion of these programs.



## Occupations

Even though these apprentices are mostly spread throughout a select few occupations, there are a wide variety of jobs that have an apprenticeship program associated with them.

In total, there were 18,900 active apprentices in 2018. *Electricians* had the highest share of active apprentices at 22 percent (4,200). *Construction laborers* made up the second highest share with 15.1 percent (2,900), followed by *Carpenters* (8.8 percent) and *Plumbers, pipefitters, and steamfitters* (7.3 percent).

Among the 12,600 apprenticeship completers from 2008 to 2018, 20.8 percent were *Electricians* (2,600). *Plumbers, pipefitters, and steamfitters* clocked in at 12.3 percent (1,500), followed by *Tool and die makers* (6.2 percent) and *Carpenters* (5.9 percent).

Newly registered apprentices followed a similar trend among top occupations as well, with *Electricians* (22.6 percent) and *Construction laborers* (16.1 percent) making up the largest shares.

Among top occupations, *First-line supervisors of retail sales* workers recorded no new apprentices for seven years during

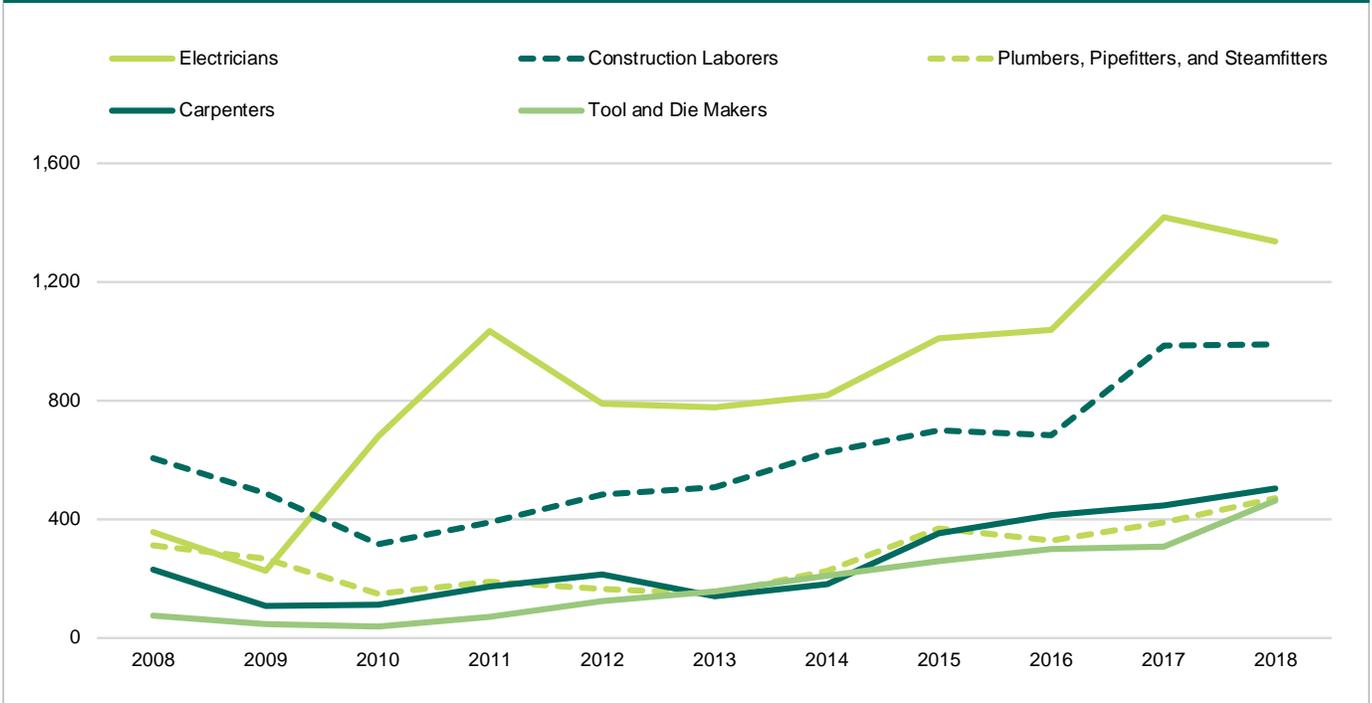
the time period. The bulk of the newly registered apprentices in this occupation was instead limited to two years, 2014 and 2018, where the occupation welcomed 550 and 651 newcomers, respectively.

Two other occupations have seen a dramatic rise in newly registered apprentices within the past few years. *Engineering technologists and technicians* saw an uptick of 169 new apprentices from 2015 to 2018 after having no apprentices in prior years. *Medical assistants* grew by 106 in 2017 and 2018 after registering only two in previous years.

