

MICHIGAN'S LABOR MARKET NEWS

VOL. 76, NO. 10
DECEMBER 2020

Occupational Supply and Demand in the Michigan Labor Market

Feature Article pg. 16

Map of the Month: Respiratory Therapist Program Completers by College and Online Job Ads

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Ask the Economist: What Are Some of the Ways Labor Demand is Measured?

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Michigan payroll jobs increased nearly 16,000 in October, but were still down over the year.

OCTOBER 2020 JOBLESS RATE

MICHIGAN
5.5%
NATIONAL
6.9%

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IT'S BIGGER THAN DATA.

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

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

Michigan's jobless rate fell to 5.5 percent in October as payroll jobs continued a modest and slowing rebound statewide. Despite this, payroll jobs remained over 400,000 below pre-pandemic levels. Over the year, Michigan's jobless rate was up by 1.7 percent while the labor force declined by 82,000.

This issue of *Michigan's Labor Market News* looks at the supply and demand of workers in the state's labor market, providing an updated analysis from the December 2018 edition of *Michigan's Labor Market News*. Our *Feature Article* presents information on the shortages and surpluses for both degreed and nondegreed occupations across our state. Our *Map of the Month* focuses on the location of Michigan's training programs and job advertisements for the in-demand occupation of *Respiratory workers*, while the *Occupational Focus* spotlights *Childcare workers*. Finally, our *Ask the Economist* section closes out this issue with a discussion on some of the basic methodology behind measuring labor demand.

As the new director of the Bureau of Labor Market Information and Strategic Initiatives, please know that my goal is to continue to provide our partners with the highest quality data and information that help drive the critical decisions impacting the people of Michigan. I would also like to take this opportunity to thank my predecessor, Dr. Jason Palmer, for over six years of bureau leadership and 16 years of service to the state.

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



SCOTT POWELL
DIRECTOR

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MICHIGAN'S UNEMPLOYMENT RATE DECLINES DURING OCTOBER

Michigan's seasonally adjusted unemployment rate decreased in October to 5.5 percent, the lowest rate displayed by the state since March.

The jobless rate in the U.S. receded by one full percentage point between September and October to 6.9 percent. Michigan's October jobless rate was 1.4 percentage points below the national rate, however the Michigan rate has generally been above the U.S. rate in 2020. The U.S. unemployment rate advanced by 3.3 percentage points over the year, while the Michigan jobless rate rose by 1.6 percentage points.

Michigan's labor force status over the past year shows clear impact from the pandemic, as total employment fell by 157,000 over the year. The number of state unemployed surged by 75,000 since October 2019.

The state workforce declined by 1.7 percent over the year. The national labor force receded by 2.1 percent since October 2019.

Impact of COVID-19 Pandemic on Michigan Demographic Labor Market Trends

October marks six months since the April 2020 height of the COVID-19 pandemic's impact on the state labor market. An analysis of 2020

unpublished data from the Michigan Current Population Survey (CPS) reveals some of the descriptive demographic trends among the state's workforce over the past seven months.

The Current Population Survey data indicates that labor force and employment levels for adult women have seen a greater negative effect than adult men. For example, after a very sharp employment drop in April, the employment level for men age 20 or older has rebounded somewhat through October, and was down by only 9,900, or -0.4 percent since the pre-pandemic peak in February. For women age 20 or older, the employment reduction was more substantial (-176,000, or -7.8 percent).

Similarly, adult women ages 20+ recorded a large labor force drop of 126,000 or 5.4 percent since February, while the October labor force among adult men was above February levels.

Data from the survey also revealed that the gap between the jobless rate for White adults (20+) and Black adults (20+) may have widened considerably so far during the pandemic. A very sharp jump in the jobless rate occurred in April for both White 20+ (21 percent) and Black 20+ (34.2 percent) workforce participants in Michigan. The unemployment rate for White adult workers

moved down to 9.1 percent for the period May-October 2020, however the Black 20+ jobless rate declined more modestly to just 23.3 percent over that period.

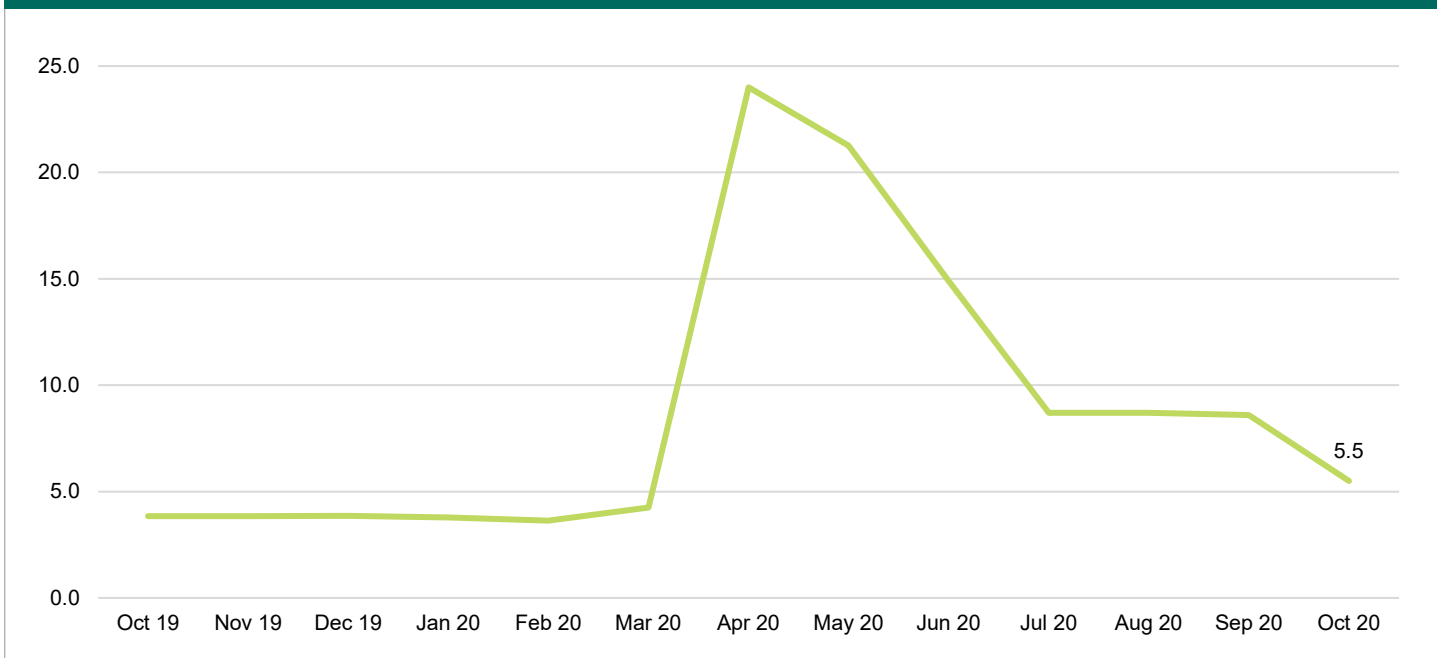
The Current Population Survey also revealed that job losers in the state advanced substantially six months after the height of the pandemic in comparison with prior to the pandemic. The CPS defines job losers as those who either are on temporary layoff, completed a temporary job, or people whose employment ended involuntarily. Between February and October, job losers rose by 116,000, or over 150 percent.

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Economic Specialist

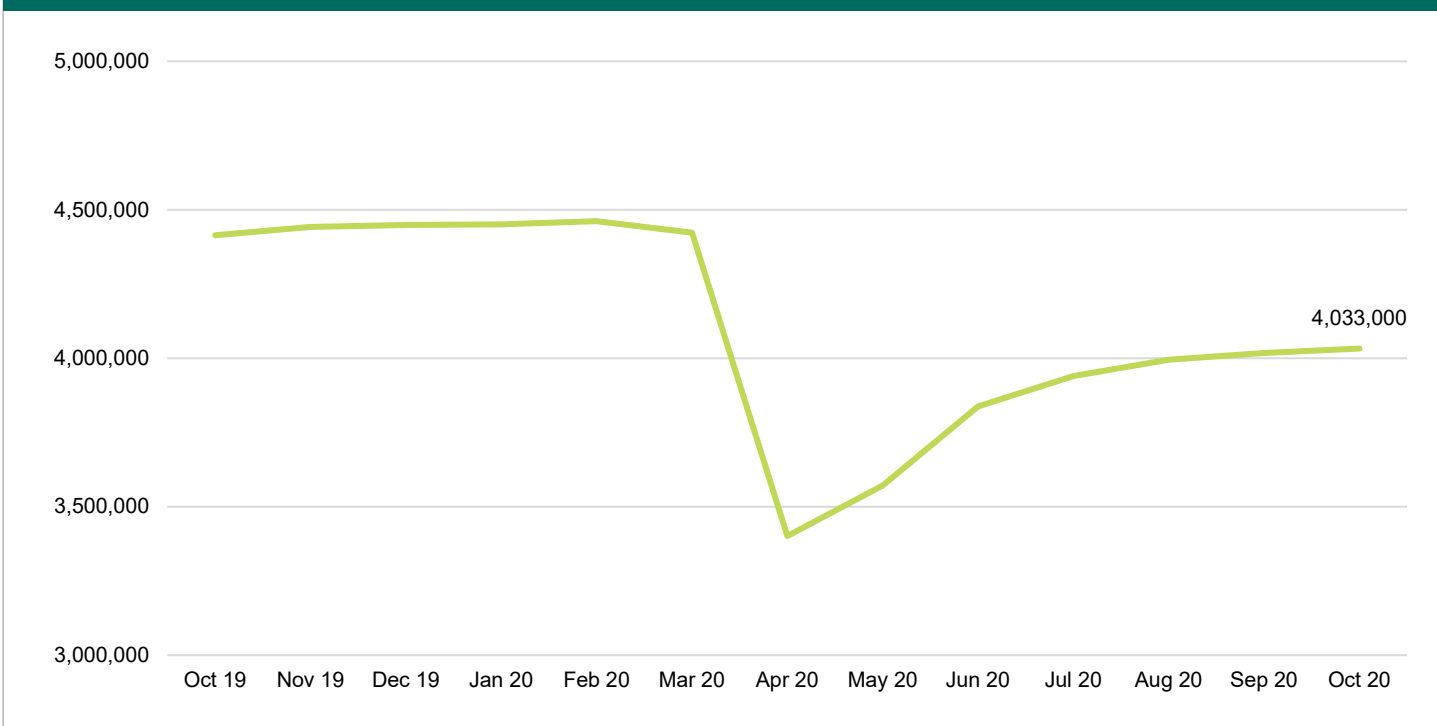
MICHIGAN LABOR FORCE ESTIMATES (SEASONALLY ADJUSTED)

	OCTOBER 2020	SEPTEMBER 2020	OCTOBER 2019	CHANGE OVER THE MONTH	CHANGE OVER THE YEAR
Labor Force	4,860,000	4,841,000	4,942,000	+19,000	-82,000
Employed	4,594,000	4,426,000	4,751,000	+168,000	-157,000
Unemployed	266,000	415,000	191,000	-149,000	+75,000
Jobless Rate	5.5	8.6	3.9	-3.1	+1.6

MICHIGAN JOBLESS RATE, OCTOBER 2019–OCTOBER 2020 (PERCENT)



MICHIGAN MONTHLY SEASONALLY ADJUSTED PAYROLL JOBS, OCTOBER 2019–OCTOBER 2020



MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

Monthly Overview

Total nonfarm payroll employment on the statewide level moved up slightly over the month (+15,900), a 0.4 percent increase since September. Job gains were recorded for the sixth straight month in Michigan on a seasonally adjusted basis, a recovery of 632,200 since the substantial loss sustained in April. Monthly employment growth occurred in numerous major industry sectors across the state, including *Professional and business services* (+6,100), *Trade, transportation, and utilities* (+5,800), and *Leisure and hospitality* (+5,600). Several subsectors also experienced job advancements over the month, including *Healthcare and social assistance* (+2,000) and *Finance and insurance* (+700). Despite positive job change in most industry sectors, employment loss occurred in *Manufacturing* (-1,500), *Other services* (-900), and *Construction* (-500).

