MICHIGAN'S
LABOR MARKET NEWS

The state unemployment rates so far in 2023 have been essentially flat over 2022 levels.

FEBRUARY 2023 JOBLESS RATE

MICHIGAN
4.3%

NATIONAL
3.6%

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Michigan's Labor Market News is a product of the Michigan Center for Data and Analytics (MCDA), which enhances and promotes evidence-based decision making across state government through advanced research and analytics.

The Labor Market Information division of the MCDA is the official source for Michigan's employment, occupation, and industry data through a partnership with U.S. Department of Labor.

MICHIGAN UNEMPLOYMENT RATE CONSTANT IN JANUARY AND FEBRUARY

Note Data Revisions: The data in this article reflects recently revised historical estimates. All states in the nation participate in this revision process facilitated by the U.S. Bureau of Labor Statistics. Seasonally adjusted and not seasonally adjusted monthly labor force estimates from 2018 to 2022 were revised for Michigan and the Detroit metro area.

Michigan's seasonally adjusted unemployment rate remained unchanged for the third consecutive month, at 4.3 percent during February.

The U.S. unemployment rate increased by two-tenths of a percentage point between January and February to 3.6 percent. Michigan's jobless rate was 0.7 percentage points larger than the U.S. rate. Over the year, the national unemployment rate receded by two-tenths of a percentage point, while the statewide rate rose by one-tenth of a percentage point. Compared to other states, Michigan's 4.3 percent unemployment rate was tied with California for 7th highest nationally.

Michigan's labor force was nearly unchanged during February, with a workforce increase of 0.1 percent over the month. The national labor force rose by 0.3 percent since January. Employment edged up by 0.2 percent in the state and 0.1 percent nationally. Total unemployment in Michigan fell by 1.0 percent over the month, while national unemployment advanced by 4.3 percent.

Over the year, Michigan's workforce advanced by 0.4 percent, 1.1 percentage points below the national labor force increase of 1.5 percent. Statewide employment edged up by 0.3 percent, while the U.S. employment total rose by 1.7 percent. Michigan's unemployment level increased by 2.5 percent over the year, while national unemployment receded by 5.4 percent.

Michigan 2022 Revised Annual Average Unemployment Rate Decreases Slightly

As a result of the annual benchmarking process, Michigan's 2022 annual average unemployment rate was revised downward by one-tenth of a percentage point to 4.2 percent. Michigan annual employment rose by 131,000, or 2.9 percent, between 2021 and 2022, while annual unemployment fell by 75,000, or 27.0 percent. The statewide annual labor force advanced by 1.2 percent over the year. Michigan's annual average unemployment rate fell from 5.8 percent to 4.2 percent, a decrease of 1.6 percentage points between 2021 and 2022.

For more information on state and regional unemployment rates for Michigan, view full press releases at Michigan.gov/LMI.
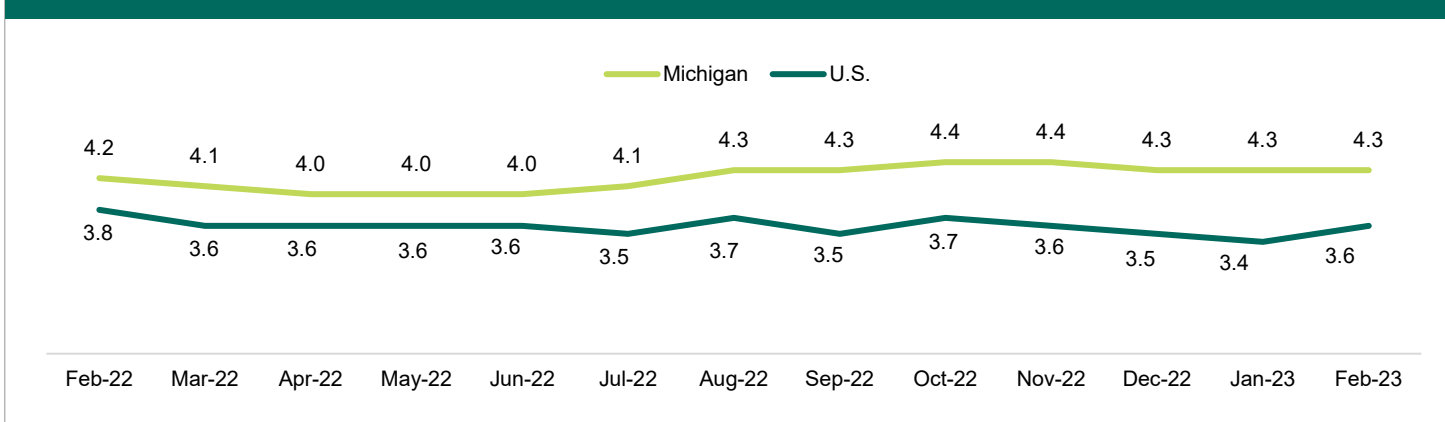
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MICHIGAN LABOR FORCE ESTIMATES, FEBRUARY 2023 (SEASONALLY ADJUSTED)

	FEB 2023	JAN 2023	FEB 2022	OVER THE MONTH		OVER THE YEAR	
				NUMERIC	PERCENT	NUMERIC	PERCENT
Civilian Labor Force	4,842	4,836	4,825	6	0.1%	17	0.4%
Employed	4,635	4,627	4,623	8	0.2%	12	0.3%
Unemployed	207	209	202	-2	-1.0%	5	2.5%
Unemployment Rate	4.3	4.3	4.2	0.0	XXX	0.1	XXX

Source: Local Area Unemployment Statistics, Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget

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MICHIGAN UNEMPLOYMENT RATE, FEBRUARY 2022–FEBRUARY 2023 (PERCENT)

Michigan: Feb-22 4.2, Mar-22 4.1, Apr-22 4.0, May-22 4.0, Jun-22 4.0, Jul-22 4.1, Aug-22 4.3, Sep-22 4.3, Oct-22 4.4, Nov-22 4.4, Dec-22 4.3, Jan-23 4.3, Feb-23 4.3

U.S.: Feb-22 3.8, Mar-22 3.6, Apr-22 3.6, May-22 3.6, Jun-22 3.6, Jul-22 3.5, Aug-22 3.7, Sep-22 3.5, Oct-22 3.7, Nov-22 3.6, Dec-22 3.5, Jan-23 3.4, Feb-23 3.6

Source: Local Area Unemployment Statistics, Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget

MICHIGAN JOB TRENDS BY INDUSTRY SECTOR

Monthly Overview

Michigan total nonfarm payroll jobs moved up by 0.3 percent (+14,600) to 4,416,400 in February, on a seasonally adjusted basis. Total payroll employment in Michigan has now risen four consecutive months and 21 times over the month within the past two years. Additionally, job gains on the statewide level rose at a faster rate this month than the previous three months. As of February 2023, statewide employment was only 0.7 percent or 33,100 below its February 2020 pre-pandemic job level.

On the nationwide level, total nonfarm payroll jobs increased over the month by 0.2 percent or 311,000, slightly less than the statewide rate of change. Nationally, seasonally adjusted job gains have now been recorded for the past 26 months, surpassing its February 2020 pre-pandemic job level for the ninth time, with the last recorded nonfarm job decline occurring in December 2020.
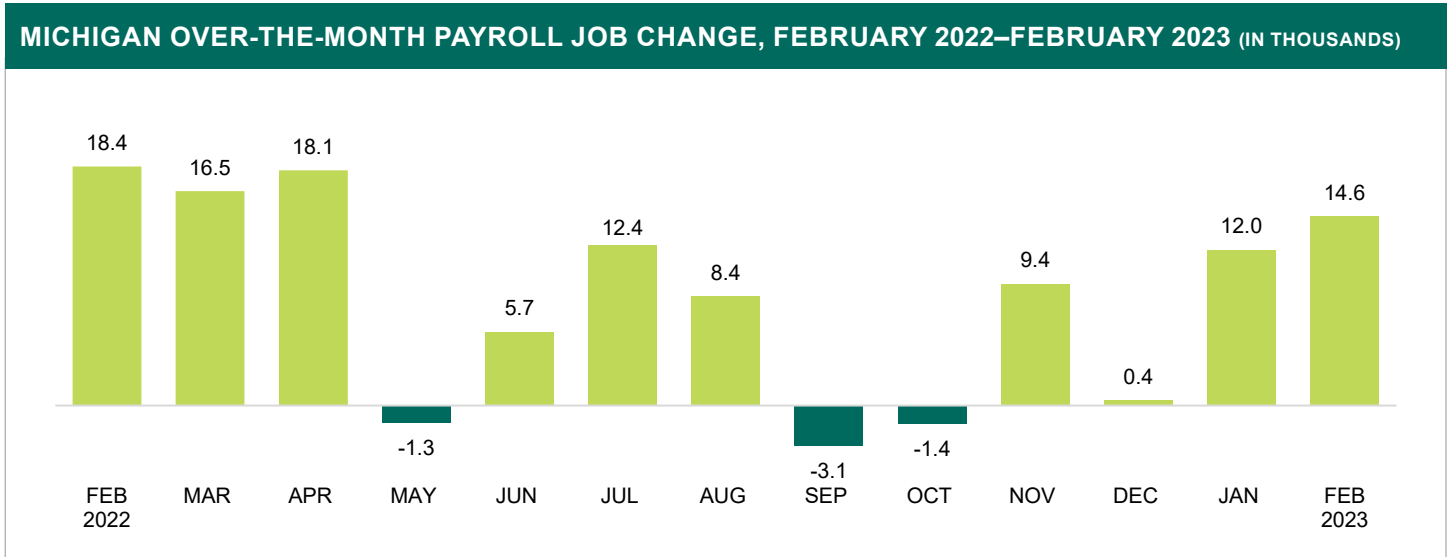
On a percentage basis, noteworthy job additions were recorded within several major industry sectors including *Leisure and hospitality* (+0.9 percent), *Other services* (+0.7 percent), and *Government* (+0.6 percent), during February. Additionally more modest gains were noted over the month within both the *Manufacturing* and *Trade, transportation, and utilities* (+0.5 percent) sectors. Numerically, the *Trade, transportation, and utilities* (+4,000) and *Leisure and hospitality* (+3,800) industries recorded the most significant employment advances, mainly due to notable job increases within their respective subsectors, during February.

