

Characteristics of Female Workers in Oklahoma 2001-2020



Oklahoma Employment Security Commission
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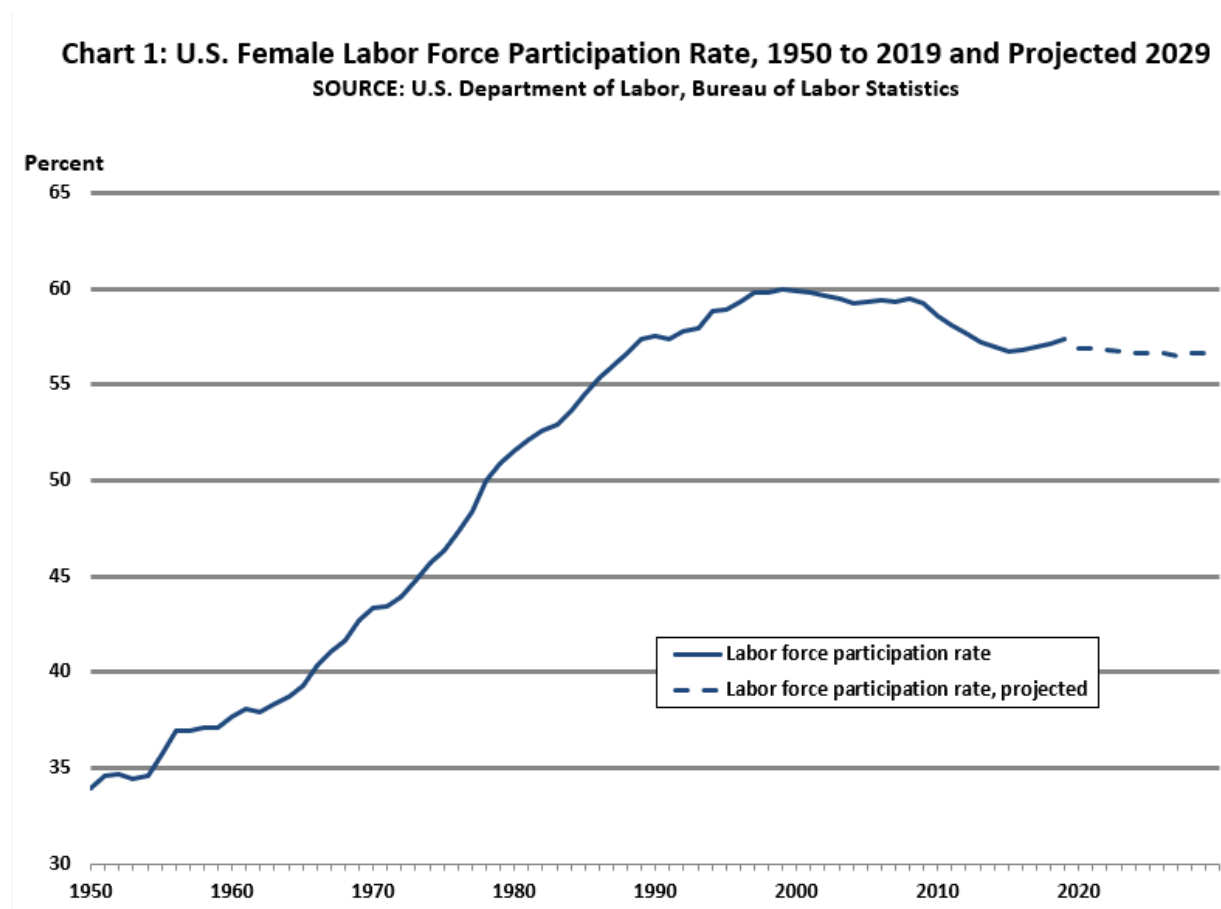
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Characteristics of Female Workers in Oklahoma, 2001-2020

Introduction

A major factor contributing to the growth of the U.S. labor force in the second half of the 20th century was the remarkable increase in the labor force participation rate of women.¹ During this time, the U.S. economy experienced economic growth that increased the demand for labor. Baby boomers (those born between 1946 and 1964) began entering the labor force in large numbers during the early 1960s as they reached working age. The large influx of women into the labor market at this time resulted in a rapidly increasing female labor force participation rate (see Chart 1, below).



The female labor force participation rate climbed throughout the 1960s, 1970s, and 1980s, finally peaking at 60.0 percent in 1999. Over these four decades, the female labor force participation rate increased even during several economic downturns. Since the peak, the female labor force participation rate, which historically offset the decline in the male participation rate, has been decreasing and is now contributing to a decline in the overall labor force participation rate. Since the midpoint of the Great Recession in 2008,

¹ Mitra Toossi and Teresa L. Morisi, “Women in the Workforce Before, During, and After the Great Recession.” July 2017, *Spotlight on Statistics*, U.S. Bureau of Labor Statistics.

the rate has further declined by 2.8 percentage points to 56.7 percent in 2015.² In 2018, 57.1 percent of all women participated in the labor force, remaining near-constant from the 57.0 percent in 2017. Still, that rate was about three percentage points below the peak of 60.0 percent in 1999.³ The Bureau of Labor Statistics (BLS) projects the female labor force participation rate will continue to decline in the 2019–2029 decade, falling by 0.8 percentage points to 56.6 percent in 2029 (see Chart 1).

