Women in the Michigan Workforce

March 2024

MICHIGAN
Center for Data and Analytics

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Acknowledgments

This report is an updated version of the 2021 *Women in the Michigan Workforce* report with an expanded focus on education, training, and regional information. In addition, the current report uses different age groupings and calculations, so it is not directly comparable to the 2021 report.

Table of Contents

Executive Summary

Women make up just under 50 percent of the Michigan labor force. Addressing issues that impact women's education, earnings, and ability to participate in the labor force is in the best interest of the Michigan economy. This report summarizes disparities faced by women in an effort to help define the scope of the issue.

Michigan women who work full-time, year-round earn approximately 81 cents per dollar that men earn. This discrepancy only becomes more prominent when looking at hours worked, race and ethnicity, and educational attainment.

Labor force participation rates for women are below those of men. In Michigan, women had a participation rate of 57.3 percent which is nearly 10 percentage points below the rate of 67.2 percent for men.

Women are more likely than men to hold multiple jobs and are less likely to work full-time. Approximately 50 percent of women worked more than 35 hours per week compared to nearly 70 percent of men.

Poverty is more likely to impact women than men. In 2022, 14.6 percent of Michigan women were impoverished compared to 12.1 percent of men. Like earnings, this gap only becomes more pronounced when broken down by different demographics.

Women often work in service-related industries and occupations that typically offer below-average earnings. Roughly four of every five women worked in an industry where average earnings for women were below the all-industry average.

Women are underrepresented in STEM fields, which are typically high-demand, high-wage occupations. Despite earning close to 60 percent of the total degrees and certificates awarded, women only accounted for about 38.8 percent of degrees and certificates in STEM.

The share of women in Registered Apprenticeships is growing, but still small. Women made up one in every 10 active registered apprentices, an increase from the roughly one in every 12 in 2014.

Women with children under five participate in the labor force at rates more than 20 percentage points lower than their male counterparts. This, and other data, shows the responsibility of caring for young children often falls on women, impacting their ability to work.

Women in the Michigan Workforce

This report aims to highlight key factors that contribute to challenges women in the workforce face. The disparities are not Michigan-specific but are observed across the nation. Discrepancies in average pay, hours worked, and labor force participation are just some of the areas highlighted in this report. Gaps among men and women are only further exacerbated when broken down by demographics such as race and ethnicity, presence of children, and age groups. This report offers key insights and understanding on areas of longstanding inequity by providing sound data analysis to inform decision-makers.

Labor Force and Unemployment

Economic prosperity can be measured in a variety of ways. Labor force participation, employment, and unemployment rates are some of the most used and well-understood metrics.
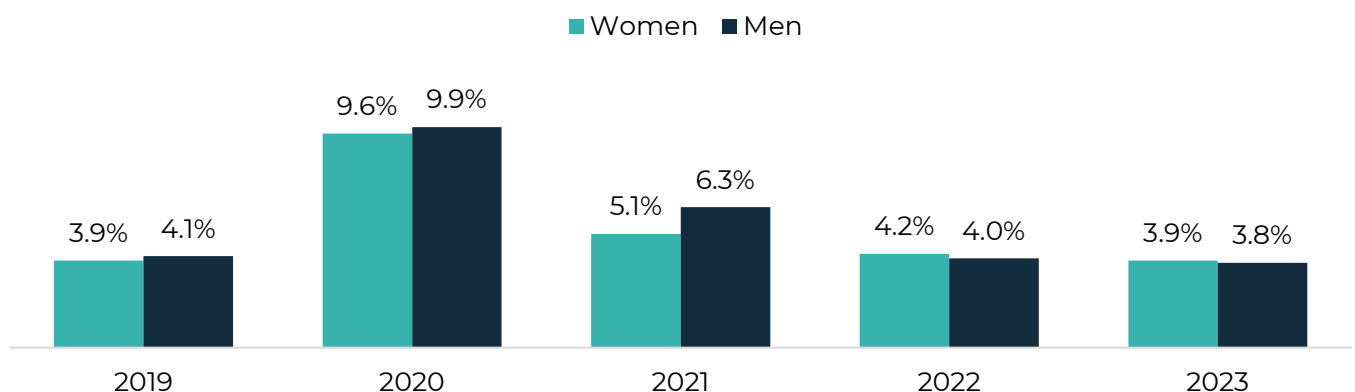
Total Population

Men and women each experienced lower employment and elevated unemployment rates during 2020 and 2021 due to the COVID-19 pandemic. Pre-pandemic (2019), the average Michigan unemployment rate was 3.9 percent for women and 4.1 percent for men. These historically low rates showed men and women in a comparable place in terms of unemployment. During the COVID-19 pandemic, unemployment rates more than doubled for both groups and although they declined significantly in 2021, they were still elevated compared to pre-pandemic rates. Preliminary data for 2023 shows men and women in a slightly better position than 2019 and a return to historically low unemployment rates for the state. However, unemployment rates alone do not demonstrate the impact on women in the labor force.

Women returned to historically low pre-pandemic unemployment rates in 2023.

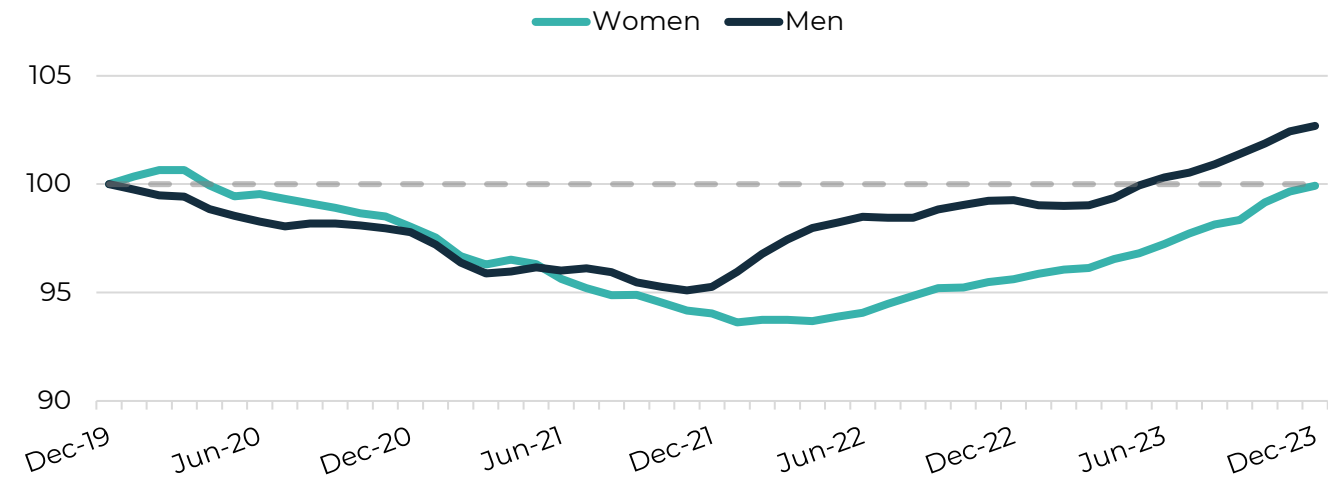Figure 1: Annual Average Unemployment Rate by Gender (Ages 16+) in Michigan

Source: Current Population Survey, U.S. Census Bureau, 12-Month Averages

The beginning of the COVID-19 pandemic affected labor force numbers for both men and women ages 16 and older, however, declines for women were sustained much longer than men's. In Figure 2, labor force numbers for men and women in Michigan are indexed to the 2019 average. Labor force numbers for men in Michigan have gradually increased since the end of 2021 and have remained above pre-pandemic levels since June 2023 (July 2022–June 2023). Meanwhile, average labor force numbers for Michigan women have consistently been below pre-pandemic numbers over the time period. Preliminary annual 2023 data shows women were at 99.9 percent of their 2019 labor force, a remaining loss of approximately 1,900 women. This resulted in labor force participation rates of 57.3 percent for women ages 16 and older and 67.2 percent for men, a gap of nearly 10 percentage points. These rates were slightly lower than the U.S. average participation rates for both women (57.2 percent) and men (68.1 percent).

The total labor force for both men and women in Michigan has recovered from pandemic-related losses. However, numbers for women declined more and have been slower to return to their pre-pandemic numbers.

Figure 2: Index* of Michigan Labor Force by Gender (Ages 16+)
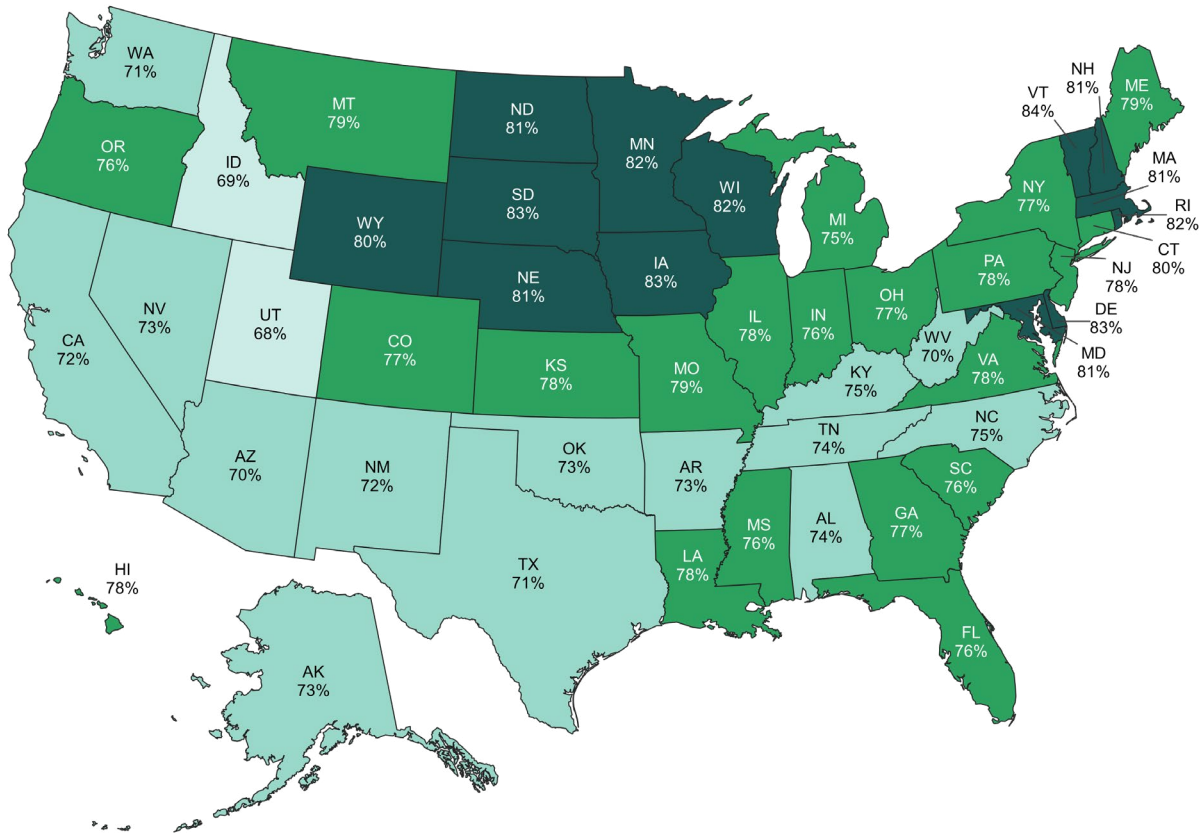

Source: Current Population Survey, U.S. Census Bureau, 12-Month Moving Averages

* An index year of 2019 means that labor force numbers were set equal to 100 in 2019 and percent changes were calculated from there.

Michigan ranked 34th out of the 50 states for greatest labor force participation rate among women with children under 18.