Over the Year Analysis

Michigan payroll jobs were down 381,200 or 8.6 percent since last year on a seasonally adjusted basis. Although employment continued to rebound since April, significant job losses over the last year reflect the sharp pandemic-related job cuts and reduced job additions over the last several months. *Leisure and hospitality* retained the largest percent job decline (-32.1 percent) among all major sectors on the statewide level, followed by *Other services* (-10.4 percent), *Information* (-7.8 percent), *Professional and business services* (-7.2 percent), and *Manufacturing* (-7.1 percent). Among industries statewide, only two subsectors reported seasonally adjusted job growth over the year; *Federal government* (+3,200), due to hiring for Census 2020, and *Finance and insurance* (+300).

Pandemic-Related Job Trends by Major Industry

Payroll job data can be used to shed light on pandemic-related employment cuts by industry in Michigan and the subsequent job recalls that have occurred so far through October 2020.

Total nonfarm payroll jobs in Michigan are estimated to have plunged by more than 1 million in April 2020 due to COVID-19 pandemic-induced layoffs. This was a record monthly job reduction in the state. Significant job additions occurred in the following three months as workers were gradually recalled. These monthly job gains have since slowed, with a decreasing

job addition each of the last four months. This has resulted in job expansion of only 18.6 percent between April 2020 and October 2020.

Industries that have recorded the greatest numeric recovery since April include *Trade, transportation, and utilities* (+124,500), *Manufacturing* (+121,800), and *Leisure and hospitality* (+116,500). Sectors with the largest percent increases over the same time frame included *Construction* (+78.0 percent), *Leisure and hospitality* (+64.8 percent), and *Other services* (+37.2 percent).

Several major industry sectors lost jobs from April 2020 to October 2020, including *Government* (-5,500), *Information* (-900), and *Mining and logging* (-700).

Significant Industry Employment Developments

PROFESSIONAL AND BUSINESS SERVICES

Professional and business services jobs in Michigan rose over the month (+6,100) on a seasonally adjusted basis but were still down by 46,800 (-7.2 percent) since October 2019. Unlike last month, a majority of the industry's employment growth came not from *Professional, scientific, and technical services* but instead from the *Administrative services* subsector (+5,000). This sector's 1.0 percent growth rate was the second highest among all major industry sectors for October on the statewide level. Nationally, total nonfarm payroll jobs in the *Professional and business services* sector grew by 208,000 (+1.0 percent) over the month but were still down 4.9 percent over the year.

TRADE, TRANSPORTATION, AND UTILITIES

On a seasonally adjusted basis, total payroll jobs in the *Trade, transportation, and utilities* industry increased by 5,800 or 0.8 percent over the month, however, were still 38,500 below February pre-pandemic employment levels. Modest job gains were recorded within two of the industry's three seasonally adjusted subsectors—*Retail trade* (+3,400) and *Transportation, warehousing, and utilities* (+2,500)—while *Wholesale trade* remained virtually flat since last month. Over the year, total employment was down 3.9 percent. On the nationwide level, total *Trade, transportation, and utilities* jobs advanced marginally by 172,000 (+0.6 percent) but were down by 3.6 percent since October 2019.

GOVERNMENT

Although total employment in *Government* stayed virtually unchanged over the month, noteworthy job movement was recorded on the subsector level. Jobs in the *Federal government* subsector declined by 3,000 or 5.2 percent in October due mainly to continued employment reductions among Census 2020 workers. Conversely, job growth was noted in *Local government* (+2,900), which was a result of a slight change in the timing of seasonal hires. Over the year, total payroll jobs in the *Government* sector were down 39,300 (-6.4 percent), similar to the job drop since the February pre-pandemic period. Nationally, employment in *Government* was down both over the month (-1.2 percent) and over the year (-4.9 percent).

Metropolitan Statistical Areas (MSAs)

On a not seasonally adjusted basis, total nonfarm payroll jobs advanced over the month in 11 of Michigan's 14 Metropolitan Statistical Areas (MSAs). The Bay City and Benton Harbor metro areas remained flat since last month, whereas employment in the Monroe (-0.3 percent) region declined. Job gains ranged from 0.2 percent in Muskegon to 1.7 percent in the Lansing MSA this month.

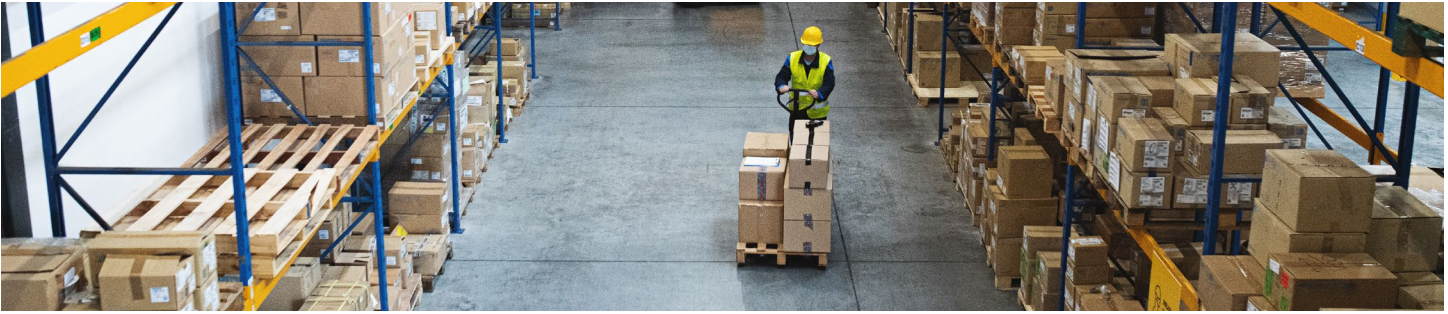
Due to COVID-19 pandemic-related job losses, total payroll employment was down over the year in every metro area, led by Monroe (-14.1 percent), Bay City (-11.6 percent), and Muskegon (-11.4 percent). On a numeric basis, over the year job loss was led by the Detroit (-184,300), Grand Rapids (-41,000), and Lansing (-21,900) regions.

In October, a majority of metropolitan areas experienced modest job growth in *Retail trade*, with the largest gains recorded in Saginaw (+4.9 percent) and Battle Creek (+3.6 percent).

October employment additions were also noted in the *Professional and business services* sector, as jobs in this industry remained flat or increased in every metro area except Ann Arbor (-0.4 percent).

JIM BIRNEY

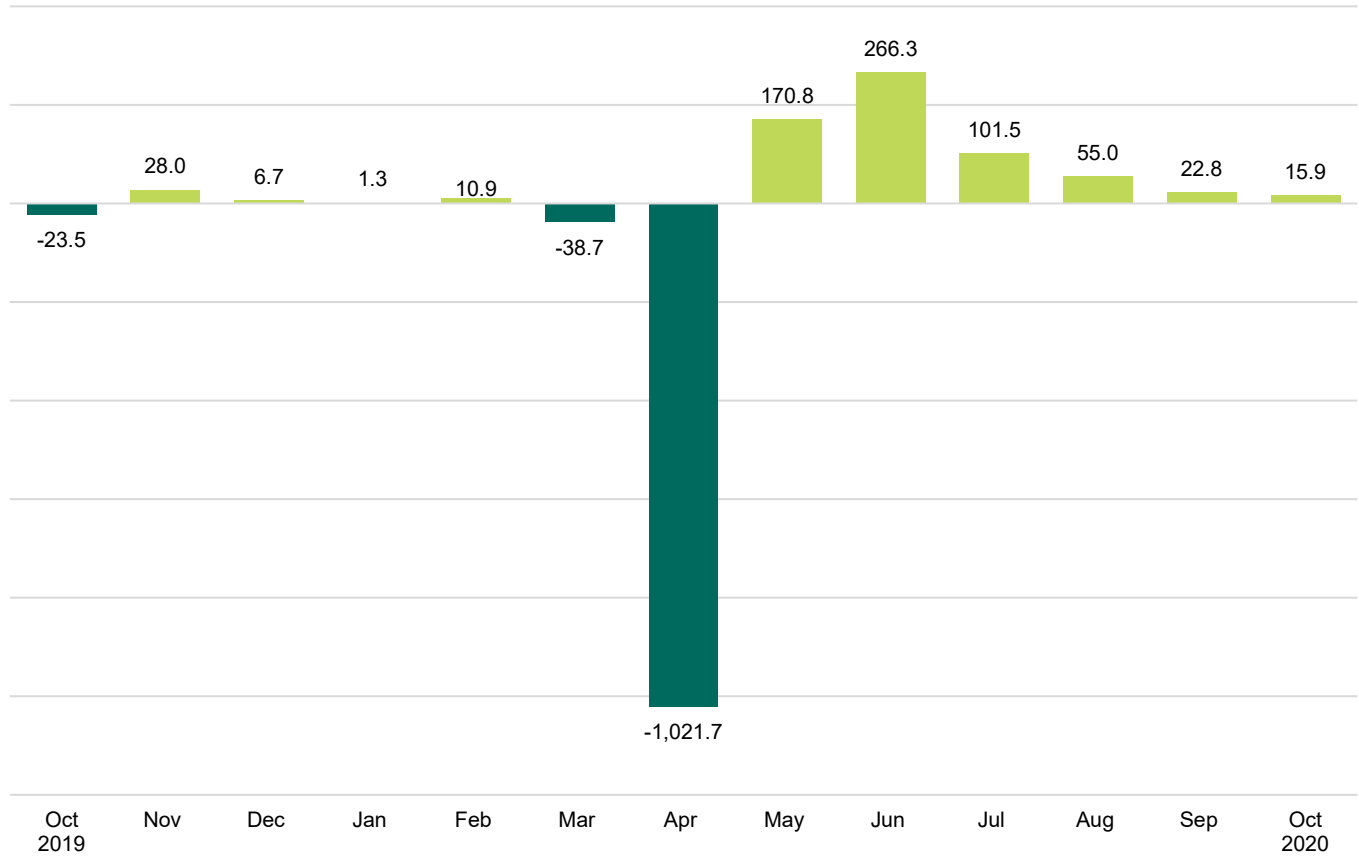
Economic Analyst



MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)

INDUSTRY	OCTOBER 2020	SEPTEMBER 2020	OCTOBER 2019	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	4,033,400	4,017,500	4,414,600	15,900	0.4%	-381,200	-8.6%
Total Private	3,459,000	3,443,000	3,800,900	16,000	0.5%	-341,900	-9.0%
Private Service-Providing	2,713,300	2,695,100	3,008,900	18,200	0.7%	-295,600	-9.8%
GOODS-PRODUCING	745,700	747,900	792,000	-2,200	-0.3%	-46,300	-5.8%
Mining, Logging, and Construction	181,000	181,700	184,100	-700	-0.4%	-3,100	-1.7%
Mining and Logging	6,200	6,400	7,400	-200	-3.1%	-1,200	-16.2%
Construction	174,800	175,300	176,700	-500	-0.3%	-1,900	-1.1%
Manufacturing	564,700	566,200	607,900	-1,500	-0.3%	-43,200	-7.1%
Durable Goods	418,300	418,600	453,400	-300	-0.1%	-35,100	-7.7%
Transportation Equipment Manufacturing	167,500	106,400	190,000	61,100	57.4%	-22,500	-11.8%
Non-Durable Goods	146,400	147,600	154,500	-1,200	-0.8%	-8,100	-5.2%
SERVICE-PROVIDING	3,287,700	3,269,600	3,622,600	18,100	0.6%	-334,900	-9.2%
Trade, Transportation, and Utilities	766,300	760,500	797,300	5,800	0.8%	-31,000	-3.9%
Wholesale Trade	162,000	162,100	172,000	-100	-0.1%	-10,000	-5.8%
Retail Trade	443,100	439,700	463,300	3,400	0.8%	-20,200	-4.4%
Transportation, Warehousing, and Utilities	161,200	158,700	162,000	2,500	1.6%	-800	-0.5%
Information	50,700	50,900	55,000	-200	-0.4%	-4,300	-7.8%
Financial Activities	222,300	221,500	226,400	800	0.4%	-4,100	-1.8%
Finance and Insurance	170,300	169,600	170,000	700	0.4%	300	0.2%
Real Estate and Rental and Leasing	52,000	51,900	56,400	100	0.2%	-4,400	-7.8%
Professional and Business Services	602,100	596,000	648,900	6,100	1.0%	-46,800	-7.2%
Professional, Scientific, and Technical Services	285,700	284,500	296,500	1,200	0.4%	-10,800	-3.6%
Management of Companies and Enterprises	68,900	69,000	70,300	-100	-0.1%	-1,400	-2.0%
Administrative and Support and Waste Management and Remediation Services	247,500	242,500	282,100	5,000	2.1%	-34,600	-12.3%
Education and Health Services	628,500	627,500	681,100	1,000	0.2%	-52,600	-7.7%
Educational Services	58,100	59,100	74,300	-1,000	-1.7%	-16,200	-21.8%
Health Care and Social Assistance	570,400	568,400	606,800	2,000	0.4%	-36,400	-6.0%
Leisure and Hospitality	296,200	290,600	436,000	5,600	1.9%	-139,800	-32.1%
Arts, Entertainment, and Recreation	28,900	28,400	54,600	500	1.8%	-25,700	-47.1%
Accommodation and Food Services	267,300	262,200	381,400	5,100	1.9%	-114,100	-29.9%
Other Services	147,200	148,100	164,200	-900	-0.6%	-17,000	-10.4%
Government	574,400	574,500	613,700	-100	0.0%	-39,300	-6.4%
Federal Government	55,200	58,200	52,000	-3,000	-5.2%	3,200	6.2%
State Government	176,200	176,200	194,100	0	0.0%	-17,900	-9.2%
Local Government	343,000	340,100	367,600	2,900	0.9%	-24,600	-6.7%

