

FIELD GUIDE CONSULTING

Young Adult Labor Market Assessment

Milwaukee City and the Milwaukee Region

August 15, 2016

Table of Contents

| | |
|--|-----------|
| ABOUT THE STUDY | 3 |
| <i>Key Terms and Definitions</i> | <i>3</i> |
| YOUNG ADULT LABOR FORCE PROFILE | 4 |
| LABOR FORCE PARTICIPATION, EMPLOYMENT, AND UNEMPLOYMENT..... | 7 |
| EMPLOYMENT STATUS, ENROLLMENT STATUS, AND LABOR FORCE PARTICIPATION | 12 |
| DISCONNECTION FROM WORK AND SCHOOL | 16 |
| EARNINGS BY DEMOGRAPHIC CATEGORY | 18 |
| INDUSTRIES AND OCCUPATIONS IN WHICH YOUNG ADULTS CAN BUILD CAREERS..... | 20 |
| YOUNG ADULT EMPLOYMENT BY INDUSTRY AND TARGET INDUSTRY SECTOR..... | 20 |
| <i>All Industries</i> | <i>20</i> |
| <i>Target Industry Sectors.....</i> | <i>22</i> |
| EMPLOYMENT BY OCCUPATION AND TARGET SECTOR OCCUPATIONS..... | 25 |
| EARNINGS BY INDUSTRY AND OCCUPATION | 34 |
| MIDDLE-SKILL OCCUPATIONS..... | 36 |
| <i>Higher-Earning Middle-Skill Occupations</i> | <i>36</i> |
| <i>Lower-Earning Middle-Skill Occupations</i> | <i>38</i> |
| <i>Detailed Information on Employment in Middle-Skill Occupations.....</i> | <i>39</i> |
| RECOMMENDATIONS FOR WORKFORCE DEVELOPMENT | 43 |

About the Study

The National Fund for Workforce Solutions (NFWS) supports local regional collaboratives that provide education, training, and credentialing for jobseekers and entry-level employees, preparing them for career advancement.

On behalf of the NFWS, Field Guide Consulting prepared this report describing the population of young adults living Milwaukee City, Milwaukee County, and the Milwaukee Study Region. The report presents a labor market profile of the region's young adults and a profile of industries and occupations in which young people can build careers.

The study has been informed primarily by analysis of the American Community Survey. The survey is performed by the U.S. Census Bureau during the time between census years and contains the most detailed information on the labor force demographics and status of young adults in the region who are between the ages of 18 and 29. The ACS is unique in the level of timely information it provides, specifically on young adults, and therefore has been the primary source for this study.

The report covers several key topics including:

- The size of the young adult labor force;
- Demographics of the labor force;
- Geographic maps that depict the geographic dispersion and concentration of young adults;
- Information on subpopulations of young adults, such as young adults who are disconnected from school or work;
- The occupations of young adults and industries where they work;
- Earnings of young adults, by industry and by occupation;
- Middle-skill occupations and the average earnings of young adults in these occupations; and
- Recommendations for workforce development.

The report is intended to inform and guide workforce development strategies throughout the Milwaukee region.

Key Terms and Definitions

This study presents a labor market profile describing the population of young adults age 18 to 29 who live in Milwaukee City, Milwaukee County, and the Milwaukee Study Region.

Geographic Study Area: The study covers Milwaukee City, Milwaukee County, and the Milwaukee Study Region. The Milwaukee Study Region equates roughly to the Milwaukee–Racine–Waukesha metropolitan area, which includes Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Jefferson, Washington, and Waukesha counties, and Milwaukee City. The most detailed and up-to-date source of information on the region's young adult labor force is the ACS. The ACS combines reporting for selected Public Use Microdata Areas. Data on the PUMAs is rich and detailed, but the boundaries of the PUMAs

do not align perfectly with the Milwaukee–Racine–Waukesha metropolitan area. In the PUMA definitions, Dodge and Jefferson counties are combined and therefore the reporting on the Milwaukee Study region is inclusive of all areas in the Milwaukee–Racine–Waukesha metropolitan area, plus Dodge County. The addition of information on young adults in Dodge County results in only a slight adjustment to the total population of young adults studied and, for this reason, it was decided to include Dodge County as part of the Milwaukee Study Region.

Young Adults: Except where otherwise noted, the term *young adults* in this report refers to people age 18 to 29.

Industry: Information on employment by industry (and related statistics) is reported on the basis of the North American Industrial Classification System. Findings are reported at the level of the NAICS two-digit level, except where more detailed reporting was requested. Information on the subindustries that are included in each two-digit NAICS industry is available from the U.S. Census (see: Introduction to NAICS, <https://www.census.gov/eos/www/naics/>).

Occupational Category: Information on employment by occupation (and related statistics) is reported on the basis of the Standard Occupational Classification 2010. Findings are reported at the level of the two-digit SOC occupational categories, except where more detailed reporting was requested. Information on the occupations that are included in each two-digit SOC category is available from the U.S. Bureau of Labor Statistics (See: Occupational Employment Statistics, http://www.bls.gov/oes/current/oes_stru.htm).

Middle-Skill Occupations: These are occupations for which a significant portion of workers have educational attainment that is above a high school diploma, but less than a bachelor's degree. The percentage of workers who have this level of educational attainment (above high school but less than a bachelor's) must be 40 percent or more to be considered a middle-skill occupation in this study.

Time Period: The majority of the study is informed by the ACS results for 2014, the most recent data available from the ACS.

Young Adult Labor Force Profile Population Description

Within the Milwaukee Study Region, there was a population of 330,970 young adults age 18-29 in 2014, representing about 21 percent of the population of the study area (total population of 1,572,245). Just over a quarter of the region's young adults (86,421) lived in Milwaukee City; 73,325 lived outside of Milwaukee city in Milwaukee County; and the remainder (171,224) lived in the surrounding counties.ⁱ

Milwaukee City is divided into five PUMAs: The Central PUMA was home to 27,026 young adults, the North PUMA was home to 22,851, the South Central PUMA was home to 20,617, the North Central PUMA was home to 20,118, and the South PUMA was home to 18,660 young adults. Milwaukee County is subdivided into three PUMAs: 31,105 young adults lived in the Northeast PUMA, 25,048 young adults lived in the West PUMA, and 17,172 young adults lived in the South PUMA.

There were 49,543 young adults living in Waukesha County—19,921 in the Central PUMA, 17,715 in the East PUMA, and 11,817 in the West PUMA. Racine County was home to 27,093 young adults and 18,735 young adults lived in Walworth County.

Washington and Ozaukee counties (combined) were home to 27,093 young adults, and Dodge and Jefferson counties (combined) were home to 25,659 young adults.

Figure 1: Milwaukee City Young Adult Population by Public Use Microdata Area, 2014

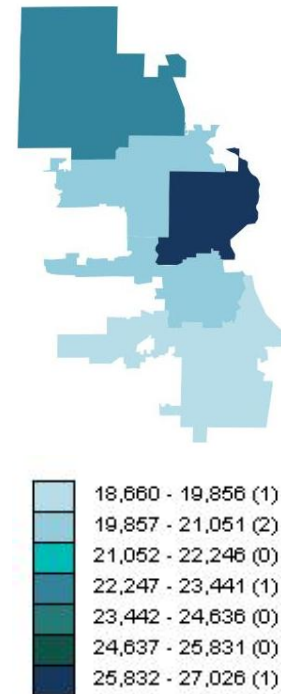


Table 1 Young Adult Population by Age Cohort, 2014ⁱⁱ

| Age | Milwaukee City | Milwaukee County | Milwaukee Study Region |
|-----------|----------------|------------------|------------------------|
| Age 18-29 | 86,421 | 73,325 | 330,970 |
| 18 | 6,540 | 4,181 | 30,157 |
| 19 | 7,762 | 5,076 | 26,022 |
| 20 | 5,647 | 4,444 | 24,304 |
| 21 | 8,091 | 5,985 | 28,374 |
| 22 | 8,512 | 5,785 | 28,685 |
| 23 | 8,067 | 6,419 | 30,680 |
| 24 | 6,732 | 5,570 | 27,965 |
| 25 | 6,734 | 8,085 | 27,956 |
| 26 | 9,632 | 5,129 | 26,817 |
| 27 | 6,218 | 6,598 | 24,394 |
| 28 | 7,206 | 7,586 | 27,329 |
| 29 | 5,280 | 8,467 | 28,287 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author. Note: The ACS reports data by Public Use Microdata Area (PUMA).

Figure 2: Milwaukee County and Milwaukee City Young Adult Population by Public Use Microdata Area, 2014

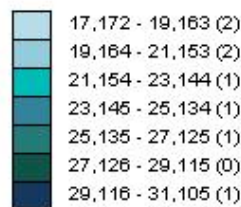
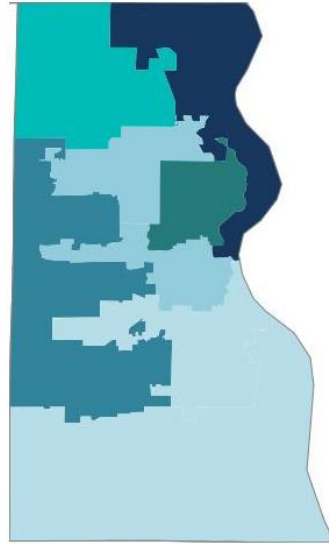


Figure 3: Milwaukee Study Region Young Adult Population by Public Use Microdata Area, 2014

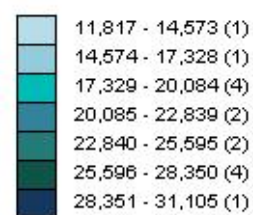
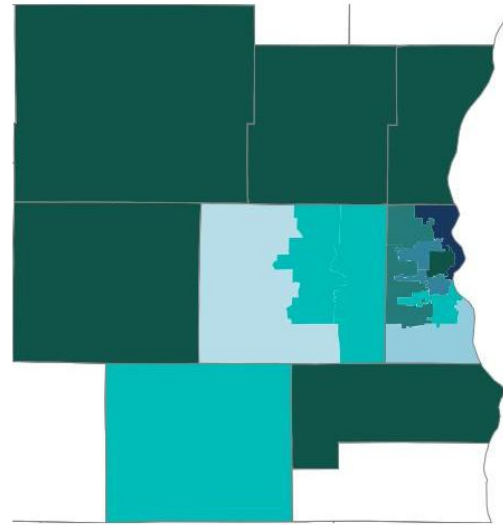


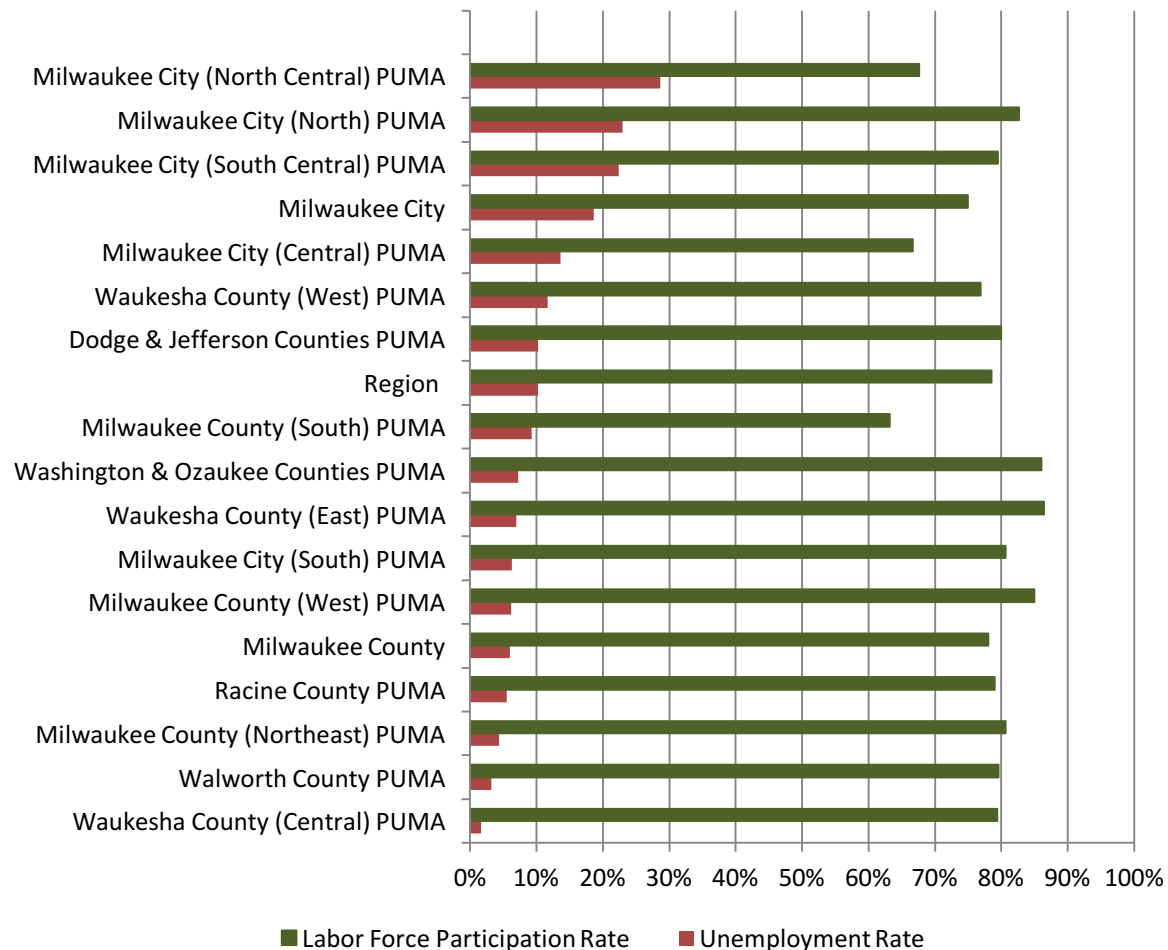
Table 2: Young Adult Population (Age 18-29) by Microdata Area, 2014

| Public Use Microdata Area | Population Age 18-28 |
|-------------------------------------|----------------------|
| Waukesha County (West) PUMA | 11,817 |
| Waukesha County (East) PUMA | 17,715 |
| Waukesha County (Central) PUMA | 19,921 |
| Walworth County PUMA | 18,735 |
| Milwaukee County (Northeast) PUMA | 31,105 |
| Milwaukee County (South) PUMA | 17,172 |
| Milwaukee County (West) PUMA | 25,048 |
| Milwaukee City (North) PUMA | 22,851 |
| Milwaukee City (North Central) PUMA | 20,118 |
| Milwaukee City (Central) PUMA | 27,026 |
| Milwaukee City (South Central) PUMA | 20,617 |
| Milwaukee City (South) PUMA | 18,660 |
| Racine County PUMA | 27,093 |
| Washington & Ozaukee Counties PUMA | 27,433 |
| Dodge & Jefferson Counties PUMA | 25,659 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author. Note: The ACS reports data by Public Use Microdata Area (PUMA).

