

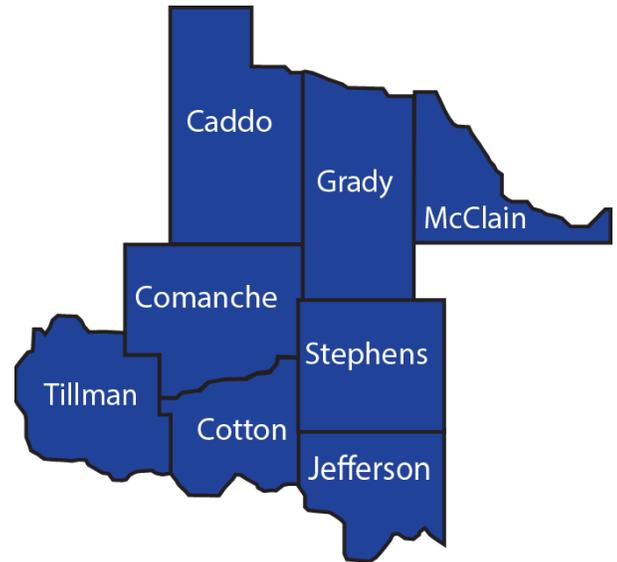
South Central Oklahoma Workforce Area Briefing

May 2017

Overview

The South Central Oklahoma Workforce Development Area is composed of eight Oklahoma counties: Caddo, Comanche, Cotton, Grady, Jefferson, McClain, Stephens, and Tillman. According to the U.S. Census Bureau, this combined region of Oklahoma covers 7,246 square miles, making it the third largest of the state’s workforce areas in land mass. Over 312,000 Oklahoma citizens live in the eight-county area – approximately 8% of the state’s total population. Three cities in the area boast populations of 10,000 residents or more, including Lawton, Duncan, and Chickasha.

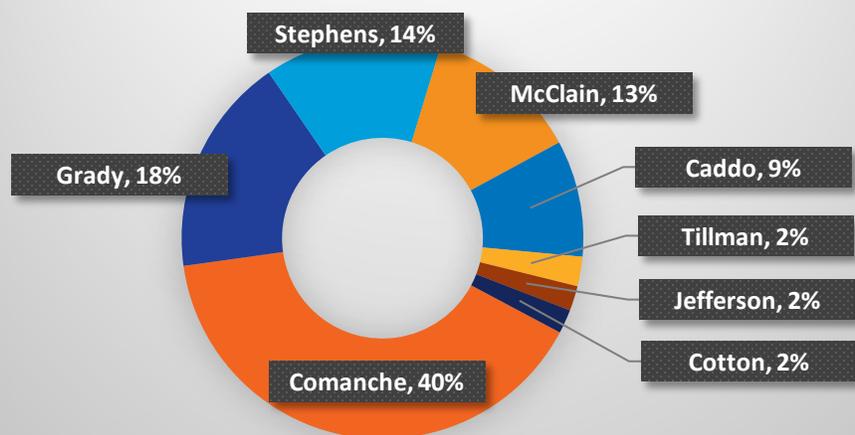
Note that for simplicity, the South Central Oklahoma Workforce Development Area will generally be referenced throughout this report as the “Area.” Sources for all data are cited. The most common data source utilized is EMSI, data release 2017.2.



Population Breakdown by County

- The city of Lawton, the county seat of Comanche County, is the largest city in the Area with an estimated population of 97,589. Comanche County, the most populous County in the Area, is home to a total of 125,003 individuals, representing 40.1% of the population of the Area.
- Cotton County, the second smallest county geographically with only 642 square miles, is the least populous county in the Area and home to 5,991 residents or 1.9% of the Area population.

2016 Area Percentage of Population by County



Source: EMSI 2017.2

- Between 2010 and 2016, the Area experienced a nominal growth rate of 1.35%, a net increase of 4,169 residents. This small overall growth rate

was fueled by population increases in only two counties; McClain County, which experienced the highest growth rate of 11.5%, and Grady County, which grew by 4.9%. These two counties accounted for an overall population increase of 6,531 Area residents.