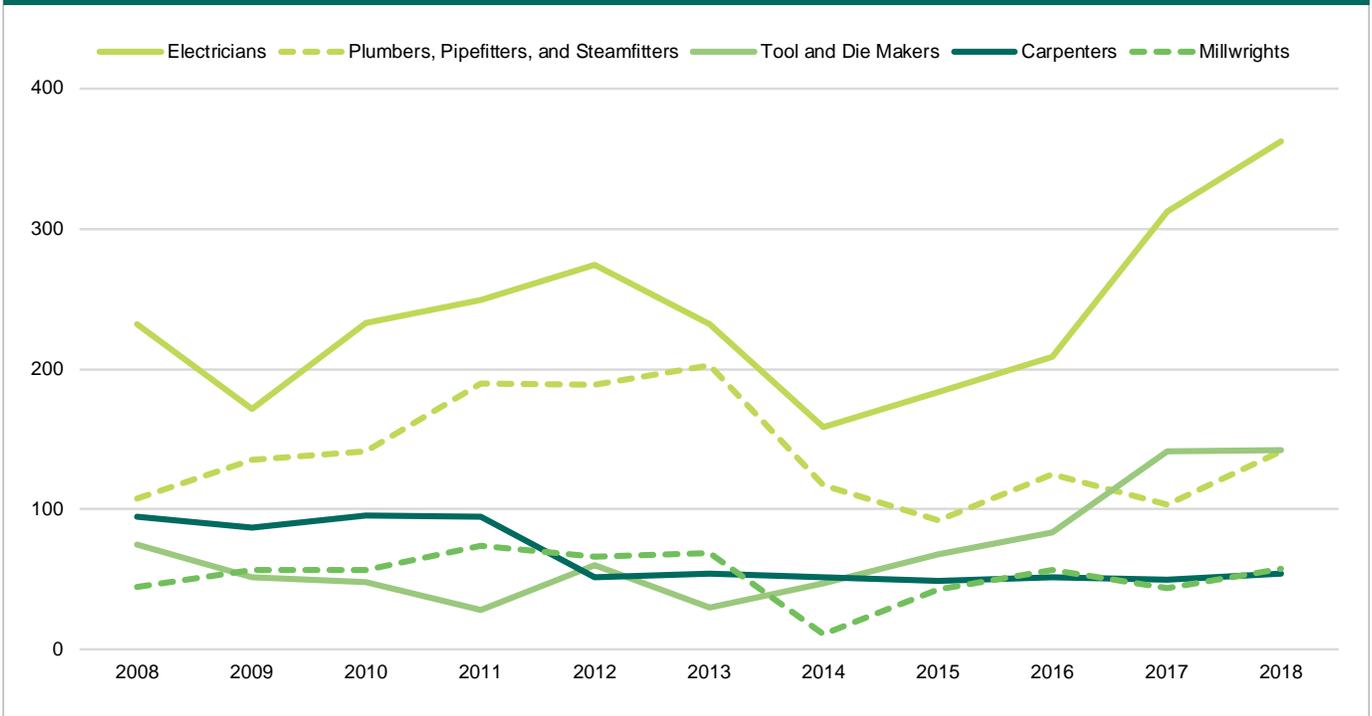
A rise in new apprentices within the past few years across several occupations is a commonality among the smaller occupations. This is especially true as the total number of apprentices has increased over the past few years after seeing a dip in the early to mid-2010s.

Figures 4 and 5 illustrate the change over time in terms of new registrants and completers for the five largest occupations. *Electricians* hold the top spot in both categories, but it is noticeable that while *Construction laborers* have many new apprentices, it is not among the top five occupations in terms of completers. *Millwrights* jump up to take the fifth spot.

**FIGURE 4: NEW REGISTERED APPRENTICES BY OCCUPATION, MICHIGAN**



**FIGURE 5: APPRENTICESHIP COMPLETERS, MICHIGAN**



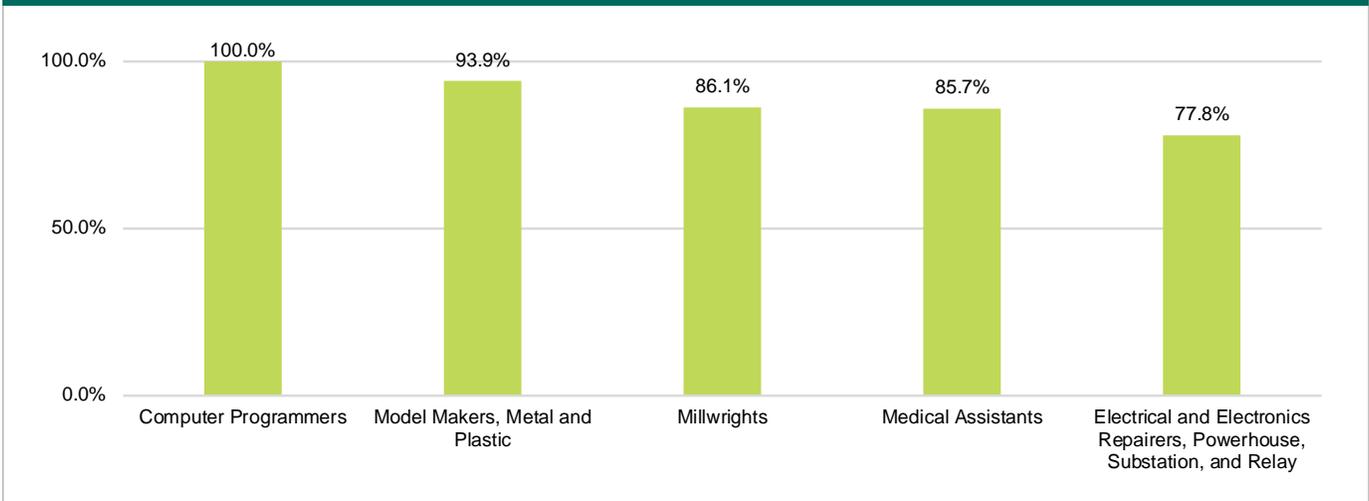
Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