Young Adult Labor Force Participation, Employment and Unemployment

Figure 4: Young Adult Unemployment and Labor Force Participation by PUMA, 2014



Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

In 2014, young adults ages 18 to 29 had 10 percent unemployment across the study region. The rate was nearly twice as high in Milwaukee City at 18.7 percent unemployment. Young adults in the North Central PUMA had the highest unemployment in the region at 29 percent. Young adult unemployment was also high in the Milwaukee City North PUMA at 23 percent, Milwaukee City South Central PUMA at 22 percent, and Milwaukee City Central PUMA at 14 percent. The Milwaukee City South PUMA was the only area in Milwaukee City in which young adults had lower-than-average unemployment at 6 percent.

By comparison, young adult unemployment was lower in Milwaukee County, which had a young adult unemployment rate of 6 percent. The Milwaukee County South PUMA had slightly higher young adult unemployment at 9 percent and the Milwaukee County Northeast PUMA had considerably low young adult unemployment at 4 percent.

Unemployment varied in other areas of the study region. Young adults living in the Waukesha County West PUMA had 12 percent unemployment while unemployment in other parts of Waukesha County was lower (7 percent for the Waukesha County East PUMA and 2 percent for the Waukesha County Central PUMA). Young adults in Dodge and Jefferson counties had 10 percent unemployment. Young adult unemployment was lower than the regional average in Walworth (3 percent), Racine (6 percent), and Washington and Ozaukee counties (7 percent).

Young adult labor force participation was lowest in the Milwaukee City South PUMA (63 percent), Milwaukee City Central PUMA (67 percent), and Milwaukee City North Central PUMA (68 percent). These participation rates are considerably lower than that of the region (78 percent).

Figure 5: Unemployed Young Adults in Milwaukee County and Milwaukee City by Public Use Microdata Area, 2014

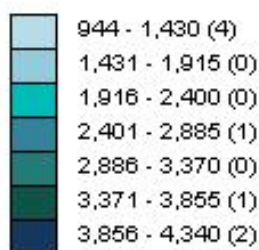
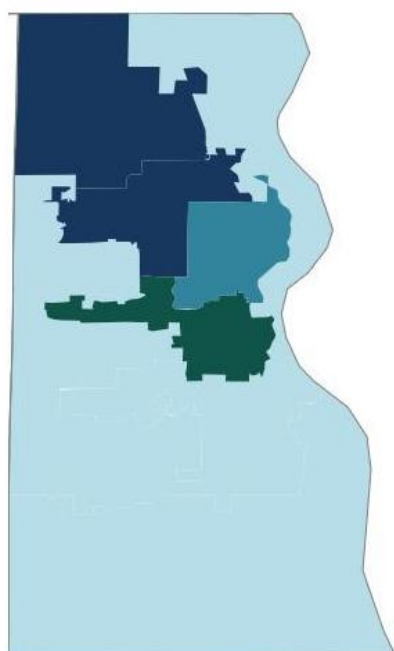
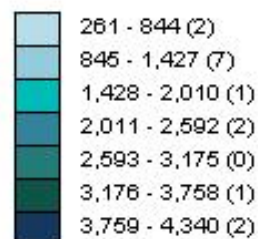
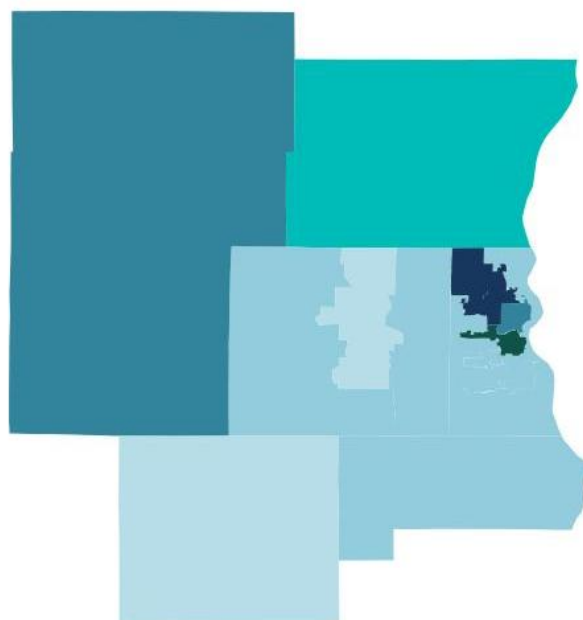


Figure 6: Unemployed Young Adults in the Milwaukee Study Region by Public Use Microdata Area, 2014



Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 3: Employment, Unemployment, and Labor Force Participation for Young Adults Age 18-29 by PUMA, 2014

| | Total | Employed | Unemployed | Not in the Labor Force | Unemployment Rate | Labor Force Participation Rate |
|-------------------------------------|----------------|----------------|---------------|------------------------|-------------------|--------------------------------|
| Study Region | 330,970 | 233,233 | 26,548 | 71,189 | 10% | 78% |
| Milwaukee City | 109,272 | 66,632 | 15,286 | 27,354 | 19% | 75% |
| Milwaukee City (North) PUMA | 22,851 | 14,549 | 4,340 | 3,962 | 23% | 83% |
| Milwaukee City (North Central) PUMA | 20,118 | 9,711 | 3,890 | 6,517 | 29% | 68% |
| Milwaukee City (Central) PUMA | 27,026 | 15,555 | 2,453 | 9,018 | 14% | 67% |
| Milwaukee City (South Central) PUMA | 20,617 | 12,722 | 3,659 | 4,236 | 22% | 79% |
| Milwaukee City (South) PUMA | 18,660 | 14,095 | 944 | 3,621 | 6% | 81% |
| Milwaukee County | 73,325 | 53,828 | 3,411 | 16,086 | 6% | 78% |
| Milwaukee County (Northeast) PUMA | 31,105 | 24,013 | 1,084 | 6,008 | 4% | 81% |
| Milwaukee County (South) PUMA | 17,172 | 9,845 | 1,003 | 6,324 | 9% | 63% |
| Milwaukee County (West) PUMA | 25,048 | 19,970 | 1,324 | 3,754 | 6% | 85% |
| Other Counties | 148,373 | 112,773 | 7,851 | 27,749 | 7% | 81% |
| Waukesha County (West) PUMA | 11,817 | 8,026 | 1,061 | 2,730 | 12% | 77% |
| Waukesha County (East) PUMA | 17,715 | 14,248 | 1,064 | 2,403 | 7% | 86% |
| Waukesha County (Central) PUMA | 19,921 | 15,544 | 261 | 4,116 | 2% | 79% |
| Walworth County PUMA | 18,735 | 14,426 | 474 | 3,835 | 3% | 80% |
| Racine County PUMA | 27,093 | 20,210 | 1,187 | 5,696 | 6% | 79% |
| Washington & Ozaukee Counties PUMA | 27,433 | 21,900 | 1,702 | 3,831 | 7% | 86% |
| Dodge & Jefferson Counties PUMA | 25,659 | 18,419 | 2,102 | 5,138 | 10% | 80% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author. Note: The ACS reports data by Public Use Microdata Area (PUMA).

Demographics

Following national trends, 51.3 percent of young adults in the Milwaukee Study Region were male in 2014, while 48.7 percent were female. The trend is similar in Milwaukee County but reversed in Milwaukee City, where 51.7 percent of young adult residents were female. In Milwaukee City there was no racial majority; approximately 43.9 percent of the city's young adult population was white, 41.5 percent was black, 5.2 percent was Asian, 5.6 percent was some other race, and 3.5 percent of the population was two races or more. Outside of the city, the population was less racially diverse than the United States overall; approximately 72.5 percent of the young adult population in the study region was white (81.7 percent in Milwaukee County) while whites accounted for 69.0 percent of the total U.S. young adult population.

Table 4: Young Adult Population Age 18-29 by Sex, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|----------------------------------|-----------------------|-------------------------|-------------------------------|----------------------|
| Young Adults Age 18 to 29 | 109,272 | 73,325 | 330,970 | 53,402,261 |
| Male | 52,815 | 38,379 | 169,819 | 27,234,139 |
| Female | 56,457 | 34,946 | 161,151 | 26,168,122 |
| % Male | 48.3% | 52.3% | 51.3% | 51.0% |
| % Female | 51.7% | 47.7% | 48.7% | 49.0% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 5: Population of Young Adults Age 18-29 by Race, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|-------------------------------------|-----------------------|-------------------------|-------------------------------|----------------------|
| Between 18 and 29 | 109,272 | 73,325 | 330,970 | 53,402,261 |
| White alone | 47,993 | 59,896 | 239,805 | 36,861,782 |
| Black or African American alone | 45,300 | 5,287 | 57,382 | 7,800,564 |
| American Indian/Alaska Native | 476 | 283 | 1,336 | 466,832 |
| Asian alone | 5,652 | 3,738 | 13,842 | 3,045,813 |
| Some Other Race alone | 6,075 | 1,281 | 9,539 | 3,201,585 |
| Two or More Races | 3,776 | 2,840 | 9,066 | 1,881,710 |
| Share of Population 18 to 29 | | | | |
| % White alone | 43.9% | 81.7% | 72.5% | 69.0% |
| % Black or African American alone | 41.5% | 7.2% | 17.3% | 14.6% |
| % American Indian / Alaska Native | 0.4% | 0.4% | 0.4% | 0.9% |
| % Asian alone | 5.2% | 5.1% | 4.2% | 5.7% |
| % Some Other Race Alone | 5.6% | 1.7% | 2.9% | 6.0% |
| % Two or More Races | 3.5% | 3.9% | 2.7% | 3.5% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Employment Status, Enrollment Status, and Labor Force Participation

Overall, young adults in Milwaukee City had an unemployment rate of 18.7 percent in 2014, compared to an unemployment rate of 11.5 percent for young adults in the United States. Young adult unemployment was considerably lower in Milwaukee County (6.0 percent) and lower across the study region (10.2 percent). Labor force participation for young adults in the Milwaukee Study Region was higher than that of the United States and this was also true of Milwaukee City and Milwaukee County.

There were stark racial differences in the work status of the Milwaukee young adult labor force. Young adult blacks in Milwaukee City had a 32.4 percent unemployment rate in 2014, compared to a 7.3 percent unemployment rate for young adult whites in Milwaukee City. Unemployment for young adult Asians was lower at 2.6 percent, compared to 13.6 percent for young adults of another race (other than white, black, or Asian), and 46.3 percent for young adults of mixed races. The difference in unemployment across racial lines was more polarized in Milwaukee City than it is in the United States as a whole. (In the United States, young adult whites had an unemployment rate of 9.6 percent and blacks had an unemployment rate of 20.2 percent). Similar trends of polarized differences in unemployment by race are evident across the study region.

The rate of labor force participation also differs across racial lines in Milwaukee City compared to the United States. Whites and Asians in Milwaukee City had higher labor force participation than they did in the United States; white young adults in Milwaukee City had a labor force participation rate of 80.1 percent in 2014 while white young adults in the United States had a participation rate of 75.2 percent. Labor force participation of blacks in Milwaukee city was 69.1 percent in 2014, compared to 69.9 percent in the United States.

The rate of educational enrollment in the Milwaukee Study Region was similar to the enrollment rate of young adults in the United States. In the study region, educational enrollment—including both high school and all postsecondary education—was 37.4 percent, compared to 36.5 percent in the United States. Educational enrollment of young adults was lower in Milwaukee City at 34.2 percent. Enrollment rates were slightly higher for men in Milwaukee City and Milwaukee County, although higher for women in the total Milwaukee Study Region. Similar to regional trends in unemployment and labor force participation, educational enrollment rates diverged along racial lines. Whites in Milwaukee City had an enrollment rate of 35.8 percent in 2014, while blacks had an enrollment rate of 30.7 percent. Asians and people of another race had higher enrollment rates at 41.0 percent and 44.4 percent respectively; enrollment was low for people of multiple races at 25.7 percent. Similar trends are apparent in Milwaukee County and across the study region.