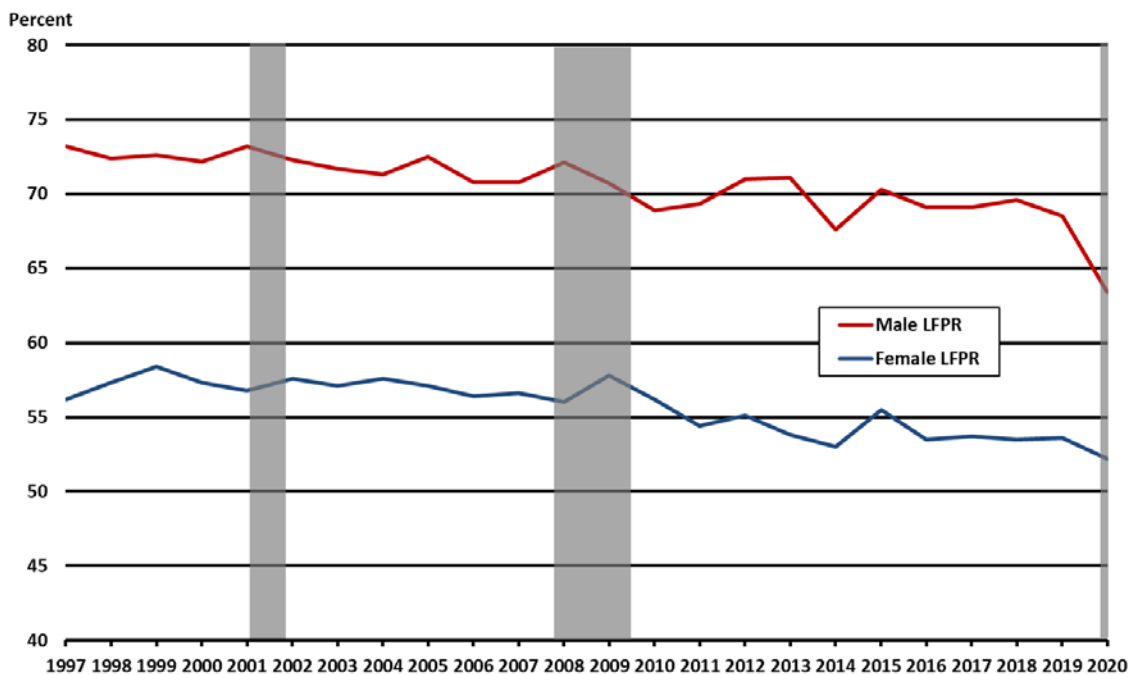
The following analysis updates a previous study of the characteristics and trends of female workers in Oklahoma using the Quarterly Workforce Indicators (QWI) Explorer from the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics program along with supporting data from the Bureau of Labor Statistics’ Current Population Survey (CPS) and the Employment Projections program.

Trends in Oklahoma’s Female Labor Force, 1997-2020 (Current Population Survey)

The Current Population Survey (CPS) is a monthly survey of households conducted by the Bureau of Census the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics. At the state level, data from the Current Population Survey for Oklahoma is available from 1997 to 2020. Chart 2 (below) illustrates the labor force participation rates for both genders from 1997 to 2020.

Chart 2: Oklahoma Male and Female Labor Force Participation Rates, 1997-2020

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics and Current Population Survey (CPS)



NOTE: Shaded areas represent National Bureau of Economic Research defined recession periods.

² Ibid.

³ “Women in the Labor Force: a Databook : BLS Reports.” U.S. Bureau of Labor Statistics. U.S. Bureau of Labor Statistics, December 1, 2019. <https://www.bls.gov/opub/reports/womens-databook/2019/home.htm>.

From 1997 to 2020, Oklahoma’s female labor force participation rate declined from 56.2 percent to 52.2 percent (-4.0 percentage points), peaking at 58.4 percent in 1999. At the same time, the male labor force participation rate also declined but much more than the female rate, falling from a peak of 73.2 percent in 1997 to 63.1 percent in 2020 (-9.8 percentage points). Oklahoma’s overall labor force participation rate declined from 64.2 percent in 1997 to 57.5 percent in 2020 (-6.7 percentage points).

Characteristics of Female Workers in Oklahoma, 2001-2020 (Quarterly Workforce Indicators)

The Quarterly Workforce Indicators (QWI) data produced by the U.S. Census Bureau provide local labor market statistics by industry, worker demographics, employer age, and size. Unlike statistics tabulated from a firm or person-level data, the QWI source data are unique job-level data that link workers to their employers. Because of this link, labor market data in the QWI is available by worker age, sex, educational attainment, and race/ethnicity, allowing for analysis by demographics of a particular local labor market or industry.

Employment by Gender

Table 1 (below) summarizes the composition of the Oklahoma workforce by gender from 2001 to 2020. In most years, male workers make up the bulk of employment, but the overall trend suggests that the female workers’ share is gaining over the 20 years from 2001 to 2020, growing from 49.0 percent in 2001 to 49.9 percent in 2020.