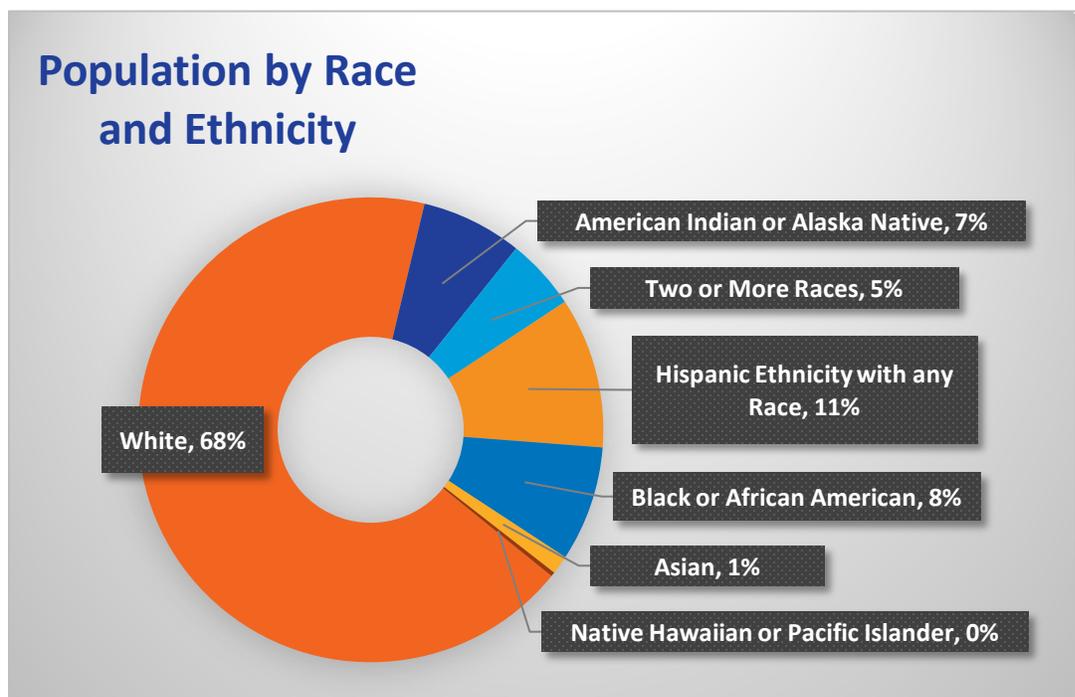
In contrast, during this same time frame, six Area counties decreased in population: Tillman County, -7.13% representing a loss of 570 residents; Jefferson County, -3.34%, -215 residents; Cotton County, -2.96%, -183 residents; Stephens County, -1.35%, -608 residents; Caddo County, -1.34%, -397 residents; and, Comanche County, -0.31%, representing a loss of 389 residents.

- In addition to overall population representation, it is helpful to examine population density, measured in the number of persons living in a one-square-mile area. Much of the South Central Oklahoma Workforce Development Area is rural. Seven of the eight counties exhibit relatively low population density rates, under 70 persons per square mile. Tillman and Jefferson Counties are most notable as possessing the lowest population density in the Area at approximately 8 persons per square mile. Comanche County, home to Lawton, the largest metropolitan statistical area (MSA) in the region, experiences a population density rate of 115 persons per square mile. As a point of comparison, the two counties in the state of Oklahoma experiencing the highest population density, Oklahoma and Tulsa, each display county-wide population densities of over 1,000 individuals per square mile.

Population Breakdown by Race and Ethnicity

The chart below illustrates the racial and ethnic diversity of residents living in the South Central Oklahoma Workforce Development Area. The racial categories designated by the U.S. Census Bureau are utilized. It should be noted that the Census Bureau categorizes “Hispanic,” not as a race, but as an ethnicity. As such, Hispanic is always reported in conjunction with another racial designator, i.e. “Black or African American, Hispanic.” Individual races included in the chart were reported as Non-Hispanic.

- Nearly 212,000 Area residents identify themselves as “White.” This equates to 67.9% of the total Area population, a racial representation 1.8 percentage points higher than statewide average most recently reported at 66.1%.