Continued job gains among many Michigan industry sectors and subsectors have moved their respective job levels above February 2020 job counts. The majority of major industry sectors recorded employment levels above their February 2020 job counts except for *Manufacturing*, *Education and health services*, *Leisure and hospitality*, *Other services*, and *Government*.

Over-the-Year Analysis

Over the year, total nonfarm payroll jobs in Michigan increased by 91,700 or 2.1 percent since February 2022, notably lower than the national average (+2.9 percent) over the same period. Most major industry sectors recorded yearly job gains. Strong employment advancements occurred within several major industries including, *Mining and logging* (+5.8 percent), *Leisure and hospitality* (+5.3 percent), *Information* (+4.3 percent), and *Construction* (+4.1 percent). Numerically, solid job additions were led by the *Government* (+22,700) and *Leisure and hospitality* (+20,800) sectors.

MICHIGAN OVER-THE-MONTH PAYROLL JOB CHANGE, FEBRUARY 2022–FEBRUARY 2023 (IN THOUSANDS)

FEB 2022	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB 2023
18.4	16.5	18.1	-1.3	5.7	12.4	8.4	-3.1	-1.4	9.4	0.4	12.0	14.6

Source: Current Employment Statistics, Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget

Annual Benchmark Revision Process Adds Jobs to 2022

In partnership with the U.S. Bureau of Labor Statistics, Michigan recently completed its annual benchmark processes for all its state and metro industry series. The newly revised, benchmarked data was reviewed from the second quarter of 2021 through the third quarter of 2022. These data derived principally from the Quarterly Census of Employment and Wages program, which counts jobs covered by the unemployment insurance tax system. In addition, the basis for industry classification in the establishment survey has been revised from the 2017 North American Industry Classification System (NAICS) to NAICS 2022. Furthermore, for the 2022 benchmark, new seasonally adjusted data for series without historical corrections were adjusted back through 2018. Those series with historical corrections will have seasonally adjusted data updated back to the earliest year affected by historical correction.

The total nonfarm employment level for March of 2022 was revised upward by +14,506 or 0.34 percent. Between March 2021 and March 2022, the seasonally adjusted total nonfarm payroll over the year job growth was revised upward from +172,256 to +186,571. On a monthly basis total nonfarm payroll benchmark revisions ranged from -0.13 percent to +0.93 percent, on the statewide level. On the metro area level, total nonfarm payroll benchmark revisions ranged from -2.02 percent (during February 2022 in Ann Arbor) to +5.47 percent (during August 2022 in Midland). At 1.30 percentage points, the Detroit-Livonia-Dearborn area recorded the smallest range of revisions among all Michigan regions. Conversely, at 5.47 percentage points, the Midland region noted the largest range of revision among all Michigan metro areas.
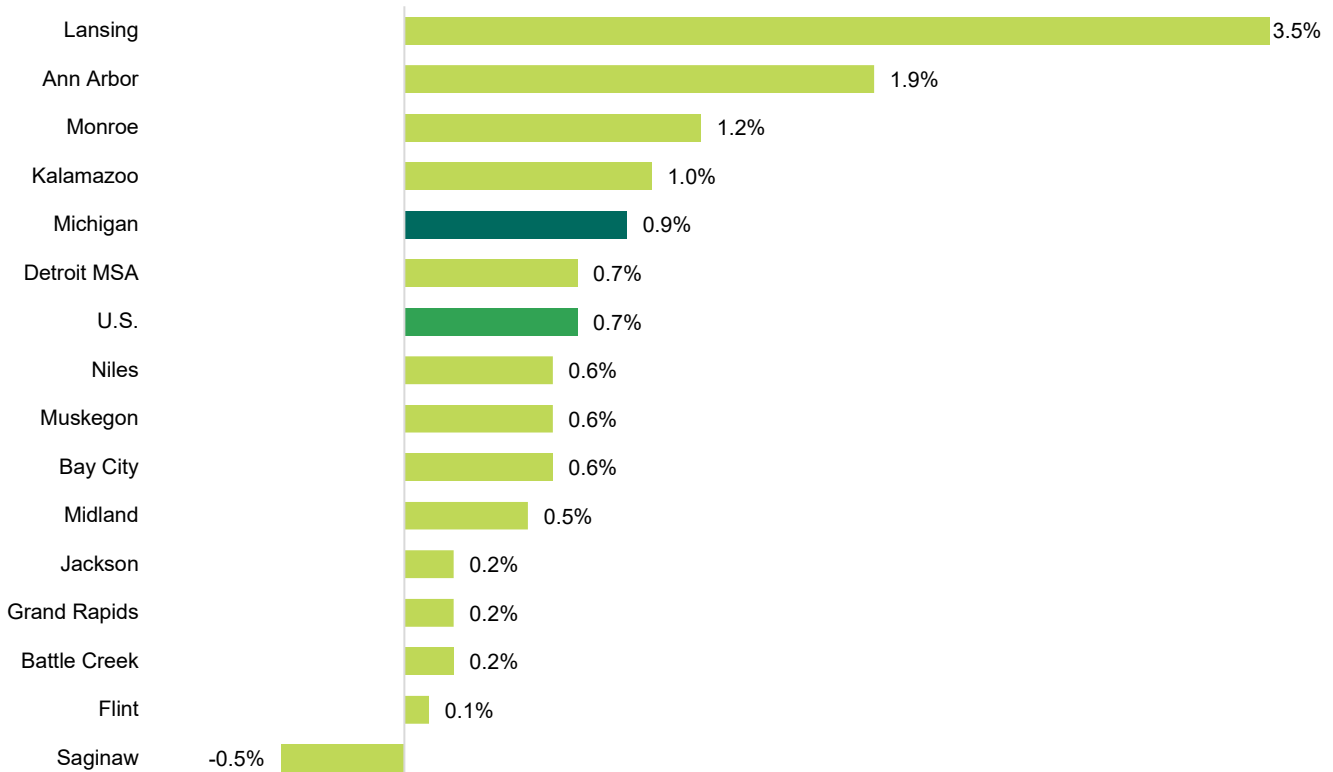
Metropolitan Statistical Areas (MSAs)

Every Michigan Metropolitan Statistical Area (MSA) recorded not seasonally adjusted job gains over the month besides the Saginaw MSA (-0.5 percent). Only four of those 13 metro areas recorded job gains larger than the state's rise (+0.9 percent) in February.

Job growth in the Detroit MSA noted the same percent growth as the nation (+0.7 percent) this month. The 3.5 percent increase in jobs in the Lansing MSA was well above other regions primarily due to state government educational services recovering jobs lost in January.

Manufacturing, Information, and *Other services* jobs remained mostly unchanged in a majority of Michigan's metro areas during February. Conversely, most metro areas in Michigan noted job additions within their respective *Professional and business services* sectors. Furthermore, employment in the *Government* sector recorded typical seasonal job gains in virtually every statewide region.

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JIM BIRNEY
Economic Analyst

MICHIGAN METRO AREA JOB CHANGE, JANUARY–FEBRUARY 2023 (NOT SEASONALLY ADJUSTED)

Metro Area	Job Change
Lansing	3.5%
Ann Arbor	1.9%
Monroe	1.2%
Kalamazoo	1.0%
Michigan	0.9%
Detroit MSA	0.7%
U.S.	0.7%
Niles	0.6%
Muskegon	0.6%
Bay City	0.6%
Midland	0.5%
Jackson	0.2%
Grand Rapids	0.2%
Battle Creek	0.2%
Flint	0.1%
Saginaw	-0.5%

MICHIGAN PAYROLL JOBS (SEASONALLY ADJUSTED)