Figure 3: Labor Force Participation Rates for Women with Children Under 18 (Ages 20 to 64)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau
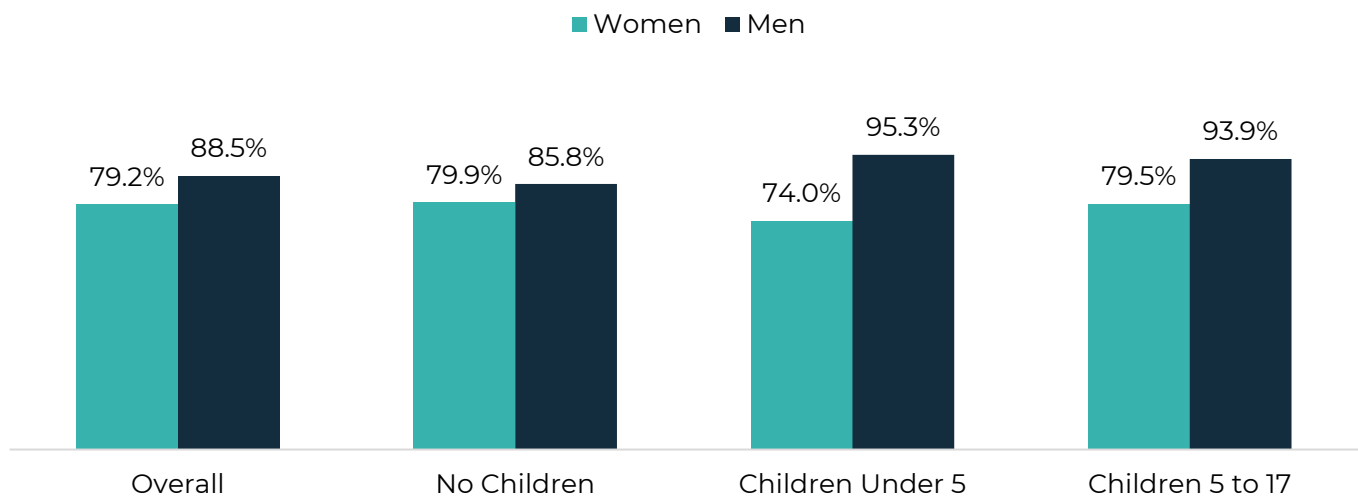
State Comparisons

Publicly available data show that women who are between the ages of 20 and 64 and have children under 18 are slightly more likely to participate in the labor force than women without children in their household. Approximately 75.4 percent of Michigan women who had children under 18 in their home participated in the labor force in 2022. This is compared to a rate of 73.0 for women without children in their household. Women without children are more likely to be older, which can negatively impact labor force participation. There were 41 states where women with children under 18 had greater labor force participation rates than women without children. In almost every state, except for Idaho and Utah,

women with children under 18 participate in the labor force at a rate above 70 percent.

Labor force participation rates for men outpace those for women in every state (20 to 64 age group). Nationally, men had an average labor force participation rate of 83.1 percent, nearly 10 percentage points greater than the average of 74.6 among women. Maine, Rhode Island, and Vermont had the closest participation rates between men and women, with each showing less than a 4 percentage point difference. In 2022, Michigan ranked 25th in participation rate disparities with a gap of 7.8 percentage points for those ages 20 to 64.

Nationally, women with children under five had the lowest participation rate in 2023 of any other group analyzed.

Figure 4: 2023 Average U.S. Labor Force Participation Rates for Parents and Nonparents (Ages 25 to 54)

■ Women ■ Men

	Women	Men
Overall	79.2%	88.5%
No Children	79.9%	85.8%
Children Under 5	74.0%	95.3%
Children 5 to 17	79.5%	93.9%

Source: 2023 One-Year Public Use Microdata Samples, Current Population Survey, U.S. Census Bureau

Parental Status (National Level)

The disparities in labor force participation rates between men and women grow starker when separated by ages of children and limiting to those who are ages 25 to 54, but the data is not available at the state level. Nationwide, women with children under five participated in the labor force at rates (74.0 percent) far lower then all other groups of parents and nonparents in 2023. Conversely, men with children under five had the highest average labor force participation rate (95.3 percent). The difference between men and women with children under five is greater than 20 percentage points nationally.

Parents with children under five are not the only group for which disparities exist. Nationwide,

among people ages 25 to 54, women without children had the greatest participation rates of any female category while men without children had the lowest participation rate of any male grouping analyzed. This discrepancy can be indicative of the childcare issues seen throughout the nation. In a report published by the Center for American Progress, the relationship between childcare and employment among women is highlighted. Part of the findings include women being more likely than men to drop out of the labor force when faced with barriers due to childcare. Although this Women in the Michigan Workforce report does not provide policy recommendations to address underlying issues in labor force disparities, it can provide background about potentially contributing factors.

> **Nationwide, women with children under five participated in the labor force at rates far lower than all other groups of parents and nonparents in 2023.**

Patterns of Work

Disparities by gender continue to exist when looking at patterns of work. The differences between men and women in typical hours worked, number of jobs held, and work situations for single parents are notable.

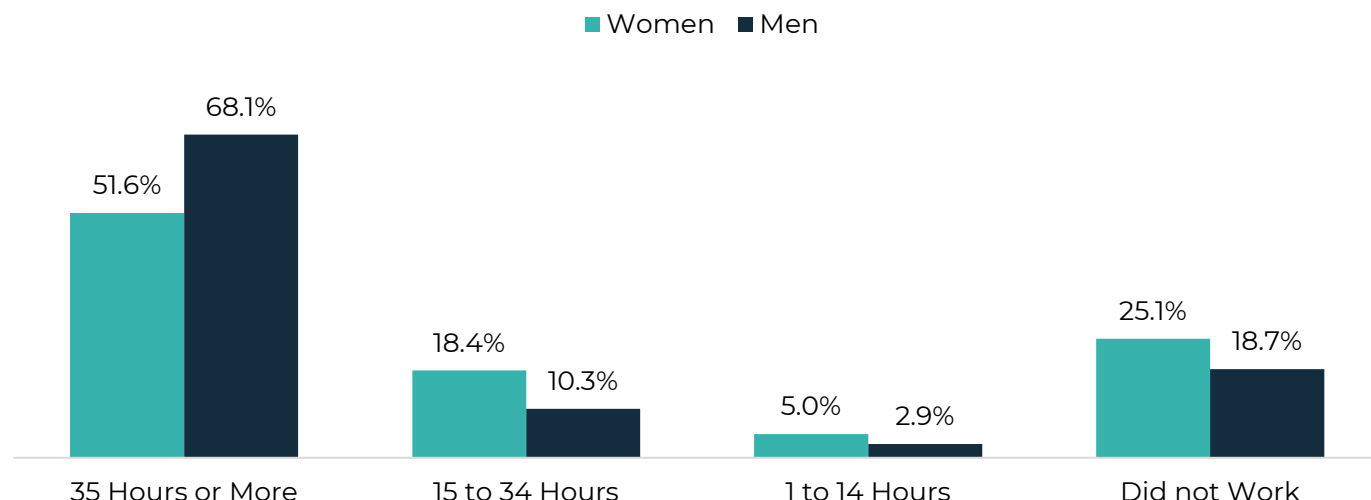## Full-Time, Year-Round Work

There were approximately 1,380,200 Michigan women between the ages of 16 and 64 who worked full-time, year-round in 2022. This represented 44 percent of all women in the specified age group. Comparatively, 58 percent (1,852,900) of men ages 16 to 64 worked full-time, year-round. This means there were approximately 471,700 less women than men in the age group who worked full-time, year-round in Michigan in 2022. If 58 percent of women in the 16 to 64 population worked full-time, year-round, an additional 431,700 Michigan women would be in this category. This disparity stands out since there were only 53,900 more men than women in the total population ages 16 to 64 in Michigan in 2022.

Part-Time Work

Roughly half of the women ages 16 to 64 in Michigan worked 35 hours or more per week in 2022, which is markedly lower than the nearly 70 percent of men. A similar split is seen at the national level, indicating this is not a Michigan-specific disparity. Conversely, more women work less than 35 hours per week than men. Just over 23 percent (729,700) of women worked between one and 34 hours per week on average compared to 13 percent (419,900) of men. Further, a quarter of Michigan women did not work in 2022 compared to less than 19 percent of men. The largest disparity in the state is in the average number of hours worked per week among all men and women ages 16 to 64, at 40.8 hours for men and 35.6 hours for women.

Women were more likely than men to work part-time or not at all.

Figure 5: Hours Typically Worked Per Week by Gender (Ages 16 to 64) in Michigan

■ Women ■ Men

	35 Hours or More	15 to 34 Hours	1 to 14 Hours	Did not Work
Women	51.6%	18.4%	5.0%	25.1%
Men	68.1%	10.3%	2.9%	18.7%

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

Women were less represented among the share of single parents working full-time.

Figure 6: Gender Breakdowns of Work Situations for Single Parents in Michigan

■ Women ■ Men

	Women	Men
Full-Time	72.6%	27.4%
Part-Time	90.7%	9.3%
Nonworking	82.3%	17.7%

Source: 2022 One-Year Public Use Microdata Samples, American Community Survey, U.S. Census Bureau

Multiple Jobs

Women 16 and older in Michigan are more likely than their male counterparts to hold multiple jobs. During 2020, approximately 6.0 percent of employed women were working more than one job compared to 4.6 percent of men. Since then, the share for women has come down slightly but is still elevated compared to men in the state. Throughout 2023, an average of 5.6 percent of Michigan women and 4.9 percent of working men had more than one job.

Hours Worked by Educational Attainment

The share of women versus men who worked part-time or full-time changes when looking at educational attainment. About 19 percent of women in Michigan with a bachelor's degree or higher worked part-time in 2022, which was nearly 10 percentage points lower than women with less than a bachelor's degree (28 percent). Despite the large difference in part-time workers by educational attainment, there were far more women working part-time than men at both education levels. Only 9 percent of men with a bachelor's degree or higher worked part-time and just 12 percent of men with less than a bachelor's worked less than full-time. This means, there were roughly 78,200 more women than men with a bachelor's degree or higher working part-time in the state.

Single Parents

In Michigan, there were more than 300,000 single parents in 2022 and 78 percent (235,000) of them were women. Looking at employment situations for single parents in Michigan, women outpace men numerically in every category. Most single parents (59 percent) worked full-time and of those, 73 percent were women. About 14 percent of single parents worked part-time and 27 percent were nonworking. Of these groups, women made up 91 percent of part-time and 82 percent of nonworking. Based on their share of all single parents (78 percent), women were less represented among the share of single parents working full-time and overrepresented in the part-time or nonworking single parents, compared to men.

> **In Michigan, there were more than 300,000 single parents in 2022 and 78 percent (235,000) of them were women.**

Employment by Industries and Occupations

Industry Employment

Industry classification reflects the business activity of an employer or company.