## Completion Rates

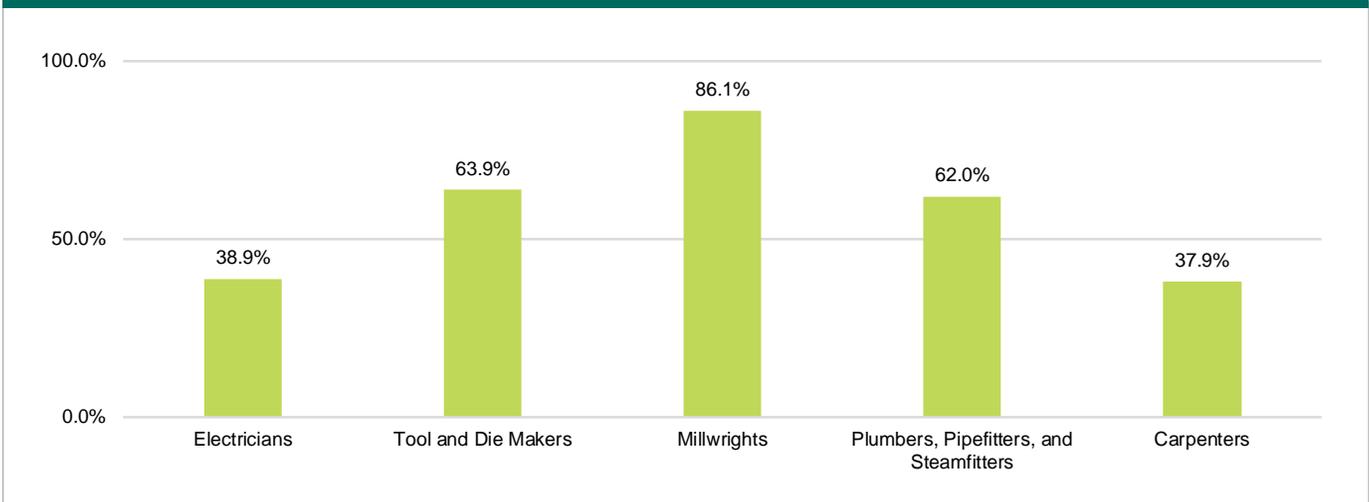
In addition to the number of completers, the completion rates of registered apprentices vary from one occupation to the next. Rates are measured as the percentage of new apprentices who complete their programs within the expected timeframe, measured as the length of the program plus a 50 percent extension. For example, apprentices in a four-year program are given six years to complete. Additionally, completion rates are measured using the most recent apprentice cohort for which full data is available. For example, given a six-year completion window, the most recent cohort of apprentices in a four-year program originally would have registered in 2012.

Among all apprenticeship occupations with at least 10 program completers in the most recent cohort, *Computer programmers* had a 100 percent completion rate, as shown in Figure 6. *Model makers, metal and plastic* was not far behind at 93.9 percent. *Millwrights* had the third highest completion rate at 86.1 percent and led all top occupations (in terms of number of program completers). *Electricians* and *Carpenters* had the lowest program completion rates among top occupations at 38.9 percent and 37.9 percent, respectively. These rates are slightly less than the 41.2 percent completion rate for all apprenticeship occupations.