INDUSTRY	FEB 2023	JAN 2023	FEB 2022	OVER THE MONTH		OVER THE YEAR	
				LEVEL	PERCENT	LEVEL	PERCENT
TOTAL NONFARM	**4,416,400**	**4,401,800**	**4,324,700**	**14,600**	**0.3%**	**91,700**	**2.1%**
Total Private	3,814,000	3,802,700	3,745,000	11,300	0.3%	69,000	1.8%
Private Service-Providing	3,007,200	2,999,900	2,961,800	7,300	0.2%	45,400	1.5%
GOODS-PRODUCING	**806,800**	**802,800**	**783,200**	**4,000**	**0.5%**	**23,600**	**3.0%**
Mining, Logging, and Construction	196,700	195,900	188,800	800	0.4%	7,900	4.2%
Mining and Logging	7,300	7,300	6,900	0	0.0%	400	5.8%
Construction	189,400	188,600	181,900	800	0.4%	7,500	4.1%
Manufacturing	610,100	606,900	594,400	3,200	0.5%	15,700	2.6%
Durable Goods	459,300	456,200	443,800	3,100	0.7%	15,500	3.5%
Transportation Equipment Manufacturing	187,700	186,400	178,000	1,300	0.7%	9,700	5.4%
Non-Durable Goods	150,800	150,700	150,600	100	0.1%	200	0.1%
SERVICE-PROVIDING	**3,609,600**	**3,599,000**	**3,541,500**	**10,600**	**0.3%**	**68,100**	**1.9%**
Trade, Transportation, and Utilities	811,100	807,100	804,700	4,000	0.5%	6,400	0.8%
Wholesale Trade	178,400	177,000	170,300	1,400	0.8%	8,100	4.8%
Retail Trade	454,500	453,900	454,300	600	0.1%	200	0.0%
Transportation, Warehousing, and Utilities	178,200	176,200	180,100	2,000	1.1%	-1,900	-1.1%
Information	57,600	57,900	55,200	-300	-0.5%	2,400	4.3%
Financial Activities	228,200	228,200	233,300	0	0.0%	-5,100	-2.2%
Finance and Insurance	171,200	171,300	177,300	-100	-0.1%	-6,100	-3.4%
Real Estate and Rental and Leasing	57,000	56,900	56,000	100	0.2%	1,000	1.8%
Professional and Business Services	660,700	660,900	656,100	-200	0.0%	4,600	0.7%
Professional, Scientific, and Technical Services	318,200	318,400	311,600	-200	-0.1%	6,600	2.1%
Management of Companies and Enterprises	71,200	71,300	70,600	-100	-0.1%	600	0.8%
Administrative and Support and Waste Management and Remediation Services	271,300	271,200	273,900	100	0.0%	-2,600	-0.9%
Education and Health Services	673,000	674,200	656,700	-1,200	-0.2%	16,300	2.5%
Educational Services	76,100	77,000	72,300	-900	-1.2%	3,800	5.3%
Health Care and Social Assistance	596,900	597,200	584,400	-300	-0.1%	12,500	2.1%
Leisure and Hospitality	415,100	411,300	394,300	3,800	0.9%	20,800	5.3%
Arts, Entertainment, and Recreation	51,500	51,800	47,800	-300	-0.6%	3,700	7.7%
Accommodation and Food Services	363,600	359,500	346,500	4,100	1.1%	17,100	4.9%
Other Services	161,500	160,300	161,500	1,200	0.7%	0	0.0%
Government	602,400	599,100	579,700	3,300	0.6%	22,700	3.9%
Federal Government	55,000	54,900	53,900	100	0.2%	1,100	2.0%
State Government	182,100	179,600	172,800	2,500	1.4%	9,300	5.4%
Local Government	365,300	364,600	353,000	700	0.2%	12,300	3.5%

Source: Current Employment Statistics, Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget
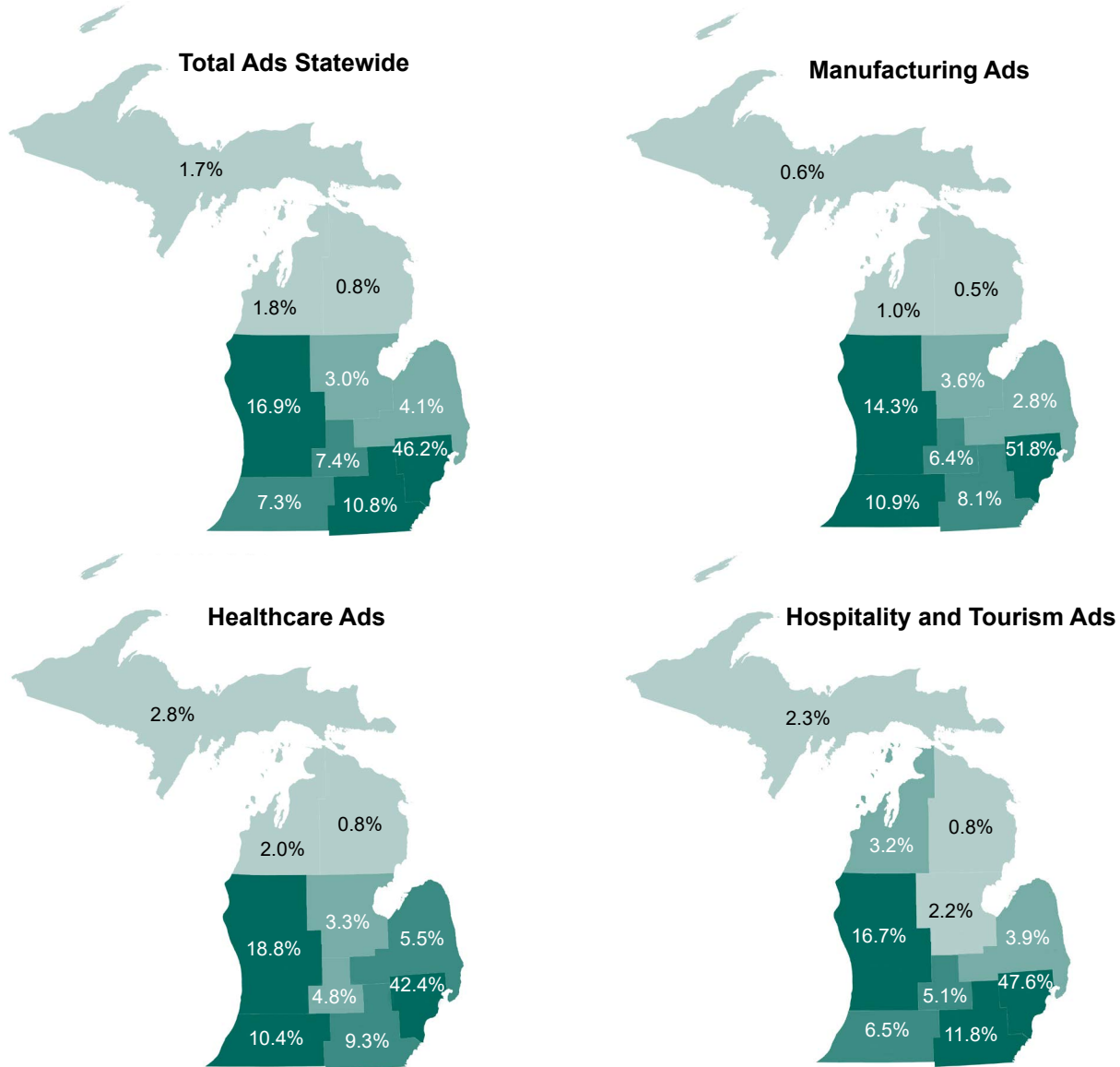
SHARE OF ONLINE JOB ADVERTISEMENTS BY MICHIGAN PROSPERITY REGION

Total Ads Statewide

Manufacturing Ads

Healthcare Ads

Hospitality and Tourism Ads

These maps, from the Michigan Industry Cluster Workforce Analysis reports, show the share of total online job advertisements for Michigan's prosperity regions by total statewide ads or specified to a cluster. Comparing these maps can help reveal where job openings for certain industries are more heavily advertised. Each report contains the regional share of ads from all industries and a comparison map of ads within the cluster by prosperity region. A full year of data is used to eliminate seasonal swings. Several regions and clusters reveal variations. For example, the distribution of Healthcare ads is closely aligned with total ads in many regions such as the Northeast, Northwest, and East Central where both percentages are within one point of each other. Meanwhile,

other regions deviate significantly like South Central Michigan which has 7.4 percent of all ads, but only 4.8 percent of Healthcare ads. Other clusters vary as well, such as Manufacturing where ads are more concentrated in the Detroit Metro and Southwest regions. This distribution varies greatly from ads in Hospitality and Tourism which are more concentrated in the Upper Peninsula and Northwest compared to total ads.

EVAN LINSKEY
Research Manager

A GLIMPSE AT MICHIGAN'S INDUSTRY CLUSTER REPORTS

The Michigan Center for Data and Analytics recently published eight industry cluster reports in partnership with the Michigan Department of Labor and Economic Opportunity. The eight industry clusters covered by the reports are Agriculture, Construction, Energy, Healthcare, Hospitality and Tourism, Information Technology, Manufacturing, and Mobility. These reports were designed to explore industry clusters in Michigan through a variety of data sources, including key occupations, education and training requirements, online job advertisements, occupational projections, workforce

demographics, the talent pipeline and more. The intention of each report is to support workforce development across the state and to highlight the position of each cluster in Michigan.

This article features select portions directly from individual reports to highlight some of the available information. Each report closely mirrors the other reports, where data was available, so most information in this article can be found for each cluster. View and download the full reports on the Michigan Labor Market Information website.