Women are employed in all industries of the Michigan economy but are more likely to be concentrated in service-related sectors. The top five industry sectors where women have the largest share of employment are typically service facing. *Healthcare and social assistance* and *Educational services* are both overwhelmingly female dominated, with women having represented nearly 80 and 70 percent of employment, respectively, in 2022.
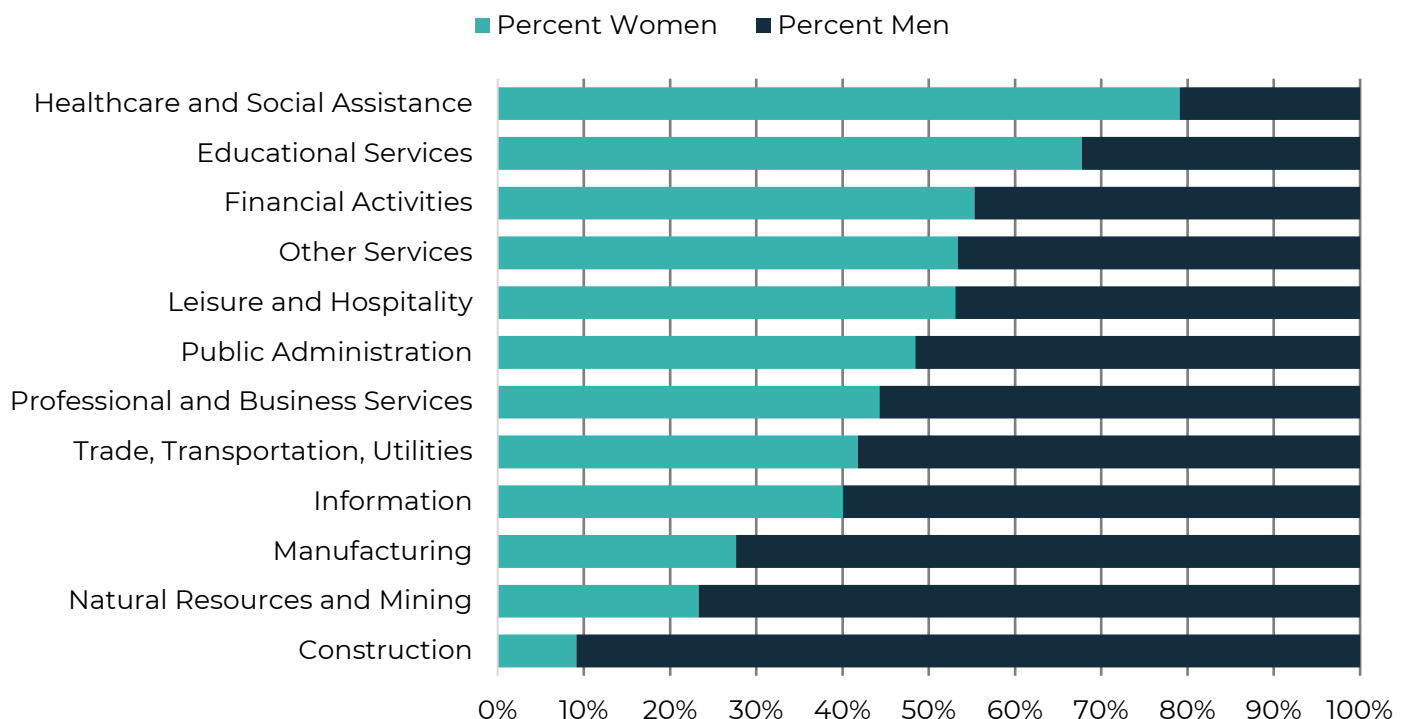
In almost every sector where women hold the majority of employment, they earn below the all-industry average hourly wage. Roughly four of every five women in 2022 worked in an industry where women, on average, earned below the all-industry average hourly wage. Comparatively, less than half of men worked in industry sectors where they earned below the all-industry average.

> **In almost every sector where women hold the majority of employment, they earn below the all-industry average hourly wage.**

Women made up nearly 80 percent of the employment in *Healthcare and social assistance* but earned approximately 52 percent of what men earned in the industry.

Figure 7: Michigan Industry Sectors by Gender (Ages 16+)

Source: 2022 One-Year Public Use Microdata Samples, American Community Survey, U.S. Census Bureau

On average, women earned between 50 and 75 cents per every dollar their male colleagues earned in more than half of Michigan industries.

Figure 8: Gender Wage Gap Across Michigan Industries, 2021

Wage Gap	Number of Industries	Percent of Industries	Percent of Women Workforce
Less than 10 Percent	20	6.7%	2.0%
Between 10 and 25 Percent	105	35.1%	36.0%
Between 25 and 50 Percent	157	52.5%	54.7%
More than 50 Percent	17	5.7%	7.3%

Source: First Quarter 2021 Longitudinal Employer-Household Dynamics, Four-Digit Industries, U.S. Census Bureau

Note: Of the 299 industries, only six showed women earning more than men. Data fluctuates in these industries and employment in most is very low. Men have earned higher wages in each of the six industries in recent years.

Women earned less than the average earnings of men in nearly every Michigan industry sector. The largest difference was in *Healthcare and social assistance*. Despite making up 80 percent of the employment in the industry, women earned approximately 52 percent of what men earned. The healthcare industry has a vast array of occupations that represent a large earnings scale. Some specific occupations where women are more likely to be concentrated include *Registered nurses*, *Home health and personal care aides*, and *Pharmacy technicians*, to name a few. Each of these occupations are large in overall employment but pay much less than jobs like *Surgeons* and *Physicians*, which are often male-dominated and offer above-average earnings.

In 2021 there were 299 industry groups in Michigan with employment and earnings data available by gender. Overall, approximately 98 percent of industry groups in Michigan had an average pay disparity favoring men in 2021. Just under 7 percent of industries displayed an earnings gap less than 10 percent. In other words, women in these industries earned roughly 90 cents or greater per every dollar men earned. Approximately one-third (35.1 percent) of industry

groups showed gaps between 10 and 25 percent. The majority of industry groups (52.5 percent) had between a 25 and 50 percent earnings gap among men and women. This means, in the majority of Michigan industries, women earned between 50 and 75 cents per every dollar their male colleagues earned in 2021. Less than 6 percent of industry groups had a wage gap of more than 50 percent.[1]

The industries with the smallest wage gaps between men and women in 2021, where at least 2,000 women were employed, were *Vocational and rehabilitation services*; *Local messengers and local delivery*; and *Media streaming distribution services, social networks, and other content providers*. The three industries with the largest gaps in the state were *Offices of dentists*, *Spectator sports*, and *Offices of physicians*.

In both *Offices of dentists* and *Offices of physicians,* women held the majority of employment at 87 and 80 percent, respectively. Some of the largest occupations within *Offices of dentists* are *Miscellaneous healthcare support occupations* (like an orthotist or prosthetic aide), *Dental assistants,* and *Dental hygienists*. Each of these occupations are paid far less than *Dentists*

[1] The industry wage gap examines average wages across broad industries and does not account for differences in occupation, education, or experience.

and are overwhelmingly female. A similar split is seen within *Offices of physicians*. The volume of employment among women in these low-paying support roles can help explain the level of pay disparity observed in these industries. Additionally, according to U.S. Census Bureau data, women in higher paying roles, such as *Physicians,* often have average earnings lower than their male counterparts. This indicates that the wage gap is not solely due to the volume of women in low-paying positions.

Occupational Employment

Occupational classification reflects the type of job or work a person primarily performs.
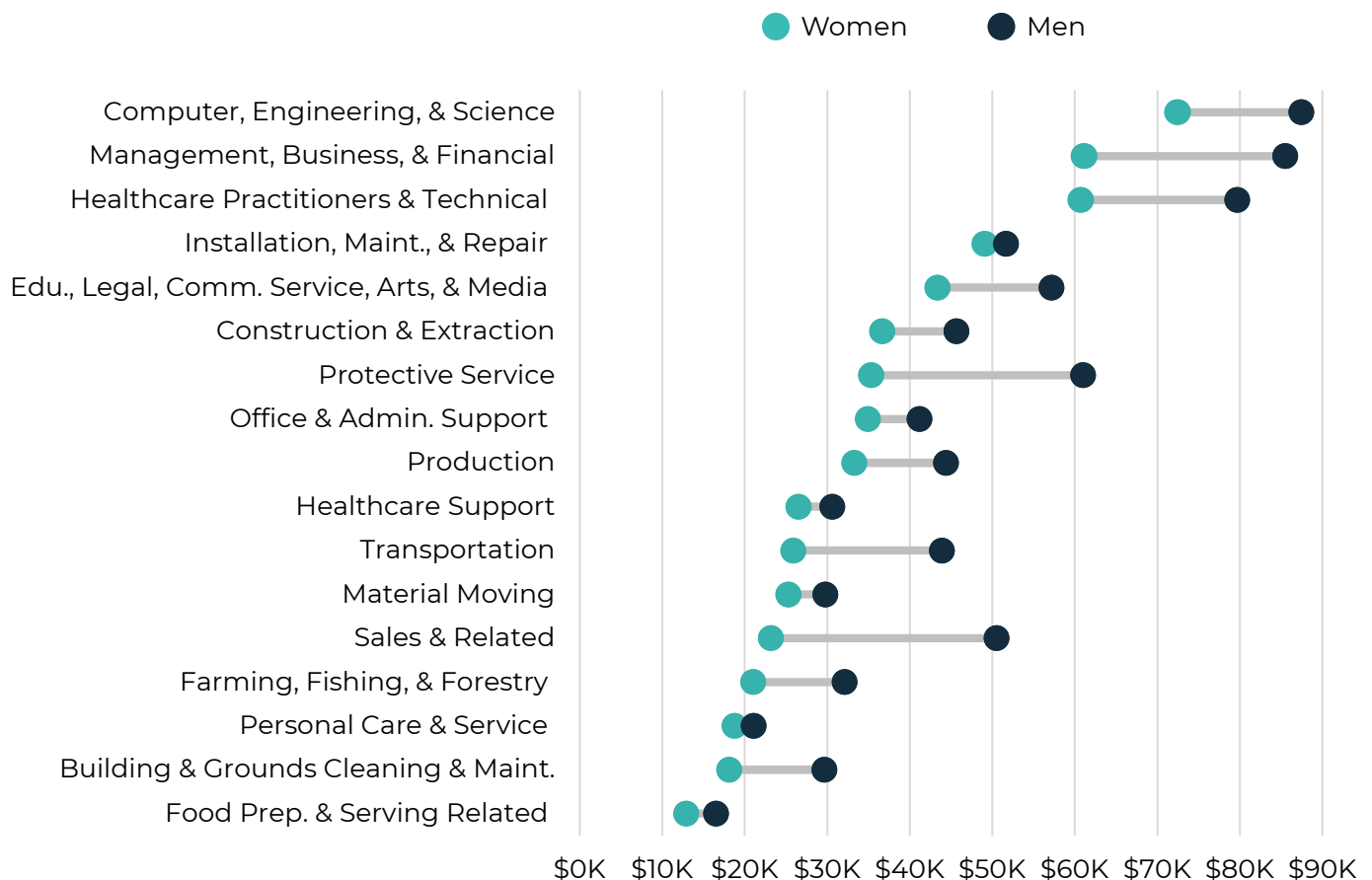
In 2022, approximately 47 percent of employed civilians ages 16 and older were women and 53 percent were men. Out of 17 occupational groups, women held the majority of employment in just six of the groups. Similar to the industry groups, the occupations where women were

> **There were no occupational groups where average earnings among women outpaced men.**

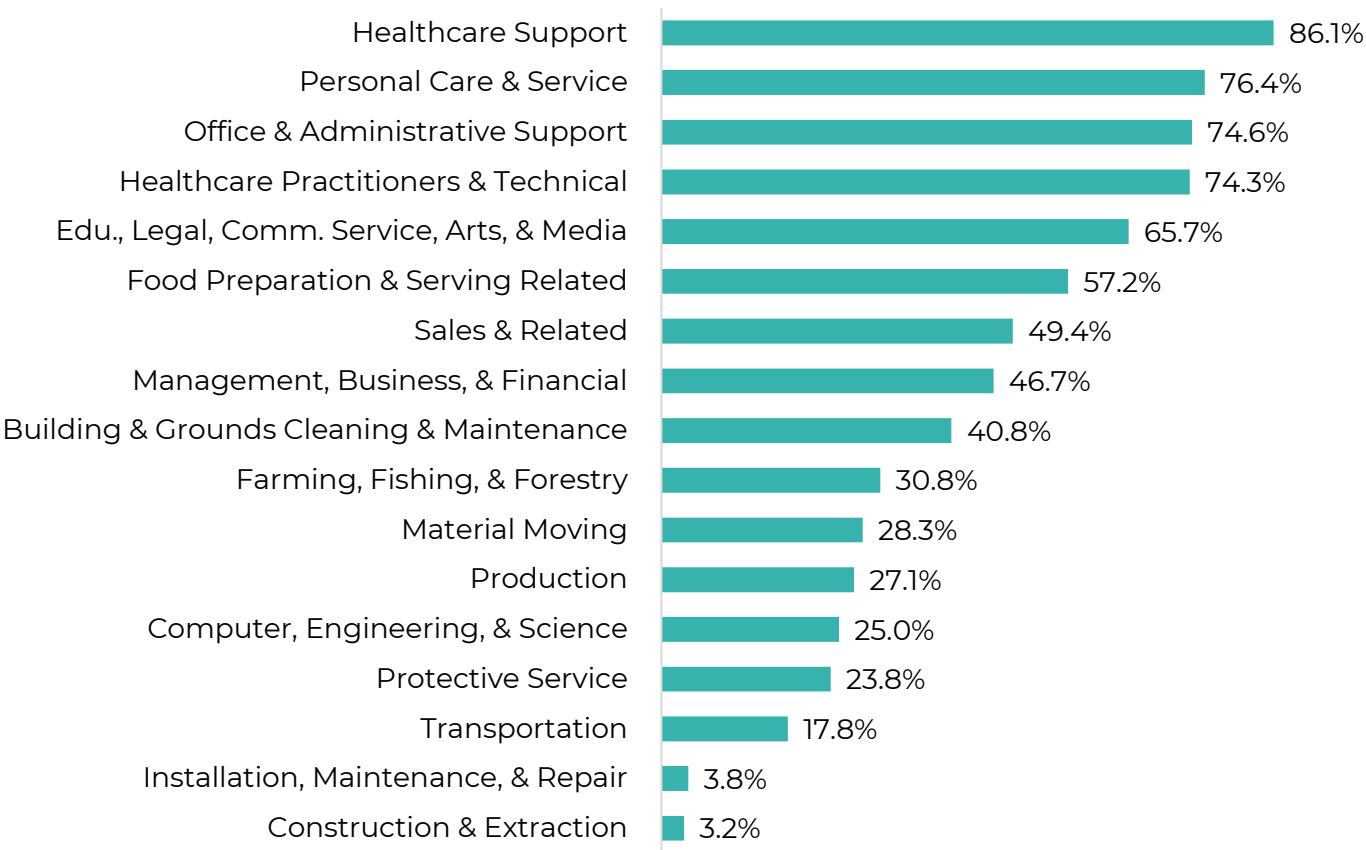**Earning gaps between men and women vary greatly by occupational group.**