Source: EMSI 2017.2

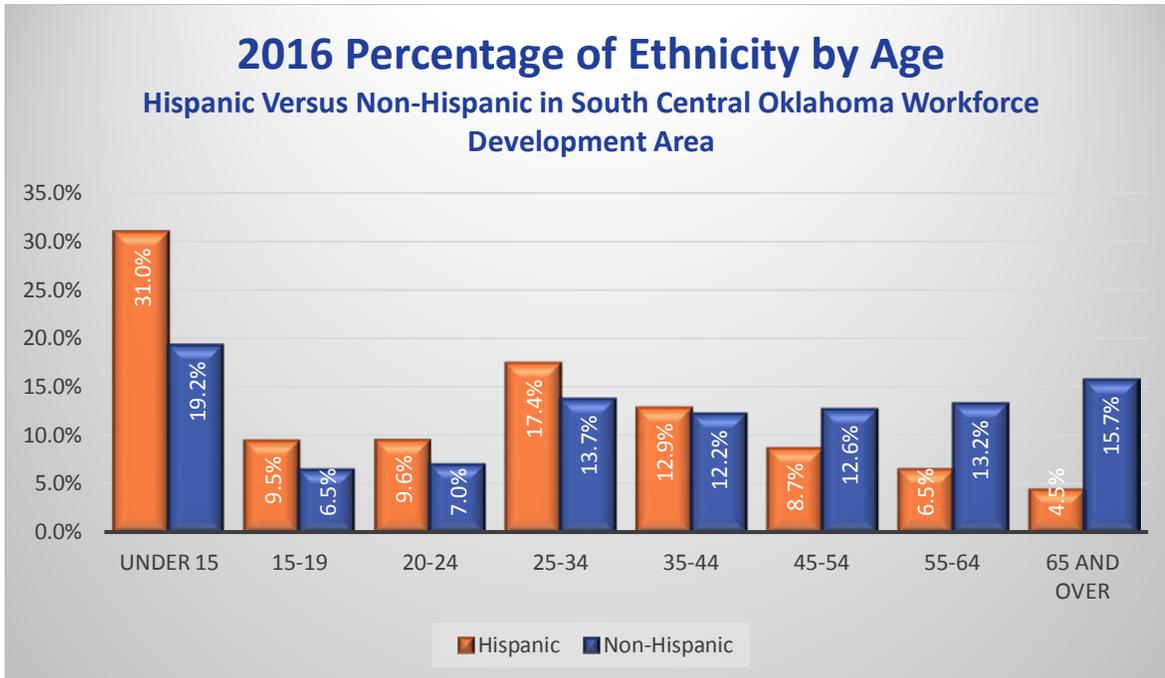
- At 0.3% (926 total Area residents) Native Hawaiians or Pacific Islanders, Non-Hispanic, comprise the smallest racial classification.
- Individuals of native descent are categorized by the Census Bureau as “American Indians or Alaska Native.” This racial group is under-represented in the South Central Oklahoma Workforce Development Area compared with the Oklahoma statewide population. American Indians or Alaska Native, Non-Hispanic, represent 7.0% of the population in the Area compared with 9.2% in the state.
- Individuals self-identifying as “Black or African American, Non-Hispanic” are slightly over-represented in the Area at 8.0% compared to a statewide population of 7.3%.
- Individuals who self-identify as being of Hispanic ethnicity account for 10.49% of the Area population. As noted previously, Hispanic ethnicity is always reported in conjunction with a racial designator. This figure includes everyone of Hispanic ethnicity, regardless of race. Between 2010 and 2016, the Hispanic population in the Area increased by 18.2%. This is slightly lower than the statewide growth rate of 22.7%.
- Between 2010 and 2016, the growth rate for the Non-Hispanic population was -0.31%, resulting in a decline in population in that category of an estimated 882 individuals. These data include individuals of any race who report Non-Hispanic ethnicity.

Hispanic Population

Based upon the significant growth rate of the Hispanic population in the Area, this group was selected for further analysis. A chart titled “2016 Percentage of Ethnicity by Age” illustrating the Hispanic population by age as compared to populations who identify as Non-Hispanic, follows the analysis summary.

- As noted previously, individuals who self-identify as Hispanic account for 10.49% of the Area population. This is comparable to the statewide Hispanic representation of 10.38%. Though slightly lower than the 2010-2016 statewide growth rate for individuals of Hispanic ethnicity, the Hispanic population in the Area grew by 18.2% while the Non-Hispanic population declined.
- The majority of the Hispanic population is 24 years of age or younger (50.1%) while the majority of those who self-identify as Non-Hispanic are over the age of 34 (53.7%). Over 15% of Non-Hispanics have surpassed the presumed retirement age of 65; only 4.5% of Hispanics have reached that milestone. These data hold significant implication for the ethnic diversity of the future workforce in the South Central Oklahoma Workforce Development Area. Many of those individuals self-identifying as Non-Hispanic have already begun to “age out” and will continue to age and exit the workforce at a higher rate, to be replaced by a greater representation of younger Hispanic employees.
- Of particular importance for the Hispanic population is the youth. Nearly 31% of all Hispanics residing in the Area are under the age of 15; 40.5% are age 19 or less. In comparison, only a total of 25% of Non-Hispanics are reported to be 19 years of age or less. Based upon age, these individuals are presumed to be either preparing to enter, or are currently students of, the K-12 school system. This differential will significantly alter the ethnic representation of academic cohorts. An examination of educational attainment data, provided later in this report, indicates that individuals who self-identify as Hispanic generally exhibit lower levels of educational attainment than those who indicate they are Non-Hispanic. Based upon these combined data, educators must be prepared to engage, mentor,

and motivate an increased population of youths of Hispanic ethnicity to enhance educational outcomes, student success, and workforce preparation.