**Table 1. Oklahoma: Employment by Gender of Worker
Annual Averages, 2001-2020**

| Year | Female | | Male | |
|------|---------|---------|---------|---------|
| | Number | Percent | Number | Percent |
| 2001 | 688,872 | 49.0 | 715,895 | 51.0 |
| 2002 | 687,158 | 49.5 | 700,060 | 50.5 |
| 2003 | 668,191 | 49.6 | 679,401 | 50.4 |
| 2004 | 678,906 | 49.7 | 686,391 | 50.3 |
| 2005 | 696,319 | 49.7 | 704,972 | 50.3 |
| 2006 | 712,060 | 49.5 | 726,663 | 50.5 |
| 2007 | 726,775 | 49.5 | 741,136 | 50.5 |
| 2008 | 741,015 | 49.4 | 759,211 | 50.6 |
| 2009 | 730,108 | 50.0 | 728,752 | 50.0 |
| 2010 | 714,668 | 50.1 | 711,103 | 49.9 |
| 2011 | 719,086 | 49.4 | 736,487 | 50.6 |
| 2012 | 731,417 | 49.0 | 761,611 | 51.0 |
| 2013 | 739,815 | 48.7 | 778,178 | 51.3 |
| 2014 | 750,853 | 48.7 | 790,576 | 51.3 |
| 2015 | 761,375 | 48.9 | 794,191 | 51.1 |
| 2016 | 758,053 | 49.5 | 772,791 | 50.5 |
| 2017 | 757,417 | 49.5 | 774,144 | 50.5 |
| 2018 | 766,169 | 49.3 | 787,812 | 50.7 |
| 2019 | 777,319 | 49.5 | 793,959 | 50.5 |
| 2020 | 760,142 | 49.9 | 763,523 | 50.1 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, qwexplorer.ces.census.gov

It is also interesting to note that in 2009 and 2010, the female share of the workforce surpassed the male share due to the lingering effects of the 'Great Recession.' From 2008 to 2010, female employment fell 26,347 (-3.6 percent), while male employment dropped by 48,108 (-6.3 percent), nearly double the female job losses. Some have referred to this recession as the "Man-Cession," because men bore most job losses.⁴

Female Worker Employment by Age Group

Table 2 (below) shows the breakdown by age group for female workers in Oklahoma from 2001 to 2020. From Table 2, the female worker age groups that gained employment over this period were the 22 to 24 years old, 25 to 34 years old, 55 to 64 years old, and 65 years and older groups.

Table 2. Oklahoma: Female Employment by Age Group, Annual Averages, 2001-2020

| Year | 14 to 18 years old | 19 to 21 years old | 22 to 24 years old | 25 to 34 years old | 35 to 44 years old | 45 to 54 years old | 55 to 64 years old | 65 years and older |
|------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 2001 | 31,175 | 45,477 | 45,029 | 144,723 | 173,207 | 155,826 | 72,788 | 20,647 |
| 2002 | 28,676 | 45,205 | 45,524 | 143,682 | 168,006 | 156,726 | 77,870 | 21,469 |
| 2003 | 25,890 | 43,302 | 45,243 | 138,802 | 158,340 | 154,443 | 80,176 | 21,995 |
| 2004 | 24,924 | 42,731 | 46,673 | 140,609 | 156,545 | 158,678 | 85,269 | 23,477 |
| 2005 | 25,056 | 43,372 | 48,447 | 144,267 | 156,467 | 163,526 | 90,123 | 25,061 |
| 2006 | 26,385 | 43,395 | 49,008 | 147,247 | 156,627 | 166,893 | 95,417 | 27,088 |
| 2007 | 26,713 | 42,862 | 49,485 | 152,106 | 156,349 | 169,937 | 100,429 | 28,894 |
| 2008 | 26,633 | 41,967 | 48,901 | 157,239 | 155,900 | 173,114 | 105,897 | 31,364 |
| 2009 | 22,749 | 39,643 | 46,940 | 156,975 | 151,668 | 170,535 | 108,814 | 32,784 |
| 2010 | 19,261 | 38,188 | 44,965 | 154,915 | 147,399 | 165,825 | 110,770 | 33,345 |
| 2011 | 18,759 | 38,897 | 44,677 | 156,999 | 147,401 | 162,748 | 114,793 | 34,812 |
| 2012 | 19,194 | 39,651 | 46,422 | 160,182 | 149,711 | 160,273 | 117,920 | 38,064 |
| 2013 | 19,241 | 40,464 | 48,072 | 163,681 | 150,955 | 157,063 | 120,187 | 40,152 |
| 2014 | 20,249 | 40,423 | 49,513 | 166,727 | 153,422 | 155,561 | 122,740 | 42,218 |
| 2015 | 21,972 | 40,518 | 49,732 | 169,372 | 156,352 | 154,496 | 125,252 | 43,681 |
| 2016 | 21,920 | 39,202 | 47,880 | 168,570 | 156,738 | 152,557 | 126,301 | 44,885 |
| 2017 | 21,608 | 39,560 | 45,948 | 166,978 | 158,525 | 150,616 | 127,685 | 46,497 |
| 2018 | 22,635 | 41,153 | 45,274 | 166,502 | 162,949 | 149,222 | 129,545 | 48,889 |
| 2019 | 23,463 | 42,200 | 46,052 | 167,154 | 167,074 | 148,878 | 130,823 | 51,675 |
| 2020 | 22,724 | 40,391 | 45,109 | 162,076 | 165,509 | 146,005 | 127,415 | 50,913 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, (qwiexplorer.ces.census.gov)

From 2001 to 2020, female workers in the 55 to 64 years old age group gained the most employment, adding 54,627 workers (75.0 percent), followed by the 65 years and older group that increased by 30,266 (146.6 percent), and the 25 to 34 years old group that added 17,353 workers (12.0 percent). The 22 to 24 years old group increased by only 80 workers (0.2 percent). All other female worker age groups' employment declined over these 20 years (see Table 2).