Figure 9: Median Earnings by Gender for Michigan Occupational Groups (Ages 16+)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

Women hold the majority share of employment in just six occupational groups, and each are typically service-related.

Figure 10: Michigan Occupational Groups by Share of Women Employed (Age 16+)

Occupational Group	Share
Healthcare Support	86.1%
Personal Care & Service	76.4%
Office & Administrative Support	74.6%
Healthcare Practitioners & Technical	74.3%
Edu., Legal, Comm. Service, Arts, & Media	65.7%
Food Preparation & Serving Related	57.2%
Sales & Related	49.4%
Management, Business, & Financial	46.7%
Building & Grounds Cleaning & Maintenance	40.8%
Farming, Fishing, & Forestry	30.8%
Material Moving	28.3%
Production	27.1%
Computer, Engineering, & Science	25.0%
Protective Service	23.8%
Transportation	17.8%
Installation, Maintenance, & Repair	3.8%
Construction & Extraction	3.2%

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

concentrated by share of employment are typically service-related.

There were no occupational groups where average earnings among women outpaced men. One of the largest disparities observed was in *Sales and related* where women earned approximately 46 percent of what their male counterparts earned. This was equivalent to annual median earnings of $23,200 for women and $50,500 for men in the occupational group. However, employment was comparable for men and women in this group. Looking at employment shares for occupations within *Sales and related* at the national level, women hold majority employment as *Travel agents* (80 percent), *Cashiers* (70 percent) and *Real estate brokers and sales agents* (57 percent).

Men, however, are more likely to be employed as *Parts salespersons* (77 percent), *Securities, commodities, and financial services sales agents* (75 percent) and *Sales representatives* (72 percent).

Although it has one of the lowest representations of women by employment (3.2 percent women), *Installation, maintenance, and repair* has one of the smallest pay disparities. In this occupational group, women earned around 95 cents per dollar men earned in 2022. This equated to annual median earnings of $49,100 for women and $51,700 for men. This group holds occupations such as *First-line supervisors of mechanics, installers, and repairers*; *Telecommunications equipment installers and repairers, except line installers;* and *Avionics technicians*.

Earnings

> **Nationally, women earned about 73 cents on the dollar compared to men. In Michigan, this gap is even larger. Women earned 68 cents per dollar that men earned.***
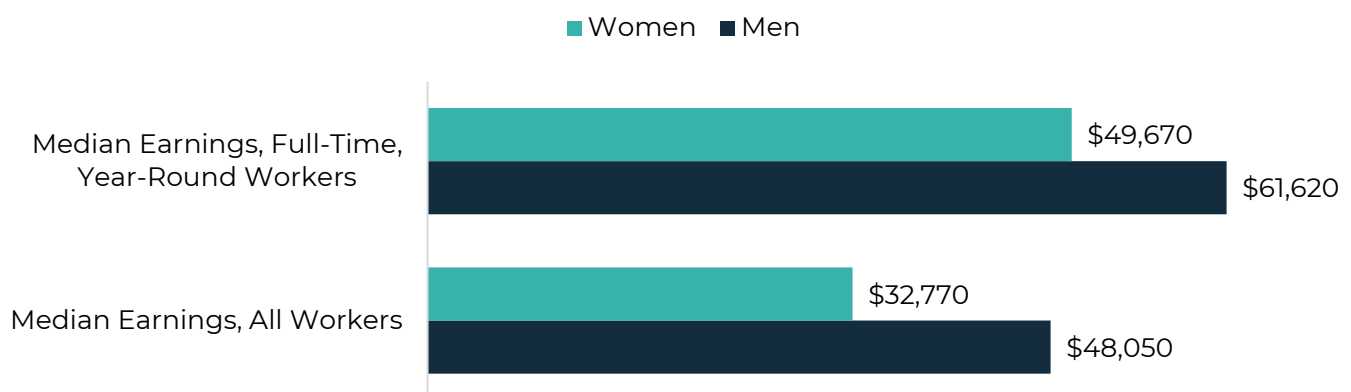
Median wages are one of the most straightforward ways to measure disparities among groups. Women in Michigan who worked full-time, year-round in 2022 earned an average of $49,670 compared to $61,620 for men. In other words, women working full-time earned approximately 81 percent of what men earned in the state. The gap is even larger when including part-time workers in Michigan. Median earnings for all women in Michigan were $32,770 compared to $48,050 for men in 2022. This means that women earned approximately

68 cents per every one dollar men earned in 2022. The issue of gender pay gaps is not specific to Michigan. Wage disparities are observed throughout the nation, with all working U.S. women earning around 73 cents on the dollar compared to men, and women working full-time, year-round earning 82 cents on the dollar. A national estimate of women earning 84 cents on the dollar for full-time, year-round workers is often cited but comes from a dataset that is not available at the state level and includes a slightly larger age group.

* Note: this data is for all workers, both full and part-time.

Earning gaps for women compared to men persist regardless of full or part-time work status.

Figure 11: Median Earnings in Michigan by Gender (Ages 16+ with Earnings)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau
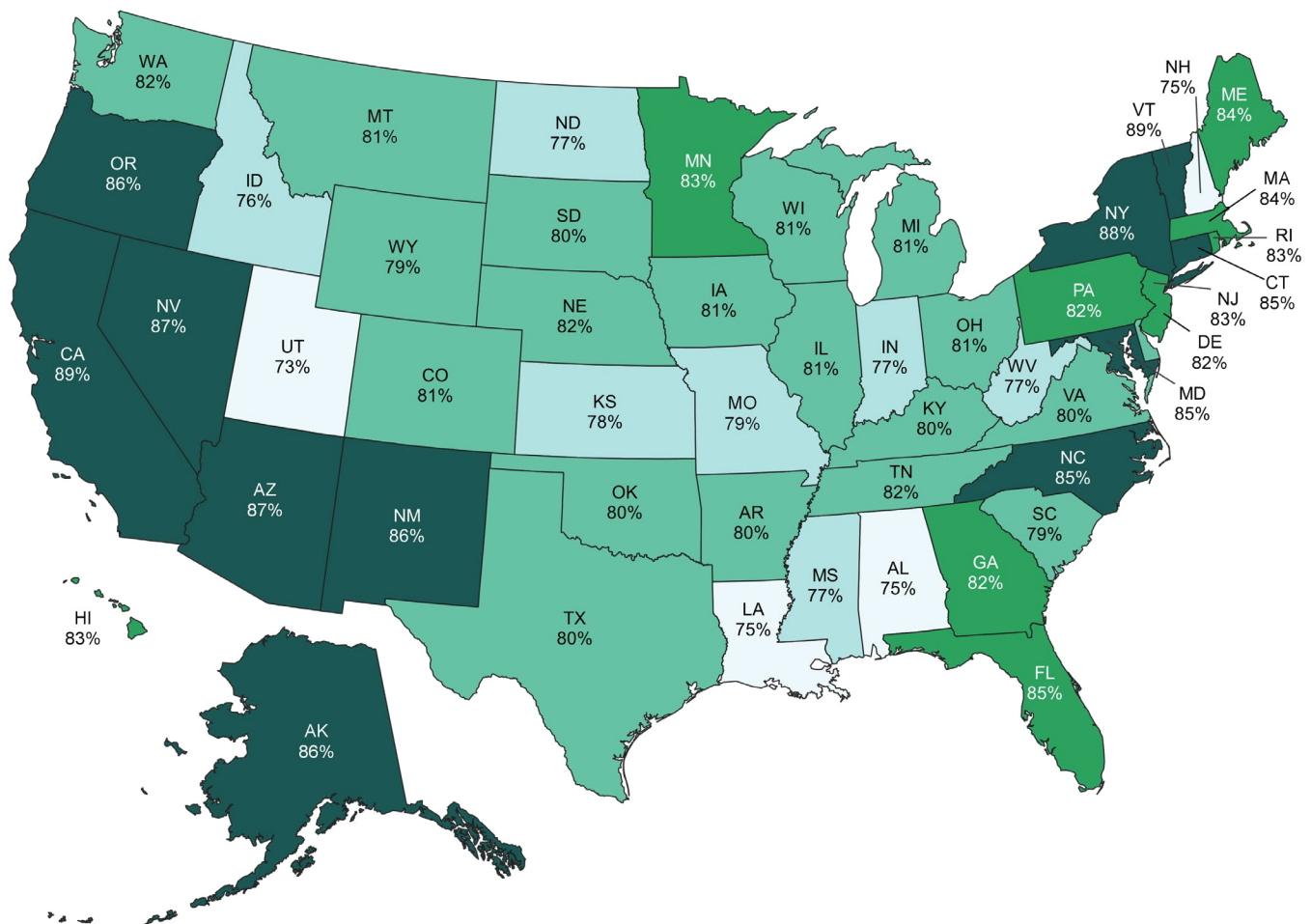
State Comparisons

Despite making up roughly half the population in each state, women earned notably less than men across the United States. Michigan ranked 30th out of all 50 states for smallest gap in women's earnings as a percentage of men's among all full-time, year-round workers. Michigan women who worked full-time earned approximately 81 cents on the dollar compared to men who worked full-time. The top three states for smallest gender wage gaps were Vermont, California, and New York. Even with gaps that were closer than all other U.S. states, women earned over 10 percent less than their male counterparts in these states.

Women who worked full-time, year-round in 2022 earned notably less than their male counterparts across the U.S.