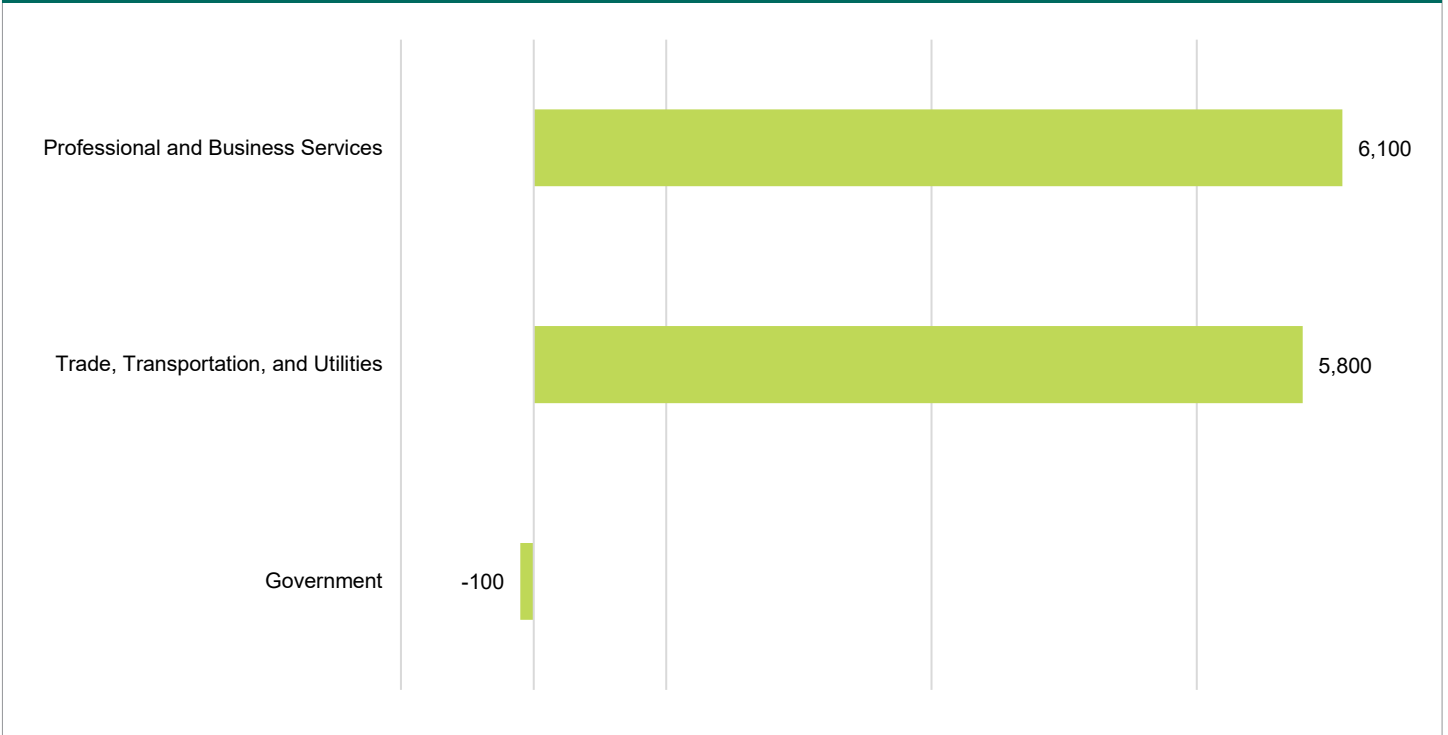
MICHIGAN OVER-THE-MONTH PAYROLL JOB CHANGE, OCTOBER 2019–OCTOBER 2020 (IN THOUSANDS)



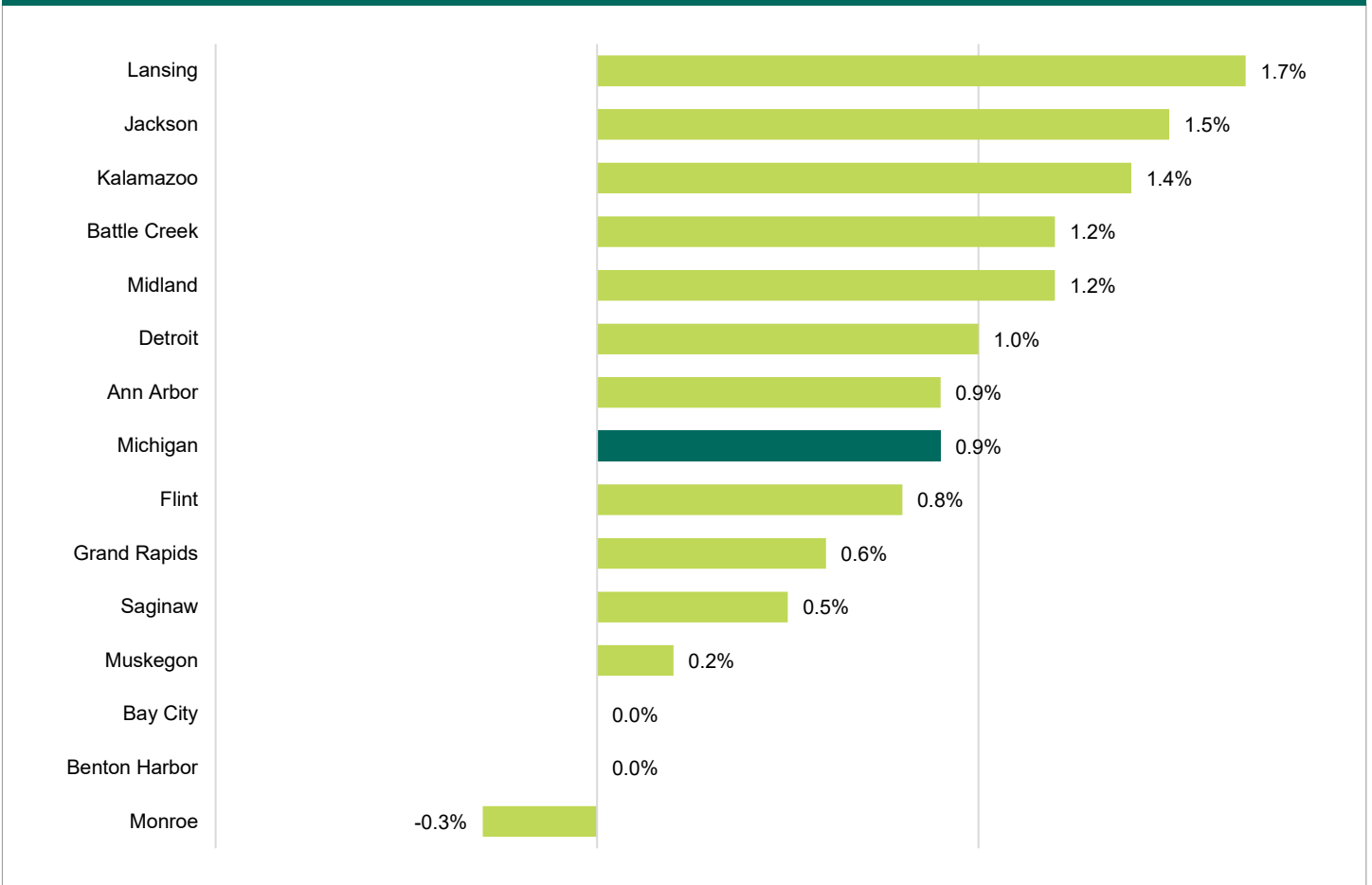
MICHIGAN 2020 JOB LOSS AND GAINS (IN THOUSANDS)

MAJOR INDUSTRY	FEB–APRIL JOB LOSS		APRIL–OCT JOB GAIN	
	LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	-1060.4	-23.8%	632.3	18.6%
Mining and Logging	-0.5	-6.8%	-0.7	-10.1%
Construction	-84.0	-46.1%	76.6	78.0%
Manufacturing	-180.8	-29.0%	121.8	27.5%
Trade, Transportation, and Utilities	-163.0	-20.3%	124.5	19.4%
Wholesale Trade	-19.5	-11.4%	10.1	6.6%
Retail Trade	-117.7	-25.2%	94.4	27.1%
Information	-3.8	-6.9%	-0.9	-1.7%
Financial Activities	-13.4	-5.9%	6.9	3.2%
Professional and Business Services	-148.1	-22.5%	92.1	18.1%
Education and Health Services	-116.1	-17.0%	61.1	10.8%
Leisure and Hospitality	-255.6	-58.7%	116.5	64.8%
Other Services	-57.7	-35.0%	39.9	37.2%
Government	-37.4	-6.1%	-5.5	-0.9%

MICHIGAN OVER-THE-MONTH JOB CHANGE BY SELECT INDUSTRY, SEPTEMBER 2020–OCTOBER 2020



METROPOLITAN AREA JOB CHANGE, SEPTEMBER 2020–OCTOBER 2020 (NOT SEASONALLY ADJUSTED)



REGIONAL LABOR MARKET ANALYSIS

ANN ARBOR METROPOLITAN AREA

- The unemployment rate in the Ann Arbor MSA fell by 2.6 percentage points this month to 3.5 percent, which was the lowest jobless rate among all Michigan metro areas in October.
- Total regional workforce in the area moved down by 2,400 (-1.2 percent) over the month due to a significant decrease in the total number of unemployed individuals (-5,200).

MONTHLY INDUSTRY DEVELOPMENTS

- Nonfarm payroll jobs in the Ann Arbor area increased by 2,000 or 0.9 percent in October, which matched the statewide rate of gain.

INDUSTRY TRENDS

- Area job gains in October were concentrated in the *Government* sector, with seasonal additions in *State and Local government*. However, most area sectors have registered pandemic-related job cuts over the past year.

BAY CITY METROPOLITAN AREA

- Joblessness in the Bay City region moved down by 2.9 percentage points in October to 4.6 percent, slightly lower than the statewide unemployment rate for this month (5.1 percent).
- Despite the significant monthly drop in the jobless rate, employment in the region was little changed, up by just 300 or 0.7 percent. The rate cut was partially due to a large 2.5 percent decline in the area labor force.

MONTHLY INDUSTRY DEVELOPMENTS

- In the Bay City MSA, total nonfarm payroll jobs remained flat in October, one of only three Michigan metro areas without job expansion over the month.

INDUSTRY TRENDS

- Minor job gains in *Mining, logging, and construction* and *Education and health services* were offset by small job declines in the *Leisure and hospitality* and *Government* sectors.

FLINT METROPOLITAN AREA

- In October, the Flint unemployment rate moved down by 3.8 percentage points to 5.6 percent, the second largest monthly rate drop among Michigan major labor markets.
- The rise in the number of area employed (+2,100) was more than offset by a substantial decrease in the number of unemployed residents, resulting in a large 2.8 percent labor force decline over the month.

MONTHLY INDUSTRY DEVELOPMENTS

- Flint regional total payroll jobs advanced by 1,000 or 0.8 percent this month but were still down 4.5 percent since last year.
- Employment growth in the metro area was centered within the *Service providing* sector, with notable job gains in both the *Professional and business services* (+2.5 percent) and *Trade, transportation, and utilities* (+2.1 percent) industries.

INDUSTRY TRENDS

- Job losses were widespread in the region since October 2019, with particularly large cuts in *Leisure and hospitality*, *Health care*, and *Government*.