However, during the same period, the number of female workers declined significantly in the 14 to 18 year-old age group (-27.1 percent), the 19 to 21-year-old age group (-11.2 percent), the 35 to 44-year old age group (-4.4 percent), and the 45 to 54-year old (-6.3 percent) age group.

⁴ Howard J. Wall, "The "Man-Cession" of 2008-2009: It's Big, but It's Not Great," October 2009, *Regional Economist*, Federal Reserve Bank of St. Louis.

From 2018 to 2020, (February 2020 marking the beginning of a National Bureau of Economic Research defined recession period and April 2020 the ending), female workers in the 25-34 years old age group lost the most employment, losing 4,426 workers (-2.7 percent). The 45-54 years old age group decreased by 3,217 workers (-2.2 percent), the 19-21 years old age group decreased by 762 workers (-1.9 percent), and the 55-64 years old age group decreased by 2,130 workers (-1.6 percent).

Female Worker Employment by Industry

What industries employ the largest number of female workers in Oklahoma? In general, service industries (NAICS 42 to 92) employ the most women (see Table 3 below).

**Table 3. Oklahoma: Employment of Female Workers by Industry
Annual Averages, 2001 and 2020**

| | 2001 | | 2020 | |
|---|---------|---------|---------|---------|
| | Number | Percent | Number | Percent |
| NAICS 11 Agriculture, Forestry, Fishing and Hunting | 2,263 | 28.4 | 2,700 | 30.0 |
| NAICS 21 Mining, Quarrying, and Oil and Gas Extraction | 7,394 | 24.5 | 8,512 | 24.0 |
| NAICS 22 Utilities | 4,064 | 24.6 | 3,477 | 23.9 |
| NAICS 23 Construction | 11,475 | 16.6 | 15,530 | 18.3 |
| NAICS 31-33 Manufacturing | 48,414 | 27.5 | 32,160 | 23.6 |
| NAICS 42 Wholesale Trade | 16,584 | 28.5 | 15,376 | 27.3 |
| NAICS 44-45 Retail Trade | 89,610 | 51.4 | 87,184 | 50.5 |
| NAICS 48-49 Transportation and Warehousing | 9,307 | 20.6 | 16,471 | 27.9 |
| NAICS 51 Information | 19,465 | 47.6 | 8,473 | 40.2 |
| NAICS 52 Finance and Insurance | 39,801 | 71.4 | 37,006 | 66.6 |
| NAICS 53 Real Estate and Rental and Leasing | 12,469 | 50.9 | 9,393 | 45.2 |
| NAICS 54 Professional, Scientific, and Technical Services | 27,387 | 51.8 | 38,179 | 49.9 |
| NAICS 55 Management of Companies and Enterprises | 7,173 | 49.9 | 10,509 | 46.7 |
| NAICS 56 Administrative and Support and Waste Management and Remediation Services | 41,330 | 43.1 | 41,753 | 43.7 |
| NAICS 61 Educational Services | 94,373 | 68.5 | 101,632 | 70.3 |
| NAICS 62 Health Care and Social Assistance | 136,163 | 80.3 | 174,404 | 79.4 |
| NAICS 71 Arts, Entertainment, and Recreation | 7,989 | 46.7 | 20,310 | 51.9 |
| NAICS 72 Accommodation and Food Services | 60,271 | 55.9 | 79,327 | 56.0 |
| NAICS 81 Other Services (except Public Administration) | 20,520 | 51.4 | 16,440 | 46.7 |
| NAICS 92 Public Administration | 32,813 | 46.2 | 41,301 | 49.5 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, (qwexplorer.ces.census.gov)

In 2001, NAICS 62 Health Care and Social Assistance had the greatest number (136,163) and the largest share (80.3 percent) of female workers. NAICS 61 Educational Services followed with a female employment level of 94,373 (68.5 percent). While NAICS 52 Finance and Insurance did not have a sizeable employment level of female workers (39,801) in 2001, female employment represented 71.4 percent of the workforce in this industry. NAICS 44-45 Retail Trade had the third-highest level of employment of female workers (89,610), but that amounted to a little over half (51.4 percent) of the total employment in that industry. The most underrepresented industry for female employment was NAICS 23 Construction, which saw only 11,475 female workers (16.6 percent).

By 2020, Oklahoma’s female workforce had grown 10.4 percent, adding 71,268 workers. At the same time, the male workforce grew by 6.7 percent, adding 47,629 workers—23,639 fewer male workers than female (see Table 1, page 4). Employment of female workers expanded in 12 of Oklahoma’s 20 industry sectors by 112,690 workers and contracted in eight sectors by 41,418 workers. The industry with the most substantial employment increase of female workers was NAICS 62 Health Care and Social Assistance, adding 38,241 (28.1 percent) over the 20 years. NAICS 72 Accommodation and Food Services had the second-largest gain in female employment, adding 19,056 female workers (31.6 percent) between 2001 and 2020.

It is also interesting to note that the industry showing the most dramatic rise in employment, both female and male, during this period was NAICS 71 Arts, Entertainment, and Recreation where employment more than doubled from 17,106 workers in 2001 to 39,120 workers in 2020—a remarkable 128.7 percent growth rate. No doubt a great deal of the phenomenal job growth in this industry (which includes gambling industries) occurred thanks to the introduction of tribal gaming in Oklahoma in 2004.⁵

The most significant job losses for female workers occurred in NAICS 31-33 Manufacturing where females lost 16,254 jobs, and the female share of employment in the sector fell from 27.5 percent in 2001 to 23.6 percent in 2020.