Figure 12: Earnings for Women as a Percentage of Men's by State (Ages 16+, Full-Time, Year-Round)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau
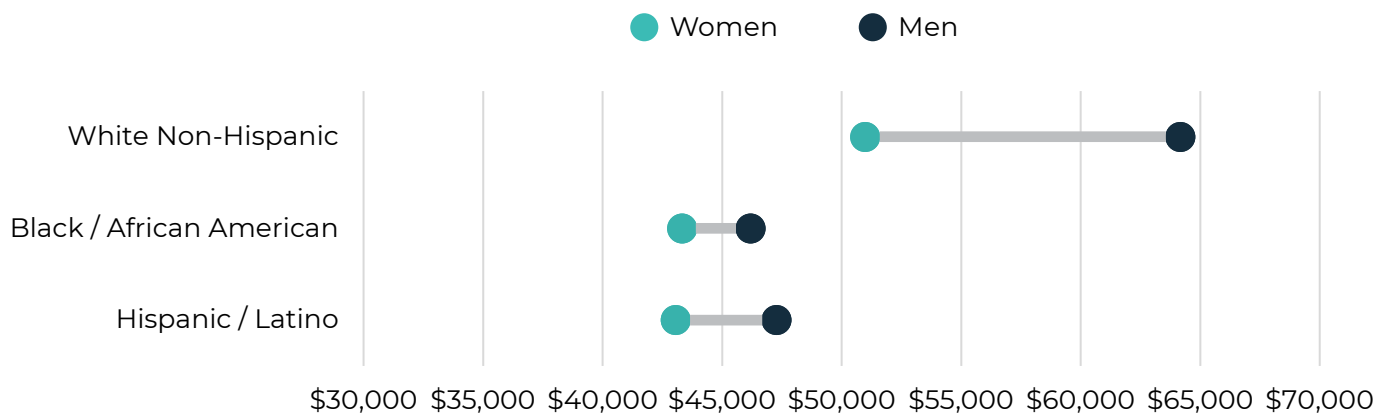
Race and Ethnicity

Differences in earnings are further exacerbated when looking at race and ethnicity. White non-Hispanic men who worked full-time earned an average of nearly $64,200 in 2022 while white-non-Hispanic women earned just under $51,000 (79 cents per dollar). Comparatively, women who are Black or African American earned an average of $43,320 (slightly less than their male counterparts), which equated to 68 cents per every dollar a white non-Hispanic man earned. The disparity is similar when looking at Hispanic or Latino women who earned an average of $43,060, representing approximately 67 cents on the dollar compared to white non-Hispanic men.

Earning gaps among men and women existed for each race and ethnicity but are even more pronounced when specifically compared to white non-Hispanic men.

Figure 13: Median Earnings in Michigan by Gender (Ages 16+ with Earnings)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

Educational Attainment

Approximately 66 percent of Michigan women ages 25 and older held at least some college or an associate degree or higher in 2022, compared to 62 percent of men in the same age group. Even though women in the state were more educated, on average, they earned significantly less than men with the same level of education. The starkest contrasts were for those with a bachelor's degree and a master's degree or higher, where women earned over $25,000 less than their male counterparts in 2022. When looking at percent differences, those with less than a high school diploma showed the largest separation—women earned approximately 62 cents per dollar earned by men.

There are numerous studies on gender pay disparities, with causes including differences in occupations, industries, hours worked, experience, discrimination, and more. The Center for American Progress found that the gender wage gap exists at all age groups and widens over a woman's career, meaning women experience a gender wage gap for their entire working career. Examining the root of this issue is beyond the scope of this report but the impacts are significant.

With increased educational attainment, the relative gap in earnings between women and men is reduced, on average. However, the total wage difference does grow as wages rise with education.

Figure 14: Earnings for Women as a Percentage of Men's by Educational Attainment in Michigan (Ages 25+)
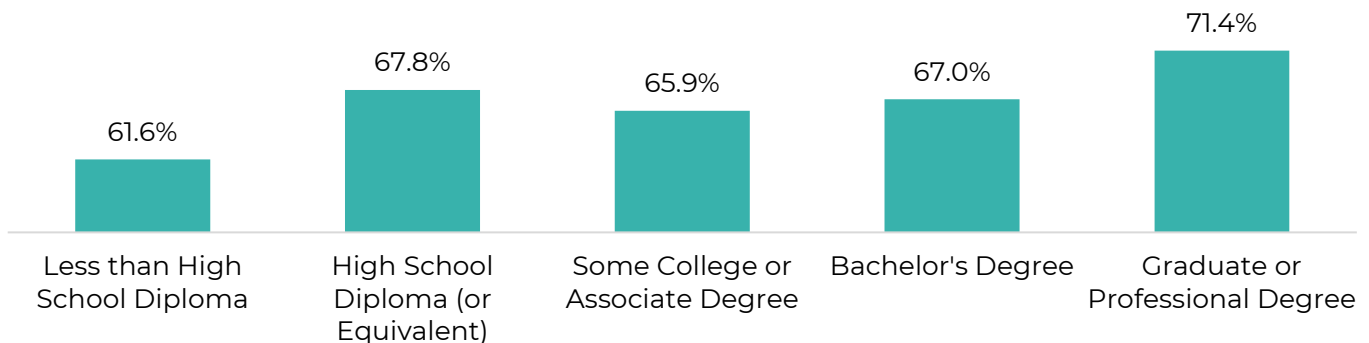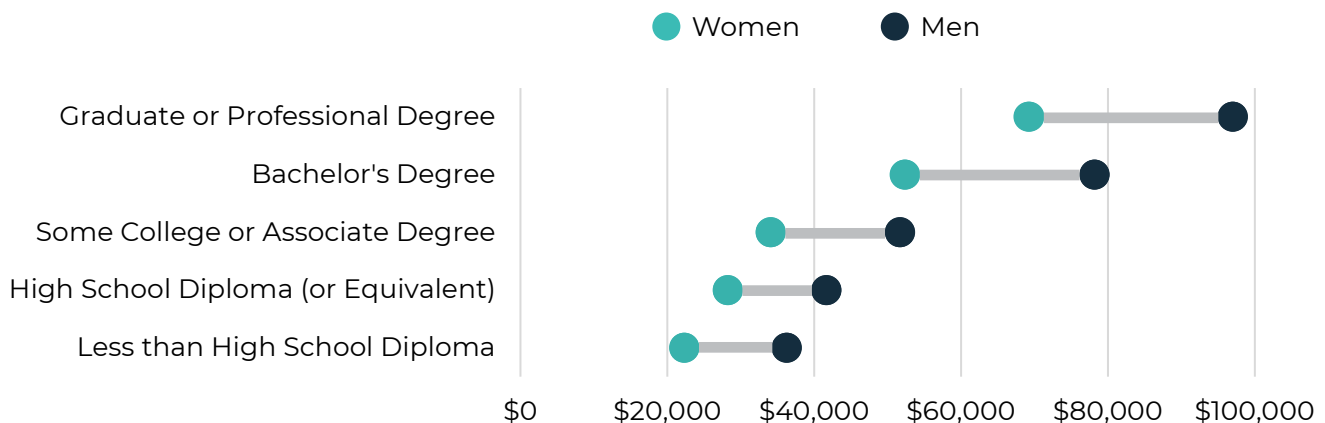

Figure 15: Average Earnings by Educational Attainment and Gender in Michigan (Ages 25+)

Sources: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

Poverty

> Poverty rates for Black or African American women are more than double the rate for women who are white non-Hispanic.

Poverty status is a common metric used to determine economic prosperity and is closely associated with earnings disparities. In 2022, approximately 13.4 percent of Michigan residents fell below the poverty line. Men had an average poverty rate of 12.1 percent (589,200 men) while women had a rate of 14.6 percent (727,000 women).
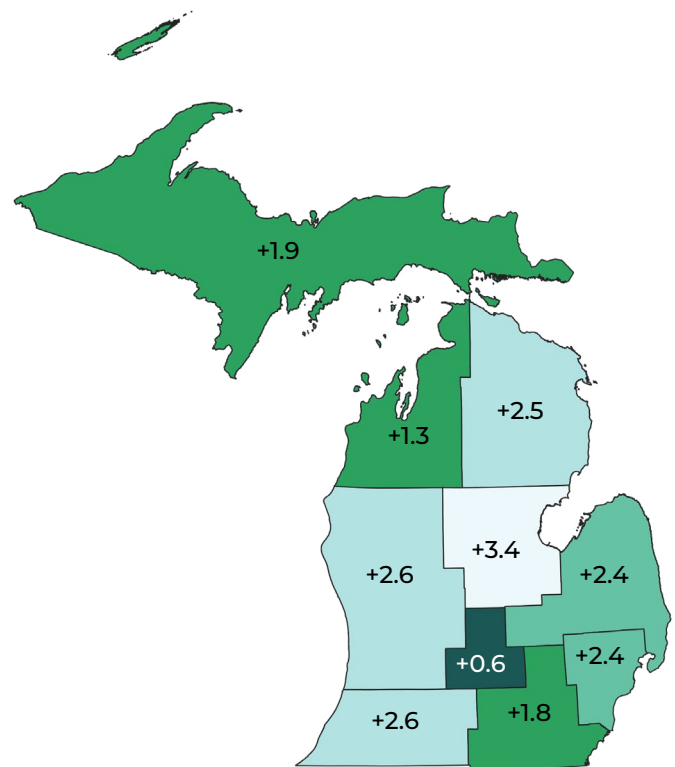
Prosperity Regions

This disparity was seen across all regions of the state as well. Poverty rates among men and women in each area of the state are available using five-year average data (2018–2022). In every prosperity region, women faced higher rates of poverty than men ranging from 0.6 percentage points greater in South Central to 3.4 percentage points higher in East Central Michigan.

Race and Ethnicity

Rates of poverty increase when looking at non-white individuals, with the exception of those who are Asian. In 2022, women of color experienced rates of poverty that were notably higher than women who are white non-Hispanic. Just under 30 percent of Michigan women who are Black or African American were below the poverty line. This was more than double the average rate for both women who are white non-Hispanic and the average rate for all women in the state. Michigan women who are Black or African American also had poverty rates that exceeded those of their national counterparts, who were at a rate of 22.6 percent.

Poverty rates were higher for women than men in every Michigan Prosperity Region.
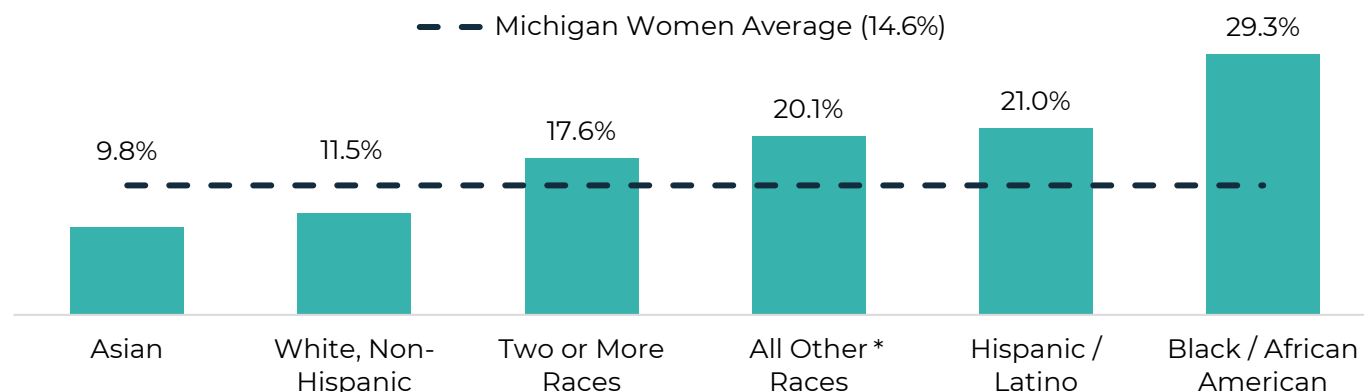
Figure 16: Percentage Point Difference in Poverty Rates for Women Compared to Men by Michigan Prosperity Region (2018–2022)

Source: 2018–2022 Five-Year Estimates, American Community Survey, U.S. Census Bureau

Women who are people of color often experienced above average poverty rates.