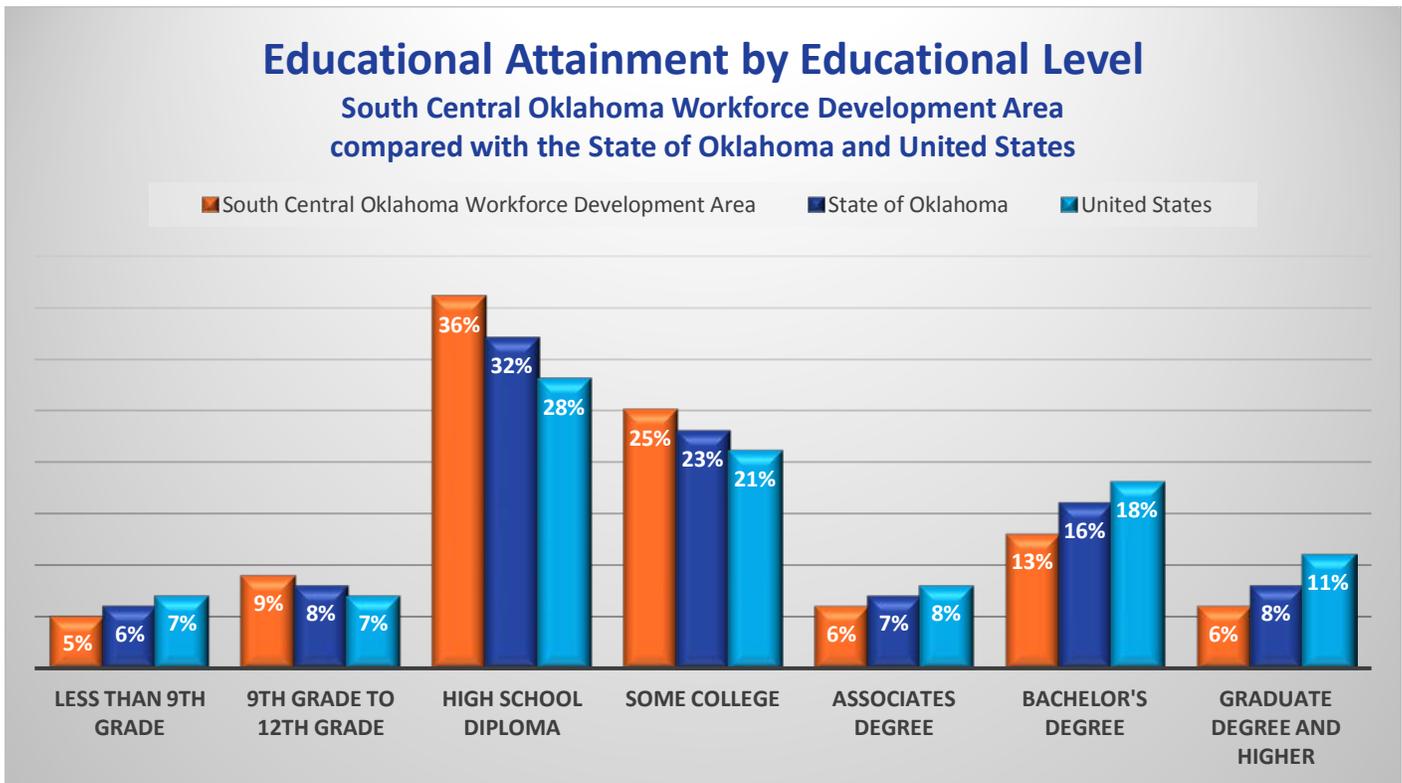
Source: EMSI 2017.2

Educational Attainment

Data regarding educational attainment are gathered by the U.S. Census Bureau utilizing a variety of surveys. Census Bureau staff aggregate the data into seven educational attainment categories ranging from the completion of “Less than 9th Grade” up to the attainment of a “Graduate Degree or Higher.” Unfortunately, the scale currently in use fails to quantify those individuals who have achieved an educational award above the level of a high school diploma but below the attainment of an Associates Degree. This missing category is generally characterized by the completion of a career-specific vocationally associated certificate or an industry-recognized credential. The educational attainment levels, categorized utilizing the Census Bureau classifications, are discussed below and followed by two charts, “Educational Attainment by Education Level” and “Educational Attainment by Race/Ethnicity.”

- Educational attainment in the South Central Oklahoma Workforce Development Area is heavily centered in the areas of “High school diploma” and “Some college.” Thirty-six percent of residents have earned a diploma while an additional 25% have attended some college without completing a degree.
- One half of the Area residents have completed a high school diploma or less.
- Eighty-six percent of South Central Oklahoma Workforce Development Area residents have attained a high school diploma or higher. This level of educational attainment is equivalent to both the state and national averages. With regard to postsecondary degrees – Associates Degrees and higher – the Area attainment level of 25% is lower than both the state (31%) and the national (37%) levels.

- Twenty-five percent of Area residents have completed “Some college.” This percentage is higher than that of both the state (23%) and the nation (21%). This high percentage of individuals who have prior college experience provides the Area with added opportunity to re-engage adult students to return to college and complete a degree.
- An additional 13% have completed a Bachelor’s Degree and 6% have completed a Graduate Degree or higher. These percentages are below state and national levels.