BATTLE CREEK METROPOLITAN AREA

- In October, the jobless rate in the Battle Creek metro area decreased by 3.3 percentage points to 5.3 percent.
- Total labor force levels in the region were down both over the month (-2.3 percent) and over the year (-2.9 percent).

MONTHLY INDUSTRY DEVELOPMENTS

- Battle Creek nonfarm payroll jobs rose marginally by 600 or 1.2 percent over the month.
- All area job growth was located within the *Service-providing* sector, as *Trade, transportation, and utilities* moved up by 400 (+4.7 percent) over the month.

INDUSTRY TRENDS

- On a percentage basis, the *Retail trade* sector stayed flat over the year but rose seasonally by 200 jobs in October.

DETROIT-WARREN-DEARBORN METRO AREA

- Although the Detroit MSA unemployment rate fell by 3.6 percentage points to 6.3 percent in October, the area still tied for the highest jobless rate this month among Michigan metro areas.
- The Detroit metro area jobless rate has increased by 2.3 percentage points since October 2019, reflecting large numbers of pandemic-related layoffs.

MONTHLY INDUSTRY DEVELOPMENTS

- Regional nonfarm jobs moved up since September by 17,900 or 1.0 percent, on pace with both the statewide (+0.9 percent) and national (+1.1 percent) rates of gain.
- *Professional and business services* (+6,200) and *Trade, transportation, and utilities* (+5,300) recorded the largest numeric job growth in this metro area in October.

INDUSTRY TRENDS

- Over the year, total jobs were down by 9.0 percent (-184,300), significantly above the national rate of job decline.

GRAND RAPIDS-WYOMING METRO AREA

- Joblessness in the Grand Rapids metro area decreased by 2.6 percentage points to 3.7 percent in October. The metro region ranked tied for second in the state with the lowest October unemployment rate.
- Employment rose by 1.0 percent in October, but the regional workforce in Grand Rapids fell over the month due to a decline in the number of unemployed.

MONTHLY INDUSTRY DEVELOPMENTS

- Total payroll jobs in the Grand Rapids MSA moved up by 3,100 or 0.6 percent in October, which was less than the statewide rate of gain for this month.

INDUSTRY TRENDS

- Modest employment additions within the *Professional and business services* (+2,200) and *Government* (+800) sectors helped advance the area's total October nonfarm job count.

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	ANN ARBOR			BATTLE CREEK			BAY CITY		
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019
PLACE OF RESIDENCE									
Labor Force	200,900	203,300	199,400	60,200	61,600	62,000	47,400	48,600	49,500
Employment	193,800	191,000	194,800	57,000	56,200	59,900	45,200	44,900	47,600
Unemployment	7,100	12,300	4,700	3,200	5,300	2,000	2,200	3,600	1,900
Rate (percent)	3.5%	6.1%	2.4%	5.3%	8.6%	3.3%	4.6%	7.5%	3.8%
PLACE OF WORK									
Total Nonfarm Jobs	221,300	219,300	233,300	51,800	51,200	58,300	31,200	31,200	35,300
Mining, Logging, and Construction	4,600	4,600	5,200	1,600	1,600	1,900	1,400	1,300	1,500
Manufacturing	14,000	14,100	14,600	9,700	9,700	11,200	3,300	3,300	4,500
Trade, Transportation, and Utilities	25,900	25,800	26,600	8,900	8,500	9,200	7,200	7,200	7,600
Wholesale Trade	6,100	6,200	6,600	*	*	*	*	*	*
Retail Trade	15,600	15,400	15,900	5,800	5,600	5,800	4,500	4,500	4,900
Information	5,500	5,500	5,600	*	*	*	300	300	300
Financial Activities	6,600	6,500	6,800	1,100	1,100	1,200	1,200	1,200	1,300
Professional and Business Services	27,800	27,900	30,800	5,100	5,100	5,900	2,000	2,000	2,400
Educational and Health Services	28,100	27,800	30,000	10,000	10,000	10,900	6,000	5,900	6,500
Leisure and Hospitality	13,900	13,900	18,400	3,300	3,300	4,600	3,600	3,700	4,300
Other Services	5,900	5,900	6,300	1,800	1,800	2,100	1,100	1,100	1,300
Government	89,000	87,300	89,000	10,000	9,800	11,000	5,100	5,200	5,600
DETROIT-WARREN-DEARBORN									
FLINT									
GRAND RAPIDS-WYOMING									
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019
PLACE OF RESIDENCE									
Labor Force	2,124,000	2,036,000	2,180,000	178,900	184,000	183,200	574,800	585,000	576,000
Employment	1,991,000	1,835,000	2,093,000	168,800	166,700	174,900	553,700	548,300	562,600
Unemployment	133,000	201,000	87,000	10,100	17,300	8,300	21,100	36,700	13,300
Rate (percent)	6.3%	9.9%	4.0%	5.6%	9.4%	4.5%	3.7%	6.3%	2.3%
PLACE OF WORK									
Total Nonfarm Jobs	1,863,200	1,845,300	2,047,500	130,800	129,800	137,000	528,300	525,200	569,300
Mining, Logging, and Construction	76,900	76,200	81,900	5,700	5,700	6,100	28,000	28,200	27,000
Manufacturing	231,700	232,100	252,500	11,600	11,600	9,100	105,000	105,000	117,700
Trade, Transportation, and Utilities	361,500	356,200	385,000	29,400	28,800	28,100	91,900	91,600	97,700
Wholesale Trade	79,100	79,000	85,400	5,700	5,700	5,800	29,700	30,000	32,600
Retail Trade	198,300	194,200	210,600	19,400	18,900	19,400	45,000	44,500	48,100
Information	25,300	25,300	26,300	3,100	3,200	3,600	6,000	6,000	6,300
Financial Activities	116,900	116,800	121,100	5,700	5,700	6,100	26,800	26,600	27,000
Professional and Business Services	370,100	363,900	391,200	16,300	15,900	17,000	72,300	70,100	76,700
Educational and Health Services	282,500	279,300	320,100	24,200	23,900	26,900	89,200	88,500	94,300
Leisure and Hospitality	144,500	143,900	199,900	12,600	12,700	15,600	40,300	41,100	50,000
Other Services	70,500	70,700	75,000	5,100	5,100	5,300	21,100	21,200	22,700
Government	183,300	180,900	194,500	17,100	17,200	19,200	47,700	46,900	49,900

* Data is suppressed

JACKSON METROPOLITAN AREA

- The jobless rate in the Jackson MSA fell by 3.1 percentage points in October to 4.6 percent, still slightly higher than its year-ago unemployment rate (3.1 percent).
- Workforce in the area declined marginally over the year (-400), as the sharp pandemic-related rise in the number of area unemployed offset the drop in total regional employment.

MONTHLY INDUSTRY DEVELOPMENTS

- In the Jackson region, total payroll jobs advanced by 800 or 1.5 percent in October, higher than normal for this month, as workers continue to be recalled from pandemic-related layoffs.
- October employment gains were due mainly to the rise in *Service providing* jobs over the month, as the *Goods producing* sector recorded job growth of only 100 since September.

INDUSTRY TRENDS

- Nonfarm jobs in the *Professional and business services* sector moved up by 300 or 5.3 percent this month, the largest percent increase for this industry among all Michigan metro areas.

LANSING-EAST LANSING METRO AREA

- In the Lansing region, the unemployment rate fell by 2.8 percentage points in October to 3.9 percent, well below the statewide jobless rate for this month (5.1 percent).
- Over the past year, total employment in the area dropped by 12,500 (-5.1 percent), despite a seasonal October increase of 4,700.

MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm jobs in the Lansing region moved up seasonally by 3,700 or 1.7 percent over the month, the largest percent increase among all 14 Michigan metro areas.

INDUSTRY TRENDS

- Only one major industry sector reported job losses over the month (*Information*) in the Lansing-East Lansing MSA, as seasonal job advancements occurred in both the *Government* (+2,000) and *Professional and business services* (+1,200) sectors.

MONROE METROPOLITAN AREA

- The Monroe MSA unemployment rate declined by 2.2 percentage points to 4.7 percent this month.
- Regional workforce was down both over the month (-1,100) and over the year (-2,800).

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Monroe remained virtually flat in October (-0.3 percent), as most major area industries reporting no job change over the month.

INDUSTRY TRENDS

- Total metro area *Manufacturing* jobs fell by 300 (-6.1 percent) in October, which was the only significant industry job change over the month.

KALAMAZOO-PORTAGE METRO AREA

- The Kalamazoo metro area jobless rate dropped in October by 2.8 percentage points to 4.0 percent, which was 1.1 percentage points above the October 2019 rate.
- Total employment advanced seasonally by 1.8 percent in October in the metro area, but remained down by 1,500 over the year.

MONTHLY INDUSTRY DEVELOPMENTS

- Payroll jobs in Kalamazoo increased by 2,000 or 1.4 percent in October, the third largest percent gain among all Michigan metropolitan areas.
- Total jobs in the *Government* sector rose by 600 or +3.1 percent, a typical education-related job gain over the month.

INDUSTRY TRENDS

- Total nonfarm payroll jobs were down 9,800 or 6.4 percent since October 2019, one of the lowest percent job reductions among metro areas in Michigan.

MIDLAND METROPOLITAN AREA

- In October, the Midland area jobless rate moved down by 2.6 percentage points to 3.7 percent, still 0.8 percentage points higher than its year-ago rate.
- Labor force in the region edged down over the month (-1.5 percent) and was only 300 below the October 2019 level.

MONTHLY INDUSTRY DEVELOPMENTS

- Regional payroll jobs in Midland rose by 400 or 1.2 percent this month, on track with both the statewide and national rates of gain for October.

INDUSTRY TRENDS

- Nonfarm jobs in the region advanced due to employment additions in the *Private service providing* (+400) sector. Total jobs were now down by 6.6 percent since October 2019.

MUSKEGON METROPOLITAN AREA

- Joblessness in the Muskegon labor market decreased by 3.9 percentage points to 6.3 percent, the largest October rate decline in any Michigan major labor market area.
- Employment in the metro area edged up slightly by 500 in October, however pandemic-related employment cuts dropped employment by 3,300 over the past year.

MONTHLY INDUSTRY DEVELOPMENTS

- Total nonfarm payroll jobs in the Muskegon MSA stayed relatively unchanged over the month (+0.2 percent) and fell sharply by 7,400 since October 2019.

INDUSTRY TRENDS

- The employment count in every industry remained down over the year, except for *Mining, logging, and construction* (+200) and *Professional and business services* (+100).

CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	JACKSON			KALAMAZOO-PORTAGE			LANSING-EAST LANSING		
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019
PLACE OF RESIDENCE									
Labor Force	72,800	74,100	73,200	169,200	171,200	168,800	241,100	243,100	252,500
Employment	69,500	68,400	70,900	162,400	159,600	163,900	231,500	226,800	244,000
Unemployment	3,400	5,700	2,300	6,800	11,600	4,900	9,500	16,300	8,500
Rate (percent)	4.6%	7.7%	3.1%	4.0%	6.8%	2.9%	3.9%	6.7%	3.4%
PLACE OF WORK									
Total Nonfarm Jobs	53,700	52,900	58,100	142,900	140,900	152,700	216,700	213,000	238,600
Mining, Logging, and Construction	2,300	2,200	2,100	6,900	6,700	6,600	7,500	7,600	8,500
Manufacturing	8,400	8,400	9,300	20,800	20,700	23,400	16,300	16,300	15,600
Trade, Transportation, and Utilities	10,600	10,600	12,100	24,100	23,800	26,400	33,700	33,200	36,400
Wholesale Trade	*	*	*	5,800	5,800	6,300	5,900	5,900	6,400
Retail Trade	6,200	6,200	6,300	14,100	13,900	15,900	20,200	19,700	21,700
Information	200	200	200	600	700	700	2,800	2,900	2,900
Financial Activities	2,200	2,200	2,200	8,100	8,100	8,100	16,700	16,600	17,100
Professional and Business Services	6,000	5,700	5,900	17,800	17,200	18,100	24,400	23,200	25,000
Educational and Health Services	9,300	8,900	10,300	23,500	23,100	25,400	30,000	29,900	32,900
Leisure and Hospitality	4,500	4,500	5,300	16,000	16,100	16,300	15,900	15,900	19,300
Other Services	2,400	2,400	2,500	4,900	4,900	5,200	9,100	9,100	10,100
Government	7,800	7,800	8,200	20,200	19,600	22,500	60,300	58,300	70,800
MIDLAND									
MONROE									
MUSKEGON									
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019
PLACE OF RESIDENCE									
Labor Force	39,300	39,900	39,600	72,000	73,100	74,800	75,100	77,700	76,200
Employment	37,900	37,400	38,500	68,700	68,100	72,800	70,300	69,800	73,600
Unemployment	1,400	2,500	1,200	3,400	5,000	2,100	4,700	7,900	2,600
Rate (percent)	3.7%	6.3%	2.9%	4.7%	6.9%	2.8%	6.3%	10.2%	3.4%
PLACE OF WORK									
Total Nonfarm Jobs	35,100	34,700	37,600	35,800	35,900	41,700	57,300	57,200	64,700
Mining, Logging, and Construction	*	*	*	1,900	1,800	2,000	2,900	2,800	2,700
Manufacturing	*	*	*	4,600	4,900	5,700	11,400	11,400	13,700
Trade, Transportation, and Utilities	*	*	*	9,800	9,800	10,600	13,200	13,300	13,900
Wholesale Trade	*	*	*	1,700	1,700	1,700	*	*	*
Retail Trade	*	*	*	4,200	4,200	4,800	10,400	10,300	11,200
Information	*	*	*	*	*	*	200	200	300
Financial Activities	*	*	*	900	900	900	1,700	1,700	1,800
Professional and Business Services	*	*	*	4,500	4,500	5,500	3,700	3,600	3,600
Educational and Health Services	*	*	*	4,500	4,500	5,000	10,500	10,200	11,800
Leisure and Hospitality	*	*	*	3,000	3,000	4,600	5,200	5,400	7,500
Other Services	*	*	*	1,300	1,300	1,500	1,700	1,700	2,100
Government	3,200	3,200	3,000	5,000	4,900	5,500	6,800	6,900	7,300