Table 6: Employment Status of Young Adults, Selected Demographics, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|---|----------------|------------------|------------------------|---------------|
| Between 18 and 29 | 109,272 | 73,325 | 330,970 | 53,402,261 |
| Employed | 66,632 | 53,828 | 233,233 | 34,707,002 |
| Unemployed | 15,286 | 3,411 | 26,548 | 4,500,939 |
| Not in the Labor Force | 27,354 | 16,086 | 71,189 | 14,194,320 |
| Male | 52,815 | 38,379 | 169,819 | 27,234,139 |
| Employed | 28,815 | 29,752 | 116,575 | 18,059,487 |
| Unemployed | 8,677 | 1,928 | 16,100 | 2,483,048 |
| Not in the Labor Force | 15,323 | 6,699 | 37,144 | 6,691,604 |
| Female | 56,457 | 34,946 | 161,151 | 26,168,122 |
| Employed | 37,817 | 24,076 | 116,658 | 16,647,515 |
| Unemployed | 6,609 | 1,483 | 10,448 | 2,017,891 |
| Not in the Labor Force | 12,031 | 9,387 | 34,045 | 7,502,716 |
| White alone | 47,993 | 59,896 | 239,805 | 36,861,782 |
| Employed | 35,623 | 45,492 | 186,281 | 25,061,488 |
| Unemployed | 2,796 | 3,054 | 12,578 | 2,664,867 |
| Not in the Labor Force | 9,574 | 11,350 | 40,946 | 9,135,427 |
| Black or African American alone | 45,300 | 5,287 | 57,382 | 7,800,564 |
| Employed | 21,165 | 2,676 | 26,286 | 4,352,533 |
| Unemployed | 10,130 | 254 | 11,192 | 1,101,839 |
| Not in the Labor Force | 14,005 | 2,357 | 19,904 | 2,346,192 |
| American Indian / Native Alaskan | 476 | 283 | 1,336 | 610,807 |
| Employed | n/a | 101 | 532 | 331,233 |
| Unemployed | 208 | n/a | 208 | 75,038 |
| Not in the Labor Force | 268 | 182 | 596 | 204,536 |
| Asian alone | 5,652 | 3,738 | 13,842 | 3,045,813 |
| Employed | 4,139 | 2,283 | 8,580 | 1,741,760 |
| Unemployed | 109 | n/a | 109 | 168,645 |
| Not in the Labor Force | 1,404 | 1,455 | 5,153 | 1,135,408 |
| Some Other Race alone | 6,075 | 1,281 | 9,539 | 3,201,585 |
| Employed | 4,081 | 1,076 | 6,087 | 2,053,601 |
| Unemployed | 644 | 103 | 945 | 296,128 |
| Not in the Labor Force | 1,350 | 102 | 2,507 | 851,856 |
| Two or More Races | 3,776 | 2,840 | 9,066 | 1,881,710 |
| Employed | 1,624 | 2,200 | 5,467 | 1,166,387 |
| Unemployed | 1,399 | n/a | 1,516 | 194,422 |
| Not in the Labor Force | 753 | 640 | 2,083 | 520,901 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 7: Labor Force Participation Rate and Unemployment Rate of Young Adults, Selected Demographics, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|---|----------------|------------------|------------------------|---------------|
| Between 18 and 29 | | | | |
| Unemployment Rate | 18.7% | 6.0% | 10.2% | 11.5% |
| Labor Force Participation Rate | 75.0% | 78.1% | 78.5% | 73.4% |
| Male | | | | |
| Unemployment Rate | 23.1% | 6.1% | 12.1% | 12.1% |
| Labor Force Participation Rate | 71.0% | 82.5% | 78.1% | 75.4% |
| Female | | | | |
| Unemployment Rate | 14.9% | 5.8% | 8.2% | 10.8% |
| Labor Force Participation Rate | 78.7% | 73.1% | 78.9% | 71.3% |
| White alone | | | | |
| Unemployment Rate | 7.3% | 6.3% | 6.3% | 9.6% |
| Labor Force Participation Rate | 80.1% | 81.1% | 82.9% | 75.2% |
| Black or African American alone | | | | |
| Unemployment Rate | 32.4% | 8.7% | 29.9% | 20.2% |
| Labor Force Participation Rate | 69.1% | 55.4% | 65.3% | 69.9% |
| American Indian / Native Alaskan | | | | |
| Unemployment Rate | n/a | n/a | 28.1% | 18.5% |
| Labor Force Participation Rate | 43.7% | 35.7% | 55.4% | 66.5% |
| Asian alone | | | | |
| Unemployment Rate | 2.6% | n/a | 1.3% | 8.8% |
| Labor Force Participation Rate | 75.2% | 61.1% | 62.8% | 62.7% |
| Some Other Race alone | | | | |
| Unemployment Rate | 13.6% | 8.7% | 13.4% | 12.6% |
| Labor Force Participation Rate | 77.8% | 92.0% | 73.7% | 73.4% |
| Two or More Races | | | | |
| Unemployment Rate | 46.3% | n/a | 21.7% | 14.3% |
| Labor Force Participation Rate | 80.1% | 77.5% | 77.0% | 72.3% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 8: Young Adult Enrollment in Education, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|---|----------------|------------------|------------------------|---------------|
| Young Adults Age 18 to 29 | 109,272 | 73,325 | 330,970 | 53,402,261 |
| Not Enrolled Last 3 Months | 71,954 | 46,216 | 207,154 | 33,886,853 |
| Enrolled in Education | 37,318 | 27,109 | 123,816 | 19,515,408 |
| Male | 52,815 | 38,379 | 169,819 | 27,234,139 |
| Not Enrolled Last 3 Months | 34,402 | 23,991 | 108,179 | 17,914,732 |
| Enrolled in Education | 18,413 | 14,388 | 61,640 | 9,319,407 |
| Female | 56,457 | 34,946 | 161,151 | 26,168,122 |
| Not Enrolled Last 3 Months | 37,552 | 22,225 | 98,975 | 15,972,121 |
| Enrolled in Education | 18,905 | 12,721 | 62,176 | 10,196,001 |
| White alone | 47,993 | 59,896 | 239,805 | 36,861,782 |
| Not Enrolled Last 3 Months | 30,823 | 38,502 | 149,117 | 23,566,180 |
| Enrolled in Education | 17,170 | 21,394 | 90,688 | 13,295,602 |
| Black or African American alone | 45,300 | 5,287 | 57,382 | 7,800,564 |
| Not Enrolled Last 3 Months | 31,402 | 3,925 | 39,098 | 5,088,028 |
| Enrolled in Education | 13,898 | 1,362 | 18,284 | 2,712,536 |
| American Indian / Native Alaskan | 476 | 283 | 1,336 | 610,807 |
| Not Enrolled Last 3 Months | 211 | 0 | 724 | 437,424 |
| Enrolled in Education | 265 | 283 | 612 | 173,383 |
| Asian alone | 5,652 | 3,738 | 13,842 | 3,045,813 |
| Not Enrolled Last 3 Months | 3,335 | 1,763 | 7,846 | 1,496,741 |
| Enrolled in Education | 2,317 | 1,975 | 5,996 | 1,549,072 |
| Some Other Race alone | 6,075 | 1,281 | 9,539 | 3,201,585 |
| Not Enrolled Last 3 Months | 3,378 | 311 | 4,471 | 2,183,305 |
| Enrolled in Education | 2,697 | 970 | 5,068 | 1,018,280 |
| Two or More Races | 3,776 | 2,840 | 9,066 | 1,881,710 |
| Not Enrolled Last 3 Months | 2,805 | 1,715 | 5,898 | 1,115,175 |
| Enrolled in Education | 971 | 1,125 | 3,168 | 766,535 |
| Share Enrolled | | | | |
| Young Adults Age 18 to 29 | 34.2% | 37.0% | 37.4% | 36.5% |
| Male | 34.9% | 37.5% | 36.3% | 34.2% |
| Female | 33.5% | 36.4% | 38.6% | 39.0% |
| White alone | 35.8% | 35.7% | 37.8% | 36.1% |
| Black or African American alone | 30.7% | 25.8% | 31.9% | 34.8% |
| American Indian / Native Alaskan | 55.7% | 100.0% | 45.8% | 28.4% |
| Asian alone | 41.0% | 52.8% | 43.3% | 50.9% |
| Some Other Race alone | 44.4% | 75.7% | 53.1% | 31.8% |
| Two or More Races | 25.7% | 39.6% | 34.9% | 40.7% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Connection and Disconnection from Work and School

In 2014, approximately 37 percent of young adults in the study area were enrolled in school or college (or had been enrolled in the last three months). Approximately 33 percent of working young adults were enrolled in school; 25 percent of unemployed young adults were enrolled in school, and 56 percent of young adults who were not in the labor force were enrolled in school.

There were approximately 51,234 young adults in the region who were not employed and not in school. This accounts for approximately 15 percent of all young adults in the region. The percentage of young adults who were disconnected from work and school was higher in Milwaukee City at 21.2 percent. Parts of the city—in particular Milwaukee City North Central PUMA and Milwaukee City North PUMA—had higher percentages of young adults who were disconnected from work and school (27.2 percent and 24.2 percent, respectively). Disconnection from work and school was less prevalent in Milwaukee County (11 percent of young adults are disconnected from work and school) but the rate varied by area with 16.1 percent of young adults in Milwaukee County West PUMA and 14.9 percent of young adults in Milwaukee County South PUMA disconnected from work and school. In Milwaukee County Northeast, only 2.6 percent of young adults were disconnected from work and school.

In the surrounding counties, there were 20,043 young adults who were neither working nor enrolled in school. Racine County had the highest rate with 36.3 percent of young adults disconnected from work and school. Dodge and Jefferson counties (23.4 percent), and Washington and Ozaukee counties (18.6 percent) were also higher than the regional average.

Table 9: Work Status and Educational Enrollment Status for Young Adults Age 18-29

| | Milwaukee City, Wisconsin | Milwaukee County, Wisconsin | Milwaukee, Waukesha, Walworth, Racine, Washington, Dodge, Jefferson, Greene, and Fayette Counties, and Milwaukee City |
|---|----------------------------------|------------------------------------|--|
| Employed | 66,632 | 53,828 | 233,233 |
| Not Enrolled Last 3 Months | 48,813 | 38,157 | 155,911 |
| Enrolled in Education | 17,819 | 15,671 | 77,322 |
| Unemployed | 15,286 | 3,411 | 26,548 |
| Not Enrolled Last 3 Months | 12,405 | 1,831 | 19,958 |
| Enrolled in Education | 2,881 | 1,580 | 6,590 |
| Not in the Labor Force | 27,354 | 16,086 | 71,189 |
| Not Enrolled Last 3 Months | 10,736 | 6,228 | 31,285 |
| Enrolled in Education | 16,618 | 9,858 | 39,904 |
| Not Employed or Enrolled Last 3 Months | 23,141 | 8,059 | 51,243 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author. Note: The ACS reports data by Public Use Microdata Area (PUMA).

Table 10: Number of Young Adults Age 18-29 Who Are Disconnected from Work and School

| Geography | Not Employed or Enrolled Last 3 Months | Total Young Adults (18-29) | Share of Young Adults Not Employed or Enrolled in the Last 3 Months |
|-------------------------------------|--|----------------------------|---|
| Region | 51,243 | 330,970 | 15.5% |
| Milwaukee City | 23,141 | 109,272 | 21.2% |
| Milwaukee City (North Central) PUMA | 6,209 | 22,851 | 27.2% |
| Milwaukee City (North) PUMA | 4,900 | 20,118 | 24.4% |
| Milwaukee City (Central) PUMA | 4,830 | 27,026 | 17.9% |
| Milwaukee City (South Central) PUMA | 4,243 | 20,617 | 20.6% |
| Milwaukee City (South) PUMA | 2,959 | 18,660 | 15.9% |
| Milwaukee County | 8,059 | 73,325 | 11.0% |
| Milwaukee County (South) PUMA | 4,645 | 31,105 | 14.9% |
| Milwaukee County (West) PUMA | 2,765 | 17,172 | 16.1% |
| Milwaukee County (Northeast) PUMA | 649 | 25,048 | 2.6% |
| Other Counties | 20,043 | 148,373 | 13.5% |
| Racine County PUMA | 4,293 | 11,817 | 36.3% |
| Dodge & Jefferson Counties PUMA | 4,139 | 17,715 | 23.4% |
| Washington & Ozaukee Counties PUMA | 3,707 | 19,921 | 18.6% |
| Waukesha County (Central) PUMA | 2,575 | 18,735 | 13.7% |
| Walworth County PUMA | 2,093 | 27,093 | 7.7% |
| Waukesha County (East) PUMA | 1,775 | 27,433 | 6.5% |
| Waukesha County (West) PUMA | 1,461 | 25,659 | 5.7% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author. Note: The ACS reports data by Public Use Microdata Area (PUMA).

Earnings by Demographic Category

The average earnings of employed young adults age 18 to 29 in the Milwaukee Study Region was \$22,094 in 2014, 7.3 percent lower than the national average of \$23,833. Average earnings of young adults were lower in Milwaukee City at \$18,393 and considerably higher in Milwaukee County at \$27,009.

Men in the Milwaukee Study Region had average earnings of \$24,068, which was higher than women at \$20,121, a pattern that is similar to the United States. Whites in the Milwaukee Study Region had average earnings that were 39 percent higher than average earnings for blacks (\$23,034 for whites and \$16,513 for blacks). On average, Asians living in the study region had higher average earnings at \$27,373.