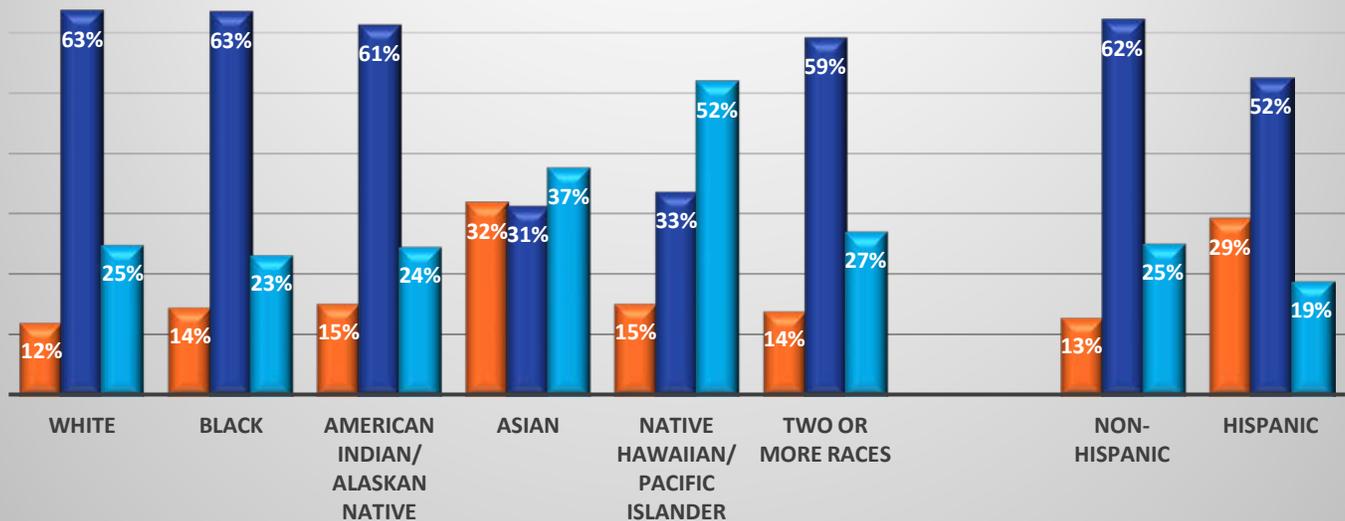
Source: EMSI 2017.2

- As indicated in previous sections, the variables of race and ethnicity figure significantly in educational achievement. With regard to race, regardless of ethnicity, 24.7% of Area residents self-identifying as “White” report receiving a college degree; for individuals who report being “Black or African American” or “American Indian or Alaska Native,” college degree attainment drops to 22.4% and 24.4%, respectively. The highest college degree completion rates are those of individuals who self-identify as Native Hawaiian or Pacific Islander (51.7%) and Asian (37.3%), though it should be noted that these two racial categories are extremely small, comprising just under 2% of the population.
- The most significant educational attainment gap is revealed by an examination of data associated with ethnicity, particularly at the lower educational levels. Over 29% of Area Hispanics possess an educational level less than a high school diploma as compared with 12.6% for individuals of Non-Hispanic ethnicity, a differential of over 16 percentage points. Only 52.4% of Hispanics have attained a high school diploma versus 62.6% of Non-Hispanics, and at the college completion level, 18.6% of Hispanics have earned a degree versus 24.9% of Non-Hispanics.