Also, NAICS 51 Information saw the greatest percent reduction of female workers where employment plunged 10,992 (-56.5 percent) between 2001 and 2020, losing more than half of the female workforce. Consolidation in this industry has reduced the overall size of the workforce by 19,846 workers (48.5 percent) over the 20 years.

Hiring Trends of Female Workers

QWI’s measure of employment change includes the indicator, Hires All (‘HirA’), which is the estimated number of workers who started a new job in a specified quarter. This indicator includes workers who started a new job (Hires New, ‘HirN’) along with workers who returned to the same employer where they had worked within the previous year (Hires Recalls, ‘HirR’).

From 2001 to 2020, overall hiring levels have declined, equally affecting females and males (see Table 4, next page). Total hiring in Oklahoma tumbled by 96,404 (-27.2 percent) during this time, female hiring levels fell from 169,661 in 2001 to 127,881 in 2020, a reduction in the hiring of 41,780 (-22.6 percent). During this time, male hiring dropped from 184,850 in 2001 to 130,225 in 2018, amounting to 54,625 (-29.6 percent) fewer hires.

One of the factors for the reduction in hiring levels over the past 20 years are the advances in technology, not only in manufacturing, clerical, and retail work but in professions such as law, financial services, education, and medicine.⁶ Automation is reducing the need for people in many jobs, and experts expect that this trend will continue.

⁵ Approved by voters in 2004, Oklahoma’s State-Tribal Gaming Act created a tribal gaming compact allowing federally recognized American Indian tribes to operate: electronic bonanza-style bingo games, electronic amusement games, electronic instant bingo games, and non-house-banked card games. The current compact expires on January 1, 2020.

⁶ David Rotman, “How Technology is Destroying Jobs.” *MIT Technology Review*, June 12, 2013.

In the period 2001 to 2020, the female proportion of hiring in Oklahoma increased 1.6 percentage points from 47.9 percent of total hiring to 49.5 percent in 2020, while males lost 1.6 percentage points.

**Table 4. Oklahoma: Hiring by Gender, Annual Averages
2001-2020**

| | Male | Percent total hiring | Female | Percent total hiring | Total hiring |
|-------------|---------|-------------------------|---------|-------------------------|--------------|
| 2001 | 184,850 | 52.1 | 169,661 | 47.9 | 354,511 |
| 2002 | 159,053 | 51.5 | 149,851 | 48.5 | 308,904 |
| 2003 | 146,758 | 51.7 | 136,844 | 48.3 | 283,602 |
| 2004 | 151,158 | 51.4 | 143,154 | 48.6 | 294,312 |
| 2005 | 162,187 | 51.7 | 151,781 | 48.3 | 313,968 |
| 2006 | 170,225 | 51.6 | 159,855 | 48.4 | 330,079 |
| 2007 | 172,953 | 51.7 | 161,863 | 48.3 | 334,817 |
| 2008 | 167,983 | 51.9 | 155,852 | 48.1 | 323,836 |
| 2009 | 124,648 | 50.5 | 122,128 | 49.5 | 246,777 |
| 2010 | 135,291 | 52.8 | 120,948 | 47.2 | 256,240 |
| 2011 | 140,827 | 53.0 | 124,913 | 47.0 | 265,741 |
| 2012 | 148,058 | 52.9 | 131,608 | 47.1 | 279,667 |
| 2013 | 150,659 | 53.0 | 133,798 | 47.0 | 284,458 |
| 2014 | 155,816 | 52.9 | 138,776 | 47.1 | 294,593 |
| 2015 | 147,939 | 51.6 | 139,017 | 48.4 | 286,956 |
| 2016 | 140,070 | 51.4 | 132,309 | 48.6 | 272,380 |
| 2017 | 147,839 | 52.3 | 134,869 | 47.7 | 282,709 |
| 2018 | 152,751 | 52.2 | 140,085 | 47.8 | 292,837 |
| 2019 | 149,430 | 50.9 | 143,890 | 49.1 | 293,321 |
| 2020 | 130,225 | 50.5 | 127,881 | 49.5 | 258,107 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau,
(qwiexplorer.ces.census.gov)

Hiring Trends of Female Workers by Industry

Which industries in Oklahoma are hiring female workers? Using the QWI dataset, we can see that, in general, the industries with higher concentrations of female workers also tended to hire a larger share of female workers. In this case, the services-providing industries are where the bulk of female hiring has taken place (see Table 5, next page).

As mentioned in the previous section, hiring levels of both female and male workers in Oklahoma have declined over the past 20 years. Also, hiring levels of female workers dropped in 18 of 20 industry sectors from 2001 to 2020.

In 2001, the industry with the highest hiring rate of female workers was NAICS 72 Accommodation and Food Services at 30,915 (54 percent of total hiring in that industry). NAICS 62 Health Care and Social Assistance followed at a level of 27,725 female hires (81 percent of total hiring in that industry and the

highest percentage of female hires). Also, female hiring in NAICS 44-45 Retail Trade was at a level of 27,429 (54 percent of total hiring in that industry) for the third-highest hiring level.