Employment and Wages (Information Technology)

Employment in the Information Technology industry cluster has been continuously growing, apart from 2020 and the impacts of the COVID-19 pandemic. To calculate the growth rates in Figure 1, employment was set equal to 100 in 2011 for both Information Technology and Michigan and changes were calculated from there. Employment in the cluster has been growing at a much faster pace than total statewide employment growth since 2011. Over the last decade, employment

FIGURE 1: **EMPLOYMENT INDEX, MICHIGAN INFORMATION TECHNOLOGY CLUSTER (INDEX YEAR: 2011)**
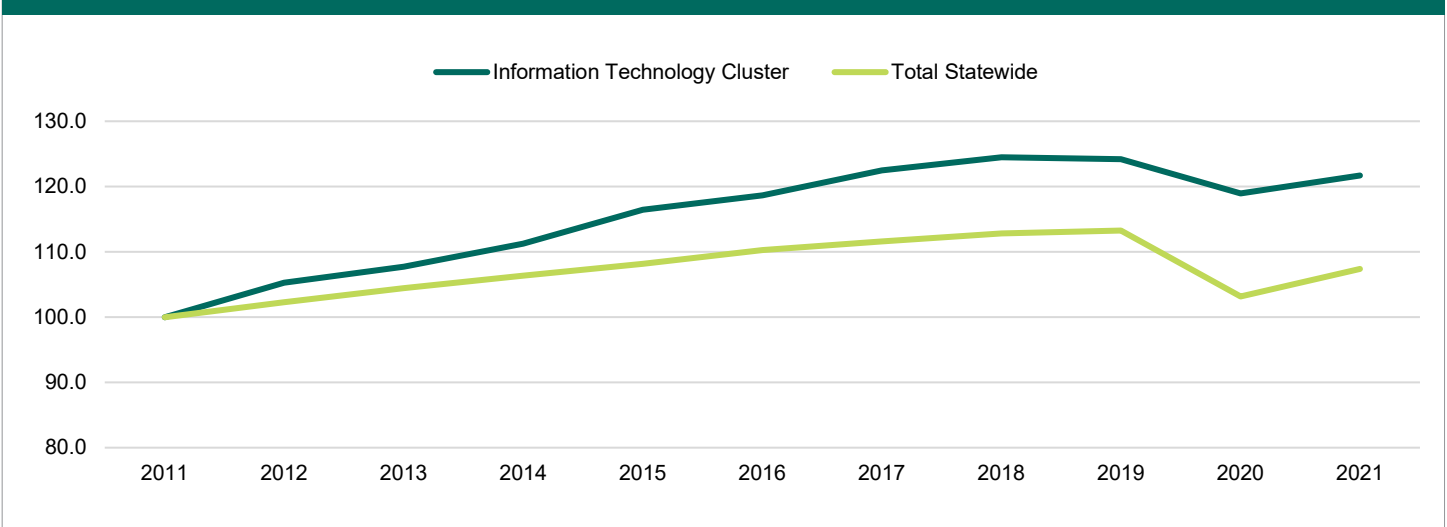
Source: Quarterly Census of Employment and Wages, Michigan Center for Data and Analytics

Food Services, 71.3%

Entertainment and Other Services, 18.1%

Accomoda-tion, 10.5%

Source: Quarterly Census of Employment and Wages, Michigan Center for Data and Analytics

in Information Technology grew by just under 22 percent from 122,300 employees to 148,800. Over the same period, statewide employment grew by 7.4 percent.

Average annual salaries in Information Technology increased by more than 30 percent since 2011. This represents an increase of about $2,100 per year from $75,500 in 2011 to $98,700 in 2021. Prior to 2017, average earnings in the state and in Information Technology were increasing at similar rates. Since then, the cluster has fallen slightly behind the state's pace of growth. However, Information Technology workers currently earn average salaries much higher than the statewide average of $61,700.

Subclusters (Hospitality and Tourism)

FOOD SERVICES

Food services holds the largest share of Hospitality and Tourism employment at 71.3 percent. This subcluster includes industries such as *Restaurants and other eating places*, *Drinking places (alcoholic beverages)*, and *Special food services, like catering*. This subcluster does not capture places such as *Breweries*. Total employment in this subcluster is 281,400, with average earnings of $21,400, slightly below the overall average for the cluster. Even though this subcluster has the lowest average wages, earnings have grown just over 17 percent from pre-pandemic wages of $18,100.

ENTERTAINMENT AND OTHER SERVICES

The *Entertainment and other services* subcluster makes up the next largest employment share in Hospitality and Tourism with 71,600 employed. This subcluster covers a broad range including *Golf courses and country clubs* or other
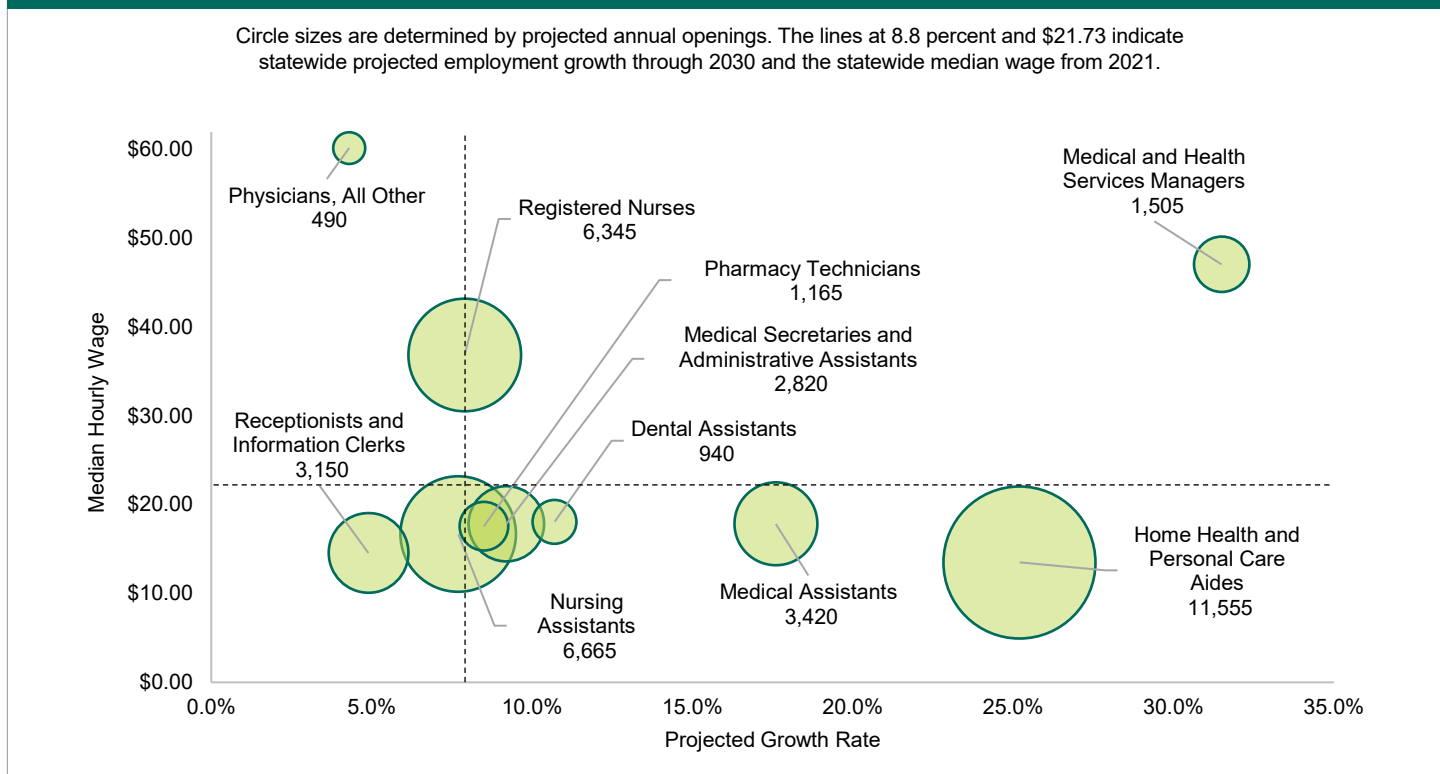
Outdoor recreation to *Hairdressers* and *Travel agencies*. This group has the highest average salary in the industry cluster at $35,100, which is almost exactly $10,000 higher per year than the cluster average. This is largely because of *Spectator sports*, which has an average annual salary of $272,500, nearly eight times greater than the average salary of *Entertainment and other services*. This alone inflates the average earnings in the subcluster to appear much higher than they would be otherwise. Without *Spectator sports earnings*, the subcluster would have an average annual salary of $28,300, which is much closer to the overall cluster average.

ACCOMMODATION

Although *Accommodation* is the subcluster with the lowest share of overall employment in Hospitality and Tourism, it still makes up over 10 percent of the cluster with 41,500 employees. This subcluster includes industry groups such as *Traveler accommodation*, *RV (recreational vehicle) parks and recreational camps,* and *Rooming and boarding houses*. The average annual salary in this subcluster in 2021 was $34,100, which is up by 16 percent since 2019 ($29,500).

FIGURE 3 **KEY OCCUPATIONS, MICHIGAN HEALTHCARE CLUSTER, 2021**

Circle sizes are determined by projected annual openings. The lines at 8.8 percent and $21.73 indicate statewide projected employment growth through 2030 and the statewide median wage from 2021.

Source: 2021 Occupational Employment and Wage Statistics, Michigan Center for Data and Analytics (Wages);
2020–2030 Long-term Occupational Projections, Michigan Center for Data and Analytics (Projected Growth Rate and Annual Openings)

Key Occupations (Healthcare)

Occupational analysis is important to understanding an industry cluster. Key occupations are chosen by a favorable mix of criteria that include the occupation's share of the cluster's total employment, the concentration within the cluster, and the projected outlook for that occupation. Due to the occupations having large volumes within the cluster, they are generally representative of the expected wages, education, and skills within the industry cluster.