Educational Attainment by Race/Ethnicity

South Central Oklahoma Workforce Development Area

■ Less than High School ■ High School Diploma ■ College Degree



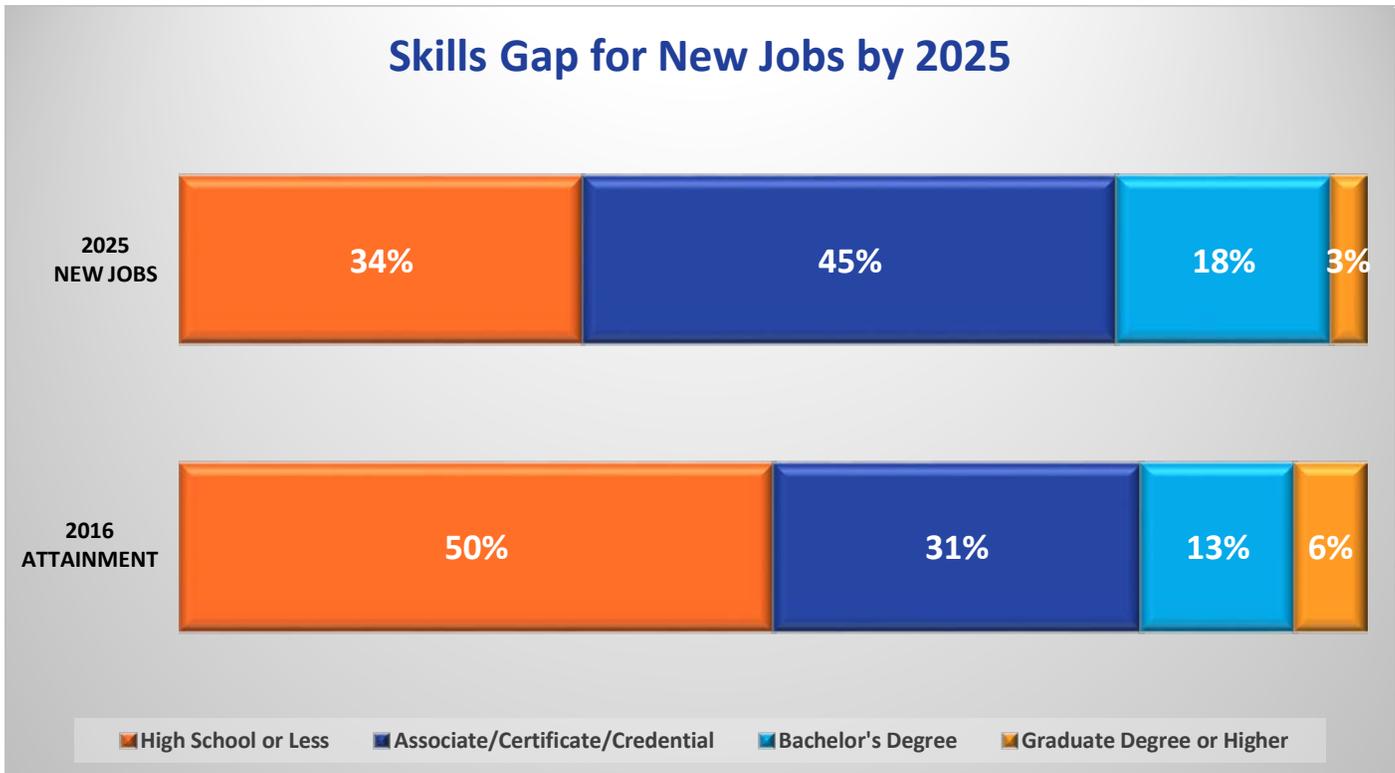
Source: EMSI 2017.2

Skills Gap

Building upon the educational attainment data presented previously, a skills gap analysis was completed. To achieve this analysis, the current level of educational achievement of Area residents was directly compared to the typical entry level of education required by newly created jobs projected to develop between 2016 and 2025. The chart “Skills Gap for New Jobs by 2025” follows the analysis and illustrates the educational gap identified.

- By 2025, 45% of all newly created jobs in the Area will require postsecondary training (completion of a certificate or some college) or an Associates Degree. Currently only 31% of individuals in the Area have achieved this educational level. Conversely, only 34% of newly created jobs will require a high school diploma or less while 50% of Area residents have achieved this level. In short, there is an excess supply of individuals with a high school diploma or less and a shortage of individuals to meet the needs of employers at the postsecondary and Associates Degree level – a 14 percentage point skills gap. Based upon projected population growth rates for 2025, an estimated 29,000 additional Area residents with a high school diploma or less must obtain some level of postsecondary credential to meet employer needs. This estimate is compounded when factoring in the anticipated need for individuals with even higher educational levels discussed below.
- Of significant consequence is the need for individuals in the Area to attain a Bachelor’s Degree. By 2025, 18% of all newly created jobs in the region will require a Bachelor’s Degree, and 3% will require a Graduate Degree or higher. With 6% of individuals in the Area currently possessing a Graduate Degree or higher, residents should be positioned to fulfill the need of new jobs requiring this level of education unless degree specialties are significantly misaligned with employer requirements. There is a need, however, to increase the population who have attained a Bachelor’s

Degree. Currently, 13% of Area residents have achieved a Bachelor’s Degree but as indicated previously, 18% of new jobs are anticipated to require that level of education upon hire, leaving a five percentage point gap.



Source: EMSI, 2017.2

Educational Assets

Colleges, Universities, and CareerTechs are instrumental in developing the workforce of the South Central Oklahoma Workforce Development Area. The Area is home to several institutions which help supply local businesses and organizations with a workforce that has the necessary labor and skills to be competitive in today’s economy.

CareerTechs.

There are five CareerTechs with six locations in the Area:

- **Caddo Kiowa Technology Center** (Fort Cobb)
- **Canadian Valley Technology Center** (Chickasha)
- **Great Plains Technology Center** (Lawton, Frederick)
- **Mid-America Technology Center** (Wayne)
- **Red River Technology Center** (Duncan)

Source: CareerTech.org

Colleges and Universities.

There are two colleges and universities in the Area:

- **Cameron University** (Lawton, Duncan)
- **University of Science and Arts of Oklahoma** (Chickasha)

Source: Oklahoma State Regents of Higher Education

Commuter Data

The U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) program uses data from a variety of sources including the unemployment insurance program, Quarterly Census of Employment and Wages (QCEW), and administrative data from censuses and surveys to create models estimating worker commutes for employment.

