

Changes in the Female Labor Force in Oklahoma



**Oklahoma Employment Security Commission
Economic Research and Analysis Division**

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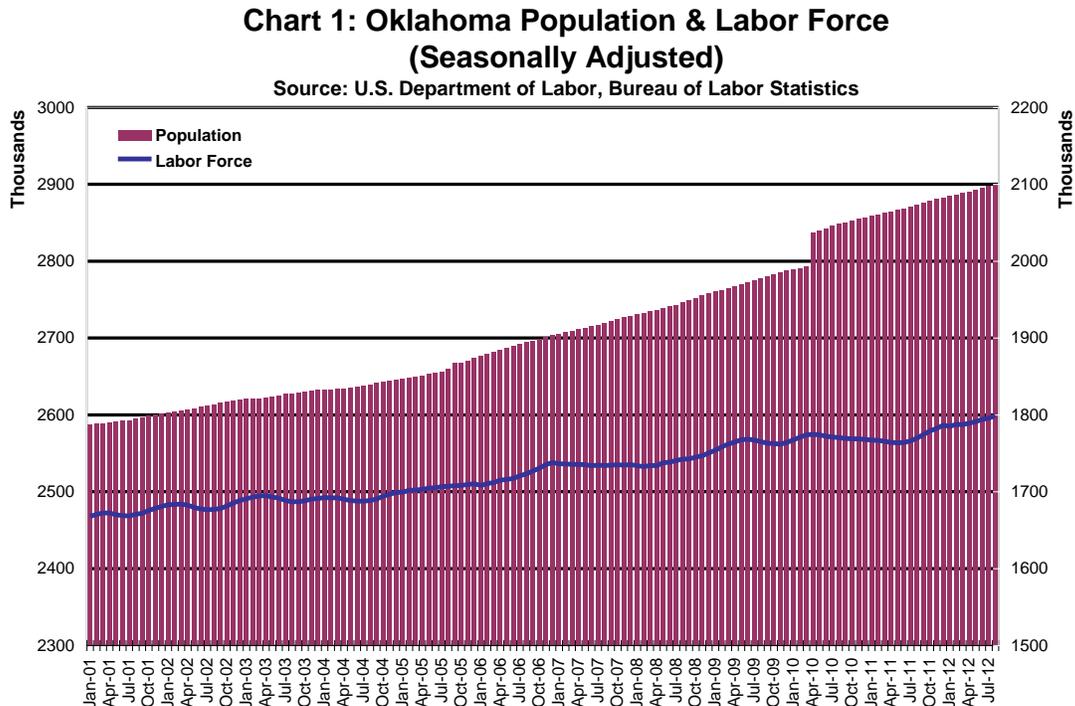
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Data from the Bureau of Labor Statistics shows that Oklahoma's non-institutionalized civilian population, herein referred to as simply population, increased from 2,587,395 to 2,900,217, or 12.1%, between January 2001 and August 2012. The labor force grew at a much slower pace for the period, increasing only 7.9% from 1,667,995 to 1,798,940. In comparison, the United States as a whole had a population increase of 13.9% and a labor force increase of 7.5%. In general, Oklahoma was consistent with the national trends in population and labor force growth rates during the past 12 years. Chart 1 displays the trends in Oklahoma population and labor force.