* Data is suppressed

NILES-BENTON HARBOR METRO AREA

- The Niles-Benton Harbor unemployment rate fell notably by 3.1 percentage points this month to 4.6 percent.
- Despite the rate drop, the number of employed was little changed in October (+0.3 percent), which was a significantly smaller advance than statewide (+4.1 percent).

MONTHLY INDUSTRY DEVELOPMENTS

- Niles-Benton Harbor nonfarm jobs remained unchanged in October. A minimal job gain was recorded in *Trade, transportation, and utilities*.
- Since October 2019, payroll jobs plunged by 4,800 or 7.6 percent due to pandemic-related layoffs.

INDUSTRY TRENDS

- Although the *Mining, logging, and construction* industry stayed flat over the month, total jobs inched up 200 over the year.

SAGINAW METROPOLITAN AREA

- Joblessness in the Saginaw region moved down by 3.5 percentage points to 5.2 percent in October, similar to the statewide unemployment rate (5.1 percent).
- Over the year, the jobless rate was up by 0.7 percentage points, due mainly to a decrease in the total number of employed residents since October 2019.

MONTHLY INDUSTRY DEVELOPMENTS

- Jobs in the Saginaw metro area moved up 400 or 0.5 percent, notably lower than both the statewide and national rate of gain this month.
- The *Retail trade* sector led the way with the largest monthly numeric job increase in October.

INDUSTRY TRENDS

- Since October 2019, payroll jobs in the Saginaw MSA dropped by 7,300 or 8.4 percent, with widespread job cuts in several industries.

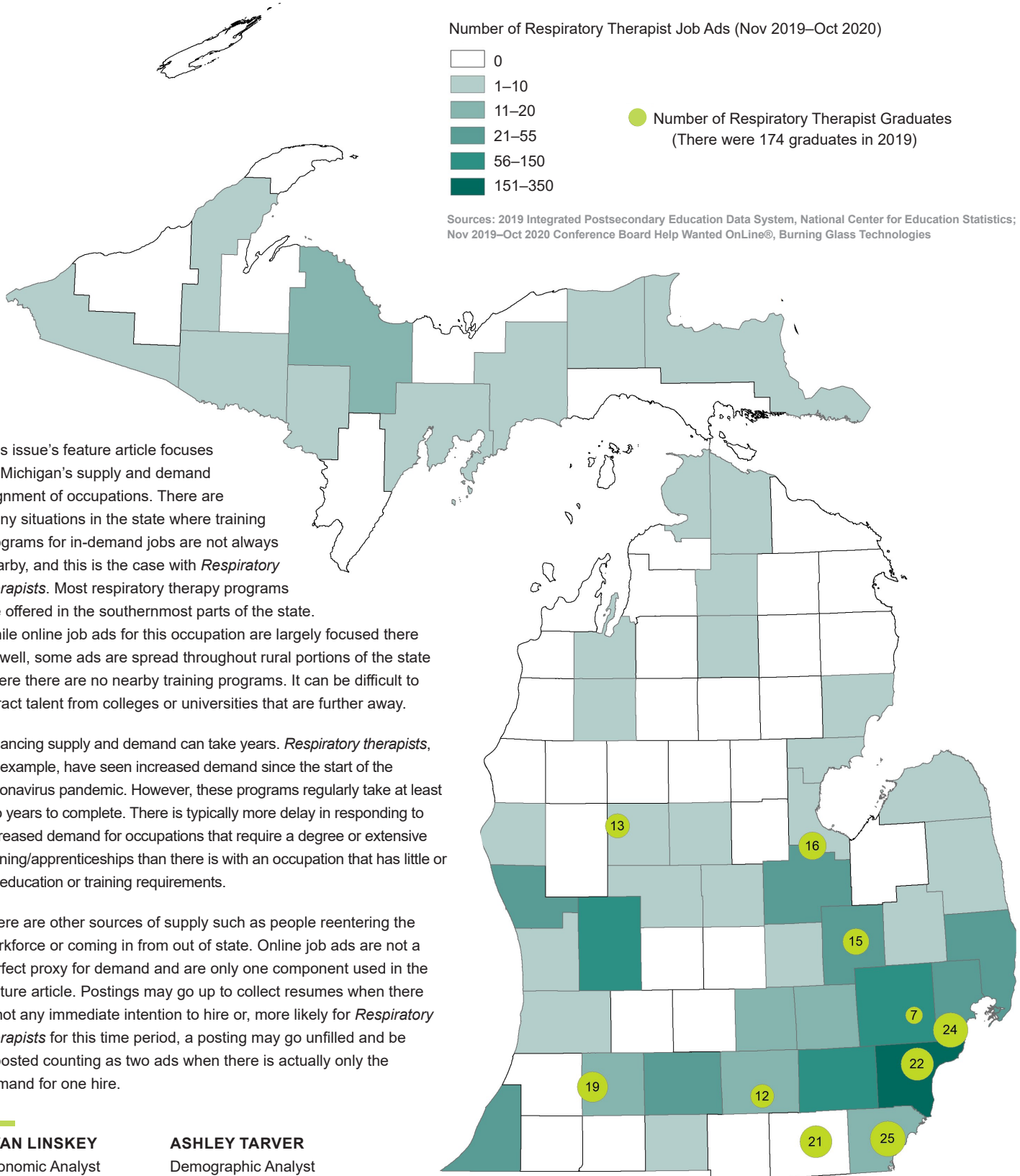
CIVILIAN LABOR FORCE AND NONFARM PAYROLL JOBS

	NILES-BENTON HARBOR			SAGINAW					
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019			
PLACE OF RESIDENCE									
Labor Force	72,400	74,500	72,600	83,200	85,600	85,400			
Employment	69,000	68,800	70,500	78,900	78,200	81,500			
Unemployment	3,300	5,700	2,100	4,300	7,400	3,800			
Rate (percent)	4.6%	7.7%	2.9%	5.2%	8.7%	4.5%			
PLACE OF WORK									
Total Nonfarm Jobs	58,400	58,400	63,200	79,100	78,700	86,400			
Mining, Logging, and Construction	2,900	2,900	2,700	3,000	3,000	3,300			
Manufacturing	13,000	12,900	13,000	10,500	10,600	10,300			
Trade, Transportation, and Utilities	9,800	10,000	10,700	15,300	14,800	17,000			
Wholesale Trade	*	*	*	1,900	1,900	2,000			
Retail Trade	6,000	6,100	6,900	10,800	10,300	12,300			
Information	400	400	500	1,000	1,000	1,200			
Financial Activities	2,400	2,400	2,500	3,600	3,600	3,800			
Professional and Business Services	5,400	5,300	5,600	10,300	10,200	11,400			
Educational and Health Services	9,300	9,200	9,600	14,700	14,600	15,900			
Leisure and Hospitality	5,500	5,600	7,600	7,300	7,300	8,900			
Other Services	2,000	2,000	2,300	3,100	3,200	3,200			
Government	7,700	7,700	8,700	10,300	10,400	11,400			
	UPPER PENINSULA			NORTHEAST MICHIGAN			NORTHWEST MICHIGAN		
	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019	OCT 2020	SEP 2020	OCT 2019
PLACE OF RESIDENCE									
Labor Force	139,300	142,000	136,600	80,100	82,500	81,100	154,200	158,300	148,700
Employment	134,100	133,400	132,000	76,300	76,100	77,900	148,400	148,200	144,300
Unemployment	5,200	8,600	4,600	3,800	6,400	3,300	5,800	10,200	4,400
Rate (percent)	3.7%	6.1%	3.4%	4.7%	7.8%	4.0%	3.8%	6.4%	2.9%

* Data is suppressed

MAP OF THE MONTH:

RESPIRATORY THERAPIST PROGRAM COMPLETERS BY COLLEGE AND ONLINE JOB ADS



This issue's feature article focuses on Michigan's supply and demand alignment of occupations. There are many situations in the state where training programs for in-demand jobs are not always nearby, and this is the case with *Respiratory therapists*. Most respiratory therapy programs are offered in the southernmost parts of the state.

While online job ads for this occupation are largely focused there as well, some ads are spread throughout rural portions of the state where there are no nearby training programs. It can be difficult to attract talent from colleges or universities that are further away.

Balancing supply and demand can take years. *Respiratory therapists*, for example, have seen increased demand since the start of the coronavirus pandemic. However, these programs regularly take at least two years to complete. There is typically more delay in responding to increased demand for occupations that require a degree or extensive training/apprenticeships than there is with an occupation that has little or no education or training requirements.

There are other sources of supply such as people reentering the workforce or coming in from out of state. Online job ads are not a perfect proxy for demand and are only one component used in the feature article. Postings may go up to collect resumes when there is not any immediate intention to hire or, more likely for *Respiratory therapists* for this time period, a posting may go unfilled and be reposted counting as two ads when there is actually only the demand for one hire.

EVAN LINSKEY
Economic Analyst

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Demographic Analyst



OCCUPATIONAL SUPPLY AND DEMAND IN THE MICHIGAN LABOR MARKET

Balancing the supply and demand of workers in the Michigan labor market is of critical importance to the Michigan economy. If the market demands more workers than are currently trained and available, the goal of creating more and better jobs in the Michigan labor market is constrained. Alternatively, if there are an oversupply of trained workers, these workers may have difficulty finding jobs, especially jobs that adequately use their skills. Consequently, achieving labor market alignment is crucial to building an economy that meets the needs of firms and workers alike. This analysis of Michigan supply and demand data builds off similar research done around the nation.

Methods

In this analysis, occupations were assigned scores for supply and demand determined from composite indices. Variables used to create

these indices are listed in Figure 1. Shortages, alignments, or surpluses were then determined based on the differences between the supply and demand scores. This is referred to as the talent gap. Scores range from five to one with five being the highest level. For example, *Respiratory therapists* were found to have a demand score of three and a supply score of only two, so they were determined to have a weak shortage talent gap. *Information security analysts* had a demand score of four and a supply score of two, so they were determined to have a strong shortage. Because data for one measure of labor supply (program completers) are only available for occupations typically requiring some sort of postsecondary award, the analysis is split into two sections. This led to a talent gap analysis for nondegreed occupations and another analysis for degreed occupations. Occupations were dropped from the analyses

if they did not typically require any education or training beyond high school, if employment statewide was below 1,000, or if data was not available. Given these exclusions, 367 of the roughly 800 detailed occupations in the state are incorporated into either the degreed or nondegreed sections.