According to these models:

- Nearly 53% of South Central Oklahoma Workforce Development Area residents remain in the Area for employment while 47% commute outside the Area. Most of those individuals who commute outside the Area travel to Oklahoma City for employment. The estimated percentage of commuters to Oklahoma City varies from 8% in Tillman County to 34% in McClain County. Norman, Oklahoma, in Cleveland County, is also a frequent destination with up to 11.5% of residents commuting there for employment. Individuals who live in counties on the southern border of the Area, including Cotton, Jefferson, and Tillman Counties, alternatively commute across the state border to Wichita Falls, Texas.
- Only Comanche and Stephens Counties retain more than half of the working population for employment in the county with 60.3% and 54.6% respectively. This finding would be expected for a number of reasons. Comanche County boasts the largest overall population of any county in the Area at approximately 125,003, is home to the largest labor force in the Area of 49,642 workers, and includes the city of Lawton, the largest city by population in the Area and third largest Metropolitan Statistical Area (MSA) in the state. As a result, job densities are much higher in this county than in any other county in the Area. In 2016, Comanche County employers reported the existence of 55,294 jobs, more than three times as many jobs as reported in the next largest employing county, Stephens County. Large employers in Comanche County include Goodyear, Comanche County Memorial Hospital, Fort Sill, Bar-S Foods, and the Comanche Nation Casino, among others.

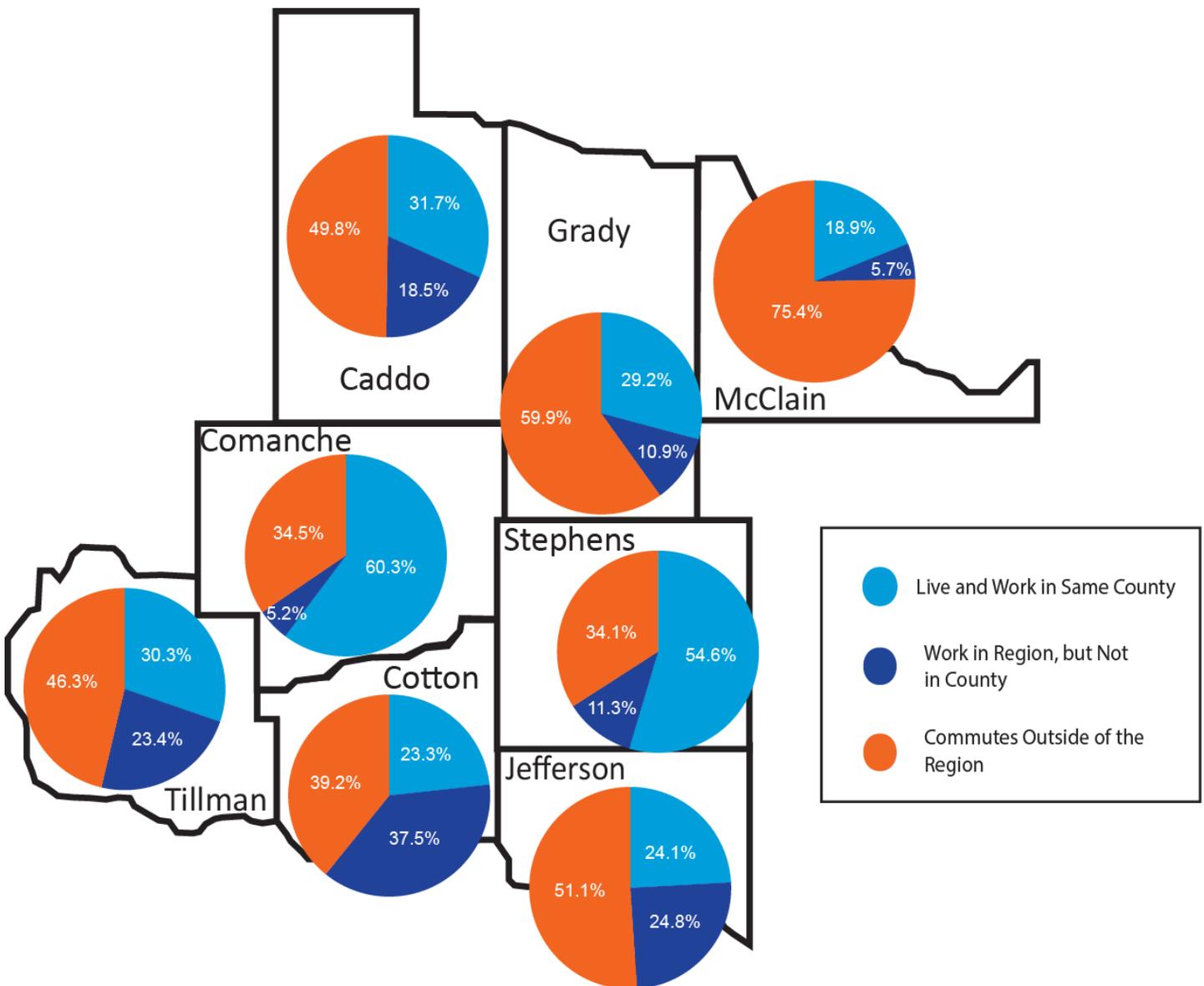
Stephens County is the third largest county in the Area in population at 44,497 and only possesses the fourth largest labor force in the Area of 18,357 residents; however, it ranks second behind Comanche County in the number of jobs reported in 2016 at 15,058. Stephens County is also home to the city of Duncan, the second largest city in the Area, surpassed only by Lawton. Examples of large Stephens County employers include the Duncan Regional Hospital, Halliburton, Walmart, and the Chisholm Trail Casino.