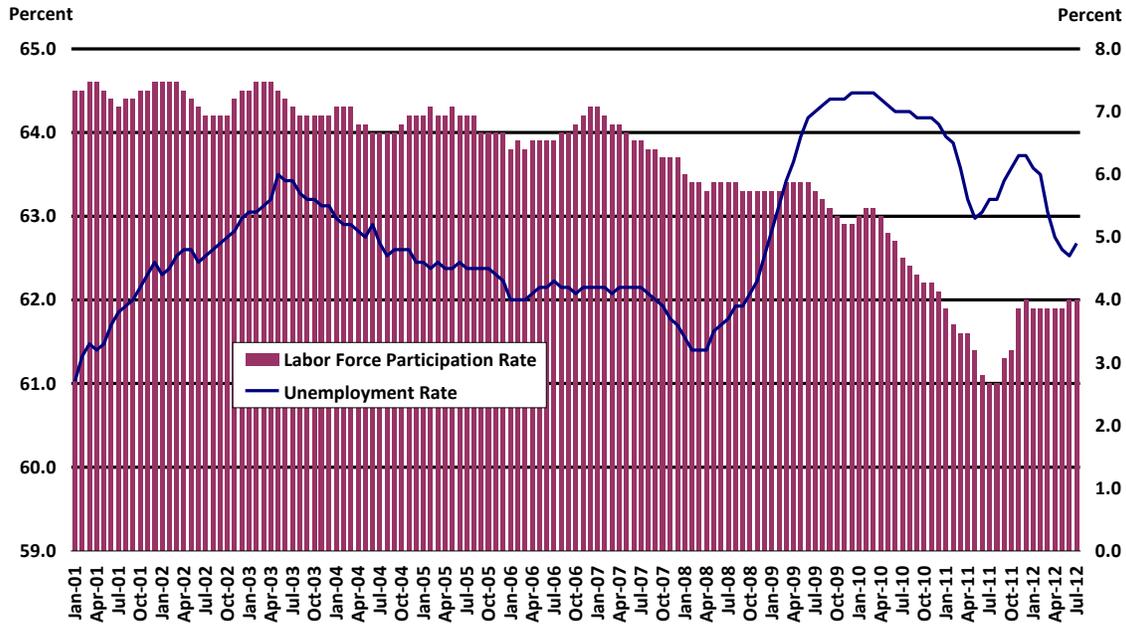
The labor force participation rate (LFPR) is determined by dividing the labor force into the population age 16 and over. Labor force is defined as the number of non-institutionalized civilians age 16 and over who are either employed or actively seeking employment. Over the last 12 years, Oklahoma's LFPR has declined 2.5 percentage points from 64.5% to 62.0%.

In particular, a rapid decline in LFPR of 3.3 percentage points occurred recently, with LFPR going from 64.3% in January 2007 to 61.0% in July 2011, despite the population growing by 6.1%. The unemployment rate also rose 2.1%. The main causes of this significant change were baby boomers (those born between 1946 and 1964) entering retirement age and the normal business cycle (Aaronson, Davis and Hu, 2012; Van Zandweghe, 2012). Cyclical movement may have also played an important role in the recent decline (Van Zandweghe, 2012) as people gave up actively seeking employment in the labor market because of scarce job opportunities brought about by the recent recession. In August of 2011, discouraged workers began reentering the labor market because of increasing job opportunities, causing an increase in the LFPR and a falling

unemployment rate. That may be an important factor in explaining a rising LFPR and declining unemployment rate after July 2011. Chart 2 illustrates these changes.