**FIGURE 6: APPRENTICESHIP PROGRAMS WITH THE HIGHEST COMPLETION RATES, MICHIGAN**

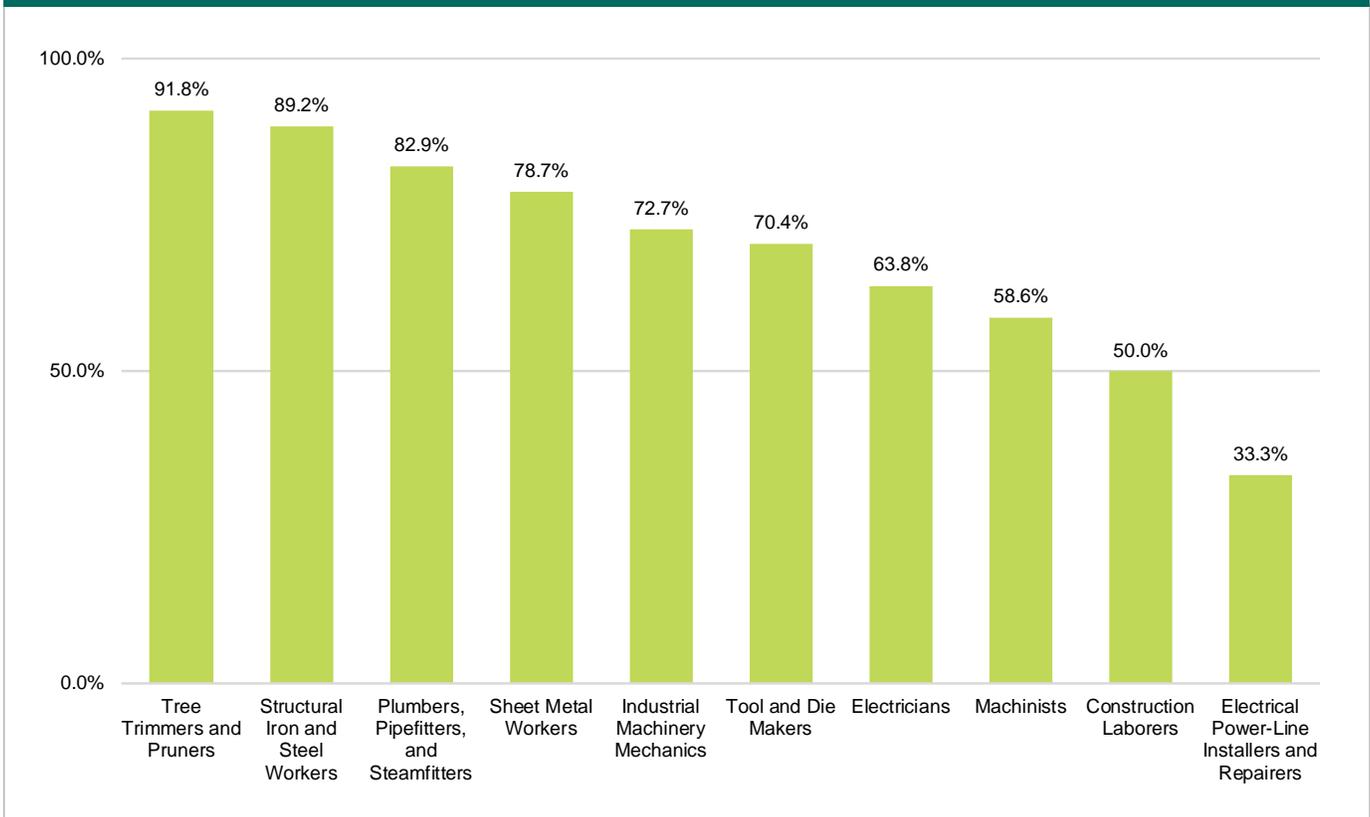


**FIGURE 7: COMPLETION RATES FOR TOP OCCUPATIONS, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

**FIGURE 8: PERCENT EMPLOYED ONE YEAR AFTER COMPLETING AN APPRENTICESHIP, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity

## Employment Outcomes

Administrative wage records allow for a variety of analysis on apprenticeship completers. These records, for example, can identify the percent employed one year after program completion, helping to improve understanding of apprenticeship program effectiveness.

*Electrical and electronics repairers, powerhouse, substation, and relay* displayed a post-completion employment percentage of 100 percent. However, the sample size on this occupation is relatively small, with only 14 completers in 2017. Other high-performing occupations included *Tree trimmers and pruners* (91.8 percent), *Medical assistants* (91.7 percent), and *Structural iron and steel workers* (89.2 percent), as shown in Figure 8.

Larger occupations tended to display lower employment percentages. For *Electricians*, 63.8 percent were employed one year after completion. *Tool and die makers* were at 70.4 percent, and *Plumbers, pipefitters, and steamfitters* had a rate of 82.9 percent. These rates were greater than that of other occupations such as *Electrical power-line installers and repairers* (33.3 percent), *Construction laborers* (50 percent), and *Machinists* (58.6 percent).

Of note, these rates only encompass Michigan administrative wage records. This means that if an apprenticeship program completer were to find work outside of the state, they are not counted among those who are employed one year after completing. Furthermore, those who find work as a self-employed worker are not included in the records.

A key component of a registered apprenticeship is wage progression from the first to the last year of a program. Following that, a key outcome measure is a look at how completers progress their wages after completion of an apprenticeship. This progression can be compared to those across the state in the same occupation as well.

In 2018, the median hourly first-year wage for a newly registered apprentice was \$15.11. For 2018 completers, the median last-year wage sat at \$26.57. The median wage in the last year for all 2018 completers was significantly greater than that of the statewide median wage of \$18.08 in 2018.

For the purposes of this report, 2017 completers were identified one year after completion and occupations with

**FIGURE 9: EARNINGS ONE YEAR AFTER COMPLETING AN APPRENTICESHIP, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity; 2018 Occupational Employment Statistics (OES), Bureau of Labor Market Information and Strategic Initiatives, Michigan Department of Technology, Management & Budget

fewer than 10 completers employed were suppressed. For example, wage data was suppressed for occupations such as *Carpenters* and *Pharmacy technicians* because of the insufficient number of those employed. Among 2017 completers, the median annual wage one year after completion—the equivalent of a starting wage in any non-apprenticed occupation—was \$33.59. This was just shy of three times the overall 25th percentile wage (which is a proxy for starting wages across all occupations) in Michigan of \$12.06.

The difference in starting, exit, and post-apprenticeship wages amongst top occupations was also significant. *Electricians* had a median starting wage of \$13.55, as shown in Figure 9. In the last year of their apprenticeship, these apprentices were earning \$27.24. One year after completion, this wage spiked to \$36.17, an increase of \$8.43. Compared to the starting wage for *Electricians* across the state, the median starting wage was \$20.69, \$15.48 less than that of 2017 completers in the occupation.