Following national trends, young adults with higher educational attainment enjoyed higher earnings. The average earnings for young adults without a high school diploma was \$14,420 in 2014, while the average earnings for workers with a bachelor's degree was twice as high at \$33,997 and three times as high for workers with a master's degree or higher education. Most of the region's workers who were enrolled in classes had lower average earnings of \$11,569 (vs. \$27,313 for working young adults who were not enrolled in classes).

Average earnings also increase with age among young adults, and this trend is similar in the Milwaukee Study Region, Milwaukee County, Milwaukee City, and the United States. Employed young adults in the study region who were age 18 had average earnings of just \$5,832 per year, while employed young adults age 29 had average earnings of \$33,820.

Table 11: Average Earnings of Employed Young Adults, Selected Demographics, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|-----------------------------------|-----------------------|-------------------------|-------------------------------|----------------------|
| Young Adults Age 18-29 | \$18,393 | \$27,009 | \$22,094 | \$23,833 |
| Male | \$19,717 | \$26,990 | \$24,068 | \$26,142 |
| Female | \$17,385 | \$27,032 | \$20,121 | \$21,328 |
| By Race | | | | |
| White alone | \$20,137 | \$27,099 | \$23,034 | \$24,441 |
| Black or African American alone | \$16,655 | \$16,348 | \$16,513 | \$19,894 |
| American Indian / Native Alaskan | n.a. | \$22,000 | \$13,112 | \$21,193 |
| Asian alone | \$17,351 | \$50,065 | \$27,377 | \$30,870 |
| Some Other Race alone | \$14,238 | \$19,372 | \$14,668 | \$20,763 |
| Two or More Races | \$15,895 | \$18,138 | \$17,717 | \$21,123 |
| By Educational Attainment | | | | |
| Less than High School Diploma | \$14,758 | \$16,460 | \$14,420 | \$15,991 |
| High School Diploma or Equivalent | \$13,045 | \$19,691 | \$16,886 | \$19,512 |
| Some College, No Degree | \$16,638 | \$14,760 | \$16,341 | \$17,986 |
| Associate's Degree | \$20,282 | \$23,258 | \$22,012 | \$25,307 |
| Bachelor's Degree | \$32,600 | \$33,687 | \$33,997 | \$36,176 |
| Master's, Professional, or PhD | \$34,083 | \$50,761 | \$47,317 | \$47,551 |
| By Enrollment Status | | | | |
| Not Enrolled Last 3 Months | \$21,183 | \$32,835 | \$27,313 | \$27,888 |
| Enrolled in Education | \$10,752 | \$12,822 | \$11,569 | \$14,027 |
| By Age | | | | |
| 18 Years Old | \$7,940 | \$6,212 | \$5,832 | \$5,959 |
| 19 Years Old | \$7,899 | \$5,075 | \$8,263 | \$8,565 |
| 20 Years Old | \$7,471 | \$16,525 | \$12,125 | \$11,616 |
| 21 Years Old | \$9,928 | \$10,689 | \$11,013 | \$13,553 |
| 22 Years Old | \$13,135 | \$15,107 | \$15,284 | \$15,976 |
| 23 Years Old | \$16,107 | \$28,892 | \$20,297 | \$19,764 |
| 24 Years Old | \$18,351 | \$21,706 | \$20,469 | \$23,104 |
| 25 Years Old | \$20,788 | \$31,921 | \$26,514 | \$28,639 |
| 26 Years Old | \$21,930 | \$37,687 | \$30,644 | \$31,262 |
| 27 Years Old | \$23,508 | \$30,893 | \$31,755 | \$33,508 |
| 28 Years Old | \$23,240 | \$36,897 | \$33,429 | \$36,045 |
| 29 Years Old | \$33,016 | \$36,108 | \$33,820 | \$38,161 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Industries and Occupations in Which Young Adults Can Build Careers

Young Adult Employment by Industry and Target Industry Sector

All Industries

There were 290,075 young adults employed in the Milwaukee Study Region in 2014, including 89,064 young adults in Milwaukee City and 64,939 in Milwaukee County. Young adults had employment in all industry sectors across the region, with a significant concentration of 60,494 young adults working in accommodation, food service, and arts and entertainment (approximately 20.9 percent of employed young adults in the region); 45,417 young adults working in retail (15.7 percent of working young adults); 35,756 young adults working in manufacturing (12.3 percent of working young adults); 28,785 working in health care (9.9 percent of working young adults); 25,175 in professional and scientific services (8.7 percent of young adults); and 22,892 in education (7.9 percent of working young adults).

Table 12: Employment of Young Adults by NAICS Industry, 2014

| Industry | Milwaukee City | Milwaukee County | Milwaukee Study Region |
|---|----------------|------------------|------------------------|
| Agriculture | 431 | 571 | 2,625 |
| Mining Extraction | 73 | n/a | 119 |
| Utilities | 123 | 445 | 701 |
| Construction | 2,016 | 1,326 | 9,306 |
| Manufacturing | 10,454 | 6,759 | 35,756 |
| Wholesale | 2,383 | 663 | 7,419 |
| Retail | 16,758 | 6,956 | 45,417 |
| Transportation | 2,268 | 1,499 | 6,897 |
| Information | 439 | 1,724 | 3,223 |
| Finance and Real Estate | 4,073 | 5,054 | 13,878 |
| Professional, Scientific, Technical Services, and Management of Companies | 9,020 | 8,113 | 25,175 |
| Waste Management | n/a | 310 | 310 |
| Education | 6,424 | 6,792 | 22,892 |
| Health Care | 10,049 | 5,144 | 28,785 |
| Social Services | 2,416 | 1,100 | 7,400 |
| Accommodation, Food Service, Arts and Entertainment | 16,945 | 14,689 | 60,494 |
| Other Services | 3,351 | 2,873 | 12,995 |
| Government Administration | 1,650 | 921 | 5,727 |
| Military | 191 | n/a | 956 |
| Total | 89,064 | 64,939 | 290,075 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 13: Share of Employment of Young Adults by NAICS Industry, 2014

| Share of Employment | Milwaukee City | Milwaukee County | Milwaukee Study Region |
|---|----------------|------------------|------------------------|
| Agriculture | 0.5% | 0.9% | 0.9% |
| Mining Extraction | 0.1% | n/a | 0.0% |
| Utilities | 0.1% | 0.7% | 0.2% |
| Construction | 2.3% | 2.0% | 3.2% |
| Manufacturing | 11.7% | 10.4% | 12.3% |
| Wholesale | 2.7% | 1.0% | 2.6% |
| Retail | 18.8% | 10.7% | 15.7% |
| Transportation | 2.5% | 2.3% | 2.4% |
| Information | 0.5% | 2.7% | 1.1% |
| Finance and Real Estate | 4.6% | 7.8% | 4.8% |
| Professional, Scientific, Technical Services, and Management of Companies | 10.1% | 12.5% | 8.7% |
| Waste Management | n/a | 0.5% | 0.1% |
| Education | 7.2% | 10.5% | 7.9% |
| Health Care | 11.3% | 7.9% | 9.9% |
| Social Services | 2.7% | 1.7% | 2.6% |
| Accommodation, Food Service, Arts and Entertainment | 19.0% | 22.6% | 20.9% |
| Other Services | 3.8% | 4.4% | 4.5% |
| Government Administration | 1.9% | 1.4% | 2.0% |
| Military | 0.2% | n/a | 0.3% |
| Total | 100% | 100% | 100% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Target Industry Sectors

The Milwaukee Region has identified five industry sectors that are targeted for workforce development. These include:

1. Health care;
2. Finance and information;
3. Hospitality;
4. Manufacturing; and
5. Construction.

In Milwaukee City, young adults were well represented in each of these industry sectors. Young adults represented 19.6 percent of all Milwaukee City's total employment in 2014 but they represented a larger share of employment in all target sectors—20 percent of construction, 21 percent of manufacturing, 24 percent of finance and insurance, 24 percent of health care, and 48 percent of hospitality. Together, these five sectors accounted for 44 percent of all young adult employment in Milwaukee City.

Young adults represented 18.6 percent of employment in Milwaukee County in 2014. Young adult employment was underrepresented in three sectors in Milwaukee County: construction (12.5 percent), health care (16 percent), and manufacturing (17.9 percent). Young adults were well represented in Milwaukee County's finance and insurance sector (27 percent) and in hospitality (40 percent). Together, these five sectors accounted for 43 percent of all young adult employment in Milwaukee County.

Young adults represented 16.2 percent of employment across the Milwaukee Study Region in 2014. Across the region, young adult employment was underrepresented in construction (13.9 percent), but was well represented in all other sectors: health care (19.4 percent), manufacturing (16.6 percent), finance and information (17.7 percent), and manufacturing (16.6 percent). Together, these five sectors accounted for nearly half (49 percent) of all young adult employment in the study region.

A comparison of employment of young adults and employment of working age adults age 30-65 reveals that key sectors targeted for workforce development may differ from one another in long-term career potential. In four of the five sectors, the percentage of adult workers over age 30 was higher in these sectors than it was for young adults working in these sectors. The exception was hospitality. While 19.8 percent of young adults in Milwaukee City worked in hospitality, only 8.4 percent of working adults over age 30 were employed in hospitality. Trends are similar for Milwaukee County and the Milwaukee Study Region. There was a notably significant step up in representation of workers over age 30 in the manufacturing sector. Approximately 10.7 percent of working young adults in the study region were employed in the manufacturing sector, while 17.3 percent of working adults age 30-65 worked in manufacturing.

Table 14: Employment of Young Adults by Target Industry Sector, Employment of All Workers by Target Industry Sector, and Share of Workers Who Were Age 18-29, by Target Industry Sector, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region |
|---|----------------|------------------|------------------------|
| Young Adults Age 18-29 | | | |
| Health Care (NAICS 62) | 10,049 | 5,144 | 28,785 |
| Finance and Information (NAICS 51-53) | 4,512 | 6,778 | 17,101 |
| Hospitality (NAICS 72, 44) | 21,600 | 11,741 | 70,118 |
| Manufacturing (NAICS 31-33) | 10,454 | 6,759 | 35,756 |
| Construction (NAICS 23) | 2,016 | 1,326 | 9,306 |
| Other Industries | 60,641 | 41,577 | 169,904 |
| Total | 109,272 | 73,325 | 330,970 |
| All Workers | | | |
| Health Care (NAICS 62) | 41,903 | 32,123 | 148,077 |
| Finance and Information (NAICS 51-53) | 19,055 | 25,164 | 96,420 |
| Hospitality (NAICS 72, 44) | 44,942 | 29,068 | 168,198 |
| Manufacturing (NAICS 31-33) | 49,851 | 37,818 | 215,157 |
| Construction (NAICS 23) | 10,088 | 10,618 | 67,024 |
| Other Industries | 390,291 | 266,036 | 1,350,283 |
| Total | 556,130 | 400,827 | 2,045,159 |
| Share of Workers Who Are Age 18-29 | | | |
| Health Care (NAICS 62) | 24.0% | 16.0% | 19.4% |
| Finance and Information (NAICS 51-53) | 23.7% | 26.9% | 17.7% |
| Hospitality (NAICS 72, 44) | 48.1% | 40.4% | 41.7% |
| Manufacturing (NAICS 31-33) | 21.0% | 17.9% | 16.6% |
| Construction (NAICS 23) | 20.0% | 12.5% | 13.9% |
| Other Industries | 15.5% | 15.6% | 12.6% |
| Total | 19.6% | 18.3% | 16.2% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Table 15: Employment and Share of Employment by Sector, Young Adults Age 18-29 Compared to Adults Age 30-65