Comparison to 2018 Analysis

This month's feature article is an update of the analyses published in the December 2018 issue of *Michigan's Labor Market News*. The general methods and variables are identical with only an update on the figures to use wages and growth weighted by total employment while updating the data to the latest available. The outcomes of both analyses did not shift much over the two years. Nondegreed occupation alignments were within about five percent of prior alignments. Degreed occupations recorded movement

FIGURE 1: SUPPLY AND DEMAND VARIABLES

Supply Variables

- Employment (2019)
- Employment Change (2019–2016)
- Program Completers (2019)
- Program Completers Change (2019–2016)
- MiTalent Connect Resumes (2020)

Demand Variables

- Online Job Postings (2019)
- Annual Projected Openings
- Projected Growth Rate



with a greater number showing surpluses. An occupation with a surplus will still need new workers but will need fewer relative to its size than an occupation with a shortage.

Nondegreed Occupations

This section analyzes occupations that typically require less than a postsecondary certificate but still require some form of education and/or training beyond high school, according to the Bureau of Labor Statistics. Some jobs also may require a postsecondary certificate but are more reliant on training experience. Throughout this article, these occupations will be referred to as nondegreed occupations, or NDOs. In the

NDO analysis, resume data from Michigan's labor exchange, MiTalent Connect, were used in supply calculations in place of education program completers.

Looking at the overall alignment of nondegreed occupations, 70 occupations (30 percent) of the 232 NDOs analyzed demonstrated some level of talent gap shortage. There were 120 (52 percent) NDOs that appeared to have supply and demand aligned. The remaining 18 percent had some level of surplus.

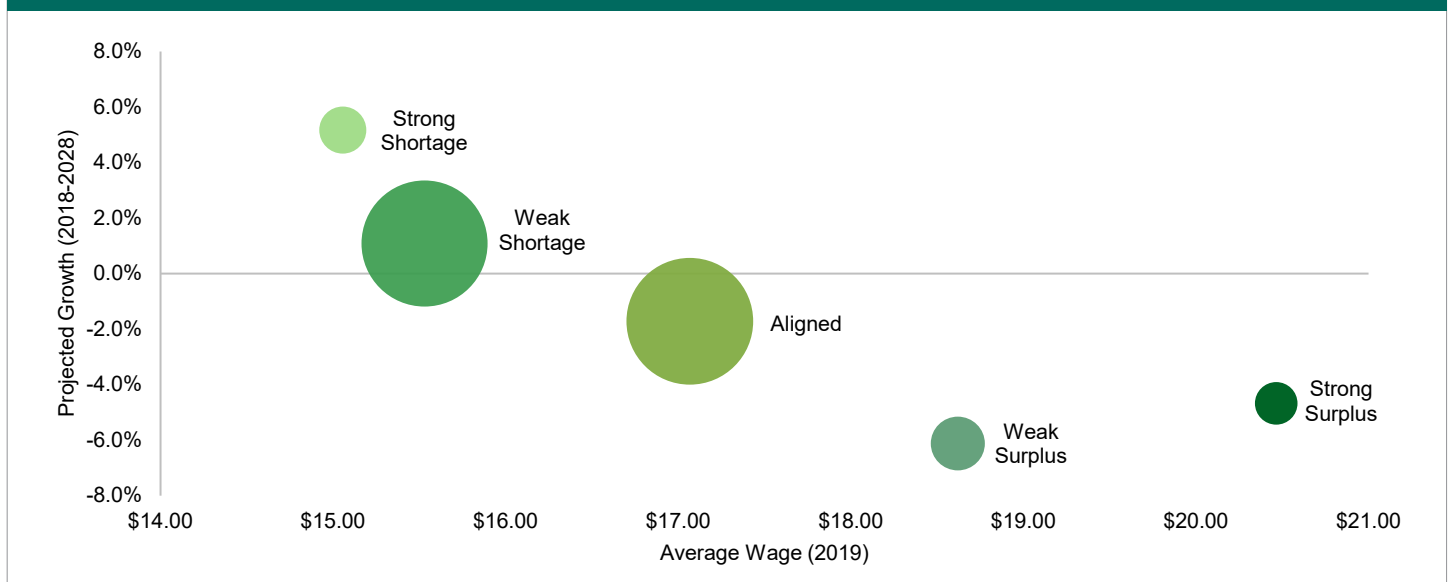
Nondegreed occupations employed more than 2.7 million workers. About 30 percent of

those workers were in nondegreed occupations that had some level of shortage while 11 percent of those were employed in NDOs that showed a surplus. The remaining 59 percent of workers were in aligned nondegreed occupations, totaling roughly 1,590,000 out of 2,702,000 workers.

ALIGNED NONDEGREED OCCUPATIONS

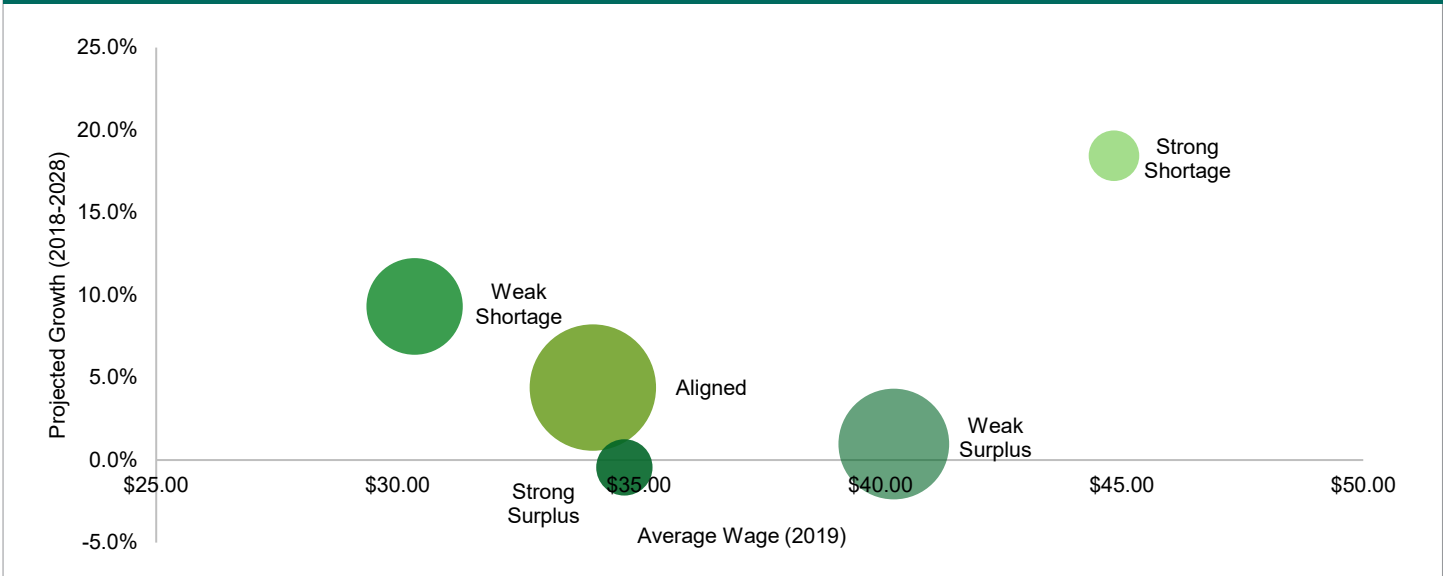
Over half of all NDOs in this analysis were found to be aligned. Many of the largest occupations, in terms of employment, also demonstrated alignment between supply and demand. Six of the 10 largest occupations in the analysis were aligned including *Retail salespersons*,

FIGURE 2: ALIGNMENT OF NONDEGREED OCCUPATIONS IN MICHIGAN BY WAGE AND PROJECTED GROWTH RATE



Source: 2019 Occupational Employment Statistics and 2018–2028 Employment Projections, Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget; Shortage Definition Determined by the Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget

FIGURE 3: ALIGNMENT OF DEGREED OCCUPATIONS IN MICHIGAN BY WAGE AND PROJECTED GROWTH RATE



Source: 2019 Occupational Employment Statistics and 2018–2028 Employment Projections, Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget; Shortage Definition Determined by the Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget

Fast food and counter workers, and *Office clerks, general*. The *Administrative support and Production* major groups had the highest count of total occupations aligned in the NDOs but this partially stems from the large number of occupations in these major groups.

NONDEGREED OCCUPATIONS WITH SHORTAGES

Shortages came from a variety of major occupational groups. The *Production* and *Food prep.* major groups each had eight occupations with a shortage. Nondegreed shortage occupations with some of the largest 2019 employment numbers included *Waiters and waitresses*, *Stockers and order fillers*, and *Janitors and cleaners, except maids and housekeeping cleaners*. Other notable weak shortages in nondegreed occupations included *Electricians*, *Childcare workers*, and *Pharmacy technicians*.

NONDEGREED OCCUPATIONS WITH SURPLUSES

Roughly 18 percent (42 occupations) of the NDOs exhibited a surplus. These occupations indicated a larger supply of workers than the labor market demanded relative to other occupations. The largest major occupation group with this misalignment was *Production* with just over one-third of the 50 occupations demonstrating a surplus. Of these *Production* jobs, there were 14 occupations with some level of surplus that had the word “operator”

in the title. This is in line with the continued automation of some *Production*-related jobs. *Office and administrative support* was the next major group with the largest concentration of surplus nondegreed occupations with 12. No other major group had more than three NDOs demonstrating some level of a surplus.

Figure 2 demonstrates a noticeable difference in both the projected growth and wages of nondegreed occupations across differing levels of alignment. Specifically, occupations with shortages had higher projected growth as well as lower wages than aligned occupations. Those with surpluses showed the opposite trend with negative projected growth, but higher wage levels. This seemed to indicate that people were either crowding toward higher paying jobs or perhaps listed these higher paying jobs on their MiTalent Connect resumes. The size of the circle denotes projected average annual openings. Occupations that were aligned or that had a weak shortage had, on average, more annual openings. This relationship shows smaller occupations are more likely to be misaligned.

Degreed Occupations

Complementing the previous section, this analysis of degreed occupations (DOs) covers jobs that require a postsecondary credential, from “postsecondary award” and “no on the job training” up to doctoral degrees. Of the 135 DOs, 27 (20 percent) showed some level of shortage. Nearly half (45 percent)

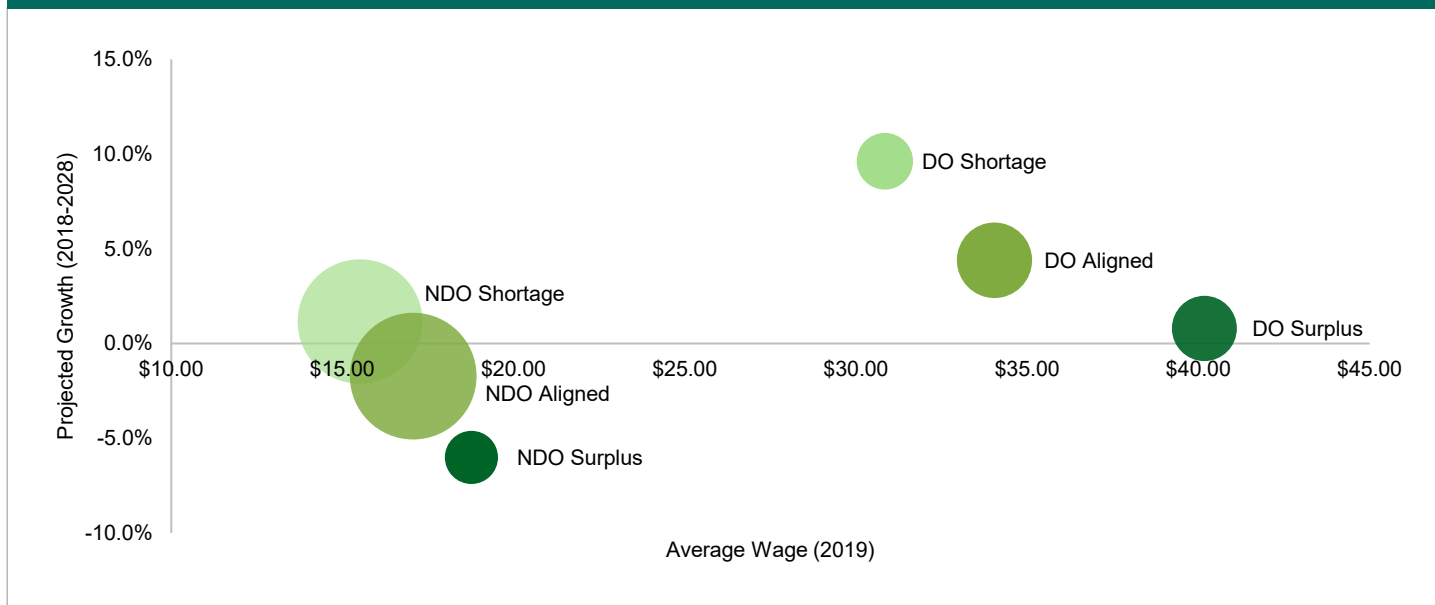
of occupations demonstrated alignment between supply and demand. Meanwhile, 47 occupations (35 percent) displayed some level of surplus.