Similarly, *Plumbers, pipefitters, and steamfitters* displayed similar progression for 2017 completers. These apprentices earned a median start of apprenticeship wage of \$15.73, progressing to an exit wage of \$26.16. One year after completion, completers earned a median wage of \$40.04, which was \$22.13 greater than that of the statewide median starting wage.

The largest difference between one-year-after-completion median wages and statewide median wages among top occupations was *Electrical power-line installers and repairers*. Upon one year after completion, the median wage was \$59.66. Comparatively, the statewide median wage was \$36.59.

# Traditional vs. Nontraditional Industries

When people think of registered apprenticeships, they often think of Construction and Manufacturing. Because of this, such apprenticeships are often referred to as traditional apprenticeships. For the purposes of this report, apprenticeship programs in all other industry sectors are identified as nontraditional apprenticeships. Nontraditional apprenticeships include industries such as Retail trade, Educational services, and Health care and social assistance. While these fields are important, together they make up a smaller share of apprentices.

## Traditional Apprentices

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In total there are roughly 18,900 active apprentices in Michigan. Construction apprentices make up 59 percent of this total, on par with what is seen among apprenticeship completers. Manufacturing trails at 20 percent, and together the traditional industries make up nearly 79 percent of all active apprentices.

Since 2008, there have been just over 42,000 newly registered apprentices. Of this quantity, nearly 81 percent registered in traditional apprenticeships. This share has varied through the period as some industries have created new programs but has for the most part been above 80 percent. In fact, only three years have seen it dip below that figure. In 2010, 75 percent of newly registered apprentices enrolled in traditional apprenticeships. This share dipped to 74.1 percent in 2014 and then reached its lowest point of the time period in 2018 with a share of 67.4 percent. On the other end, the share of traditional apprentices peaked in 2009 claiming 91.2 percent of newly registered apprentices.

From 2008 to 2015, traditional apprenticeships claimed 83 percent of newly registered apprentices. Comparatively since 2016, this share has dropped to 77.8 percent as more nontraditional apprenticeships have emerged.

Those completing traditional programs were not much different either. Of the 12,800 completers since 2008, 79.6 percent completed apprenticeships in traditional programs. This share has never dropped below 72 percent over the past 11 years. From 2008 to 2015, traditional apprenticeship completers made up 80.3 percent of the total. From 2016 to 2018, that share has dropped to 78.2 percent.

Since 2008, the Construction industry graduates the most apprentices statewide. This industry has been responsible for 58 percent (7,400) of these completers. Manufacturing follows with 22 percent (2,800).

## Nontraditional Apprentices

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Among nontraditional apprenticeships, the Energy sector made up the largest share of newly registered apprenticeships from 2008 to 2018. This industry was responsible for 28.3 percent of all nontraditional newly registered apprentices. Retail trade is close behind at 25.4 percent over the same period.

In 2014 and 2018, dramatic increases in new apprentices were realized in Retail trade, with 680 and 1,040 new apprentices, respectively. This is compared to having fewer than 100 new additions in each of the other years. Also, having not recorded more than 10 new registered apprentices since 2008, Health care and social assistance added 590 new apprentices in 2018.

The industry of Educational services also has seen a steady climb since 2016, having not dipped below 100 new apprentices each year. From 2008 to 2015, the industry only had more than 80 new apprentices once.

Among completers, there has been an uptick in the industry of Administrative and support and waste management and remediation services, as well as Educational services. The former has seen the number of completers more than quadruple (from 19 to 86) between the periods of 2008 to 2015 and 2016 to 2018. Similarly, the latter has seen an increase of roughly twice as many completers per year between the periods.

Retail trade is by far the largest industry among nontraditional completers, responsible for 38.8 percent of the share. This was mainly due to the large spikes in newly registered apprentices in 2014 and 2018. Energy and Health care and social assistance follow at 22.5 percent and 13.4 percent of the share, respectively.