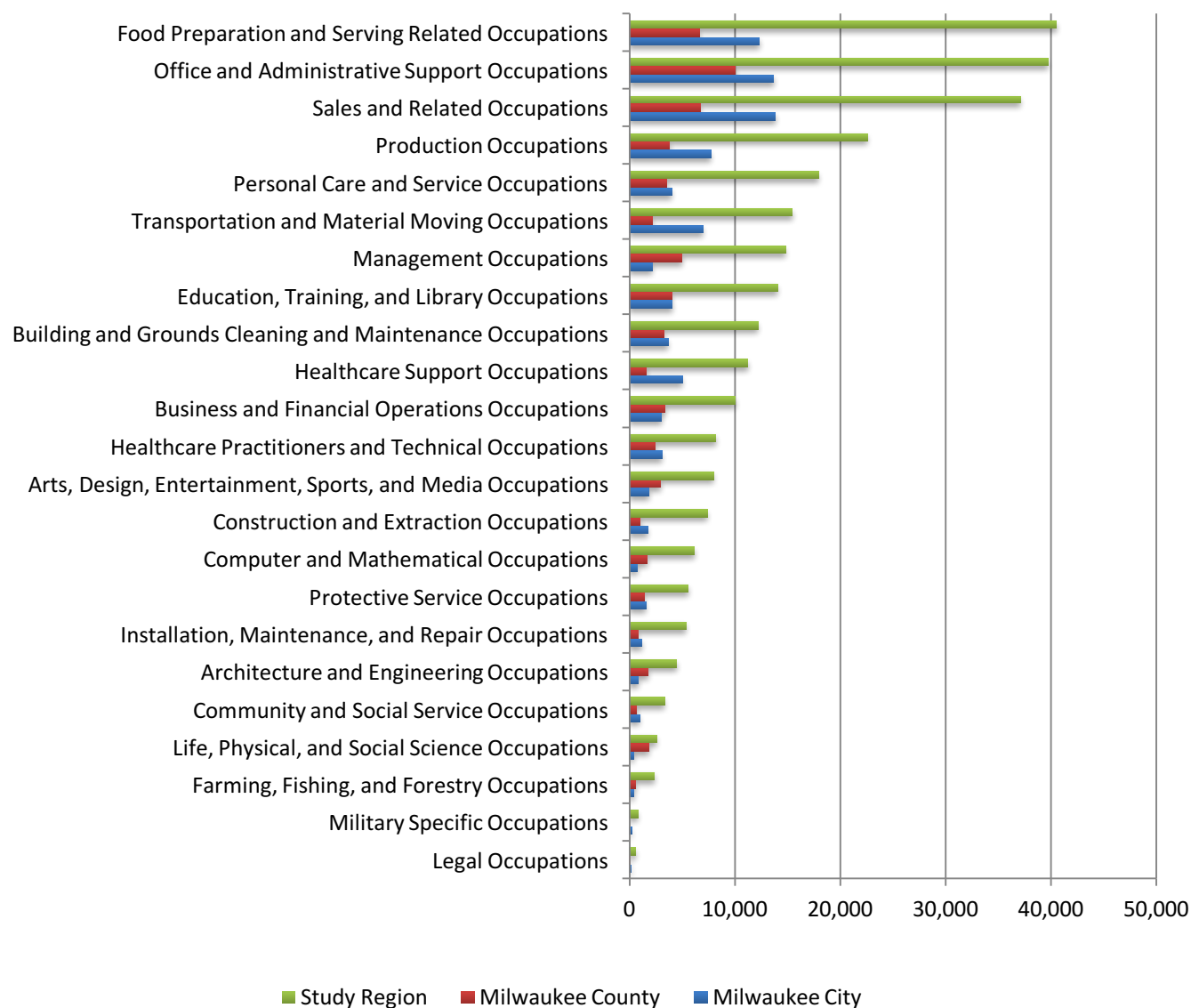
| Sector | Workers Age 18-29 | | | Workers Age 30-65 | | |
|---------------------------------------|-------------------|------------------|------------------------|-------------------|------------------|------------------------|
| | Milwaukee City | Milwaukee County | Milwaukee Study Region | Milwaukee City | Milwaukee County | Milwaukee Study Region |
| Health Care (NAICS 62) | 10,049 | 5,144 | 28,785 | 29,684 | 24,845 | 108,813 |
| Finance and Information (NAICS 51-53) | 4,512 | 6,778 | 17,101 | 13,133 | 16,568 | 71,419 |
| Hospitality (NAICS 72, 44) | 21,600 | 11,741 | 70,118 | 20,360 | 13,842 | 77,919 |
| Manufacturing (NAICS 31-33) | 10,264 | 6,696 | 35,407 | 37,537 | 29,379 | 167,990 |
| Construction (NAICS 23) | 2,016 | 1,326 | 9,306 | 7,477 | 8,715 | 52,864 |
| Other Industries | 60,641 | 41,577 | 169,904 | 135,422 | 96,897 | 489,675 |
| Total | 109,272 | 73,325 | 330,970 | 243,613 | 190,246 | 968,680 |
| Share of Total Employment | | | | | | |
| Health Care (NAICS 62) | 9.2% | 7.0% | 8.7% | 12.2% | 13.1% | 11.2% |
| Finance and Information (NAICS 51-53) | 4.1% | 9.2% | 5.2% | 5.4% | 8.7% | 7.4% |
| Hospitality (NAICS 72, 44) | 19.8% | 16.0% | 21.2% | 8.4% | 7.3% | 8.0% |
| Manufacturing (NAICS 31-33) | 9.4% | 9.1% | 10.7% | 15.4% | 15.4% | 17.3% |
| Construction (NAICS 23) | 1.8% | 1.8% | 2.8% | 3.1% | 4.6% | 5.5% |
| Other Industries | 55.7% | 56.8% | 51.4% | 55.6% | 50.9% | 50.6% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Employment by Occupation and Target Sector Occupations

The top most common occupations for young adults in the study region included food preparation and serving occupations (14 percent of employed young adults), office and administrative occupations (14 percent), sales occupations (13 percent), production occupations (8 percent), and personal care occupations (6 percent). More than half (54 percent) of young adults in the study region had jobs in these occupational categories.

Figure 7: Young Adult Employment by Occupational Category: Milwaukee City, Milwaukee County, and the Study Region, 2014



Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Trends in young adult employment by occupation are fairly similar in Milwaukee City, Milwaukee County, and across the region. In Milwaukee City, young adults represented a comparatively higher percentage of total employment in occupations like:

- Food preparation and serving (54 percent of workers were young adults);
- Sales occupations (48 percent were young adults);
- Health care support occupations (38 percent were young adults); and
- Art, design, entertainment, and sports occupations (38 percent were young adults).

In Milwaukee County, employed young adults accounted for 25.5 percent of the employed population. They account for a larger portion of the employed population in many occupational categories, including:

- Food preparation and serving occupations (Milwaukee County young adults accounted for 61 percent of these workers);
- Life and physical science workers (50 percent were young adults);
- Protective service occupations (46 percent were young adults);
- Farming occupations (48 percent were young adults);
- Building and grounds cleaning and maintenance workers (42 percent were young adults);
- Personal care workers (42 percent were young adults); and
- Arts, design, and media occupations (41 percent were young adults).

For key industry sectors targeted for workforce development such as health care, finance, IT, hospitality, manufacturing, and construction, the region has identified selected target occupations that are important for workforce development. Within the health care sector, young adults were comparatively underrepresented in occupations like registered nurses and health support technicians (surgical technicians and pharmacy technicians). In finance and IT, there were relatively few young adults working in some of the target occupations such as personal financial advisors or securities, commodities, and financial services sales agents. Young adults were well represented among computer analysts and support specialists, but underrepresented among software developers. Young adults were well represented in all target hospitality occupations and most manufacturing occupations, with the exception of machinists and first-line supervisors of production workers. In the field of construction, young adults had comparatively low representation in the target construction trades occupations. Only 2.5 percent of electricians were young adults, only 3.7 percent of construction supervisors were young adults, and only 7.2 percent of plumbers were young adults. See Table 16 for more detail.

Table 17 contains a summary of employment of young adults by occupational category. More detailed summaries are included in Table 18.

Table 16: Young Adult Employment in the Study Area by Occupation, Selected Occupations in Key Sectors, 2014

| Sector & Occupation | Employed Young Adults | Percentage of Young Adult Employment | Percent of Workers who are Young Adults |
|---|-----------------------|--------------------------------------|---|
| HEALTH CARE | | | |
| Registered Nurses (29-1141) | 2,663 | 0.9% | 11.5% |
| Health Practitioner Support Technologists and Technicians (29-2050), including Surgical Technologist (29-2055) and Pharmacy Technicians (29-2052) | 655 | 0.2% | 17.6% |
| Nursing, Psychiatric, and Home Health Aides (31-1010), including Nursing Assistants (31-1014) | 7,287 | 2.5% | 36.0% |
| Phlebotomists (31-9097) | n/a | n/a | n/a |
| FINANCE & IT | | | |
| Customer Service Representatives (43-4051) | 8,864 | 3.1% | 34.7% |
| Insurance Sales Agents (41-3021) | 920 | 0.3% | 25.5% |
| Tellers (43-9071) | 2,179 | 0.8% | 54.8% |
| Securities, Commodities, and Financial Services Sales Agents (41-3031) | 165 | 0.1% | 12.0% |
| Personal Finance Advisors (13-2052) | 98 | 0.0% | 2.7% |
| Radio and Telecommunications Equipment Installers (49-2020), including Telecommunications Equipment Installers (49-2022) | 396 | 0.1% | 29.5% |
| Software Developers (15-1132, 15-1133) | 977 | 0.3% | 18.1% |
| Computer and Information Analysts (15-1120) incl. Computer Analysts (15-1121) | 1,089 | 0.4% | 29.5% |
| Computer User Support Specialists (15-1151) | 1,495 | 0.5% | 29.1% |
| HOSPITALITY | | | |
| Combined Food Preparation and Serving Workers (35-3021) | 2,517 | 0.9% | 48.8% |
| Waiters and Waitresses (35-3031) | 15,199 | 5.2% | 77.6% |
| Retail Salespersons (41-2031) | 10,813 | 3.7% | 40.0% |
| Cashiers (41-2011) | 15,464 | 5.3% | 57.9% |
| First-Line Supervisors of Food and Preparation Workers (35-1012) | 3,333 | 1.1% | 52.9% |
| MANUFACTURING | | | |
| Miscellaneous Assemblers and Fabricators (51-2090), including Team Assemblers (51-2092) | 5,269 | 1.8% | 31.2% |
| Machinists (51-4041) | 758 | 0.3% | 9.4% |

| Sector & Occupation | Employed Young Adults | Percentage of Young Adult Employment | Percent of Workers who are Young Adults |
|--|-----------------------|--------------------------------------|---|
| First-Line Supervisors of Production and Operating Workers (51-1011) | 954 | 0.3% | 6.7% |
| CNC, Metal and Plastic (51-4011) | 988 | 0.3% | 34.3% |
| Packaging and Filling Machine Operators and Tenders (51-9111) | 451 | 0.2% | 23.4% |
| CONSTRUCTION | | | |
| Construction Laborers (47-2061) | 2,607 | 0.9% | 22.4% |
| Electricians (47-2111) | 116 | 0.0% | 2.5% |
| Carpenters (47-2031) | 1,119 | 0.4% | 16.5% |
| Plumbers, Pipefitters, and Steamfitters (47-2152) | 157 | 0.1% | 7.2% |
| First-Line Supervisors of Construction Trades and Extraction Workers (47-1011) | 199 | 0.1% | 3.7% |

Table 17: Employment of Young Adults by Occupational Category in Milwaukee City, Milwaukee County and the Study Region, 2014

| Occupational Category | Young Adult Employment | | | Percent of Young Adult Employment | | | Share of Workers Who are Young Adults | | |
|--|------------------------|------------------|--------------|-----------------------------------|------------------|--------------|---------------------------------------|------------------|--------------|
| | Milwaukee City | Milwaukee County | Study Region | Milwaukee City | Milwaukee County | Study Region | Milwaukee City | Milwaukee County | Study Region |
| Management Occupations | 2,114 | 4,952 | 14,768 | 2.4% | 7.6% | 5.1% | 14.3% | 18.9% | 12.5% |
| Business and Financial Operations Occupations | 2,987 | 3,377 | 10,032 | 3.4% | 5.2% | 3.5% | 26.0% | 22.8% | 15.5% |
| Computer and Mathematical Occupations | 752 | 1,655 | 6,110 | 0.8% | 2.5% | 2.1% | 17.8% | 18.9% | 21.3% |
| Architecture and Engineering Occupations | 828 | 1,734 | 4,466 | 0.9% | 2.7% | 1.5% | 22.3% | 25.7% | 19.0% |
| Life, Physical, and Social Science Occupations | 393 | 1,803 | 2,558 | 0.4% | 2.8% | 0.9% | 24.1% | 50.4% | 29.7% |
| Community and Social Service Occupations | 928 | 664 | 3,321 | 1.0% | 1.0% | 1.1% | 15.8% | 12.3% | 14.7% |
| Legal Occupations | 163 | 91 | 579 | 0.2% | 0.1% | 0.2% | 5.9% | 2.8% | 4.8% |
| Education, Training, and | 4,026 | 3,983 | 14,002 | 4.5% | 6.1% | 4.8% | 22.8% | 22.2% | 18.3% |

| Occupational Category | Young Adult Employment | | | Percent of Young Adult Employment | | | Share of Workers Who are Young Adults | | |
|--|------------------------|------------------|----------------|-----------------------------------|------------------|---------------|---------------------------------------|------------------|--------------|
| | Milwaukee City | Milwaukee County | Study Region | Milwaukee City | Milwaukee County | Study Region | Milwaukee City | Milwaukee County | Study Region |
| Library Occupations | | | | | | | | | |
| Arts, Design, Entertainment, Sports, and Media Occupations | 1,800 | 2,969 | 7,964 | 2.0% | 4.6% | 2.7% | 38.0% | 40.9% | 33.0% |
| Health Care Practitioners and Technical Occupations | 3,048 | 2,385 | 8,215 | 3.4% | 3.7% | 2.8% | 24.4% | 13.7% | 12.6% |
| Health Care Support Occupations | 5,019 | 1,572 | 11,214 | 5.6% | 2.4% | 3.9% | 38.4% | 30.6% | 35.3% |
| Protective Service Occupations | 1,535 | 1,398 | 5,529 | 1.7% | 2.2% | 1.9% | 21.0% | 46.2% | 26.4% |
| Food Preparation and Serving Related Occupations | 12,303 | 6,642 | 40,518 | 13.8% | 10.2% | 14.0% | 53.7% | 60.7% | 53.0% |
| Building and Grounds Cleaning and Maintenance Occupations | 3,654 | 3,229 | 12,195 | 4.1% | 5.0% | 4.2% | 21.2% | 42.4% | 25.5% |
| Personal Care and Service Occupations | 3,950 | 3,497 | 17,921 | 4.4% | 5.4% | 6.2% | 26.1% | 42.2% | 35.8% |
| Sales and Related Occupations | 13,808 | 6,689 | 37,103 | 15.5% | 10.3% | 12.8% | 48.4% | 28.9% | 31.1% |
| Office and Administrative Support Occupations | 13,668 | 10,004 | 39,690 | 15.3% | 15.4% | 13.7% | 31.0% | 27.7% | 23.2% |
| Farming, Fishing, and Forestry Occupations | 431 | 571 | 2,363 | 0.5% | 0.9% | 0.8% | 20.3% | 48.1% | 28.8% |
| Construction and Extraction Occupations | 1,680 | 1,017 | 7,400 | 1.9% | 1.6% | 2.6% | 18.0% | 13.0% | 14.6% |
| Installation, Maintenance, and Repair Occupations | 1,157 | 786 | 5,339 | 1.3% | 1.2% | 1.8% | 14.0% | 14.2% | 15.8% |
| Production Occupations | 7,692 | 3,769 | 22,576 | 8.6% | 5.8% | 7.8% | 20.1% | 19.9% | 19.5% |
| Transportation and Material Moving Occupations | 6,937 | 2,152 | 15,430 | 7.8% | 3.3% | 5.3% | 30.4% | 14.0% | 20.1% |
| Military-Specific Occupations | 191 | n/a | 782 | 0.2% | n/a | 0.3% | n/a | n/a | n/a |
| Total Employed | 89,064 | 64,939 | 290,075 | 100.0% | 100.0% | 100.0% | 28.9% | 25.5% | 23.2% |