**Chart 2: Oklahoma Unemployment & Labor Force Participation Rates
(Seasonally Adjusted)**

Source: U.S. Department of Labor, Bureau of Labor Statistics



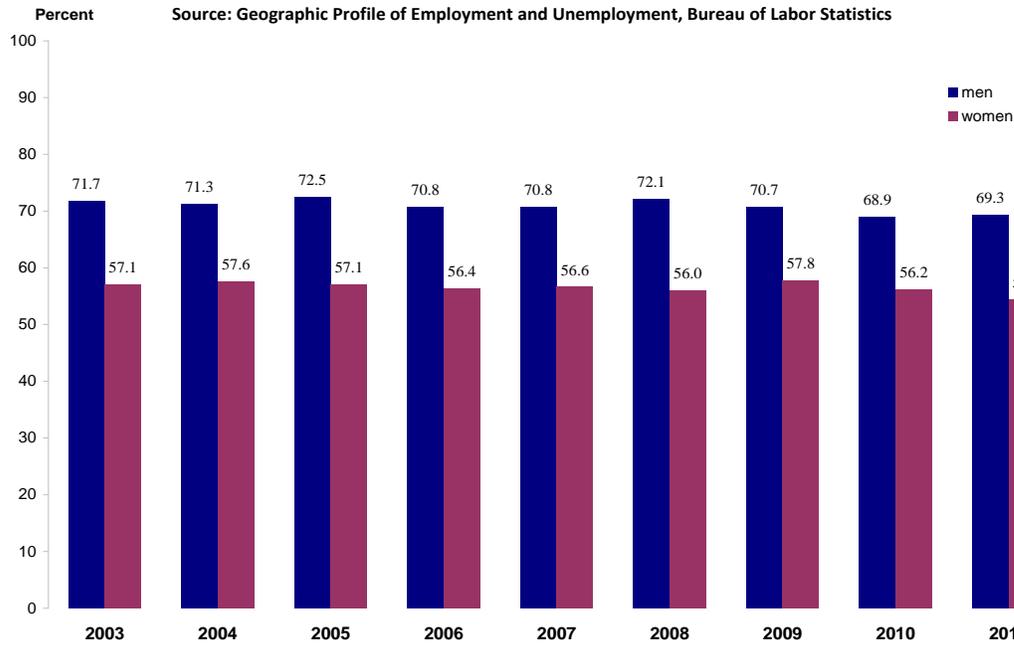
Utilizing data from the Current Population Survey (CPS), a nationwide household survey conducted by the U.S. Census Bureau, changes in female labor force trends were analyzed. Between 2003 and 2011, females in Oklahoma had declining LFPR, but higher unemployment rates. In Oklahoma, the female LFPR decreased 2.7 percentage points from 57.1 percent in 2003 to 54.4 percent in 2011. This rate peaked at 57.8 percent in 2009. The female unemployment rate increased from 5.5% to 6.5% between 2003 and 2011.

Compared to their male counterparts who saw a 2.4 percentage point decrease in LFPR, but only a 0.2 percentage point increase in their unemployment rate, Oklahoma females experienced a smaller reduction in LFPR and a greater rise in unemployment rate during the past nine years.

In 2003, Oklahoma had the ninth lowest female LFPR in the nation at 57.1%. By 2011, Oklahoma had fallen to the fifth lowest female LFPR at 54.4%. In comparison, the national average female LFPR in 2011 was 58.1%, or 3.7 percentage points higher than Oklahoma's female LFPR.

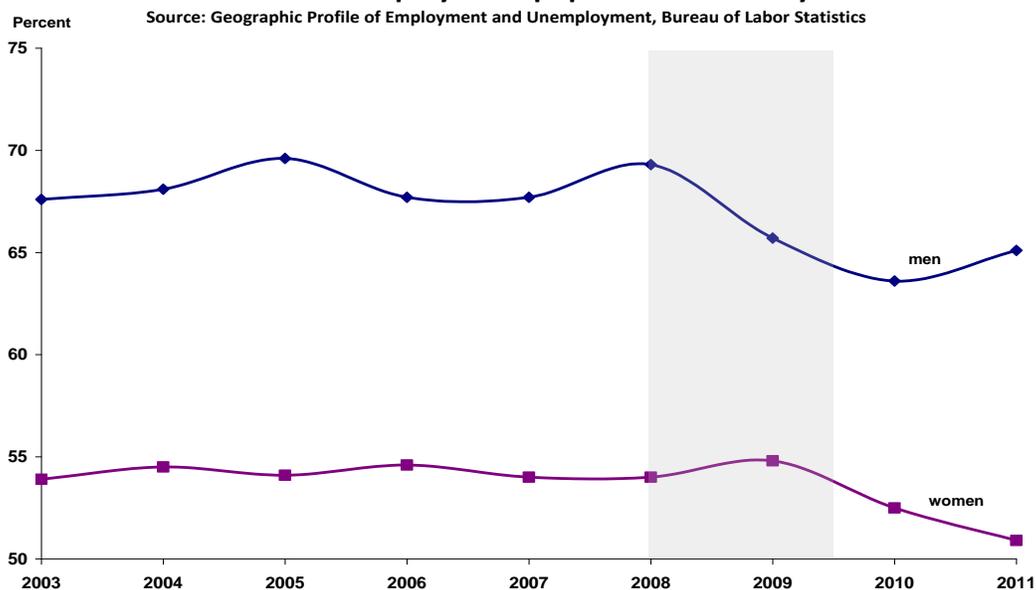
In contrast, Oklahoma's male LFPR improved from the 14th lowest in 2003 to 17th lowest in 2011, as it fell from 71.7% in 2003 to 69.3% in 2011. Chart 3 indicates changes in the female and male LFPR over the past nine years.