Table 5. Oklahoma: Hiring by Industry, Female Workers, Annual Averages, 2001 and 2020

| | 2001 | | 2020 | |
|---|-----------------|----------------------|-----------------|----------------------|
| | Number of Hires | Percent Total Hiring | Number of Hires | Percent Total Hiring |
| NAICS 11 Agriculture, Forestry, Fishing and Hunting | 726 | 28 | 585 | 31 |
| NAICS 21 Mining, Quarrying, and Oil and Gas Extraction | 804 | 14 | 499 | 18 |
| NAICS 22 Utilities | 314 | 26 | 166 | 26 |
| NAICS 23 Construction | 3,301 | 13 | 2,613 | 16 |
| NAICS 31-33 Manufacturing | 6,515 | 28 | 3,140 | 28 |
| NAICS 42 Wholesale Trade | 2,831 | 30 | 2,024 | 33 |
| NAICS 44-45 Retail Trade | 27,429 | 54 | 19,820 | 52 |
| NAICS 48-49 Transportation and Warehousing | 1,333 | 18 | 4,189 | 33 |
| NAICS 51 Information | 2,707 | 50 | 839 | 46 |
| NAICS 52 Finance and Insurance | 4,497 | 70 | 2,523 | 65 |
| NAICS 53 Real Estate and Rental and Leasing | 2,197 | 44 | 1,390 | 46 |
| NAICS 54 Professional, Scientific, and Technical Services | 5,953 | 54 | 4,795 | 49 |
| NAICS 55 Management of Companies and Enterprises | 1,287 | 53 | 975 | 51 |
| NAICS 56 Administrative and Support and Waste Management and Remediation Services | 26,212 | 41 | 14,302 | 40 |
| NAICS 61 Educational Services | 12,833 | 66 | 7,036 | 64 |
| NAICS 62 Health Care and Social Assistance | 27,725 | 81 | 25,526 | 81 |
| NAICS 71 Arts, Entertainment, and Recreation | 3,013 | 49 | 3,301 | 52 |
| NAICS 72 Accommodation and Food Services | 30,915 | 54 | 28,639 | 55 |
| NAICS 81 Other Services (except Public Administration) | 5,692 | 51 | 3,007 | 47 |
| NAICS 92 Public Administration | 3,371 | 46 | 2,507 | 49 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, (qwexplorer.ces.census.gov)

The highest reduction in statewide hiring occurred in NAICS 56 Administrative and Support and Waste Management and Remediation Services where average annual female hires fell 11,910 (-45.4 percent) over the 20 years. NAICS 44-45 Retail Trade saw female hiring decline by 7,609 workers (-27.7 percent), part of the overall hiring drop in this industry. The hiring of female workers in NAICS 61 Educational Services was nearly half the 2001 level, falling 5,797 (-45.2 percent). By 2020, the share of female hires in this industry did not change significantly at 66 percent in 2001 and 64 percent in 2020 (see Table 5).

NAICS 48-49 Transportation and Warehousing had the most significant gain in female hiring levels during the 20 years, up by 2,856 hires (214.3 percent). The female proportion of hiring in this industry increased from 18 percent in 2001 to 33 percent in 2020.

In the NAICS 71 Arts, Entertainment, and Recreation, female workers' share of hiring expanded from 49 percent in 2001 to 52 percent in 2020, an increase of three percentage points.

Female Workers' Earnings

How much are female workers paid, and what Oklahoma industries pay the highest and lowest wages to female workers? One of QWI's measures of earnings, the indicator 'Full-Quarter Employment (Stable): Average Monthly Earnings' ('EarnS'), reports the average monthly earnings of employees with stable jobs

(i.e., worked with the same firm throughout the quarter). Using this indicator, we can determine wage levels by age, gender, and industry in Oklahoma.

Table 6. Oklahoma: Average Monthly Earnings by Gender and Age Group, Annual Averages 2001-2019