- Key occupations in the Healthcare cluster cover the full spectrum of typical education and training. While some occupations have lower barriers to entry, requiring only a high school diploma and on-the-job training, several also require master's or doctoral-level degrees.

- With more than 100,000 *Registered nurses* (RNs) in the state, around one in 40 (2.5 percent) jobs in the state are RNs. This occupation is the third largest in the state only slightly trailing *Retail salespersons* and *Fast food and counter workers*. RNs have opportunities outside of Healthcare with positions in education, government, insurance, and other industries.

- Many key Healthcare occupations are almost entirely captured within the Healthcare cluster in terms of employment. This proportion can be seen by comparing the Cluster Employment column with the Michigan Employment column in the table within the full report. Some occupations, such as *Maids and housekeeping cleaners*, are spread across numerous industries while other occupations, such as *Physician assistants*, are almost entirely within the cluster.

Apprenticeships (Construction)

The Construction industry cluster is considered a traditional apprenticeship sector along with Manufacturing. This is because these two industries typically make up the majority of apprentices. Usually, Construction is the largest apprenticeship cluster, and this held true in 2021. There were 11,978 active registered apprentices in the cluster across Michigan. Nearly all (93.6 percent) of these were in the industry of *Specialty trade contractors*. There was slightly above-average representation in the cluster compared to all apprentices among people of color (12.6 percent) and veterans (6.4 percent). There was a below-average share of women in the cluster of 4.0 percent. The Detroit

Metro region had the largest share of active apprentices at 44.7 percent. East Michigan had the second most active apprentices in the Construction cluster at 22.4 percent.

The number of newly registered apprentices in Construction increased dramatically in the middle part of the last decade following an influx of funding and resources for registered apprenticeships in Michigan. From 2008 to 2015, there was an average of just under 2,000 new apprentices in the cluster. From 2016 to 2021, there was an average of more than 3,600 each year. This peaked at 4,378 in 2020. The number of Construction completers bottomed out at nearly 500 in 2014 but have increased every year since. There were just over 1,000 completers in the cluster in both 2019 and 2020 and more than 1,100 in 2021.

Real-Time Demand (Manufacturing)

Real-time demand is measured as the number of job advertisements posted online for an occupation or industry. The data is provided by Burning Glass Technologies and The Conference Board Help Wanted Online. Over time, online job advertisements have become

FIGURE 4: ONLINE JOB ADVERTISEMENTS INDEX, MICHIGAN MANUFACTURING CLUSTER (INDEX YEAR: 2015)
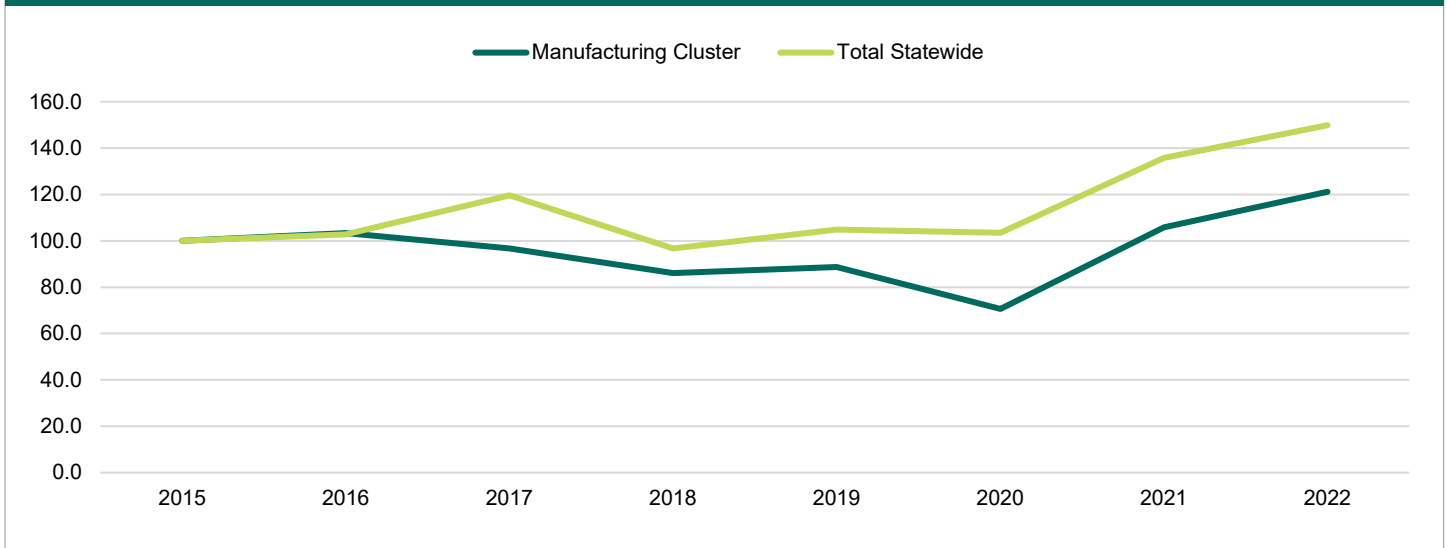
Source: The Conference Board Help Wanted OnLine, Burning Glass Technologies

more prevalent as technology becomes a more prominent method of communication. The use of online job postings still varies by industry with some areas of the economy being more reliant on methods such as word-of-mouth or local advertisements. Online job advertisements, however, can provide a mix of information about an industry cluster such as total available ads, top requested skills and certifications, minimum education requirements, and more.

Between 2015 and 2020, online job advertisements had been on a downward trend in the Manufacturing cluster. After the initial impacts in 2020 from COVID-19, online job advertisements began to increase in the cluster, just like what was observed at the total statewide level. However, the Manufacturing cluster has

been well behind the state in terms of online job ad growth since 2016. Each level of 2015 online job advertisements were set equal to 100 and the changes were calculated from there. In both 2021 and 2022, the cluster surpassed its 2015 job advertisement levels.

Minimum education requirements in online job ads for this cluster are mainly split between high school diplomas or equivalent and bachelor's degrees. Few job ads for this cluster require at least an associate degree and even less require a master's degree or above. This is typical of the education and training requirements for key occupations in Manufacturing. It is not a cluster that advertises heavily for workers with higher levels of education.

Employment Projections (Agriculture)

Projections do not exist for industry clusters as a whole but they do exist for industries and occupations that make up the industry cluster. Although projections through 2030 show nearly 9 percent growth in total statewide employment, it is important to remember that these projections begin with a base year of 2020, where total employment was down compared to prior years.

Figure 5 shows the occupations with the highest projected growth rates within the Agriculture cluster. All of them, except *Conveyer operators and tenders*, are also among the cluster's key occupations. Together, these top five

FIGURE 5: MICHIGAN AGRICULTURE CLUSTER OCCUPATIONS WITH THE MOST PROJECTED ANNUAL OPENINGS THROUGH 2030
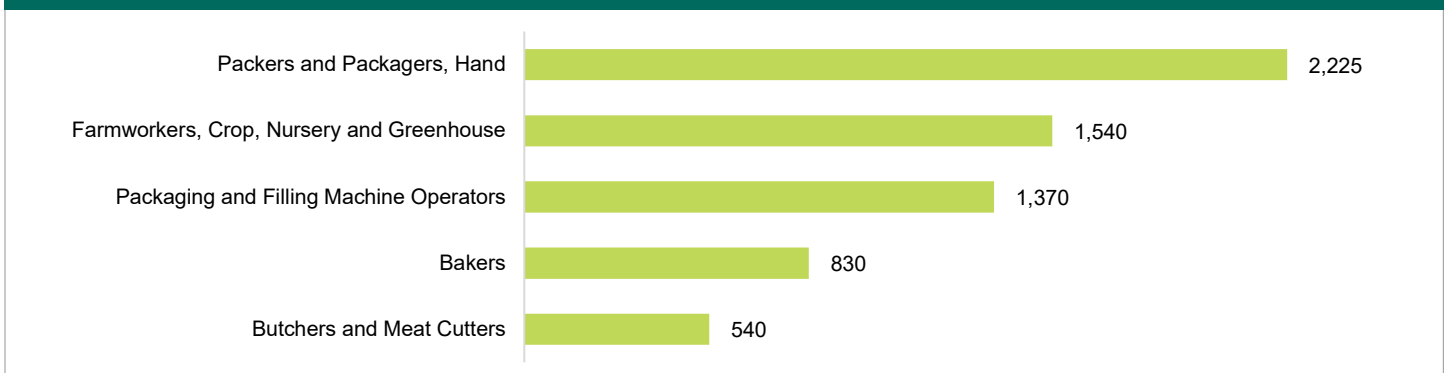
Source: 2020–2030 Occupational Employment Projections, Michigan Center for Data and Analytics

occupations are expected to add over 1,300 jobs by 2030. Each occupation requires on-the-job training but no more education than a high school diploma or equivalent.