Chart 3: Oklahoma Labor Force Participation Rates by Gender



The Great Recession, which started in December 2007 and ended in June 2009, impacted men in Oklahoma more negatively than women with regards to employment rate, or the employment-population ratio, which reflects the proportion of employed persons in the labor force. Chart 4 shows that the male employment rate fell significantly compared with that for females during the recession, because the three industry sectors of Manufacturing; Administrative and Support and Waste Management and Remediation Services; and Mining, Quarrying, and Oil and Gas Extraction were hit hardest for males. The recovery following the recession has been dubbed the “he-covey,” because the reemployment rate of men has far outpaced that of women. The men’s employment rate rebounded while the women’s employment rate continued to drop throughout 2010.

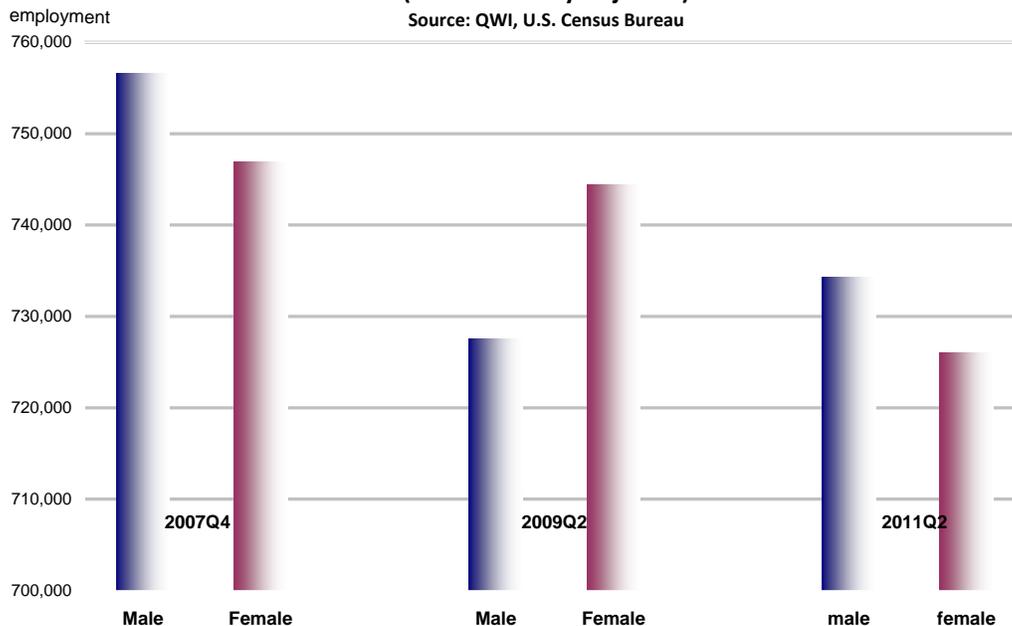
Chart 4: Oklahoma Employment-population Ratios by Gender



Note: The shaded area represents the “Great Recession”, defined by the National Bureau of Economic Research (NBER).

The U.S. Census Bureau’s Quarterly Workforce Indicators (QWI) dataset includes quarterly employment statistics for each state across all NAICS (North American Industry Classification System) sectors. Chart 5, based on the QWI dataset, shows the total employment for both males and females in Oklahoma at the beginning and end of the recession and for second quarter 2011. Men had an employment loss of 29,096 jobs during the recession, but their employment rebounded during the recovery. In contrast, despite some decreases in employment for women in Oklahoma during the recession, female employment dropped substantially after the recession, declining by 18,338 jobs two years after the end of the recession. Chart 5 plots the different employment trends of male and female workers before, during and after the recession.

**Chart 5: Oklahoma Total Employment by Gender
During and After the Recession
(Not Seasonally Adjusted)**



In addition, the QWI dataset indicates that Oklahoma’s Manufacturing, Information, and Administrative and Support and Waste Management and Remediation Services industry sectors accounted for a majority of male job losses, while the Educational Services; Health Care and Social Assistance; Arts, Entertainment, and Recreation; and Accommodation and Food Services industry sectors accounted for a majority of female job gains during the recession (fourth quarter 2007 through second quarter 2009).