Figure 17: Poverty Rates for Michigan Women by Race and Ethnicity

– – Michigan Women Average (14.6%)

Asian	White, Non-Hispanic	Two or More Races	All Other * Races	Hispanic / Latino	Black / African American
9.8%	11.5%	17.6%	20.1%	21.0%	29.3%

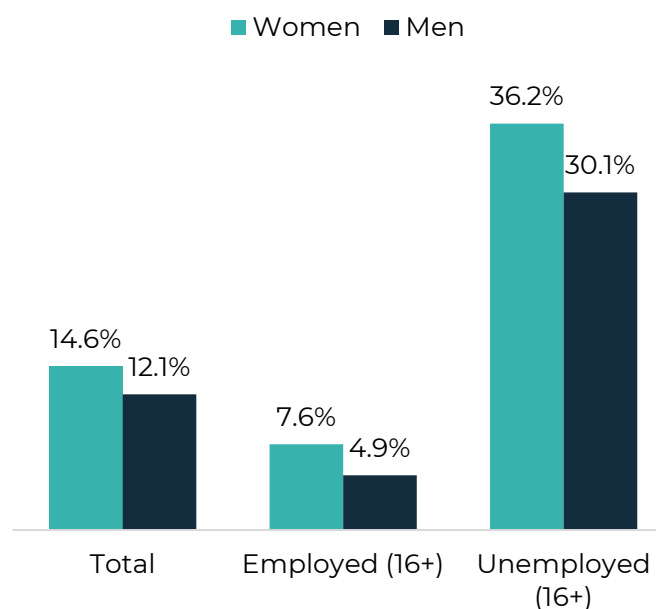Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

* Note: All Other Races includes American Indian or Alaska Native; Native Hawaiian and Other Pacific Islander; and Some Other Race Alone

Employment Status

There were approximately 4,993,600 individuals in the Michigan labor force in 2022 and just under 370,900 (7.4 percent) of them were below the poverty line. Michigan women who were employed had an average poverty rate of 7.6 percent compared to their male counterparts with a rate of 4.9 percent. Those who were unemployed in 2022 had the greatest average poverty rates, unsurprisingly. However, women in this category had a poverty rate that was nearly 6 percentage points greater than the men who were unemployed.

Women experienced higher poverty rates than men, regardless of employment status.

Figure 18: Poverty Status by Employment and Gender in Michigan

■ Women ■ Men

	Women	Men
Total	14.6%	12.1%
Employed (16+)	7.6%	4.9%
Unemployed (16+)	36.2%	30.1%

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau
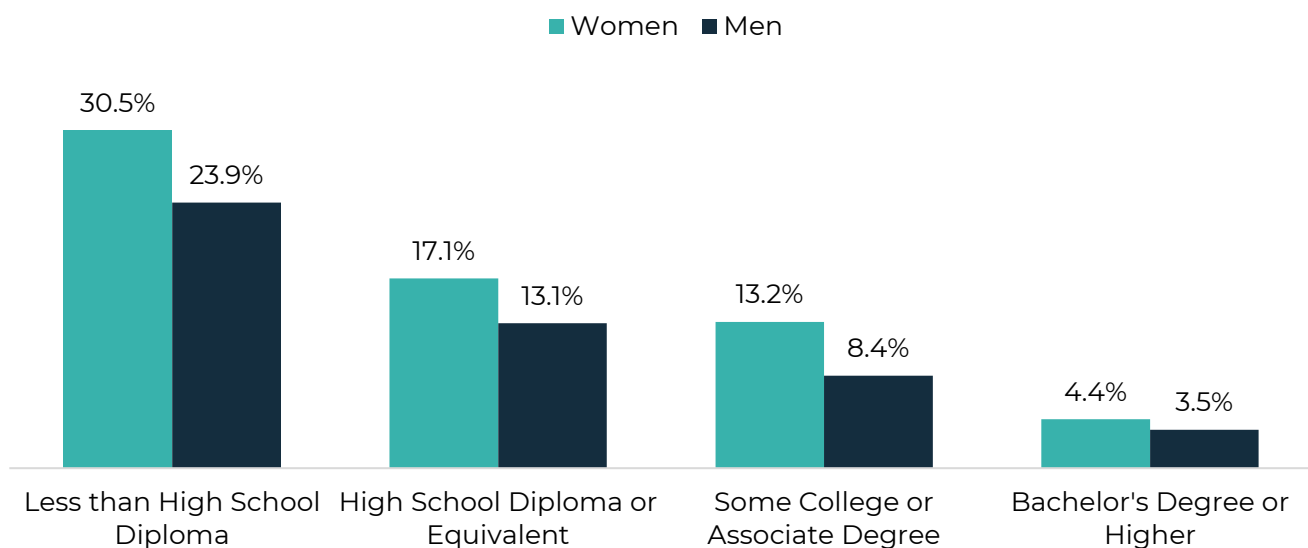
Educational Attainment

Greater educational attainment leads to higher earnings and lower poverty rates, on average. With increased educational attainment, poverty rates noticeably decline for both genders. However, women who are 25 years and older experienced greater rates of poverty than men at every level of educational attainment. The poverty rate of 13.2 percent for women with some college or associate degree was slightly higher than the rate for men with a high school diploma or equivalent. Women with a bachelor's degree or higher had a more comparable rate to their male counterparts (4.4 percent vs 3.5 percent) than for other education levels, however, it was still above the statewide rate of 3.8 percent.

> **Women who are 25 years and older experience greater rates of poverty than men at every level of educational attainment.**

Increased educational attainment leads to decreased poverty rates.

Figure 19: Share of Michigan Population Below Poverty by Gender and Educational Attainment (Ages 25+)

Legend: ■ Women ■ Men

Education Level	Women	Men
Less than High School Diploma	30.5%	23.9%
High School Diploma or Equivalent	17.1%	13.1%
Some College or Associate Degree	13.2%	8.4%
Bachelor's Degree or Higher	4.4%	3.5%

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau

Education

Education plays a major role in shaping economic outcomes. Increased educational attainment often leads to higher employment and wages and reductions in poverty. On average, women in Michigan are more highly educated than men. However, as discussed previously, earnings disparities are still present even within education levels and there are many factors contributing to these outcomes.
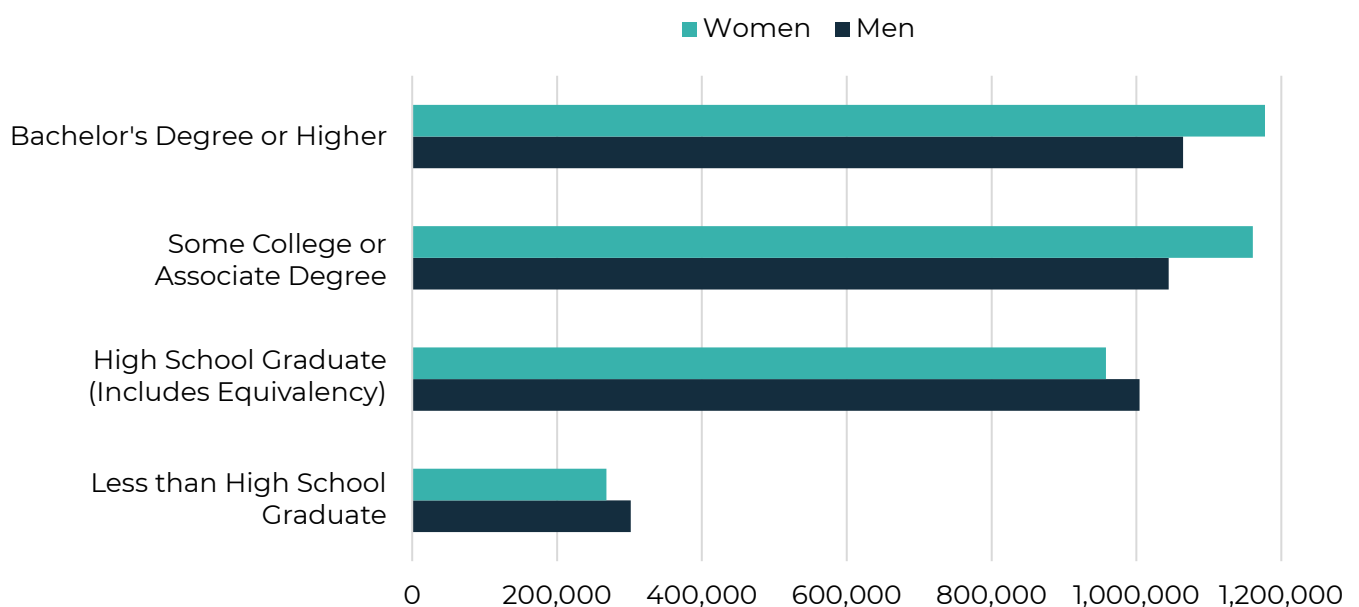
of women had some level of postsecondary education while only 61.8 percent of men had the same. While the share of individuals with some college but no degree is roughly equal for both at around 22 percent, the share of women who have earned a degree slightly outpaces men at each level. This amounts to there being nearly 200,600 more women than men with an associate degree or higher in Michigan.

Educational Attainment

As of 2022, 7.5 percent of women and 8.8 percent of men in Michigan did not have a high school diploma or equivalency among those ages 25 and older. Further, 26.9 percent of women had a high school diploma as their highest level of education compared to 29.4 percent of men. Taken together, this means that approximately 65.6 percent

Educational Completers

Women are earning a substantial portion of the new degrees and certificates awarded throughout the state. During the 2021-2022 academic year, just under 72,000 degrees or certificates were awarded to women by Michigan postsecondary institutions – around 20,000 more than were awarded to men (51,200).

Just under 66 percent of women had some level of postsecondary education compared to about 62 percent of men.

Figure 20: Educational Attainment by Gender in Michigan (Ages 25+)

Source: 2022 One-Year Estimates, American Community Survey, U.S. Census Bureau
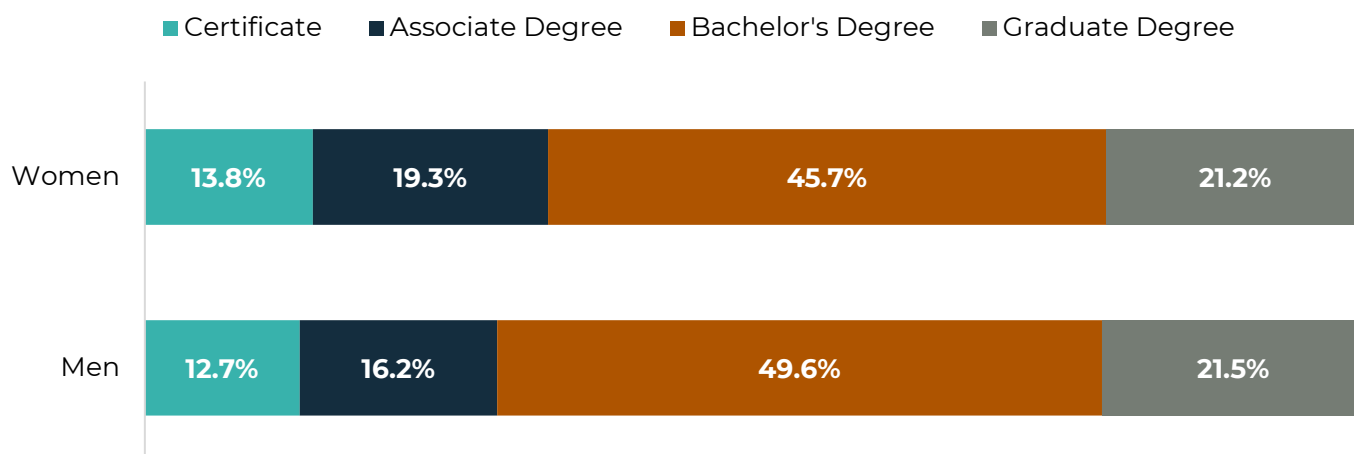
Compared to men, degree and certificate completions for women are more concentrated at lower levels. Nondegree awards and associate degrees made up 33.1 percent of completions by women compared to 28.9 percent for men. Meanwhile, bachelor's degrees accounted for 45.7 percent of completions by women and 49.6 percent of completions by men.

Many of these postsecondary completions by women play a vital role in meeting the demand for healthcare professionals. Across all award levels, approximately 81.5 percent of the nearly 22,000 degrees or certificates awarded in programs classified under *Health professions and related programs* were earned by women in 2022. Just over 5,150 women earned an associate or

Women completed more degree and certificate programs than men, however, their completions were more concentrated within certificates and associate degrees.