Agriculture occupations with the most projected annual openings through 2030 are shown in the report. Similar to the occupations with the highest projected growth, all but *Butchers and meat cutters* are on the list of key occupations. The only occupation requiring formal education is *Packaging and filling machine operators and tenders*. The remaining four occupations only require on-the-job training. For individuals who are working toward completing their high school education, or never obtained their degree, occupations in the Agriculture cluster can offer various opportunities for employment.
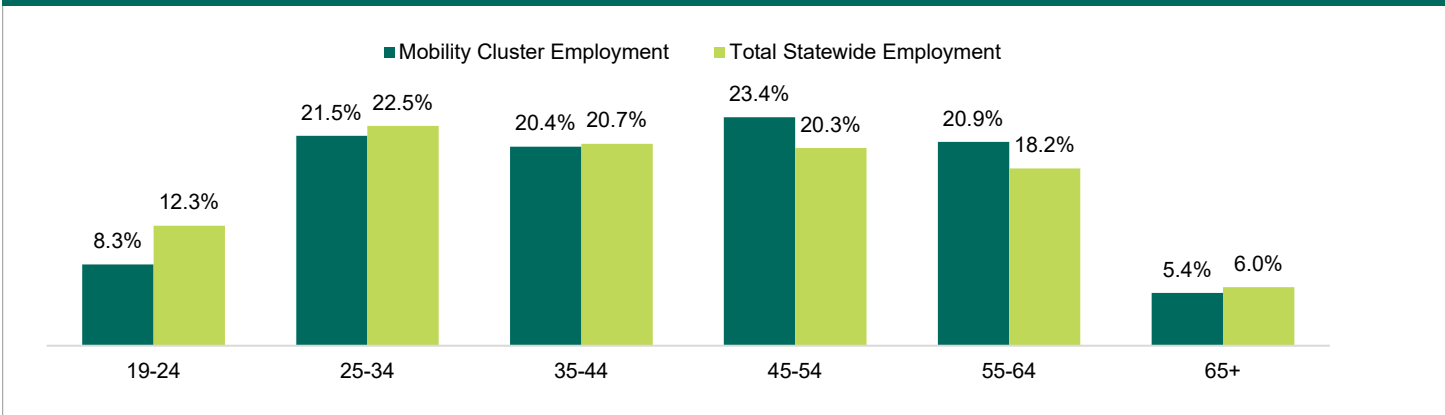
Workforce Demographics (Mobility)

Data on workforce demographics such as gender, age, education, and race or ethnicity are important to identifying industry cluster characteristics and evaluating potential disparities. Understanding and addressing gaps in education and skills across demographic groups can aid the growth of an industry cluster. In order to maintain or attract younger workers across an industry cluster, employers may need to acclimate to what their workforce values, such as opportunities for financial and professional gain. The following section displays characteristics of the Mobility cluster workforce in Michigan. These data analyses rely on the Longitudinal Employer-Household

Dynamics program and may vary from industry data published by the Quarterly Census of Employment and Wages due to limitations of data availability and differences in collection time periods.

The Mobility cluster is most heavily represented in the Detroit Metro Prosperity Region. Other regions with a greater concentration of Mobility employment include the East, Southeast, and South Central Michigan regions. Both the Upper Peninsula and Northwest Michigan regions have a lower share of Mobility cluster employment compared to the rest of the state.

The older age groups of 45 to 54 and 55 to 64 are more represented in the Mobility cluster compared to statewide employment, each

FIGURE 6: MICHIGAN MOBILITY CLUSTER EMPLOYMENT BY AGE, THIRD QUARTER 2021

■ Mobility Cluster Employment   ■ Total Statewide Employment

Age	Mobility Cluster Employment	Total Statewide Employment
19-24	8.3%	12.3%
25-34	21.5%	22.5%
35-44	20.4%	20.7%
45-54	23.4%	20.3%
55-64	20.9%	18.2%
65+	5.4%	6.0%

Source: Third Quarter 2021 Longitudinal Employer-Household Dynamics program, U.S. Census Bureau

	2017	2018	2019	2020	2021
	1,369	1,534	1,396	1,369	1,497
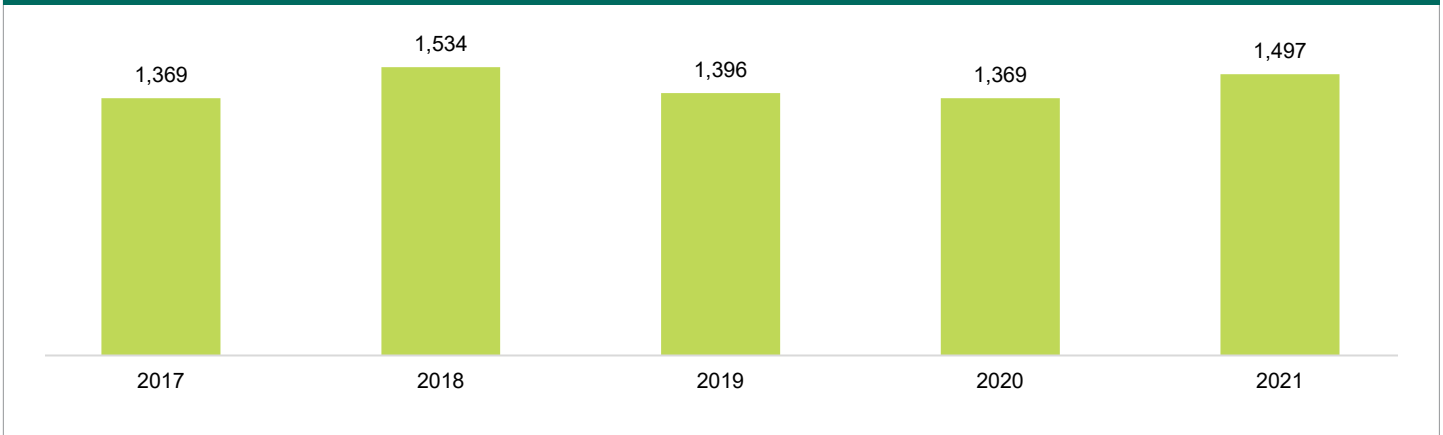
Source: National Center for Education Statistics, Integrated Postsecondary Education Data System

having a share over 2.5 percentage points greater in the cluster than total. This difference is largely offset by the share of 19- to 24-year-olds employed in the cluster, which is 4.0 percentage points less than the share for total statewide employment.

Talent Pipeline (Energy)

Data for education program completers of instructional programs are available from the National Center for Education Statistics. These data can be used to estimate ever-changing levels of supply for some occupations in the labor market. There are no officially defined programs for clusters. Certain programs are more likely to lead to work in the Energy cluster than others, but there are opportunities across the educational spectrum including business, architecture, and computer science programs. This section will highlight only a few of the

hundreds of possible programs that can lead to a job in the Energy cluster. Many factors can shift completers, such as increase in student enrollment during periods of high unemployment or difficulties attending school during a pandemic. For example, demand for workers may be causing upward pressures on programs while other factors such as a lack of instructors are causing total completers to decrease.

The Energy cluster is composed of occupations requiring various levels of education. For occupations requiring less than a postsecondary certificate, the talent pipeline for a particular profession may not be best represented by completions of academic programs. For example, the two largest occupations in the cluster, *Electricians* and *Plumbers, pipefitters, and steamfitters*, require apprenticeships rather than postsecondary awards. While there were fewer than 100 combined completions of

postsecondary programs providing preparation for these occupations in 2021, there were 470 and 235 apprenticeship completers for *Electricians* and *Plumbers, pipefitters, and steamfitters*, respectively.

Conclusion

This article features sections from each of the eight cluster reports, which can be read in their entirety on the Michigan Labor Market Information website. For more information, contact the Michigan Center for Data and Analytics.

EVAN LINSKEY
Research Manager

FEBRUARY JOB ADVERTISEMENTS DECLINE

There were 176,300 total job advertisements in the month of February. Of these, 69,500 were new job postings, which indicates they first appeared in February and did not carry over from previous months. This was a slight decrease (-1.6 percent) from January, which had 179,200 total ads. Additionally, this was a 25.8 percent decrease from one year ago in February 2022, which had 237,700 total advertisements. This marks the fourth consecutive month of decline in online job advertisements.

Education

Most of the online job ads in February required a minimum education level of high school diploma or equivalent, with 52,800 advertisements (47.9 percent). The next most advertised minimum education level was for those with a bachelor's degree, with 41,000 total ads (37.2 percent). Notably fewer employers were advertising for positions that require an associate degree, with just 10,500 ads (9.5 percent). Lastly, the fewest number of job ads required a minimum education level of master's degree or higher, with just 5,900 ads (5.3 percent).