| Year | 14 to 24 years old | 14 to 24 years old, male | 14 to 24 years old, female | 25 to 34 years old | 25 to 34 years old, male | 25 to 34 years old, female | 35 to 54 years old | 35 to 54 years old, male | 35 to 54 years old, female | 55 years and older | 55 years and older, male | 55 years and older, female |
|------|--------------------|--------------------------|----------------------------|--------------------|--------------------------|----------------------------|--------------------|--------------------------|----------------------------|--------------------|--------------------------|----------------------------|
| 2001 | \$1,065 | \$1,191 | \$938 | \$2,269 | \$2,628 | \$1,863 | \$2,964 | \$3,748 | \$2,182 | \$2,366 | \$3,099 | \$1,610 |
| 2002 | \$1,051 | \$1,168 | \$937 | \$2,286 | \$2,632 | \$1,900 | \$2,989 | \$3,755 | \$2,234 | \$2,427 | \$3,161 | \$1,678 |
| 2003 | \$1,046 | \$1,164 | \$934 | \$2,317 | \$2,655 | \$1,943 | \$3,067 | \$3,836 | \$2,305 | \$2,534 | \$3,303 | \$1,758 |
| 2004 | \$1,075 | \$1,201 | \$955 | \$2,390 | \$2,739 | \$2,004 | \$3,199 | \$4,008 | \$2,396 | \$2,649 | \$3,449 | \$1,851 |
| 2005 | \$1,110 | \$1,247 | \$979 | \$2,440 | \$2,811 | \$2,033 | \$3,279 | \$4,124 | \$2,441 | \$2,753 | \$3,595 | \$1,914 |
| 2006 | \$1,185 | \$1,351 | \$1,026 | \$2,574 | \$2,977 | \$2,129 | \$3,466 | \$4,357 | \$2,572 | \$2,983 | \$3,913 | \$2,051 |
| 2007 | \$1,249 | \$1,432 | \$1,072 | \$2,709 | \$3,143 | \$2,232 | \$3,618 | \$4,537 | \$2,695 | \$3,135 | \$4,097 | \$2,167 |
| 2008 | \$1,308 | \$1,502 | \$1,118 | \$2,831 | \$3,292 | \$2,325 | \$3,758 | \$4,714 | \$2,793 | \$3,321 | \$4,352 | \$2,286 |
| 2009 | \$1,243 | \$1,387 | \$1,108 | \$2,766 | \$3,173 | \$2,333 | \$3,677 | \$4,567 | \$2,802 | \$3,278 | \$4,254 | \$2,322 |
| 2010 | \$1,241 | \$1,389 | \$1,103 | \$2,821 | \$3,251 | \$2,364 | \$3,764 | \$4,680 | \$2,856 | \$3,381 | \$4,390 | \$2,392 |
| 2011 | \$1,282 | \$1,454 | \$1,116 | \$2,958 | \$3,433 | \$2,438 | \$3,950 | \$4,926 | \$2,953 | \$3,597 | \$4,710 | \$2,490 |
| 2012 | \$1,345 | \$1,540 | \$1,155 | \$3,079 | \$3,590 | \$2,510 | \$4,078 | \$5,074 | \$3,042 | \$3,790 | \$4,961 | \$2,616 |
| 2013 | \$1,367 | \$1,568 | \$1,168 | \$3,155 | \$3,679 | \$2,569 | \$4,151 | \$5,139 | \$3,110 | \$3,853 | \$5,005 | \$2,687 |
| 2014 | \$1,404 | \$1,622 | \$1,188 | \$3,289 | \$3,854 | \$2,662 | \$4,297 | \$5,322 | \$3,216 | \$3,999 | \$5,172 | \$2,801 |
| 2015 | \$1,421 | \$1,617 | \$1,231 | \$3,332 | \$3,864 | \$2,750 | \$4,354 | \$5,351 | \$3,313 | \$4,065 | \$5,213 | \$2,891 |
| 2016 | \$1,416 | \$1,594 | \$1,245 | \$3,272 | \$3,767 | \$2,749 | \$4,306 | \$5,260 | \$3,327 | \$4,002 | \$5,083 | \$2,908 |
| 2017 | \$1,459 | \$1,653 | \$1,274 | \$3,369 | \$3,913 | \$2,795 | \$4,442 | \$5,440 | \$3,417 | \$4,123 | \$5,246 | \$2,977 |
| 2018 | \$1,546 | \$1,770 | \$1,329 | \$3,498 | \$4,087 | \$2,870 | \$4,601 | \$5,635 | \$3,535 | \$4,259 | \$5,411 | \$3,080 |
| 2019 | \$1,605 | \$1,830 | \$1,389 | \$3,592 | \$4,165 | \$2,988 | \$4,771 | \$5,810 | \$3,707 | \$4,382 | \$5,535 | \$3,210 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, (qwexplorer.ces.census.gov)

Table 6 (above) summarizes Oklahoma's average monthly earnings by age group and gender from 2001 to 2019. While female workers' earnings have grown over the 2001 to 2019 period, without exception, their average monthly earnings lag in both age group and male earnings.

The most substantial gain in female employees' average monthly earnings over the 19 years occurred in the 55 years and older age group where earnings rose by \$1600 (41.2 percent). Nevertheless, even with that gain, female earnings were only 75.9 percent of male earnings (\$5,535) in 2019.

The highest gender pay parity was observed in the 14 to 24 years old age group where female workers earned 78.7 percent of male earnings in 2001. However, by 2019, female average monthly earnings in this age group had shrunk to 75.9 percent of male earnings.

Female Workers' Earnings by Industry

What industries in Oklahoma are paying the highest and lowest wages to female workers? QWI data shows that across all industries, female workers' average weekly earnings increased from \$1,893 in 2001 to \$3,217 in 2019 for a gain of \$1,324 (69.9 percent).

NAICS 21 Mining, Quarrying, and Oil and Gas Extraction paid both the highest average monthly wages as well as the most significant change in earnings, \$3,840 (122.2 percent), over the 19 years (see Table 7, next page).