**FIGURE 10: APPRENTICESHIP COMPLETERS BY SELECT INDUSTRIES, 2008–2018, MICHIGAN**

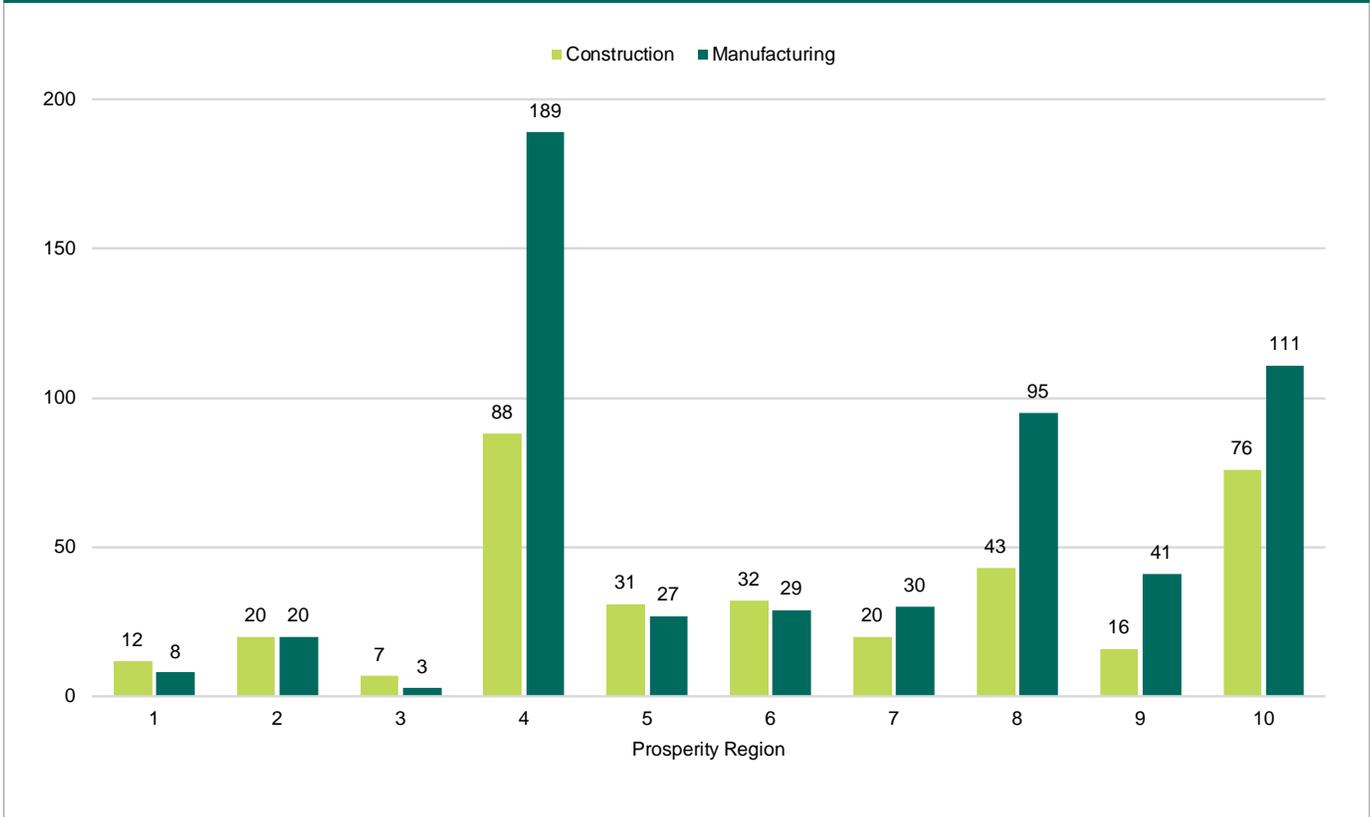


**FIGURE 11: SHARE OF APPRENTICESHIP COMPLETERS, 2008–2018, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

**FIGURE 12: MANUFACTURING AND CONSTRUCTION PROGRAMS BY REGION, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

## Programs Across the State

There were 120 new registered apprenticeship programs across Michigan in 2018, bringing the total number of active apprenticeship programs in 2018 to 1,106. As might be expected, the industries of Construction and Manufacturing made up most of these active programs at 50.5 percent and 31.5 percent respectively. No other industry sector had a share of active programs of 2 percent or greater.

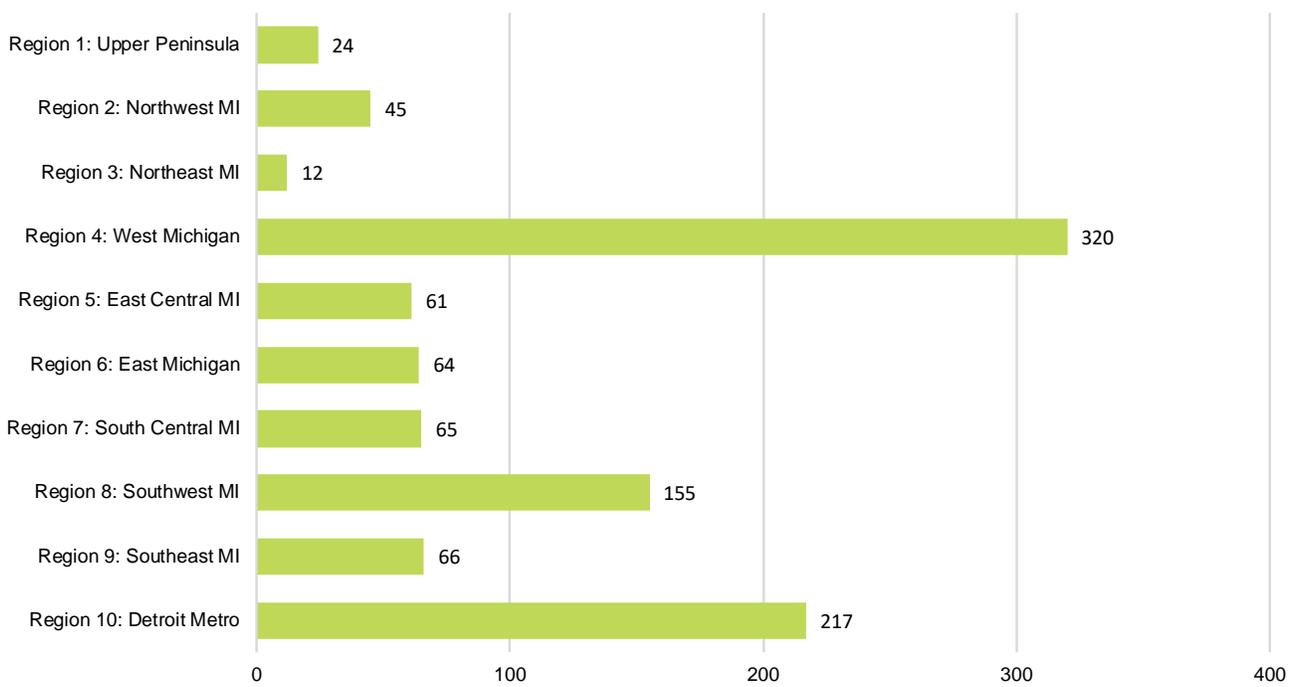
However, the share of smaller industry sectors grew slightly since 2016. Both Health care and social assistance and Educational services were responsible for 2.7 percent of new programs, adding eight over the period. Wholesale trade also added seven new programs, making up 2.4 percent of new programs.