TOTAL AVAILABLE ONLINE JOB ADVERTISEMENTS IN MICHIGAN, FEBRUARY 2022–FEBRUARY 2023
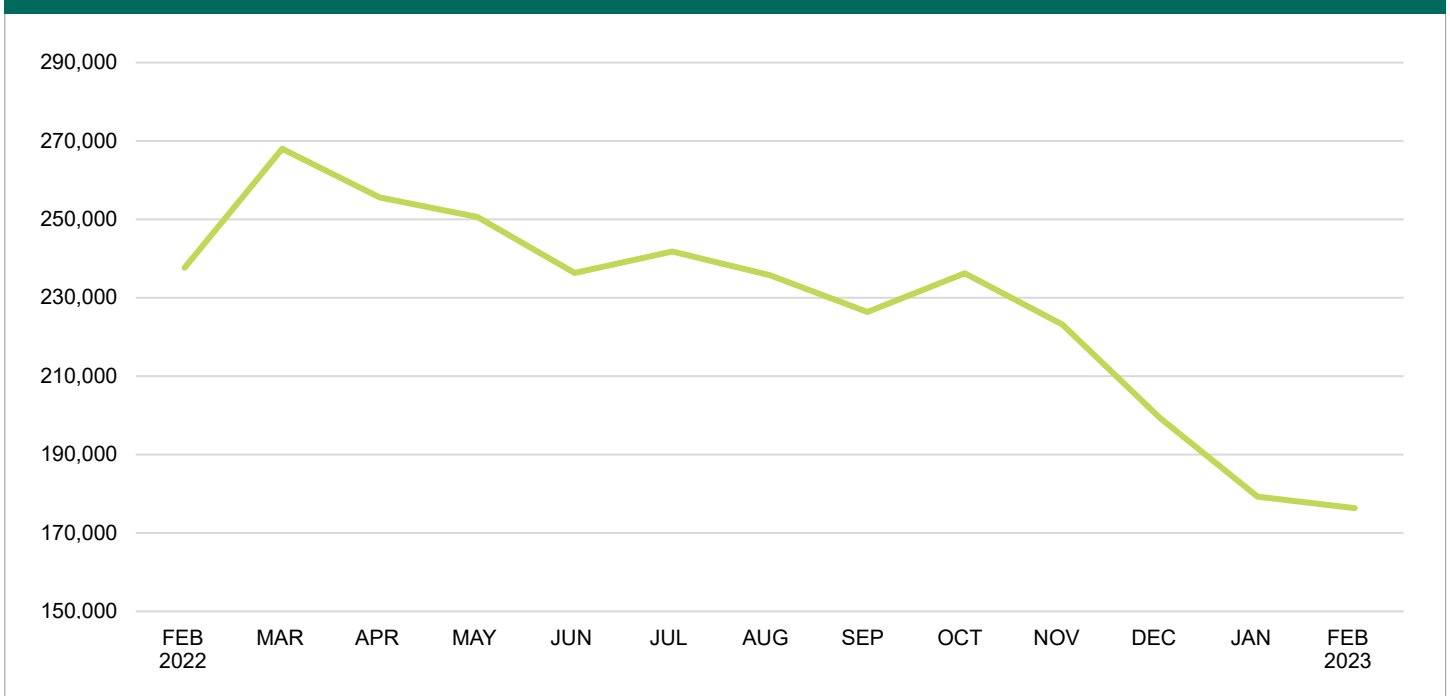
Source: The Conference Board Help Wanted OnLine®, Burning Glass Technologies

Skills

The top software and programming skills requested during February 2023 were Microsoft Office, Excel, and PowerPoint. Software and programming skills can be defined as knowledge of specific computer applications and/or programs. The top baseline skills listed for February were communication skills, teamwork/collaboration, and physical abilities. A baseline skill can be interpreted as a skill that is nonspecialized and can be applicable to a variety of occupations. Lastly, the top specialized skills for February were customer service, scheduling, and sales. A specialized skill refers to occupation-specific skills and could require more training than baseline skills.

Health Care and Social Assistance Industry Job Ads

The *Health care and social assistance* industry is one of the most prominent in the state and the online job advertisement data from February 2023 highlights the demand in this sector. Of the top 10 employers with the most job advertisements, six fall into the *Health care and social assistance* industry. Combined, Henry Ford Health System, Corewell Health, McLaren Health Care, Ascension Health, and Trinity Health represent 9,400 (5.3 percent) of the 176,300 total job advertisements available in February.

Additionally, *Registered nurses* are the most advertised occupation across the state, with 7,900 online ads. Last year in February 2022, *Register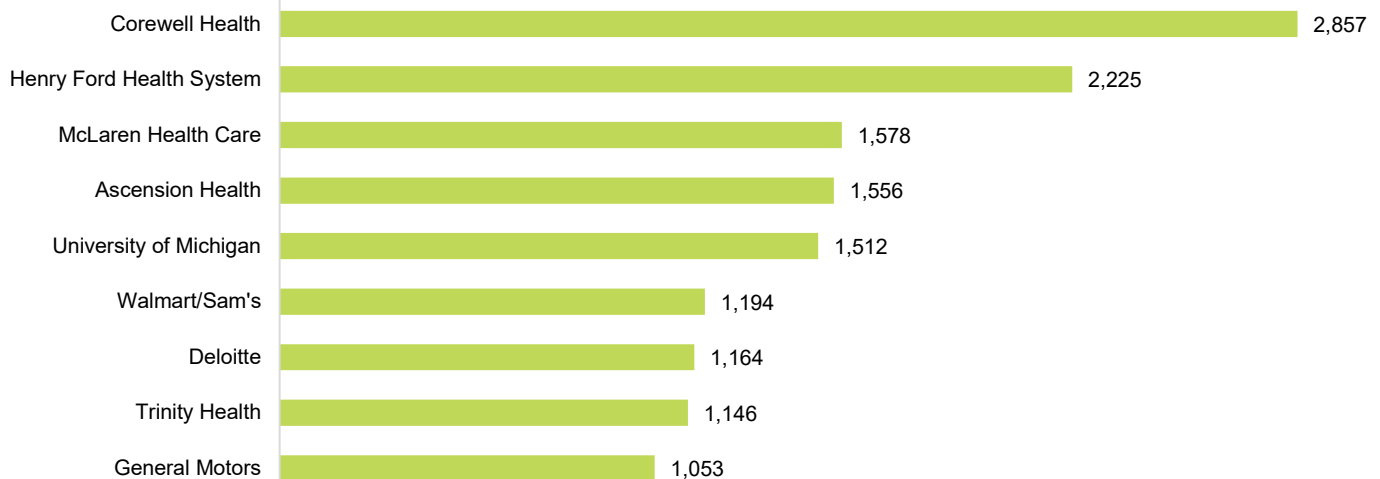ed nurses* were the second most advertised job opening with just over 7,700 ads. Unsurprisingly, the top five most requested certifications for February 2023, were registered nurse (7,300), basic life saving (4,500), first aid CPR AED (3,800), basic cardiac life support certification (2,900), and advanced cardiac life support certification (2,000). Most of the *Health care and social assistance* advertisements are posted within the Detroit-Warren-Dearborn Metropolitan Statistical Area (MSA), but the Grand Rapids-Wyoming MSA contributed many openings as well.

View the most recent online job ad information for the state and by Michigan Prosperity Region with the Michigan Online Job Advertisements Dashboard.

AMELIA ARNOLD
Student Assistant

EMPLOYERS WITH THE MOST ONLINE JOB OPENINGS IN MICHIGAN, FEBRUARY 2023

Employer	Openings
Corewell Health	2,857
Henry Ford Health System	2,225
McLaren Health Care	1,578
Ascension Health	1,556
University of Michigan	1,512
Walmart/Sam's	1,194
Deloitte	1,164
Trinity Health	1,146
General Motors	1,053

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

JOB OPENINGS AND LABOR TURNOVER ANNUAL AVERAGES DOWN IN 2022

Job openings increased by more than a full percentage point in the latest release of Michigan Job Openings and Labor Turnover (JOLTS) data for December 2022 (7.8 percent). Both the hires and labor turnover rate were up as well, at 4.0 percent and 7.6 percent respectively. Separations (3.6 percent), quits (2.5 percent), and layoffs and discharges (1.0 percent) were all stagnant in the month of December. The ratio of openings to unemployment was the only survey indicator to decline (0.57).

Job Openings

Michigan had the 6th highest rate of job openings in December at 7.8 percent, an increase of 1.5 percent from the month prior. This was reflected in 83,000 more job openings in December than November. Michigan had a higher rate than the nation over the same period (6.8 percent).

The openings to unemployed ratio decreased to 0.57 in December. This indicated there were less than six unemployed individuals per job opening, a marked change from November (0.73) and nearly equal to the national ratio (0.51).

Hires

The hires rate increased marginally from November to December, growing 0.2 percentage points to 4.0 percent. This small increase was due to Michigan employers hiring a modest 9,000 more employees than the previous month. Michigan had the 37th highest rate of hires and was equal to the national rate for December.

Separations

The rate of separations was stagnant, remaining at 3.6 percent for the second month in a row. Michigan's hires rate remains slightly below the national rate of 3.8 percent.

Similarly, the quits rate remained the same at 2.5 percent for the third consecutive month. The layoffs and discharges rate showed little movement well, which was recorded at 1.0 percent for December. The quits rate was slightly lower than the national rate (2.6 percent) while layoffs and discharges were equal.

2022 Year in Review

Comparing 2021 and 2022 JOLTS annual averages, Michigan experienced a decline across all survey indicators. The most significant drop was observed in the labor turnover rate: the average rate of turnover was 7.7 in 2022, compared to 9.3 percent in 2021 (-1.6 percent). The labor turnover rate in Michigan was lower than the national average (7.1 percent) in 2022. Michigan averaged a 7.0 percent job openings rate for 2022, a 0.5 percent decline from the year prior. This was, however, higher than the 2022 national average (6.8 percent). Excluding job openings, all other survey indicators were either equal to or below the national average in their respective categories. Overall, when comparing 2021 and 2022 annual averages, most of the changes were relatively negligible, with all except labor turnover declining by less than a full percentage point.