**Table 7. Oklahoma: Average Monthly Earnings of Female Workers by Industry, Annual Averages
2001 and 2019**

| | 2001 | 2019 | Change | Percent Change |
|--|---------|---------|---------|-------------------|
| NAICS 11 Agriculture, Forestry, Fishing and Hunting | \$1,482 | \$2,730 | \$1,248 | 84.2 |
| NAICS 21 Mining, Quarrying, and Oil and Gas Extraction | \$3,142 | \$6,982 | \$3,840 | 122.2 |
| NAICS 22 Utilities | \$2,886 | \$6,029 | \$3,143 | 108.9 |
| NAICS 23 Construction | \$1,932 | \$3,490 | \$1,558 | 80.6 |
| NAICS 31-33 Manufacturing | \$2,210 | \$3,996 | \$1,786 | 80.8 |
| NAICS 42 Wholesale Trade | \$2,412 | \$4,128 | \$1,716 | 71.1 |
| NAICS 44-45 Retail Trade | \$1,290 | \$2,154 | \$864 | 67.0 |
| NAICS 48-49 Transportation and Warehousing | \$2,159 | \$3,442 | \$1,283 | 59.4 |
| NAICS 51 Information | \$2,635 | \$4,067 | \$1,432 | 54.3 |
| NAICS 52 Finance and Insurance | \$2,230 | \$4,233 | \$2,003 | 89.8 |
| NAICS 53 Real Estate and Rental and Leasing | \$1,948 | \$3,175 | \$1,227 | 63.0 |
| NAICS 54 Professional, Scientific, and Technical Services | \$2,314 | \$4,183 | \$1,869 | 80.8 |
| NAICS 55 Management of Companies and Enterprises | \$2,328 | \$4,779 | \$2,451 | 105.3 |
| NAICS 56 Administrative and Support and Waste Management and Remediation Services | \$1,659 | \$2,932 | \$1,273 | 76.7 |
| NAICS 61 Educational Services | \$2,043 | \$3,153 | \$1,110 | 54.3 |
| NAICS 62 Health Care and Social Assistance | \$1,943 | \$3,488 | \$1,545 | 79.5 |
| NAICS 71 Arts, Entertainment, and Recreation | \$1,172 | \$2,564 | \$1,392 | 118.8 |
| NAICS 72 Accommodation and Food Services | \$913 | \$1,528 | \$615 | 67.4 |
| NAICS 81 Other Services (except Public Administration) | \$1,391 | \$2,493 | \$1,102 | 79.2 |
| NAICS 92 Public Administration | \$2,333 | \$3,456 | \$1,123 | 48.1 |

SOURCE: Quarterly Workforce Indicators, U.S. Census Bureau, (qwexplorer.ces.census.gov)

NAICS 71 Arts, Entertainment, and Recreation had the second-highest percent change in female earnings jumping 118.8 percent, from \$1,172 in 2001 to \$2,564 in 2019. Female workers employed in NAICS 22 Utilities also saw a substantial gain in earnings growing \$3,143 (108.9 percent) over the 19 years.

NAICS 72 Accommodation and Food Services saw the lowest wage growth for female workers, only increasing \$615 (67.4 percent) between 2001 and 2019. NAICS 44-45 Retail Trade saw the second-lowest wage growth, where female workers' earnings grew only by \$864 (67.0 percent) over the 19 years.

Female earnings growth in other female-led industries did better as average monthly earnings in NAICS 52 Finance and Insurance climbed \$2,003 (89.8 percent) while average monthly earnings of females in NAICS 62 Health Care and Social Assistance rose \$1,545 (79.5 percent) between 2001 and 2019.

Summary

The rapid rise in women's labor force participation was a major development in the labor market during the second half of the 20th century. Women's labor force participation increased dramatically from the 1960s through the 1980s, before slowing in the 1990s. After reaching a peak of 60.0 percent in 1999, labor force participation among women gradually declined. In 2016, 56.8 percent of all women participated in the labor force nationally.⁷

⁷ "Women in the labor force: a databook," November 2017, *BLS Reports*, Report 1071, U.S. Bureau of Labor Statistics.

Oklahoma's female labor force participation rate also reached a peak of 58.4 percent in 1999. From 1997 to 2020, the female labor force participation rate has declined from 56.2 percent to 52.2 percent (-4.0 percentage points). But the gender gap between the female and male labor force participation rates is narrowing. Oklahoma's male labor force participation rate also declined but much more than the female rate, falling from a peak of 73.2 percent in 1997 to 63.14 percent in 2020 (-9.8 percentage points).

The female share of employment in Oklahoma has also increased slightly. Between 2001 and 2020, female employment increased from 49.0 percent in 2001 to 49.9 percent in 2020. The male share has shrunk from 51.0 percent to 50.1 percent. Interestingly, women's portion of employment in Oklahoma surpassed the males' share in 2009 and 2010 during the "Great Recession."

Older female workers appear to be gaining employment at a faster rate. From 2001 to 2020, female workers in the 55 to 64 years age group increased by 54,627 employees (75.0 percent). Female workers in the 65 years and over age group grew by 30,266 (146.6 percent). The 25 to 34 years group increased by 17,353 workers (12.0 percent), and the 22-24 years-old group gained 80 workers (0.2 percent). Employment in all other age groups declined.

There are several industries in Oklahoma where employment tends to be traditionally female-led. These industries are NAICS 62 Health Care and Social Assistance (80.3 percent female employment in 2020), NAICS 61 Educational Services (68.5 percent), and NAICS 52 Finance and Insurance (71.4 percent). Industry hiring of female workers also follows a similar pattern.

While male earnings remain well above female earnings over 2001 to 2020, that gap appears to be shrinking. For example, in the 35 to 54 years age group, female workers' average monthly earnings have grown from 58.2 percent of male earnings in 2001 to 63.8 percent in 2019. Also, female workers' earnings in the 55 years and older group went from 52.0 percent of their male counterparts in 2001 to 58.0 percent in 2019.

Across all industries, female workers' average monthly earnings increased from \$1,893 in 2001 to \$3,217 in 2019 for a gain of \$1,324 (69.9 percent). The industry that paid the highest wages to women (and also men) was NAICS 21 Mining, Quarrying and Oil and Gas Extraction . Average monthly earnings among female workers were \$6,928 in 2019. This industry also recorded the largest increase in earnings of female workers over the 19 years. Female employees in NAICS 92 had the smallest percent change in average monthly earnings, increasing by only 48.1 percent.

There have been several notable changes from the 1960s through the present regarding women's involvement in the labor market. Women now are more likely to work full-time and year-round than in earlier decades and attain higher levels of education. The gender gap between women and men has narrowed dramatically over recent decades, and experts expect this trend to continue.

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