Table 18: Young Adult Employment and Total Employment in the Study Region, by Detailed Occupational Category, 2014

| Occupation | Employed Young Adults | Total Employed in the Study Region | Percentage of Young Adult Employment | Share of Workers Who Are Young Adults |
|--|------------------------------|---|---|--|
| Management Occupations (11-0000) | 14,768 | 118,263 | 5.1% | 12.5% |
| Business Operations Occupations Specialists (13-1000) | 5,772 | 35,190 | 2.0% | 16.4% |
| Financial Operations Specialists (13-2000) | 4,260 | 29,420 | 1.5% | 14.5% |
| Computer Occupations (15-1100) | 5,611 | 27,262 | 1.9% | 20.6% |
| Mathematical Occupations (15-2000) | 499 | 1,455 | 0.2% | 34.3% |
| Architects, Surveyors, and Cartographers (17-1000) | 582 | 2,010 | 0.2% | 29.0% |
| Engineers (17-2000) | 3,214 | 16,895 | 1.1% | 19.0% |
| Drafters, Engineering Technicians, and Mapping Technicians (17-3000) | 670 | 4,595 | 0.2% | 14.6% |
| Life Scientists (19-1000) | n/a | 1,135 | n/a | n/a |
| Physical Scientists (19-2000) | 643 | 2,188 | 0.2% | 29.4% |
| Social Scientists (19-3000) | n/a | 1,709 | n/a | n/a |
| Life, Physical, and Social Science Technicians (19-4000) | 1,915 | 3,569 | 0.7% | 53.7% |
| Counselors, Social Workers, and Other Community and Social Service Specialists (21-1000) | 3,038 | 16,786 | 1.0% | 18.1% |
| Religious Workers (21-2000) | 283 | 5,850 | 0.1% | 4.8% |
| Lawyers, Judges, and Related Workers (23-1000) | 392 | 8,128 | 0.1% | 4.8% |
| Legal Support Workers (23-2000) | 187 | 3,921 | 0.1% | 4.8% |
| Postsecondary Teachers (25-1000) | 2,400 | 11,842 | 0.8% | 20.3% |
| Preschool, Primary, Secondary, and Special Education School Teachers (25-2000) | 8,150 | 46,933 | 2.8% | 17.4% |
| Other Teachers and Instructors (25-3000) | 2,208 | 7,865 | 0.8% | 28.1% |
| Librarians, Curators, and Archivists (25-4000) | 526 | 1,421 | 0.2% | 37.0% |
| Other Education, Training, and Library Occupations (25-9000) | 718 | 8,593 | 0.2% | 8.4% |
| Art and Design Workers (27-1000) | 1,674 | 10,023 | 0.6% | 16.7% |
| Entertainers and Performers, Sports and Related Workers (27-2000) | 2,942 | 5,187 | 1.0% | 56.7% |
| Media and Communication Workers (27-3000) | 2,654 | 7,077 | 0.9% | 37.5% |
| Media and Communication Equipment Workers (27-4000) | 694 | 1,856 | 0.2% | 37.4% |

| Occupation | Employed Young Adults | Total Employed in the Study Region | Percentage of Young Adult Employment | Share of Workers Who Are Young Adults |
|--|-----------------------|------------------------------------|--------------------------------------|---------------------------------------|
| Health Diagnosing and Treating Practitioners (29-1000) | 5,358 | 42,775 | 1.8% | 12.5% |
| Health Technologists and Technicians (29-2000) | 2,750 | 21,305 | 0.9% | 12.9% |
| Other Health Care Practitioners and Technical Occupations (29-9000) | 107 | 1,189 | 0.0% | 9.0% |
| Nursing, Psychiatric, and Home Health Aides (31-1000) | 7,287 | 20,250 | 2.5% | 36.0% |
| Occupational Therapy and Physical Therapist Assistants and Aides (31-2000) | n/a | 764 | n/a | n/a |
| Other Health Care Support Occupations (31-9000) | 3,927 | 10,740 | 1.4% | 36.6% |
| Supervisors of Protective Service Workers (33-1000) | 201 | 787 | 0.1% | 25.5% |
| Fire Fighting and Prevention Workers (33-2000) | 838 | 1,913 | 0.3% | 43.8% |
| Law Enforcement Workers (33-3000) | 1,614 | 7,989 | 0.6% | 20.2% |
| Other Protective Service Workers (33-9000) | 2,876 | 10,250 | 1.0% | 28.1% |
| Supervisors of Food Preparation and Serving Workers (35-1000) | 5,238 | 10,103 | 1.8% | 51.8% |
| Cooks and Food Preparation Workers (35-2000) | 10,113 | 24,678 | 3.5% | 41.0% |
| Food and Beverage Serving Workers (35-3000) | 20,642 | 33,104 | 7.1% | 62.4% |
| Other Food Preparation and Serving-Related Workers (35-9000) | 4,525 | 8,503 | 1.6% | 53.2% |
| Supervisors of Building and Grounds Cleaning and Maintenance Workers (37-1000) | n/a | 3,217 | n/a | n/a |
| Building Cleaning and Pest Control Workers (37-2000) | 10,180 | 37,772 | 3.5% | 27.0% |
| Grounds Maintenance Workers (37-3000) | 2,015 | 6,797 | 0.7% | 29.6% |
| Supervisors of Personal Care and Service Workers (39-1000) | 455 | 662 | 0.2% | 68.7% |
| Animal Care and Service Workers (39-2000) | 755 | 2,137 | 0.3% | 35.3% |
| Entertainment Attendants and Related Workers (39-3000) | 1,486 | 3,543 | 0.5% | 41.9% |
| Funeral Service Workers (39-4000) | 212 | 652 | 0.1% | 32.5% |
| Personal Appearance Workers (39-5000) | 1,743 | 8,365 | 0.6% | 20.8% |
| Baggage Porters, Bellhops, and Concierges (39-6000) | n/a | 94 | n/a | n/a |
| Tour and Travel Guides (39-7000) | 632 | 1,142 | 0.2% | 55.3% |
| Other Personal Care and Service Workers (39-9000) | 12,638 | 33,428 | 4.4% | 37.8% |
| Supervisors of Sales Workers (41-1000) | 4,751 | 30,043 | 1.6% | 15.8% |
| Retail Sales Workers (41-2000) | 26,469 | 54,493 | 9.1% | 48.6% |

| Occupation | Employed Young Adults | Total Employed in the Study Region | Percentage of Young Adult Employment | Share of Workers Who Are Young Adults |
|--|-----------------------|------------------------------------|--------------------------------------|---------------------------------------|
| Sales Representatives, Services (41-3000) | 2,100 | 11,191 | 0.7% | 18.8% |
| Sales Representatives, Wholesale and Manufacturing (41-4000) | 2,220 | 13,643 | 0.8% | 16.3% |
| Other Sales and Related Workers (41-9000) | 1,563 | 9,976 | 0.5% | 15.7% |
| Supervisors of Office and Administrative Support Workers (43-1000) | 1,504 | 9,667 | 0.5% | 15.6% |
| Communications Equipment Operators (43-2000) | 170 | 272 | 0.1% | 62.5% |
| Financial Clerks (43-3000) | 4,081 | 24,777 | 1.4% | 16.5% |
| Information and Record Clerks (43-4000) | 14,790 | 46,736 | 5.1% | 31.6% |
| Material Recording, Scheduling, Dispatching, and Distributing Workers (43-5000) | 9,298 | 34,255 | 3.2% | 27.1% |
| Secretaries and Administrative Assistants (43-6000) | 3,172 | 25,758 | 1.1% | 12.3% |
| Other Office and Administrative Support Workers (43-9000) | 6,675 | 29,583 | 2.3% | 22.6% |
| Farming, Fishing, and Forestry Occupations (45-0000) | 2,363 | 8,211 | 0.8% | 28.8% |
| Supervisors of Construction and Extraction Workers (47-1000) | 199 | 5,412 | 0.1% | 3.7% |
| Construction Trades Workers (47-2000) | 6,801 | 42,894 | 2.3% | 15.9% |
| Helpers, Construction Trades (47-3000) | 88 | 235 | 0.0% | 37.4% |
| Other Construction and Related Workers (47-4000) | 312 | 1,780 | 0.1% | 17.5% |
| Extraction Workers (47-5000) | n/a | 394 | n/a | n/a |
| Supervisors of Installation, Maintenance, and Repair Workers (49-1000) | 291 | 1,863 | 0.1% | 15.6% |
| Electrical and Electronic Equipment Mechanics, Installers, and Repairers (49-2000) | 468 | 3,168 | 0.2% | 14.8% |
| Vehicle and Mobile Equipment Mechanics, Installers, and Repairers (49-3000) | 3,162 | 11,743 | 1.1% | 26.9% |
| Other Installation, Maintenance, and Repair Occupations (49-9000) | 1,418 | 16,937 | 0.5% | 8.4% |
| Supervisors of Production Workers (51-1000) | 954 | 14,178 | 0.3% | 6.7% |
| Assemblers and Fabricators (51-2000) | 6,257 | 20,985 | 2.2% | 29.8% |
| Food Processing Workers (51-3000) | 1,242 | 5,876 | 0.4% | 21.1% |
| Metal Workers and Plastic Workers (51-4000) | 4,432 | 29,134 | 1.5% | 15.2% |
| Printing Workers (51-5000) | 579 | 6,276 | 0.2% | 9.2% |
| Textile, Apparel, and Furnishings Workers (51-6000) | 1,281 | 4,916 | 0.4% | 26.1% |
| Woodworkers (51-7000) | 328 | 785 | 0.1% | 41.8% |

| Occupation | Employed Young Adults | Total Employed in the Study Region | Percentage of Young Adult Employment | Share of Workers Who Are Young Adults |
|---|-----------------------|------------------------------------|--------------------------------------|---------------------------------------|
| Plant and System Operators (51-8000) | n/a | 1,719 | n/a | n/a |
| Other Production Occupations (51-9000) | 7,503 | 32,191 | 2.6% | 23.3% |
| Supervisors of Transportation and Material Moving Workers (53-1000) | n/a | 722 | n/a | n/a |
| Air Transportation Workers (53-2000) | 88 | 1,138 | 0.0% | 7.7% |
| Motor Vehicle Operators (53-3000) | 2,483 | 30,013 | 0.9% | 8.3% |
| Rail Transportation Workers (53-4000) | n/a | 141 | n/a | n.a. |
| Water Transportation Workers (53-5000) | n/a | n/a | n/a | n/a |
| Other Transportation Workers (53-6000) | 323 | 1,108 | 0.1% | 29.2% |
| Material Moving Workers (53-7000) | 12,536 | 43,543 | 4.3% | 28.8% |
| Military Occupations (55-1000) | 782 | 1,014 | 0.3% | 77.1% |
| Total Employed | 290,075 | 1,248,102 | 100.0% | 23.2% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Earnings by Industry and Occupation

The highest-paying industries for young adults included finance and real estate (average earnings for young adults in this industry was \$33,642), manufacturing (average earnings of \$32,417), government (average earnings of \$30,584), and professional services (average earnings of \$29,824). Earnings for young adults were lowest in industries such as entertainment (average of \$12,994), retail (average of \$13,095), agriculture (average of \$13,697), education (average of \$16,487), and social services (average of \$18,522).

The highest-paying occupations for young adults included engineering and architecture occupations (average earnings of \$51,951 across the Milwaukee Study Region), legal occupations (average of \$44,572), health care practitioners and technicians (average of \$40,374), business and financial occupations (average of \$39,752), management occupations (average of \$36,871), and computer occupations (average of \$33,545). The lowest-paying occupational categories included food preparation and serving occupations (average earnings of young adults in these occupations was \$11,479 per year), farming occupations (average of \$13,945), building and grounds cleaning and maintenance occupations (average of \$14,182), personal care and service occupations (average of \$14,315), transportation and materials moving occupations (\$15,071), and sales occupations (average of \$17,097).