Degreed occupations consisted of roughly 1,046,000 workers. Of those, 15 percent of people worked in occupations with shortages and 34 percent of individuals were employed in occupations with surpluses. The remaining 50 percent of employees were in degreed occupations that were aligned. On average, degreed occupations contain about 7,750 employees. This is notably lower than the NDOs which employed, on average, almost 12,000 workers.

ALIGNED DEGREED OCCUPATIONS

Just under half of all degreed occupations were aligned, including three of the top five by employment (*Registered nurses*, *Nursing assistants*, and *Elementary school teachers, except special education*). The *Healthcare practitioners*, *Management*, and *Educational* major groups contained some of the highest number of aligned occupations and or workers. Just over half of all employees in degreed occupations were in balanced occupations totaling nearly 527,950 workers. These occupations remain attractive to future job seekers because they contained openings from growth as well as openings caused by workers changing careers or leaving the labor force.

FIGURE 4: ALIGNMENT OF ALL OCCUPATIONS IN MICHIGAN BY WAGE AND PROJECTED GROWTH RATE



Source: 2019 Occupational Employment Statistics and 2018–2028 Employment Projections, Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget; Shortage Definition Determined by the Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget

DEGREED OCCUPATIONS WITH SHORTAGES

Shortages appeared in 27 of the 135 degreed occupations and came from a variety of major groups. The largest number of shortages came from the *Computer and mathematical* occupations group. Of the 12 occupations in that major group, five of them showed some level of shortage. In *Healthcare practitioner* occupations, four of the occupations had a shortage: *Nurse practitioners*, *Speech-language pathologists*, *Diagnostic medical sonographers*, and *Magnetic resonance imaging technologist*. Some degreed occupations with shortages were very large including *Software developers* and *Medical assistants* which both employed nearly 25,000 individuals.

DEGREED OCCUPATIONS WITH SURPLUSES

Surpluses were recorded in 47 of 135 degreed occupations. However, the vast majority of those occupations had a weak surplus (41). Surpluses were spread throughout the economy with no major occupational group having more than seven surplus degreed occupations. One notable job was *General and operations managers* which showed a weak surplus and employed roughly 65,000 workers statewide. Even though this job had a weak surplus, Michigan had more than 7,000 advertisements for these managers in 2019 and they are projected to grow more than 2 percent in the coming years.

Figure 3 shows differences in projected growth and wages for degreed occupations across the

varying levels of surpluses to shortages. Like nondegreed occupations, DOs with surpluses had a higher average wage than those in alignment or with shortages. Occupations with strong shortages opposed the trend, but this alignment only contained two occupations, *Information security analysts* and *Postsecondary health specialties teachers*. This compares to weak shortages, which was made up of 25 occupations. Degreed occupations with strong shortages did not appear to have a lack of incentivizing wages, but rather they were subject to relatively high growth and high levels of educational barriers. Degreed occupations with a shortage had higher average projected growth than those with surpluses. Projected growth was a factor in calculating occupational alignment while wage was not. Generally, it appears that workers and students may be moving toward occupations with higher wages even if they may not have projected growth rates as high as other occupations. The size of the circle denotes projected average annual openings.

Figure 4 addresses degreed and nondegreed occupations concurrently. In this figure, it is evident that all alignment levels of degreed occupations had higher average wages than any level of nondegreed occupations. Nondegreed occupations typically had more employment and higher rates of turnover leading to more average annual openings than degreed occupations. It is also noteworthy that growth rates for degreed occupations that showed a surplus had the lowest 10-year growth rate of any degreed

occupation alignment but were projected to grow almost as quickly (0.8 percent) as shortage nondegreed occupations (1.2 percent).

Conclusion

All occupations continue to have some demand for new workers, but this demand may not line up with supply. This analysis used two separate groups to compare occupational alignment. An occupation with a surplus of workers can still have demand since new workers are needed to fill holes left by existing employees retiring, moving to new occupations, or due to occupational growth. Overall, most occupations in these analyses are aligned or show a weak form of misalignment which is expected due to the indexing in the analysis. Nondegreed occupations are 52 percent aligned while 59 percent of employees are in aligned occupations. For degreed occupations, 45 percent are in alignment while 51 percent of workers are employed in aligned occupations. A strong misalignment was found in only eight of the 232 nondegreed occupations and in eight of the 135 degreed occupations. Overall, this analysis points toward occupations in the Michigan labor market being more often aligned, or weakly misaligned, but should be analyzed on an individual basis.

EVAN LINSKEY
Economic Analyst

OCCUPATIONAL FOCUS

CHILDCARE WORKERS

This month's issue of *Michigan's Labor Market News* mentions *Childcare workers* as an occupation that displays a shortage of workers. *Childcare workers* typically work in childcare centers, their own home, or private households. Many childcare options remain open with the ongoing pandemic to support working parents.

According to the Bureau of Labor Statistics, *Childcare workers* "Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play."

Examples of job titles encompassed by this position include: child caregiver, childcare provider, daycare teacher, daycare worker, infant teacher, toddler teacher.

In Michigan, 41.2 percent of all *Childcare workers* were employed by *Child day care services*, followed by *Elementary and secondary schools* (25.6 percent) and *Employment services* (9.3 percent). The top pay industries for this occupation were *Social advocacy organizations*; *Other residential care facilities*; and *Community food and housing*, and *Emergency and other relief services*.

Some of the responsibilities of this occupation include

- Maintaining a safe play environment
- Observing and monitoring children's play activities
- Communicating with children's parents or guardians about daily activities, behaviors, and related issues
- Supporting children's emotional and social development, encouraging understanding of others and positive self-concepts
- Caring for children in institutional setting, such as group homes, nursery schools, private businesses, or schools for the handicapped

A high school diploma or equivalent is generally required for this occupation, but education and training requirements for *Childcare workers* vary by setting, state, and employer. They range from no formal education to certification in early childhood education. In Michigan, 30.8 percent of *Childcare workers* have a high school diploma or equivalent; 26.5 have some college education, while 30 percent completed an associate degree or higher. Some skills that may be required are monitoring, service orientation, active

listening, and social perceptiveness. Short-term onboard training from employers may also be needed. Part-time work and irregular hours are common.

Related occupations include:

- Preschool teachers, except special education
- Home health aides
- Personal care aides
- Physical therapist aides
- Lifeguards, ski patrol, and other recreational protective service workers

This occupation has a bright outlook. Its long-term projected annual growth rate of 0.3 percent through 2028 is higher than the Michigan average projected annual growth rate for all occupations of 0.1 percent. *Childcare workers* are projected to have total 4660 annual openings through 2028, most are expected to come from the need to replace workers who leave the occupation permanently. The median hourly wage is \$11.13, ranking 4th among the top 10 states in employment for this occupation.

YAN XU
Economic Analyst

MICHIGAN CHILDCARE WORKERS BY THE NUMBERS



17,230
TOTAL
EMPLOYMENT 2019

9TH
NATIONAL
EMPLOYMENT RANK



39.66
JOBS PER
10,000 TOTAL

1.04
LOCATION
QUOTIENT



\$23,160
MEDIAN
ANNUAL WAGE

\$11.13
MEDIAN
HOURLY WAGE



0.3%
2018–2028 PROJECTED
JOB GROWTH

4,660
PROJECTED ANNUAL
OPENINGS



**HIGH SCHOOL
DIPLOMA OR
EQUIVALENT**
REQUIRED
EDUCATION

Source: 2019 Occupational Employment and Wage Estimates and U.S. Bureau of Labor Statistics; 2018–2028 Employment Projections, Bureau of Labor Market Information and Strategic Initiatives, Michigan Department of Technology, Management & Budget



STATES WITH THE HIGHEST EMPLOYMENT LEVEL OF CHILDCARE WORKERS

STATE	CHILDCARE WORKERS	PER 10,000 EMPLOYED	LOCATION QUOTIENT	HOURLY MEDIAN WAGE	ANNUAL MEDIAN WAGE
California	55,430	31.89	0.83	\$13.43	\$27,940
New York	53,290	55.96	1.46	\$13.58	\$28,240
Texas	51,120	41.12	1.08	\$10.15	\$21,120
Florida	27,310	31.06	0.81	\$10.87	\$22,610
Pennsylvania	24,340	41.24	1.08	\$10.69	\$22,240
North Carolina	19,780	44.32	1.16	\$10.62	\$22,090
New Jersey	19,090	46.7	1.22	\$12.59	\$26,180
Ohio	18,710	34.34	0.9	\$10.65	\$22,160
Michigan	17,230	39.66	1.04	\$11.13	\$23,160
Georgia	17,220	38.5	1.01	\$9.37	\$19,500

Source: 2019 Occupational Employment and Wage Estimates, U.S. Bureau of Labor Statistics



MICHIGAN ONLINE JOB ADS RISE CONSIDERABLY

In October 2020, there were 180,217 online job advertisements, the highest number of postings since December 2017 (182,822 ads). A slight uptick in new postings was also shown over the month as October had 70,981 new job ads specific to the month and September had 62,490. In October 2019, there were 156,551 online ads, giving October 2020 a 15.1 percent increase (+23,666 ads).

Supply/Demand Rate Continues to Descend

Once again, the supply/demand rate continued to inch down over the month since the peak of 9.97 in May 2020. Down from September's rate of 2.53, October 2020 brings a rate of 1.38, representing approximately 138 unemployed individuals for every 100 open online job postings. Though the rate continues to fall, it is still higher than rates seen in 2019.

All Education Levels Increase in October Advertisements

In October 2020, 53 percent of job ads specified a minimum educational requirement. Over the month, requests for each educational level increased by over 15.0 percent. Demand for a high school diploma experienced the largest numerical rise and was requested in 53,728 ads, a gain of 15.3 percent (+7,132 ads). An associate degree, specified in 6,964 ads, observed the largest percent growth at 20.0 percent (+1,162 ads). A bachelor's degree was required in 29,222 online advertisements,

an 18.1 percent increase (+4,488 ads). Lastly, master's and above was required in 4,813 ads which presented an uptick of 15.9 percent (+662 ads). While each degree level experienced a boost over the month, it was only high school diplomas and associate degrees that reflected a positive change since October 2019.

Majority of Occupational Groups Increase Postings

Occupational data that is not seasonally adjusted is available through Burning Glass Technologies. The system offers job advertisement information based on broad occupation groups as well as detailed occupations. The top five most advertised occupational groups remained the same over the month; *Sales and related* (21,190 ads), *Office and administrative support* (19,209 ads), *Healthcare practitioners and technical* (16,892 ads), *Management* (15,271 ads), and *Transportation and material moving* (12,582 ads). The only occupational group that experienced a decrease in advertisements over the month was *Farming, fishing, and forestry* (-41 ads).

Over the year, four occupational groups expanded by over 50 percent in their online job advertisements. *Building and grounds cleaning and maintenance* had the largest rise in postings with 90.9 percent increase (+3,161 ads). This was largely due to multiple occupations rising by more than 100.0 percent; *Janitors and cleaners*, *Landscaping groundskeeping workers*,

Pest control workers, and *Tree trimmers and pruners*. Following behind were *Transportation and material moving* with 69.1 percent growth (+5,140 ads), *Construction and extraction* with 59.1 percent rise (+965 ads), and *Production* with a 58.7 percent boost (+3,109 ads).