Figure 21: Completions by Award Level and Gender in Michigan (2021–2022)

■ Certificate ■ Associate Degree ■ Bachelor's Degree ■ Graduate Degree

	Certificate	Associate Degree	Bachelor's Degree	Graduate Degree
Women	13.8%	19.3%	45.7%	21.2%
Men	12.7%	16.2%	49.6%	21.5%

bachelor's degree in *Registered nursing* alone. Not only do women pursue these health-related fields at much higher rates than men, but these fields also account for a substantial share of their total degree and certificate completions. For example, around 25 percent of associate degrees and nearly 50 percent of certificates lasting between one and two years were in these health-related programs.

Other popular educational fields for women include *Business, management, marketing, and related support services; Education; Psychology*; and *Public administration and social service professions*. Like healthcare, these fields all play an important role in the everyday lives of residents across the state. Additionally, aside from the business-related programs, women earned upwards of 80 percent of the degrees and

certificates in each of these fields. From nurses to teachers and social workers, women are often the ones preparing to serve in these vital functions.
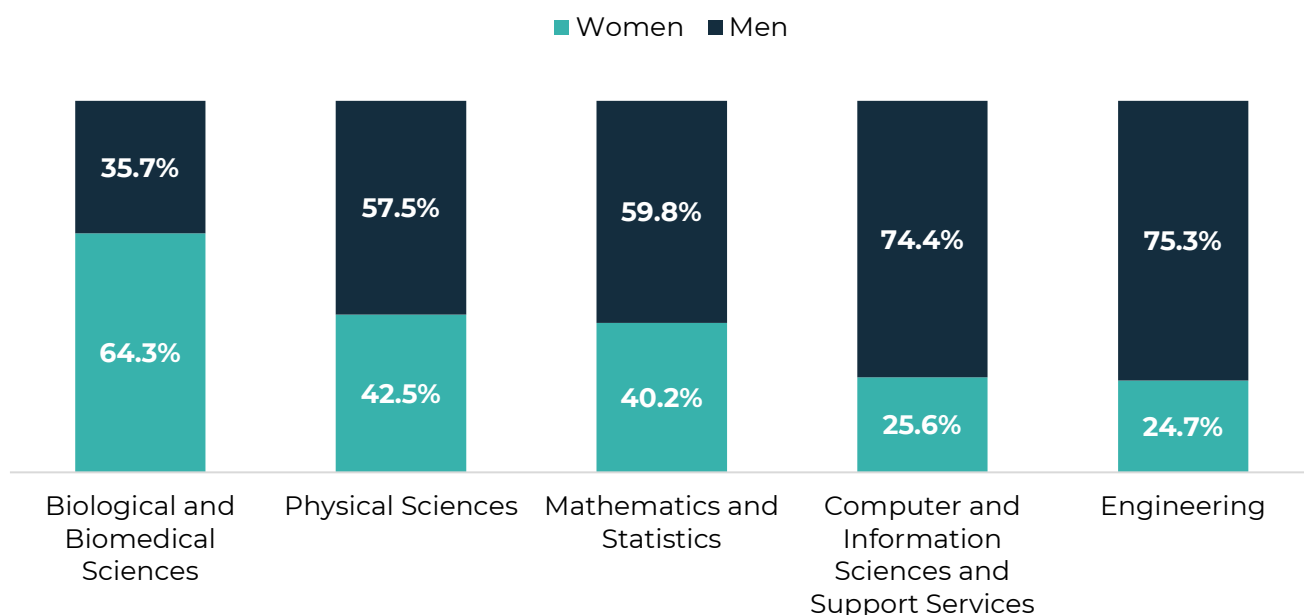
On the other hand, women are underrepresented in STEM programs which are typically high-demand, high-wage fields. Despite earning close to 60 percent of the total degrees and certificates awarded in 2022, women only accounted for about 38.8 percent of degrees and certificates in STEM. Among traditional STEM fields, the share of women varied widely from just around 25 percent for *Engineering* and *Computer and information sciences and support services*, to 64.3 percent for *Biological and biomedical sciences.* Addressing barriers and continuing to expand educational pathways to all careers for women will continue to be important for meeting statewide talent needs.

> **Women are underrepresented in STEM programs which are typically high-demand, high-wage fields.**

Women accounted for approximately 39 percent of all completions in STEM and their share within these fields varied greatly.

Figure 22: STEM Program Completions by Gender in Michigan (2021–2022)

Women ■ Men

Field	Women	Men
Biological and Biomedical Sciences	64.3%	35.7%
Physical Sciences	42.5%	57.5%
Mathematics and Statistics	40.2%	59.8%
Computer and Information Sciences and Support Services	25.6%	74.4%
Engineering	24.7%	75.3%

Source: 2021–22 Award Year, Integrated Postsecondary Education Data System, National Center for Education Statistics

Women in Registered Apprenticeships

Registered Apprenticeships:

Innovative work-based learning and postsecondary earn-and-learn models that meet the following key elements for registration:

1. Industry Led

2. Paid Job

3. Structured On-the-Job Learning/ Mentorship

4. Supplemental Education

5. Diversity

6. Quality & Safety

7. Credentials
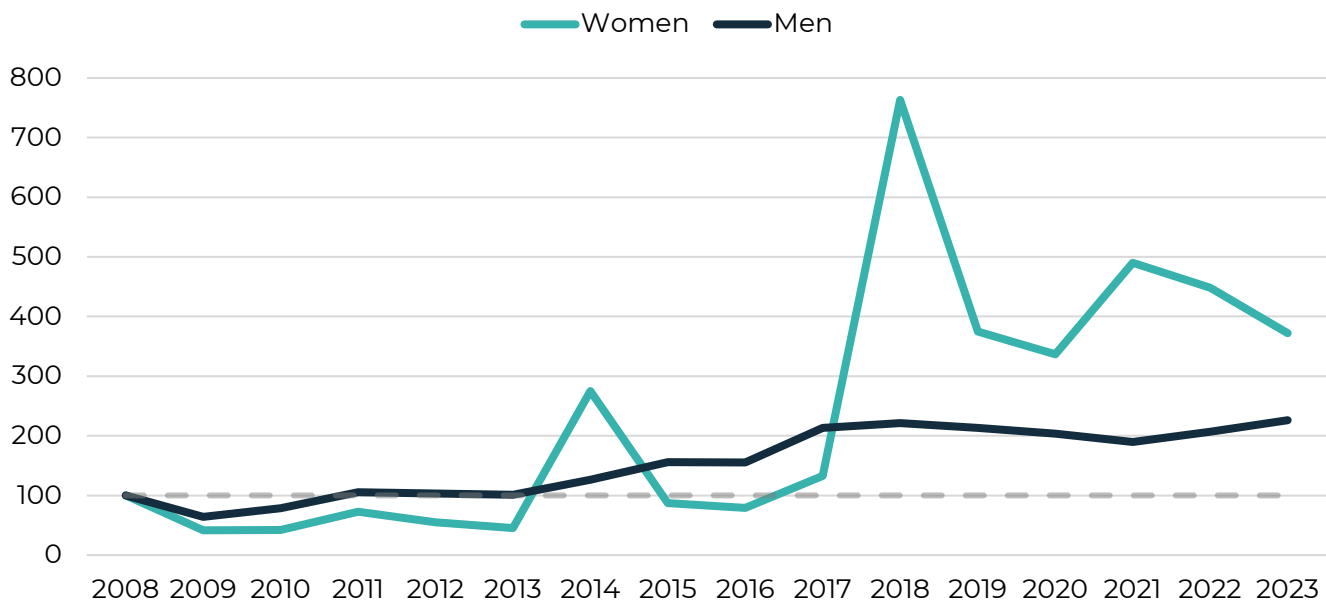
Source: U.S. Department of Labor

> **The share of women in Registered Apprenticeships has increased in Michigan but still only accounts for one in 10 active registered apprentices.**

Women play an important role in Registered Apprenticeships in Michigan. Typically, most Registered Apprenticeship programs are male dominated, however, over the last decade there has been a push to increase representation among women. In 2023, there were just over 1,800 active women registered apprentices in Michigan, representing about 10 percent of the total across the state. Comparatively, women made up 8.3 percent of approximately 9,400 active registered apprentices in 2014. There has been a numerical increase of roughly 1,000 women in active Registered Apprenticeships over the period.

Growth among women in Registered Apprenticeships spiked in 2018, shortly after increased funding in 2016. Since then, numbers have remained much higher than what was observed prior to 2016.

Figure 23: Index of New Registered Apprentices by Gender

Source: 2008–2023 Registered Apprenticeship Partners Information Management Data System, Office of Apprenticeship, U.S. Department of Labor

Trends in Women Registered Apprentices

Beginning in 2016 there was a significant increase in funding and resources for Registered Apprenticeship in Michigan. Part of this focus included an effort to increase the representation of women. Figure 23 shows the index of new registered apprentices by men and women in Michigan from 2008 to 2023. There was marked growth after the increased funding, with 1,400 more new registered apprentices who were women in 2018 compared to 2016. Previously, the record was just under 600 women, set in 2014. Overall, the growth between 2008 and 2018 was over 660 percent for women. The sharp increase

in 2018 marked a total of nearly 1,600 female registered apprentices. Since 2018, the number of new female registered apprentices each year has been lower but has remained between three and five times the number observed in 2008.
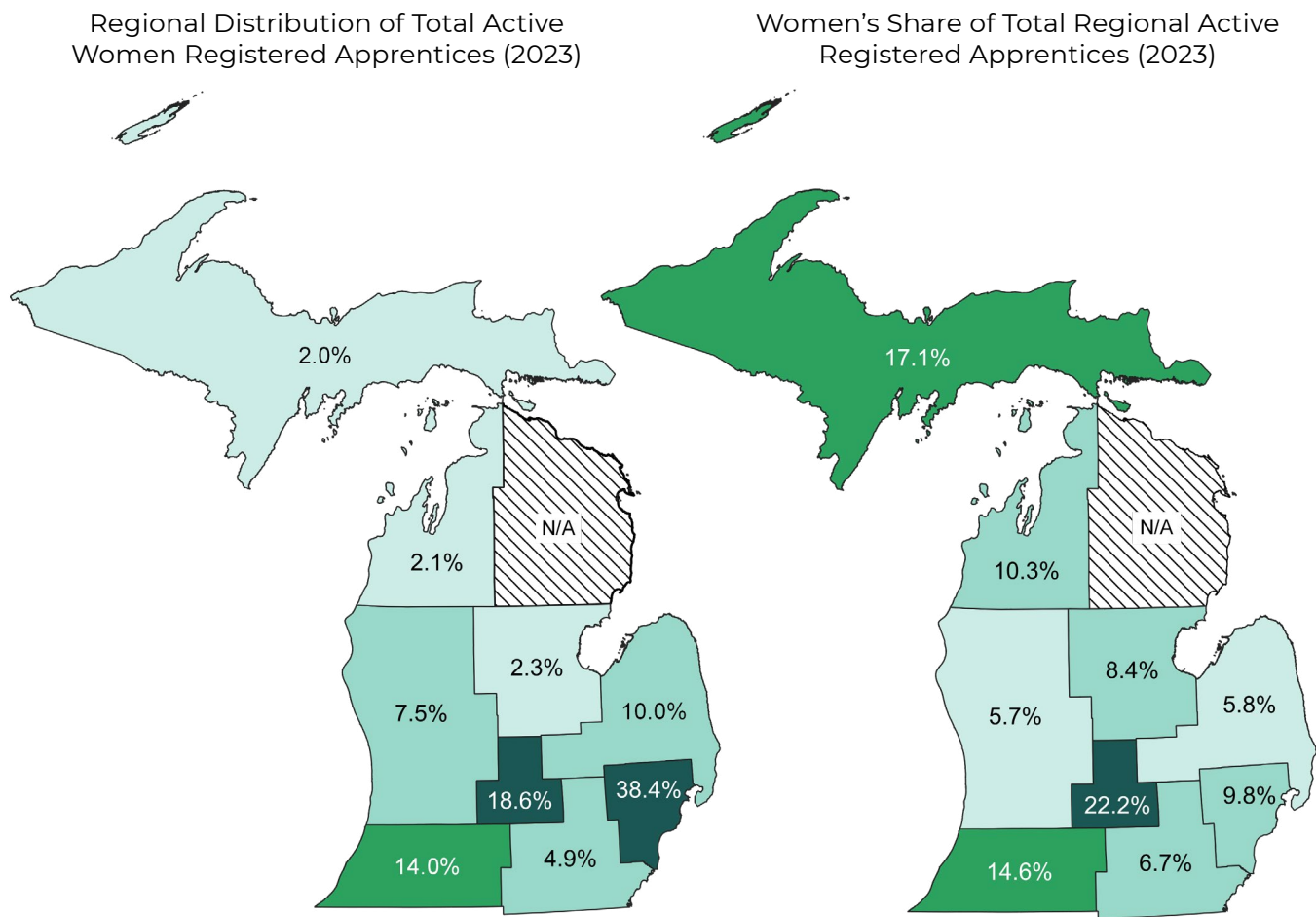
Prosperity Regions

Representation among women in Registered Apprenticeship varies by region. Over 22 percent of all registered apprentices in the South Central region were women. This accounted for nearly 19 percent (340 women) of the 1,800 women registered apprentices across the state. This is likely due to the large presence of *Healthcare and social assistance* programs in the region.