KRYSTAL JONES
Economic Analyst

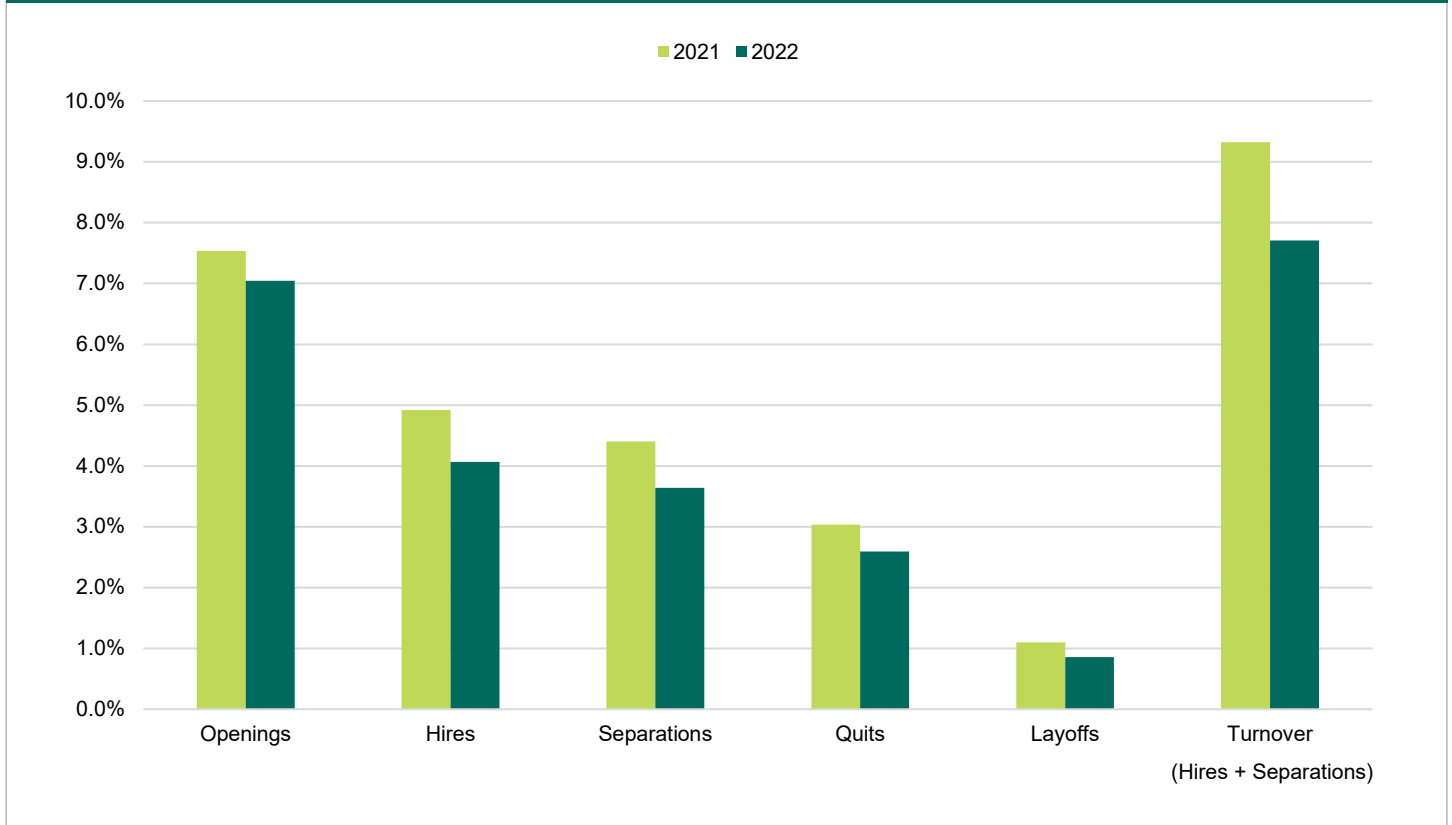## JOB OPENINGS RATE, MICHIGAN AND THE U.S., DECEMBER 2021–DECEMBER 2022
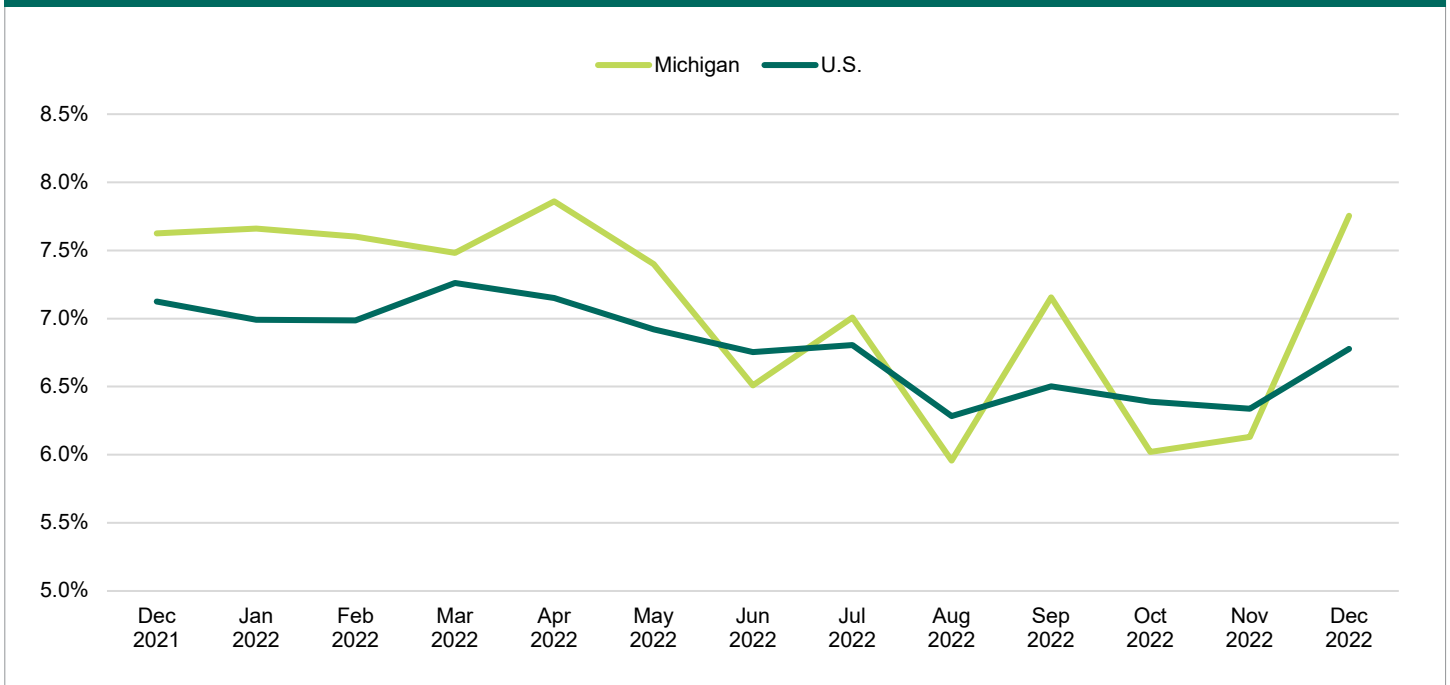
Source: Job Openings and Labor Turnover Survey, U.S. Bureau of Labor Statistics

MICHIGAN JOLTS ANNUAL AVERAGE RATES

Source: Job Openings and Labor Turnover Survey, U.S. Bureau of Labor Statistics

RELEVANT RANKINGS

2022 ANNUAL AVERAGE UNEMPLOYMENT RATES BY SELECT STATES

RANKING	STATE	ANNUAL UNEMPLOYMENT RATE (PERCENT)
50	Nevada	5.4
49	Illinois	4.6
48	Delaware	4.5
47	Pennsylvania	4.4
46	New York	4.3
41	California	4.2
41	Connecticut	4.2
41	Michigan	4.2
41	Oregon	4.2
38	Alaska	4.0
38	New Mexico	4.0
38	Ohio	4.0
34	Kentucky	3.9
34	Mississippi	3.9
32	Arizona	3.8
32	Massachusetts	3.8
29	Louisiana	3.7
29	New Jersey	3.7
29	North Carolina	3.7

Source: Local Area Unemployment Statistics, Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget

POPULATION CHANGE BY SELECT MICHIGAN COUNTIES, 2020 TO 2022

RANK	MSA	2022	2020	NUMERIC CHANGE	PERCENT CHANGE
1	Keweenaw County	2,180	2,055	125	6.10%
2	Montmorency County	9,569	9,154	415	4.50%
3	Lake County	12,594	12,100	494	4.10%
4	Crawford County	13,491	12,994	497	3.80%
5	Antrim County	24,249	23,428	821	3.50%
6	Presque Isle County	13,361	12,981	380	2.90%
7	Leelanau County	22,870	22,304	566	2.50%
8	Mecosta County	40,720	39,713	1,007	2.50%
9	Alcona County	10,417	10,167	250	2.50%
10	Otsego County	25,644	25,095	549	2.20%
74	Houghton County	37,035	37,360	-325	-0.90%
75	Berrien County	152,900	154,320	-1,420	-0.90%
76	Saginaw County	188,330	190,128	-1,798	-1.00%
77	Bay County	102,821	103,856	-1,035	-1.00%
78	Menominee County	23,266	23,500	-234	-1.00%
79	Genesee County	401,983	406,217	-4,234	-1.00%
80	Chippewa County	36,293	36,784	-491	-1.30%
81	Gratiot County	41,100	41,752	-652	-1.60%
82	Washtenaw County	366,376	372,265	-5,889	-1.60%
83	Wayne County	1,757,043	1,793,549	-36,506	-2.00%

Source: Vintage 2022 Population Estimates, U.S. Census Bureau,

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