Across all apprenticeships, the West Michigan Prosperity Region housed the largest share of active programs in the state in 2018. Nearly 29 percent of active programs were contained in this region. The Detroit Metro and Southwest regions trailed behind at 19.6 and 14 percent, respectively. On the opposite end of the spectrum, the Northeast and Upper Peninsula regions had the fewest programs at 1.1 percent and 2.2 percent, respectively.

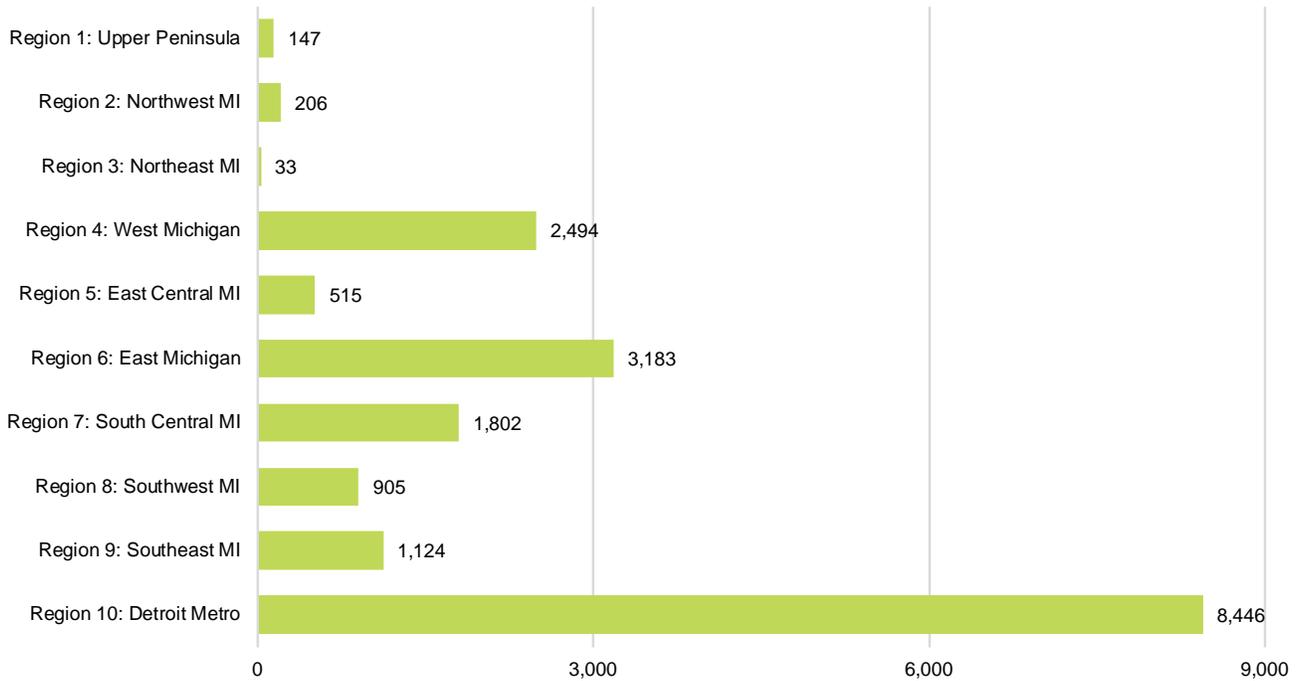
The share of traditional apprenticeships varied across the state. The East and East Central regions of the state had the highest share of these industries at 95.3 percent and 95.1 percent, respectively. Only the South Central region had a share of less than 80 percent, checking in at 76.9 percent. As shown below, Manufacturing contained the most programs in most of the regions of Michigan. This is noteworthy as stated previously, Construction has the largest number of active apprentices in the state. In the second chart, it is noteworthy that while the Detroit Metro region is second in the state in terms of number of programs, it houses the largest number of apprentices. Meanwhile, West Michigan has the third most apprentices even though it is the leader in programs in the state.

Among new programs, growth closely followed the distribution of active programs. West Michigan contributed 31.5 percent of all new programs in since 2016. This was followed by the Detroit Metro and Southwest regions at 20.9 percent and 17.1 percent, respectively.