> **Women in active Registered Apprenticeship programs are more racially diverse than men.**

Figure 24: Women in active Registered Apprenticeships were located predominately in the Detroit Metro and South Central Prosperity Regions. Within a region, however, their total share varies greatly.

Regional Distribution of Total Active Women Registered Apprentices (2023)

Women's Share of Total Regional Active Registered Apprentices (2023)

Source: 2023 Registered Apprentices, Registered Apprenticeship Partners Information Management Data System, Office of Apprenticeship, U.S. Department of Labor

Note: Data is suppressed for areas with less than 100 active registered apprentices. The suppressed counts are included in the statewide totals.

Detroit Metro held the largest share of women registered apprentices in the state at 38.4 percent. However, less than 10 percent of all the registered apprentices in the region were women. Traditional Registered Apprenticeship industries (*Manufacturing* and *Construction*) have a large presence in the Detroit Metro Prosperity Region, and as discussed previously, are typically male dominated.
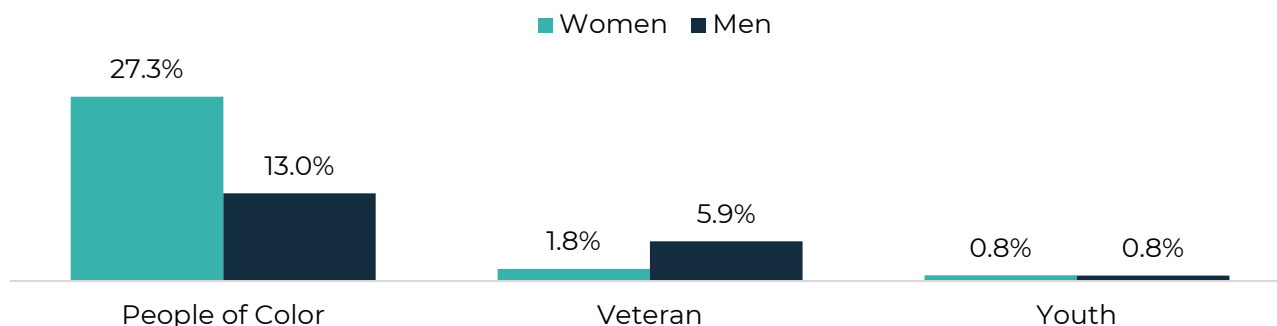
Demographics

Women in active Registered Apprenticeship programs are more racially diverse than men. Just over one-quarter (27.3 percent) of women in Registered Apprenticeships were people of color compared to 13 percent of men. Looking at other demographic groups, women were less likely to be a known veteran. Only 1.8 percent of active registered women apprentices were military veterans, which is roughly three times less than the rate for men (5.9 percent). Those who are 16 to 18 (youth) make up a smaller share of overall registered apprentices in the state, and have an equal representation among men and women.

Women in Registered Apprenticeships are more likely to be racially diverse and less likely to be veterans compared to men.

Figure 25: Share of Active Registered Apprentices by Demographic and Gender (2023)

Legend: ■ Women ■ Men

People of Color: Women 27.3%, Men 13.0%
Veteran: Women 1.8%, Men 5.9%
Youth: Women 0.8%, Men 0.8%

Source: 2023 Registered Apprentices, Registered Apprenticeship Partners Information Management Data System, Office of Apprenticeship, U.S. Department of Labor
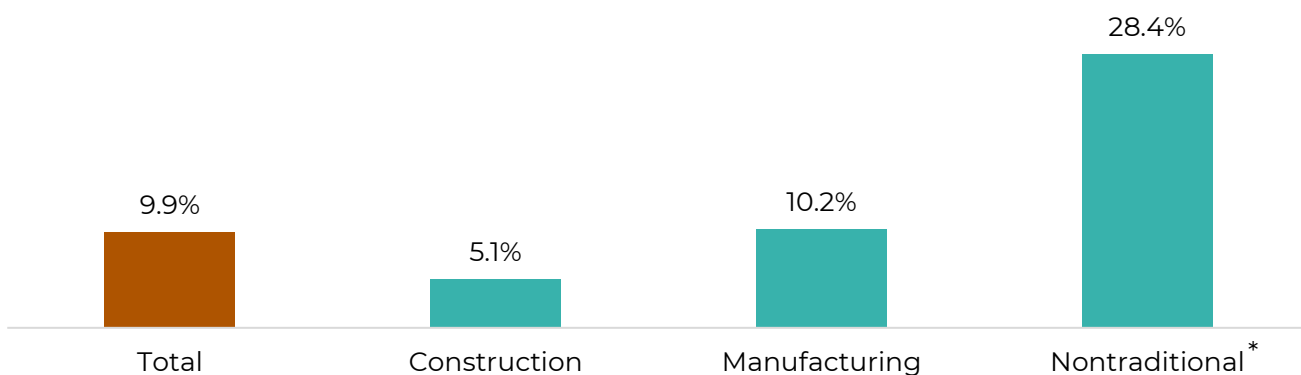
Industries

In Michigan, *Construction* and *Manufacturing* are considered traditional Registered Apprenticeship industries as they are typically responsible for the greatest number of registered apprentices. In 2023, there were just 600 women in *Construction* and just under 400 women in *Manufacturing*. This made up 5.1 percent and 10.2 percent of total active registered apprentices in these industries, respectively.

There was a greater representation of women within nontraditional industries such as *Health care and social assistance* (73.9 percent); *Educational services* (38.2 percent); and *Professional, scientific, and technical services* (34.2 percent). In total, there were about 850 women who were active registered apprentices across nontraditional industries with just under 600 in *Health care and social assistance* alone.

Women accounted for a small share of the traditional Registered Apprenticeship industries of *Manufacturing* and *Construction*.

Figure 26: Share of Active Registered Apprentices who are Women, by Industry (2023)

Total: 9.9%
Construction: 5.1%
Manufacturing: 10.2%
Nontraditional*: 28.4%

Source: 2023 Registered Apprentices, Registered Apprenticeship Partners Information Management Data System, Office of Apprenticeship, U.S. Department of Labor

* Note: "Nontraditional" makes up all other apprenticeship industries.

Occupations

Roughly one-fifth of all women who were registered apprentices in 2023 were *Nursing assistants*. This was followed by *Electricians, Construction laborers,* and *Carpenters*; the only other occupations with more than 100 active registered apprentices who were women.

Although these occupations hold a large number of women registered apprentices, their overall share in these roles is low, except for *Nursing assistants*.

Figure 27 shows the top five occupations with the greatest share of active women registered apprentices. Occupations included had more than 40 active women and a total share of at least 10 percent or greater. *Childcare workers* had the greatest share at 91.5 percent. This means less than 10 percent of all registered apprentices who were *Childcare workers* in 2023 were men. Although not represented among the top five, *Operating engineers and other construction equipment operators* (11.3 percent women) has seen a push in recent years to increase representation of women.
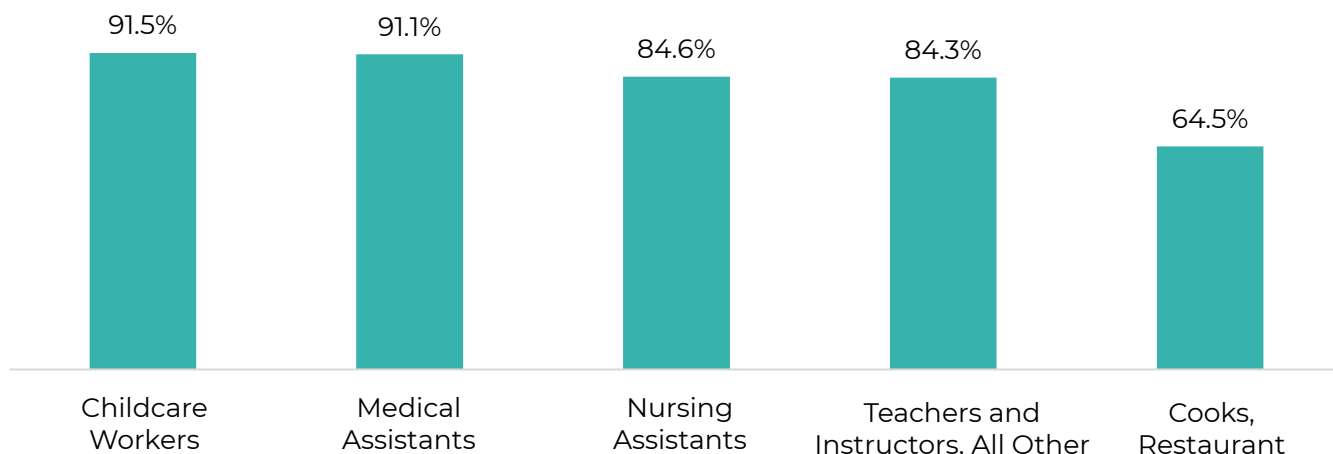
Employment Outcomes

Administrative wage record data are an important tool in measuring post-program completion success. This data source can be combined with Registered Apprenticeship data allowing for the analysis of employment rates and median one-year-after registered apprenticeship completion wages.

Men and women do not enroll in occupations or industries evenly. The top three largest programs completed among women in 2023 were *Medical assistants*, *Pharmacy technicians* and *Nursing assistants*. Among men, the top three largest programs were *Electricians*; *Plumbers, pipefitters, and steamfitters*; and *Tool and die makers*. Women are more likely to enroll in programs outside of *Construction* and *Manufacturing*, which often pay less upon completion.

Due to data limitations, there is limited wage information on women who have completed Registered Apprenticeships in Michigan. Where samples are large enough to compare, it appears that Registered Apprenticeships

Women who completed Registered Apprenticeship programs were most heavily concentrated among service-related occupations.

Figure 27: Share of Active Women Registered Apprentices in Select Occupations (2023)

Source: 2023 Registered Apprentices, Registered Apprenticeship Partners Information Management Data System, Office of Apprenticeship, U.S. Department of Labor

largely do not show notable wage gaps among completers by gender when they are in similar industries and occupations. As an example, men and women who completed *Electrician* programs in 2021 are employed at rates above 90 percent and one-year-after median wages are nearly identical. This suggests that Registered Apprenticeship training programs may be a valuable workforce development tool for increasing equity, by both increasing women's total enrollment and by encouraging women to enroll in higher-wage-earning Registered Apprenticeship fields.

Conclusion

Women in the Michigan workforce face unequal outcomes compared to men in many areas. The inequities become even more prominent when broken out by demographic categories such as race and ethnicity, typical occupations and industries, parental status, and more. While some disparities can be accounted for by the number of hours women work and their prominence in lower-paid industry areas, many other reasons remain unexplained.

Regardless of the cause, the outcome is evident. Women face disparities in the workplace compared to men and this situation is not specific to Michigan. Discrepancies by gender have been historically persistent across the United States. Because the issues women in the workforce face are multiple, integrated, and longstanding, policies aiming to address these inequities will need to be unique. Improving outcomes in the workforce will be pivotal in ensuring a strong and healthy Michigan economy.

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