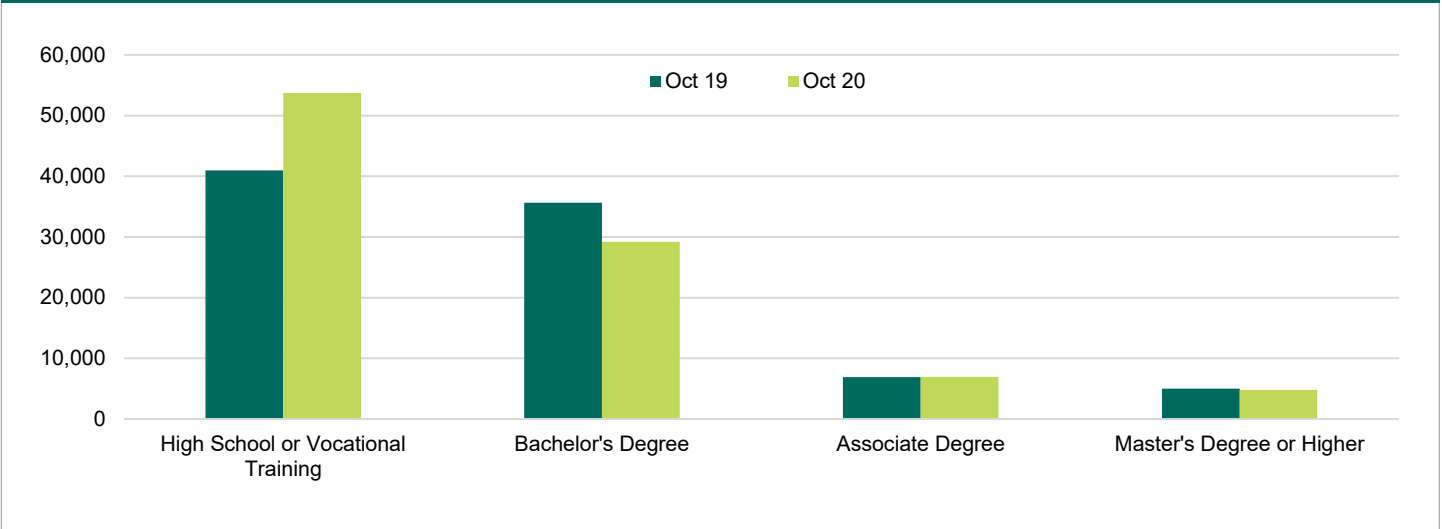
Over the month, each of the top five detailed occupations experienced growth. Within *Sales and related*, *Retail salespersons* had 7,019 job postings in October (+817 ads), *First-line supervisors of retail sales workers* held 4,590 advertisements (+765 ads), and *Sales representatives* had 3,949 (+561 ads). *Registered nurses* and *Laborers and freight, stock, and material movers, hand* complete the top five with 5,546 (+885 ads) and 4,288 (+801 ads) job advertisements, respectively.

Job Ads Climb for all Michigan Regions Over the Month

In September 2020, only eleven out of fourteen metropolitan statistical areas (MSAs) witnessed growth in their job advertisements, however, in October, each MSA realized a growth in their online postings. Battle Creek had the largest increase, 23.1 percent, with the most notable improvement in occupations belonging to *Medical assistants* (+411.1 percent), *Registered nurses* (+109.3 percent), and *Customer service representatives* (+58.6 percent).

TRISHA SCHLEGEL
Economic Analyst

CHANGE IN JOB AD EDUCATION REQUIREMENT, OCTOBER 2019–OCTOBER 2020



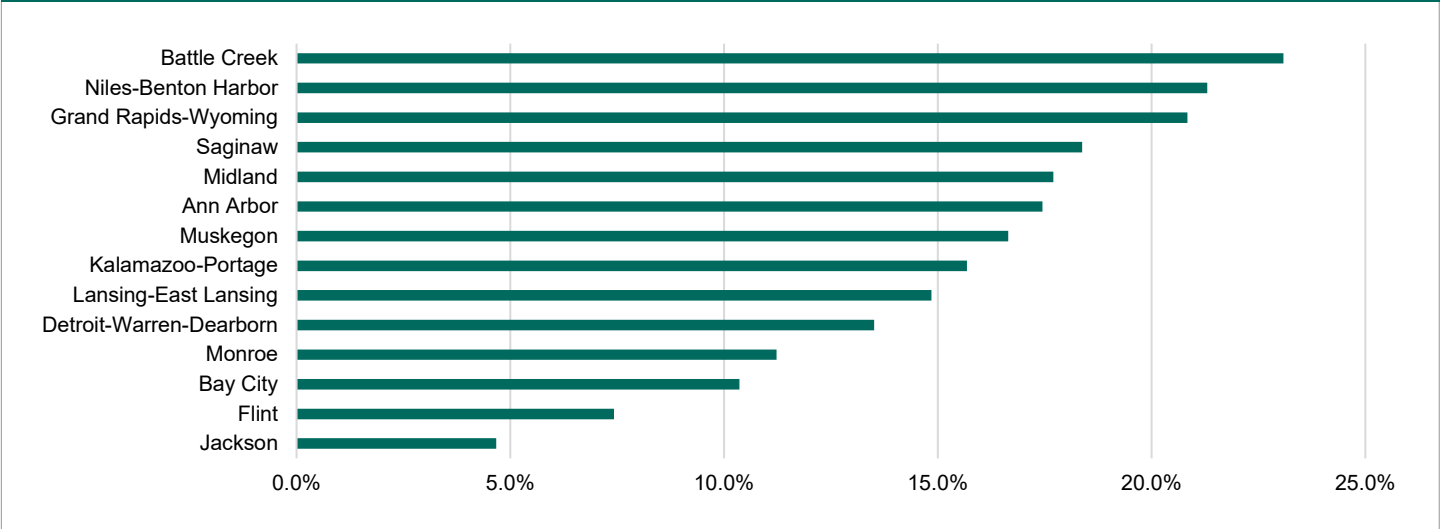
Source: Conference Board Help Wanted OnLine®, Burning Glass Technologies

MICHIGAN ONLINE JOB ADS BY INDUSTRY, OCTOBER 2020



Note: Roughly 68,000 postings did not have specific industry ties in the October 2020 data
Source: Conference Board Help Wanted OnLine®, Burning Glass Technologies

MONTHLY CHANGE IN JOB ADS BY MICHIGAN METRO AREA, SEPTEMBER 2020–OCTOBER 2020



Source: Conference Board Help Wanted OnLine®, Burning Glass Technologies

RELEVANT RANKINGS

TOP 15 LARGEST MICHIGAN OCCUPATIONS WITH A SHORTAGE THAT TYPICALLY REQUIRE A DEGREE OR CERTIFICATION (2019)

RANK	OCCUPATION	TYPICAL EDUCATION AND TRAINING	2019 EMPLOYMENT
1	Software Developers	Bachelor's Degree	25,130
2	Medical Assistants	Postsecondary Nondegree Award	24,580
3	Market Research Analysts and Marketing Specialists	Bachelor's Degree	18,840
4	Medical and Health Services Managers	Bachelor's Degree	12,310
5	Preschool Teachers, Except Special Education	Associate Degree	9,940
6	Coaches and Scouts	Bachelor's Degree	7,500
7	Educational, Guidance, and Career Counselors and Advisors	Master's Degree	7,280
8	Nurse Practitioners	Master's Degree	4,840
9	Commercial and Industrial Designers	Bachelor's Degree	4,520
10	Speech-Language Pathologists	Master's Degree, Internship/Residency	4,300
11	Industrial Engineering Technologists and Technicians	Associate Degree	4,250
12	Instructional Coordinators	Master's Degree	3,890
13	Health Specialties Teachers, Postsecondary	Doctoral or Professional Degree	3,350
14	Diagnostic Medical Sonographers	Associate Degree	2,660
15	Clinical and Counseling Psychologists	Doctoral or Professional Degree, Internship/Residency	2,590

Source: 2019 Occupational Employment Statistics and 2018–2028 Employment Projections, Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget; Shortage Definition Determined by the Bureau of Labor Market Information and Strategic Initiatives, Department of Technology, Management & Budget

TOP 15 MICHIGAN EDUCATIONAL PROGRAMS BY GRADUATES AND AWARD LEVEL (2019)

RANK	PROGRAM	AWARD LEVEL	TOTAL COMPLETERS
1	Business Administration and Management, General	Bachelor's Degree	73,324
2	Business Administration and Management, General	Master's Degree	61,226
3	Business Administration and Management, General	Associate Degree	40,020
4	Biology/Biological Sciences, General	Bachelor's Degree	18,216
5	Finance, General	Bachelor's Degree	17,953
6	Computer and Information Sciences, General	Bachelor's Degree	15,818
7	Medicine	Doctor's Degree, Professional Practice	15,521
8	Accounting	Bachelor's Degree	14,913
9	Psychology, General	Bachelor's Degree	13,422
10	Social Work	Master's Degree	11,628
11	Marketing/Marketing Management, General	Bachelor's Degree	11,326
12	Social Work	Bachelor's Degree	10,377
13	Mechanical Engineering	Bachelor's Degree	9,375
14	Registered Nursing/Registered Nurse	Bachelor's Degree	7,310
15	Cosmetology/Cosmetologist, General	Postsecondary Award, Certificate, or Diploma of at Least One But Less Than Two Academic Years	7,250

Source: 2019 Integrated Postsecondary Education Data System (IPEDS), National Center for Education Statistics, U.S. Department of Education



ASK THE ECONOMIST

**What Are Some of the Ways
Labor Demand is Measured?**

Here's What You Need to Know...

Traditionally, sources of labor market information have been focused on the demand side of the labor market. For example, employer-based job counts by occupation or industry exist for every state, which can partially represent past demand. Most state labor market information agencies also produce and publish 10-year employment projections data by industry and occupation, which serve as estimates of future long-term demand. Short-term job demand is captured by real-time job ad postings (such as those featured in this publication's recurring Online Job Advertisements section on page 22) as well as two-year employment projections data. Each of these data sources has strengths and weaknesses ranging from the time frame covered to the frequency new data updates come out.

Demand Variables Used in the Feature Article

ONLINE JOB ADVERTISEMENTS

Online job ads are typically the first place to view current job demand. Ad data are available from a variety of different vendors. The data in this month's feature comes from Burning Glass Technologies, but other third-party vendors collect similar data. Some vendors are used by job seekers and employers, including the state's Pure Michigan Talent Connect (PMTTC) at www.mitalent.org. PMTTC can be used by any job seeker or employer in the state to post job ads or find current job openings. This website also offers tools for career exploration, including resources for veterans and those interested in skilled trades.

PROJECTED ANNUAL JOB OPENINGS

Projected annual job openings is one of two demand variables created by the bureau's employment projections. This variable typically favors larger occupations, though fast-growing small occupations may have more openings than larger occupations that are growing slowly or not at all. Openings can come from three sources: transfers, exits, and growth. Transfers come from individuals who leave an occupation for a new job such as a registered nurse taking a new job as a professor. Exit openings come from individuals leaving the labor market for a longer period, such as when people retire, stay home to take care of a family member, or quit their job to manage their child's education. Growth openings are newly created positions that have never been filled. Jobs that do not require an education

typically have more openings and turnover because they usually pay less and take less time to bring train new hires.

PROJECTED JOB GROWTH

Projected job growth is the other demand variable generated by the bureau's employment projections used in the feature analysis. This variable helps counter the large occupation bias in projected annual openings, since it favors rapidly growing occupations rather than larger occupations. Using an occupation's projected growth over a 10-year period is a way to capture an increase in demand that the past market or even current markets do not anticipate well. Projections data are available at the state and sub-state level at www.michigan.gov/LMI.

Other Measures of Demand

JOB VACANCY SURVEY (JVS)

The primary goal of the JVS is to analyze the demand side of the state's labor market by looking at the number and nature of current Michigan job vacancies. While other sources of information on vacancies are available, directly asking employers with open positions about their vacancies in this survey can provide a more accurate and comprehensive picture of the demand side of the state's labor market. Michigan's next report on JVS will be published in the first quarter of 2021. The previous report can be found in the publications section of www.michigan.gov/LMI under "research."

JOB OPENINGS AND LABOR TURNOVER SURVEY (JOLTS)

The Job Openings and Labor Turnover Survey (JOLTS) program from the Bureau of Labor Statistics (BLS) produces data on job openings, hires, and separations. The program involves the monthly collection, processing, and dissemination of job openings and labor turnover data. The data, collected from sampled establishments on a voluntary basis, include employment, job openings, hires, quits, layoffs and discharges, and other separations. The number of unfilled jobs—used to calculate the job openings rate—is an important measure of the unmet demand for labor. With that statistic, it is possible to paint a more complete picture of the U.S., regional, and state labor markets rather than looking solely at the unemployment rate, a measure of the excess supply of labor. Information on labor

turnover is valuable in the proper analysis and interpretation of labor market developments and as a complement to the unemployment rate. Additional information on the JOLTS program can be found at www.bls.gov/JLT or by reviewing the Data Spotlight in the February 2020 issue of *Michigan's Labor Market News*.

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