Table 19: Average Earnings of Employed Young Adults, by Industry, 2014

| | Milwaukee City | Milwaukee County | Milwaukee Study Region | United States |
|---------------------------|-----------------------|-------------------------|-------------------------------|----------------------|
| Government Administration | \$19,404 | \$45,176 | \$30,584 | \$35,313 |
| Agriculture | \$15,224 | \$17,119 | \$13,697 | \$21,255 |
| Construction | \$24,374 | \$26,315 | n/a | \$27,785 |
| Education | \$14,203 | \$22,684 | \$16,487 | \$20,464 |
| Entertainment | \$12,514 | \$14,263 | \$12,994 | \$14,374 |
| Mining Extraction | n/a | n/a | n/a | \$53,519 |
| Finance and Real Estate | \$33,728 | \$38,602 | \$33,642 | \$35,804 |
| Information | \$30,908 | \$24,657 | \$22,618 | \$33,296 |
| Health Care | \$21,435 | \$37,998 | \$27,540 | \$27,802 |
| Manufacturing | \$26,136 | \$38,202 | \$32,417 | \$30,491 |
| Professional Services | \$23,163 | \$33,653 | \$29,824 | \$31,415 |
| Waste Management | n/a | n/a | n/a | \$25,774 |
| Retail | \$12,673 | \$16,188 | \$13,095 | \$17,254 |
| Social Services | \$12,924 | \$24,921 | \$18,522 | \$17,153 |
| Other Services | \$10,529 | \$21,726 | \$20,394 | \$19,936 |
| Transportation | \$11,605 | \$21,004 | \$26,744 | \$26,602 |
| Utilities | n/a | n/a | n/a | \$43,382 |
| Wholesale | \$19,598 | \$14,775 | \$26,589 | \$29,579 |

Table 20: Average Earnings of Employed Young Adults, by Occupation, 2014

| | Milwaukee City | Milwaukee County | Study Region | USA |
|--|-----------------------|-------------------------|---------------------|------------|
| Management Occupations | \$33,969 | \$37,378 | \$36,871 | \$40,054 |
| Business and Financial Operations Occupations | \$36,077 | \$37,606 | \$39,752 | \$43,028 |
| Computer and Mathematical Occupations | \$37,510 | \$36,767 | \$33,545 | \$47,842 |
| Architecture and Engineering Occupations | \$43,838 | \$48,412 | \$51,951 | \$48,573 |
| Life, Physical, and Social Science Occupations | \$17,838 | \$25,434 | \$24,470 | \$32,576 |
| Community and Social Service Occupations | \$36,996 | \$41,586 | \$31,335 | \$26,455 |
| Legal Occupations | \$44,591 | n/a | \$44,572 | \$46,425 |
| Education, Training, and Library Occupations | \$20,055 | \$27,487 | \$22,361 | \$23,517 |
| Arts, Design, Entertainment, Sports, and Media Occupations | \$18,838 | \$22,189 | \$27,054 | \$27,400 |
| Health Care Practitioners and Technical Occupations | \$32,361 | \$46,439 | \$40,374 | \$37,932 |
| Health Care Support Occupations | \$20,326 | \$14,979 | \$18,739 | \$18,717 |
| Protective Service Occupations | \$12,142 | \$27,107 | \$22,407 | \$27,555 |
| Food Preparation and Serving Related Occupations | \$12,813 | \$12,390 | \$11,479 | \$12,788 |
| Building and Grounds Cleaning and Maintenance Occupations | \$8,205 | \$19,953 | \$14,182 | \$14,948 |
| Personal Care and Service Occupations | \$10,891 | \$13,637 | \$14,315 | \$13,700 |
| Sales and Related Occupations | \$11,784 | \$21,017 | \$17,097 | \$18,769 |
| Office and Administrative Support Occupations | \$16,477 | \$29,185 | \$20,131 | \$19,595 |
| Farming, Fishing, and Forestry Occupations | \$15,224 | \$17,119 | \$13,945 | \$17,392 |
| Construction and Extraction Occupations | \$28,413 | \$31,750 | \$27,246 | \$27,566 |
| Installation, Maintenance, and Repair Occupations | \$24,718 | \$21,113 | \$23,436 | \$30,342 |
| Production Occupations | \$22,829 | \$24,193 | \$25,310 | \$24,780 |
| Transportation and Material Moving Occupations | \$16,050 | \$11,227 | \$15,071 | \$20,483 |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Middle-Skill Occupations

Middle-skill occupations are occupational categories in which 40 percent or more of young adult workers have educational attainment that is above a high school diploma but less than a bachelor's degree. Average earnings for young adults working in these middle-skill occupations range from a high of over \$45,000 per year for wholesale and manufacturing sales representatives to a low of less than \$10,000 per year for occupations such as food preparation and serving workers and some teacher occupations.

A combination of lower-paying and higher-paying middle-skill occupations is common throughout the United States and also common for many industries. The manufacturing sector, health care sector, and finance and IT sector in the Milwaukee Region each employ a significantly large number of middle-skilled workers in both lower-paying and higher-paying occupations. This can help support the development of career ladders through workforce development strategies that help workers find entry-level jobs that offer advancement opportunities that allow workers to progress into middle-skill careers that pay a family-supporting wage.

Higher-Earning Middle-Skill Occupations

Higher-paying middle-skill occupations exist in many industries and key sectors:

- In the manufacturing sector, higher-paying middle-skill occupations include wholesale sales representatives, metal workers and plastic workers, assemblers and fabricators, supervisors of production workers, and other production occupations.
- In the IT and finance sector, financial clerks and computer occupations are among the higher-paying middle-skill occupations.
- In the health care sector, health care technologists and technicians are among the higher-paying middle-skill occupations.
- Other higher-paying middle-skill occupations include office workers such as management and supervisory occupations, secretaries, office supervisors, and other office and administrative support workers.

Mechanics, installation, and repair occupations and firefighters are also among the higher-paying middle-skill occupations for young adults.

Table 21: Higher-Paying Middle Skilled Occupations in the Milwaukee Study Region (Average Earnings Over \$20,000 per Year): Young Adults in the Milwaukee Study Region by Occupation, Earnings of Employed Young Adults by Occupation, Percentage of Young Adults with Middle-Skill Educational Attainment (Beyond a High School Diploma but Below a Bachelor's Degree)

| | Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment |
|----|---|---------------------|---|--|
| 1 | Sales Representatives, Wholesale and Manufacturing (41-4000) | 2,220 | \$45,445 | 57.7% |
| 2 | Supervisors of Production Workers (51-1000) | 954 | \$43,122 | 73.4% |
| 3 | Management Occupations (11-0000) | 14,768 | \$36,871 | 41.5% |
| 4 | Financial Clerks (43-3000) | 4,081 | \$32,755 | 57.1% |
| 5 | Computer Occupations (15-1100) | 5,611 | \$31,309 | 46.7% |
| 6 | Fire Fighting and Prevention Workers (33-2000) | 838 | \$30,872 | 62.2% |
| 7 | Supervisors of Office and Administrative Support Workers (43-1000) | 1,504 | \$30,134 | 44.1% |
| 8 | Metal Workers and Plastic Workers (51-4000) | 4,432 | \$30,034 | 38.7% |
| 9 | Other Installation, Maintenance, and Repair Occupations (49-9000) | 1,418 | \$29,811 | 60.2% |
| 10 | Funeral Service Workers (39-4000) | 212 | \$26,717 | 50.9% |
| 11 | Drafters, Engineering Technicians, and Mapping Technicians (17-3000) | 670 | \$26,346 | 65.7% |
| 12 | Supervisors of Sales Workers (41-1000) | 4,751 | \$25,347 | 54.1% |
| 13 | Other Production Occupations (51-9000) | 7,503 | \$23,728 | 46.9% |
| 14 | Health Technologists and Technicians (29-2000) | 2,750 | \$22,057 | 73.6% |
| 15 | Assemblers and Fabricators (51-2000) | 6,257 | \$22,016 | 48.6% |
| 16 | Vehicle and Mobile Equipment Mechanics, Installers, and Repairers (49-3000) | 3,162 | \$21,760 | 66.5% |
| 17 | Secretaries and Administrative Assistants (43-6000) | 3,172 | \$20,675 | 38.5% |
| 18 | Other Office and Administrative Support Workers (43-9000) | 6,675 | \$20,554 | 51.8% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Lower-Earning Middle-Skill Occupations

Lower-paying middle-skill occupations also exist in several industries and key sectors:

- In the hospitality sector, lower-paying middle-skill occupations include supervisors of food preparation and serving workers, food-processing workers, food and beverage servers, cooks, retail sales workers, and other occupations.
- In the health care sector, lower-paying middle-skill occupations including nursing aides and health care support occupations.
- In the manufacturing sector, woodworkers and textile, apparel, and furnishing workers are among the lower-earning middle-skill occupations.

Table 22: Lower-Paying Middle-Skill Occupations in the Milwaukee Study Region (Occupations with Average Earnings of \$20,000 per Year or Less): Young Adults in the Milwaukee Study Region by Occupation, Earnings of Employed Young Adults by Occupation, Percentage of Young Adults with Middle-Skill Educational Attainment (Beyond a High School Diploma but Below a Bachelor's Degree)

| | Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment |
|----|---|--------------|----------------------------------|---|
| 1 | Nursing, Psychiatric, and Home Health Aides (31-1000) | 7,287 | \$19,903 | 55.4% |
| 2 | Animal Care and Service Workers (39-2000) | 755 | \$18,302 | 71.3% |
| 3 | Information and Record Clerks (43-4000) | 14,790 | \$18,227 | 48.4% |
| 4 | Media and Communication Equipment Workers (27-4000) | 694 | \$16,824 | 65.3% |
| 5 | Other Health Care Support Occupations (31-9000) | 3,927 | \$16,708 | 44.7% |
| 6 | Other Transportation Workers (53-6000) | 323 | \$16,402 | 59.1% |
| 7 | Supervisors of Food Preparation and Serving Workers (35-1000) | 5,238 | \$15,546 | 76.1% |
| 8 | Other Protective Service Workers (33-9000) | 2,876 | \$15,296 | 62.5% |
| 9 | Food Processing Workers (51-3000) | 1,242 | \$15,075 | 84.5% |
| 10 | Other Education, Training and Library Occupations (25-9000) | 718 | \$14,161 | 51.9% |
| 11 | Material Recording, Scheduling, Dispatching, and Distributing Workers (43-5000) | 9,298 | \$13,839 | 46.4% |
| 12 | Entertainment Attendants and Related Workers (39-3000) | 1,486 | \$13,180 | 43.4% |
| 13 | Other Personal Care and Service Workers (39-9000) | 12,638 | \$11,683 | 54.6% |
| 14 | Food and Beverage Serving Workers (35-3000) | 20,642 | \$11,217 | 71.1% |
| 15 | Cooks and Food Preparation Workers (35-2000) | 10,113 | \$10,652 | 37.9% |
| 16 | Woodworkers (51-7000) | 328 | \$10,498 | 42.1% |
| 17 | Retail Sales Workers (41-2000) | 26,469 | \$10,370 | 50.3% |
| 18 | Textile, Apparel, and Furnishings Workers (51-6000) | 1,281 | \$10,116 | 51.0% |
| 19 | Other Food Preparation and Serving Related Workers (35-9000) | 4,525 | \$9,300 | 40.4% |
| 20 | Other Teachers and Instructors (25-3000) | 2,208 | \$7,471 | 47.6% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, Analysis by the Author.

Detailed Information on Employment in Middle-skill occupations

Table 23: Young Adults in the Milwaukee Study Region by Occupation, Earnings of Employed Young Adults by Occupation, Percentage of Young Adults with Educational Attainment (Beyond a High School Diploma but Below a Bachelor's Degree), and Comparative National Percentage Young Adults with Educational Attainment (Beyond a High School Diploma but Below a Bachelor's Degree)

| Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment | Natl. Percent Middle-Skill Education Attainment |
|--|--------------|----------------------------------|---|---|
| Management Occupations (11-0000) | 14,768 | \$36,871 | 41.5% | 34.9% |
| Business Operations Occupations Specialists (13-1000) | 5,772 | \$35,877 | 13.1% | 28.4% |
| Financial Operations Specialists (13-2000) | 4,260 | \$44,890 | 4.9% | 16.8% |
| Computer Occupations (15-1100) | 5,611 | \$31,309 | 46.7% | 31.0% |
| Mathematical Occupations (15-2000) | 499 | \$55,762 | n/a | 14.5% |
| Architects, Surveyors and Cartographers (17-1000) | 582 | \$31,739 | n/a | 14.6% |
| Engineers (17-2000) | 3,214 | \$56,735 | 5.3% | 15.0% |
| Drafters, Engineering Technicians, and Mapping Technicians (17-3000) | 670 | \$26,346 | 65.7% | 55.7% |
| Life Scientists (19-1000) | n/a | n/a | n/a | 0.8% |
| Physical Scientists (19-2000) | 643 | \$33,721 | 0.0% | 2.0% |
| Social Scientists (19-3000) | n/a | n/a | n/a | 6.1% |
| Life, Physical and Social Science Technicians (19-4000) | 1,915 | \$19,774 | 22.0% | 43.8% |
| Counselors, Social Workers, and Other Community and Social Service Specialists (21-1000) | 3,038 | \$29,725 | 15.6% | 25.9% |
| Religious Workers (21-2000) | 283 | \$44,919 | n/a | 32.6% |
| Lawyers, Judges, and Related Workers (23-1000) | 392 | \$44,572 | 10.7% | 0.8% |
| Legal Support Workers (23-2000) | 187 | n/a | n/a | 32.0% |
| Postsecondary Teachers (25-1000) | 2,400 | \$15,162 | 22.4% | 20.5% |
| Preschool, Primary, Secondary, and Special Education School Teachers (25-2000) | 8,150 | \$28,000 | 23.2% | 18.1% |
| Other Teachers and Instructors (25-3000) | 2,208 | \$7,471 | 47.6% | 50.0% |
| Librarians, Curators, and Archivists (25-4000) | 526 | \$36,937 | 3.4% | 39.9% |
| Other Education, Training and Library Occupations (25-9000) | 718 | \$14,161 | 51.9% | 42.5% |
| Art and Design Workers (27-1000) | 1,674 | \$21,399 | 30.3% | 27.5% |
| Entertainers and Performers, Sports and Related Workers (27-2000) | 2,942 | \$15,550 | 26.2% | 47.9% |
| Media and Communication Workers (27-3000) | 2,654 | \$44,441 | 34.1% | 26.7% |
| Media and Communication Equipment Workers (27-4000) | 694 | \$16,824 | 65.3% | 47.5% |
| Health Diagnosing and Treating Practitioners | 5,358 | \$49,927 | 16.3% | 22.6% |

| Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment | Natl. Percent Middle-Skill Education Attainment |
|--|---------------------|---|--|--|
| (29-1000) | | | | |
| Health Technologists and Technicians (29-2000) | 2,750 | \$22,057 | 73.6% | 61.2% |
| Other Healthcare Practitioners and Technical Occupations (29-9000) | 107 | \$17,000 | n/a | 23.7% |
| Nursing, Psychiatric, and Home Health Aides (31-1000) | 7,287 | \$19,903 | 55.4% | 55.7% |
| Occupational Therapy and Physical Therapist Assistants and Aides (31-2000) | n/a | n/a | n/a | 50.7% |
| Other Health Care Support Occupations (31-9000) | 3,927 | \$16,708 | 44.7% | 62.4% |
| Supervisors of Protective Service Workers (33-1000) | 201 | \$40,000 | n/a | 53.3% |
| Fire Fighting and Prevention Workers (33-2000) | 838 | \$30,872 | 62.2% | 62.5% |
| Law Enforcement Workers (33-3000) | 1,614 | \$36,082 | 31.7% | 52.1% |
| Other Protective Service Workers (33-9000) | 2,876 | \$15,296 | 62.5% | 53.1% |
| Supervisors of Food Preparation and Serving Workers (35-1000) | 5,238 | \$15,546 | 76.1% | 48.3% |
| Cooks and Food Preparation Workers (35-2000) | 10,113 | \$10,652 | 37.9% | 40.4% |
| Food and Beverage Serving Workers (35-3000) | 20,642 | \$11,217 | 71.1% | 51.5% |
| Other Food Preparation and Serving Related Workers (35-9000) | 4,525 | \$9,300 | 40.4% | 43.3% |
| Supervisors of Building and Grounds Cleaning and Maintenance Workers (37-1000) | n/a | n/a | n/a | 40.2% |
| Building Cleaning and Pest Control Workers (37-2000) | 10,180 | \$13,903 | 29.7% | 31.8% |
| Grounds Maintenance Workers (37-3000) | 2,015 | \$15,372 | 30.8% | 33.5% |
| Supervisors of Personal Care and Service Workers (39-1000) | 455 | \$14,026 | 0.0% | 53.3% |
| Animal Care and Service Workers (39-2000) | 755 | \$18,302 | 71.3% | 47.9% |
| Entertainment Attendants and Related Workers (39-3000) | 1,486 | \$13,180 | 43.4% | 54.5% |
| Funeral Service Workers (39-4000) | 212 | \$26,717 | 50.9% | 55.7% |
| Personal Appearance Workers (39-5000) | 1,743 | \$29,290 | 23.9% | 48.2% |
| Baggage Porters, Bellhops, and Concierges (39-6000) | n/a | n/a | n/a | 46.6% |
| Tour and Travel Guides (39-7000) | 632 | \$8,550 | 31.8% | 54.9% |
| Other Personal Care and Service Workers (39-9000) | 12,638 | \$11,683 | 54.6% | 52.1% |
| Supervisors of Sales Workers (41-1000) | 4,751 | \$25,347 | 54.1% | 47.9% |
| Retail Sales Workers (41-2000) | 26,469 | \$10,370 | 50.3% | 50.4% |
| Sales Representatives, Services (41-3000) | 2,100 | \$25,066 | 19.9% | 37.0% |

| Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment | Natl. Percent Middle-Skill Education Attainment |
|--|---------------------|---|--|--|
| Sales Representatives, Wholesale and Manufacturing (41-4000) | 2,220 | \$45,445 | 57.7% | 34.7% |
| Other Sales and Related Workers (41-9000) | 1,563 | \$46,133 | 29.8% | 44.5% |
| Supervisors of Office and Administrative Support Workers (43-1000) | 1,504 | \$30,134 | 44.1% | 42.8% |
| Communications Equipment Operators (43-2000) | 170 | n/a | n/a | 52.9% |
| Financial Clerks (43-3000) | 4,081 | \$32,755 | 57.1% | 54.9% |
| Information and Record Clerks (43-4000) | 14,790 | \$18,227 | 48.4% | 53.2% |
| Material Recording, Scheduling, Dispatching, and Distributing Workers (43-5000) | 9,298 | \$13,839 | 46.4% | 43.7% |
| Secretaries and Administrative Assistants (43-6000) | 3,172 | \$20,675 | 38.5% | 51.0% |
| Other Office and Administrative Support Workers (43-9000) | 6,675 | \$20,554 | 51.8% | 52.1% |
| Farming, Fishing, and Forestry Occupations (45-0000) | 2,363 | \$13,945 | 32.3% | 27.1% |
| Supervisors of Construction and Extraction Workers (47-1000) | 199 | \$65,000 | n/a | 31.5% |
| Construction Trades Workers (47-2000) | 6,801 | \$25,578 | 28.2% | 27.8% |
| Helpers, Construction Trades (47-3000) | 88 | n/a | n/a | 25.6% |
| Other Construction and Related Workers (47-4000) | 312 | n/a | n/a | 36.7% |
| Extraction Workers (47-5000) | n/a | n/a | n/a | 29.0% |
| Supervisors of Installation, Maintenance, and Repair Workers (49-1000) | 291 | \$20,485 | n/a | 46.1% |
| Electrical and Electronic Equipment Mechanics, Installers, and Repairers (49-2000) | 468 | \$20,308 | n/a | 54.8% |
| Vehicle and Mobile Equipment Mechanics, Installers, and Repairers (49-3000) | 3,162 | \$21,760 | 66.5% | 43.0% |
| Other Installation, Maintenance, and Repair Occupations (49-9000) | 1,418 | \$29,811 | 60.2% | 46.0% |
| Supervisors of Production Workers (51-1000) | 954 | \$43,122 | 73.4% | 39.7% |
| Assemblers and Fabricators (51-2000) | 6,257 | \$22,016 | 48.6% | 35.8% |
| Food Processing Workers (51-3000) | 1,242 | \$15,075 | 84.5% | 36.0% |
| Metal Workers and Plastic Workers (51-4000) | 4,432 | \$30,034 | 38.7% | 36.6% |
| Printing Workers (51-5000) | 579 | \$49,316 | n/a | 40.9% |
| Textile, Apparel, and Furnishings Workers (51-6000) | 1,281 | \$10,116 | 51.0% | 29.1% |
| Woodworkers (51-7000) | 328 | \$10,498 | 42.1% | 25.9% |
| Plant and System Operators (51-8000) | n/a | n/a | n/a | 45.6% |
| Other Production Occupations (51-9000) | 7,503 | \$23,728 | 46.9% | 34.1% |
| Supervisors of Transportation and Material Moving Workers (53-1000) | n/a | n/a | n/a | 43.4% |

| Occupation | Young Adults | Average Earnings of Young Adults | Percent Middle-Skill Education Attainment | Natl. Percent Middle-Skill Education Attainment |
|--|---------------------|---|--|--|
| Air Transportation Workers (53-2000) | 88 | n/a | n/a | 36.2% |
| Motor Vehicle Operators (53-3000) | 2,483 | \$17,884 | 31.2% | 43.0% |
| Rail Transportation Workers (53-4000) | n/a | n/a | n/a | 49.9% |
| Water Transportation Workers (53-5000) | n/a | n/a | n/a | 41.7% |
| Other Transportation Workers (53-6000) | 323 | \$16,402 | 59.1% | 46.8% |
| Material Moving Workers (53-7000) | 12,536 | \$14,269 | 34.0% | 35.3% |
| Military Occupations (55-1000) | 782 | n/a | 24.4% | 46.8% |
| Total | 290,075 | \$22,094 | 43.5% | 41.7% |

Source: American Community Survey (ACS) 2014 Public Use Microdata File, analysis by the author.

Recommendations for Workforce Development

1. Strengthen workforce development in geographies with poor economic conditions.

Workforce development needs are highest in Milwaukee City where young adult unemployment is the highest in the region, in particular in the North, North Central, and South Central PUMA areas. In these PUMAs, unemployment is more than twice as high as any other part of the Milwaukee Study Region. Nearly a third (29 percent) of young adults in the North Central PUMA were unemployed and the area also has the second-lowest labor force participation in the region (68 percent). Unemployment of young adults is also high in the Milwaukee City North PUMA (23 percent), and South Central PUMA (22 percent). Outside of Milwaukee City, employment opportunity appears to be better for residents of Milwaukee County where young adults enjoyed comparatively low unemployment rates of 4 to 9 percent in 2014. Unemployment was comparatively high in the West PUMA of Waukesha County (12 percent) and in Dodge and Jefferson counties (10 percent).

2. Directly address stark racial disparities in employment outcomes.

There were roughly similar numbers of black and white young adults living in Milwaukee city, but the employment outcomes of black and white young adults were highly polarized. Young adult blacks in Milwaukee City had a 32.4 percent unemployment rate in 2014, compared to a 7.3 percent unemployment rate for young adult whites in the city at the time. White young adults in Milwaukee City had a labor force participation rate of 80.1 percent in 2014 while the labor force participation rate of blacks in Milwaukee city was 69.1 percent. Whites in Milwaukee City had an enrollment rate of 35.8 percent in 2014, while blacks had an enrollment rate of 30.7 percent. Whites in the study region had average earnings that were 39 percent higher than average earnings for blacks (\$23,034 for whites and \$16,513 for blacks). While differences for black and white young adults are most stark in Milwaukee City, racial disparities are evident throughout the region, and for essentially all indicators of employment status. While an explanation of the root causes of racial disparities is beyond the scope of this study, it will be difficult to improve employment outcomes in the region without addressing the factors that lead to these stark racial disparities.

3. Strengthen workforce development in the region's target key industry sectors and occupations, making adjustments as necessary.

Young adults were well represented in each of the region's five key industry sectors: health care, finance and IT, hospitality, manufacturing, and construction. In particular, these sectors employed a larger-than-average portion of young adults in Milwaukee City, where employment conditions were most difficult. Within each of these sectors, however, young adult representation differed by occupation. For some of the region's target sector occupations, young adults represented a relatively large portion of the region's labor force. These include:

- Nursing aides

- Customer service representatives
- Insurance sales agents
- Tellers
- Equipment installers
- Computer analysts
- User support specialists
- Team assemblers
- CNC, metals and plastics
- Packaging and filling machine operators
- Construction laborers
- All occupations in the hospitality sector (food preparation and serving workers, waiters and waitresses, retail salespersons, cashiers, and first-line retail supervisors).

A portion of the region's target occupations, however, are not traditional occupations for young adults, and young adults comprised a relatively small portion of the region's labor force in these occupations.

These include:

- Registered nurses
- Surgical technicians
- Pharmacy technicians
- Financial services sales agents
- Personal financial advisors
- Software developers
- Machinists
- First-line supervisors of production and operations workers
- Electricians
- Carpenters
- Plumbers
- Construction trades supervisors

More work will be needed in the region to increase young adult representation in these occupations.

- In the health care occupations, there may be a need for stronger career laddering and supportive career pathways for young adults working as nursing aids and similar lower-skilled health care occupations to progress into higher-skilled professions, such as registered nurses.
- Milwaukee's young adults have generally low representation across the construction sector's trades occupations, suggesting that more will need to be done to increase young adult participation in these careers. The reason for low young adult participation in the construction sector is unclear. While there are many young adult laborers, there are few young adults working in skilled trades. Further research may be needed to uncover barriers that may be preventing young adults from entering the construction sector or moving into skilled trades occupations.

4. In addition to the established target key sectors, the region may want to add an additional focus on the transportation and logistics sector as a candidate for workforce development.

While transportation and materials-moving occupations are not high-paying occupations (average for the occupational category was \$16,050 per year in Milwaukee City in 2014), the average pay exceeds that of many occupations in the hospitality sector and the transportation and logistics industry may offer better career advancement opportunities than are available in the food service and retail industries. Within this sector there are several occupations that can support career laddering and progression toward family-supporting careers. These include materials-moving occupations (29 percent of workers are young adults), information and records clerks (32 percent of workers are young adults), and vehicle mechanics, installers, and repairers (27 percent of workers are young adults).

5. Consider more opportunities for building career ladders that lead to middle-skill occupations that pay a family-supporting wage.

The hospitality sector (and related retail occupations) is the region's largest employment sector for young adults. However, the vast majority of jobs in this sector do not appear to lead to careers that pay a family-supporting wage. In this sector and in others, the development of transferable skills and clear career pathways that logically lead from one occupation to the next can help young adults working in the hospitality sector to move into more sustainable careers. Career laddering can also be effective within some of the region's key industries, in particular health care, IT and finance, and manufacturing. It may also make sense to consider career ladder opportunities leading to higher-paying occupations in construction trades, an occupational category in which young adults are underrepresented.

Endnotes

ⁱ American Community Survey Public Use Microdata File, 2014 Estimates, analysis by the author

ⁱⁱ Note: The ACS reports data by Public Use Microdata Area (PUMA). Three PUMAs span geographic areas that are both within and outside of the study region: (1) Lawrence County is combined with Beaver County (North), (2) Indiana County is combined with Armstrong County, and (3) Washington (South) is combined with Greene County.