The two years after the end of the recession, male employment had added 6,723 jobs, driven by the Mining; Administrative and Support and Waste Management and Remediation Services; Retail Trade; Information; and Health Care and Social Assistance sectors. In comparison, female employment suffered losses of 18,338 jobs, mainly from the Education Services (a loss 5,547 jobs since the recovery); Finance and Insurance; Manufacturing; Administrative and Support and Waste Management and Remediation Services; and Arts, Entertainment, and Recreation industry sectors. See Table 1 and 2 for the details.

Table 1: Oklahoma Male Employment across Sectors during and after the Recession

NAICS	2007Q4	2009Q2	2011Q2	2007-2009 change	2009-2011 change
Total	756,625	727,529	734,252	-29,096	6,723
Agriculture, Forestry, Fishing and Hunting	5,221	7,992	7,516	2,771	-476
Mining	37,584	31,028	38,122	-6,556	7,094
Utilities	10,685	12,619	12,230	1,934	-389
Construction	62,660	60,655	58,059	-2,005	-2,596
Manufacturing	114,854	100,128	98,751	-14,726	-1,377
Wholesale Trade	44,258	42,161	41,292	-2,097	-869
Retail Trade	81,284	79,724	82,402	-1,560	2,678
Transportation and Warehousing	36,588	35,135	33,599	-1,453	-1,536
Information	16,654	13,520	15,165	-3,134	1,645
Finance and Insurance	18,066	18,011	17,510	-55	-501
Real Estate and Rental and Leasing	12,556	12,356	11,890	-200	-466
Professional, Scientific, and Technical Services	31,456	31,926	33,153	470	1,227
Management of Companies and Enterprises	7,233	7,825	8,475	592	650
Administrative and Support and Waste Management and Remediation Services	60,680	52,066	56,542	-8,614	4,476
Educational Services	50,357	49,144	48,081	-1,213	-1,063
Health Care and Social Assistance	37,907	39,237	41,017	1,330	1,780
Arts, Entertainment, and Recreation	15,417	17,396	16,675	1,979	-721
Accommodation and Food Services	51,924	55,181	54,893	3,257	-288
Other Services (except Public Administration)	19,754	18,739	18,638	-1,015	-101
Public Administration	41,487	42,686	40,243	1,199	-2,443

Source: QWI, U.S. Census Bureau

Table 2: Oklahoma Female Employment across Sectors during and after the Recession

NAICS	2007Q4	2009Q2	2011Q2	2007-2009 change	2009-2011 change
Total	746,885	744,353	726,015	-2,532	-18,338
Agriculture, Forestry, Fishing and Hunting	2,055	3,287	3,077	1,232	-210
Mining	10,717	8,537	11,609	-2,180	3,072
Utilities	3,367	3,938	3,922	571	-16
Construction	13,444	12,736	11,866	-708	-870
Manufacturing	37,476	32,527	30,061	-4,949	-2,466
Wholesale Trade	17,263	16,572	16,557	-691	-15
Retail Trade	87,845	85,645	85,805	-2,200	160
Transportation and Warehousing	9,788	8,831	8,283	-957	-548
Information	14,270	12,259	11,470	-2,011	-789
Finance and Insurance	40,516	40,910	37,694	394	-3,216
Real Estate and Rental and Leasing	12,257	11,583	10,203	-674	-1,380
Professional, Scientific, and Technical Services	32,354	32,932	33,192	578	260
Management of Companies and Enterprises	6,555	6,456	7,406	-99	950
Administrative and Support and Waste Management and Remediation Services	46,323	40,664	38,692	-5,659	-1,972
Educational Services	109,826	114,137	108,590	4,311	-5,547
Health Care and Social Assistance	157,144	163,273	163,538	6,129	265
Arts, Entertainment, and Recreation	17,199	19,101	17,170	1,902	-1,931
Accommodation and Food Services	68,981	70,670	69,927	1,689	-743
Other Services (except Public Administration)	19,450	19,480	17,801	30	-1,679
Public Administration	40,055	40,816	39,149	761	-1,667

Source: QWI, U.S. Census Bureau

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