**FIGURE 13: ACTIVE APPRENTICESHIP PROGRAMS BY REGION, 2018, MICHIGAN**



**FIGURE 14: ACTIVE APPRENTICES BY REGION, 2018, MICHIGAN**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor



## Conclusion

The addition of administrative wage records in this report has allowed for significant analysis on the employment outcomes of apprenticeship completers in the Michigan labor market. Coupling this with new data from the time after significant progress was made in the number of resources for Michigan apprenticeships makes for a compelling story regarding the importance of these programs to the economy.

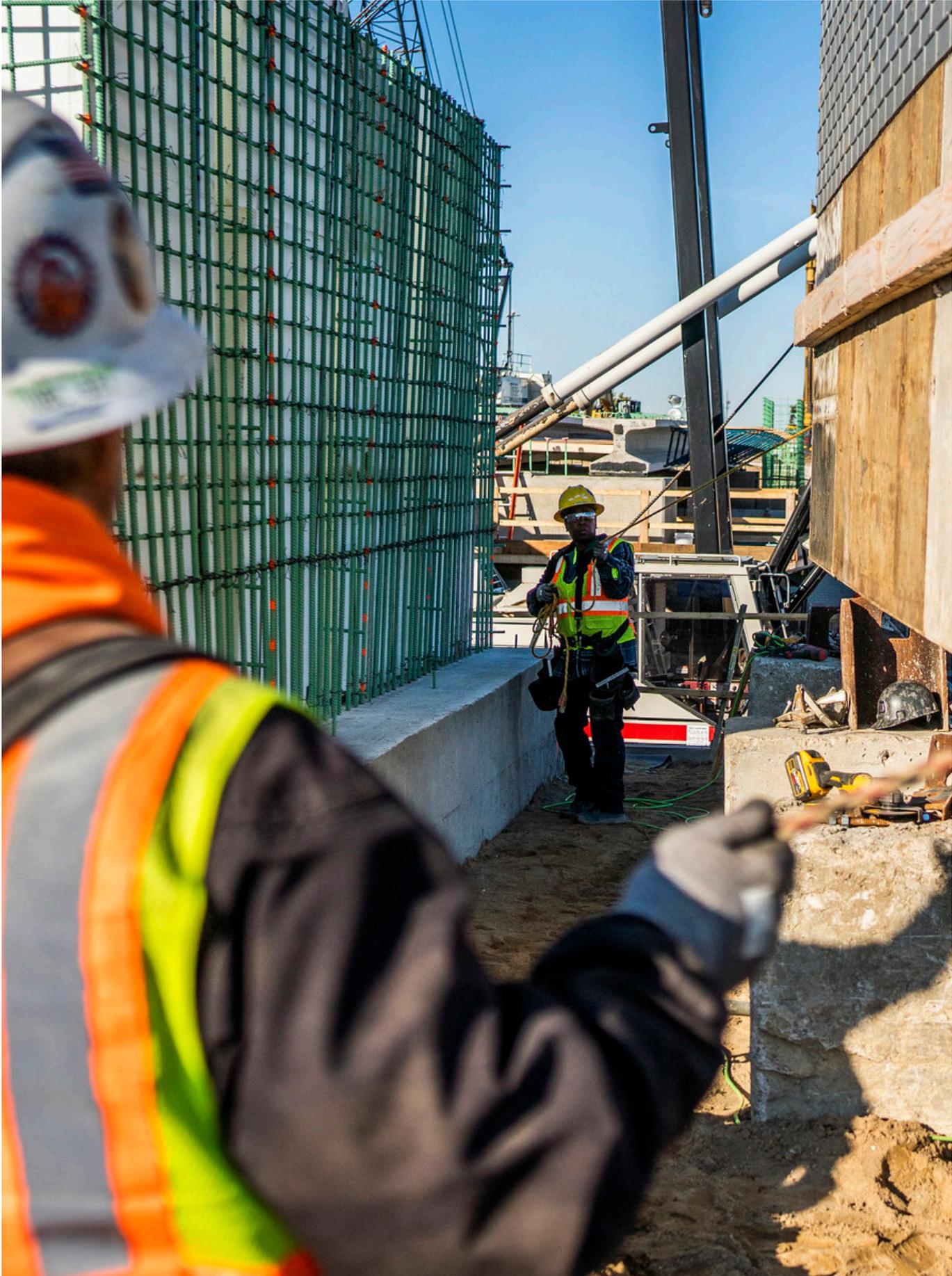
While the traditional apprenticeship industries of Construction and Manufacturing make up the brunt of apprentices in Michigan, nontraditional apprenticeships industries are growing. From 2008 to 2015, these nontraditional industries made up only 17 percent of newly registered apprentices. Since 2016, this share has increased to 22.2 percent, and it reached 32.6 percent in 2018. This indicates a wide variety of apprenticeship opportunities across Michigan.

Furthermore, the demographic makeup of these newly registered apprentices is becoming more diverse. Between the two periods, the share of women, people of color, youth,

and veterans have all increased. This is partly due to the exciting opportunities that nontraditional apprenticeships offer. Lastly, apprenticeships have a positive effect in terms of earnings and provide ample opportunities for those who choose to participate. They offer significant wage progression throughout the program, and this progression, as shown earlier, carries over into post-apprenticeship earnings. Most programs also boast high employment outcomes after completion, which bodes well for those who may be struggling to find work.



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