The remaining six counties in the Area retain between 18% and 31% of the working population. McClain County is notable for retaining the lowest percentage of workers at 18.9%, possibly due to the county's proximity to the Oklahoma City metropolitan area. Over 34% of McClain County workers travel outside the Area to work in Oklahoma City and an additional 11.5% commute to Norman for employment.

- McClain County experiences the highest percentage of workers leaving the Area for employment at 75.4%. As noted previously, based upon the commuter destination data, this is most likely due to the location of the county in relation

to the Oklahoma City MSA. Grady County ranks second, losing approximately 59.9% of working residents to jobs outside the Area. Similar to McClain County, 30.1% of Grady County workers commute to Oklahoma City and an additional 4.2% to Norman.

- It must be noted that “commuting” can no longer be strictly defined as physical relocation for employment. Data indicate that South Central Oklahoma Workforce Development Area residents who commute outside the region to work do so not only to adjacent counties and states but across the nation. This data emphasizes the growing trend of telework.



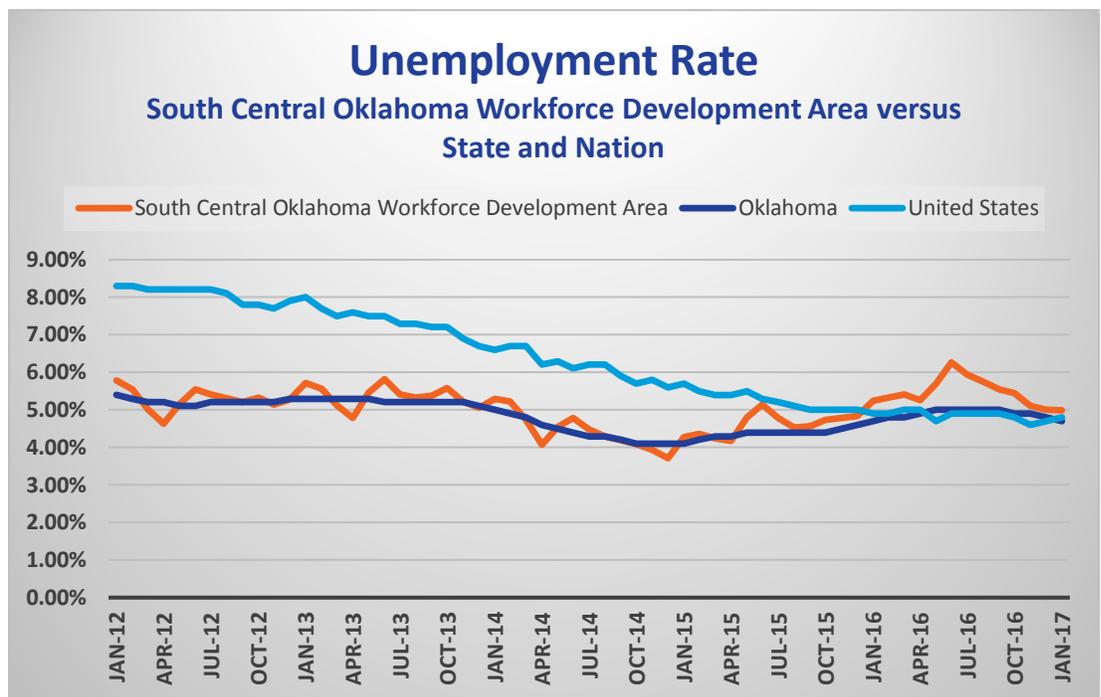
Source: U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD)

Unemployment Rate

The term “unemployment” refers to individuals who are counted as participating in the labor force, but are not employed. This eliminates consideration of individuals who do not participate in the labor force such as individuals who are unable to work due to a disability, retirees, and individuals who may consciously *choose* not to work such as students. As a result, the unemployment rate cited focuses on individuals seeking, but not attaining, employment.

For this analysis, the average unemployment rates of individuals living in South Central Oklahoma Workforce Development Area were compared to the average unemployment rates of the state of Oklahoma as a whole, and the nation, over a span of 5 years from January 2012 to January 2017.

- Between January 2012 and January 2017, although variable, the unemployment rate in the Area predominantly trended above the statewide average and below the national average. It remained below the national average until January 2016.

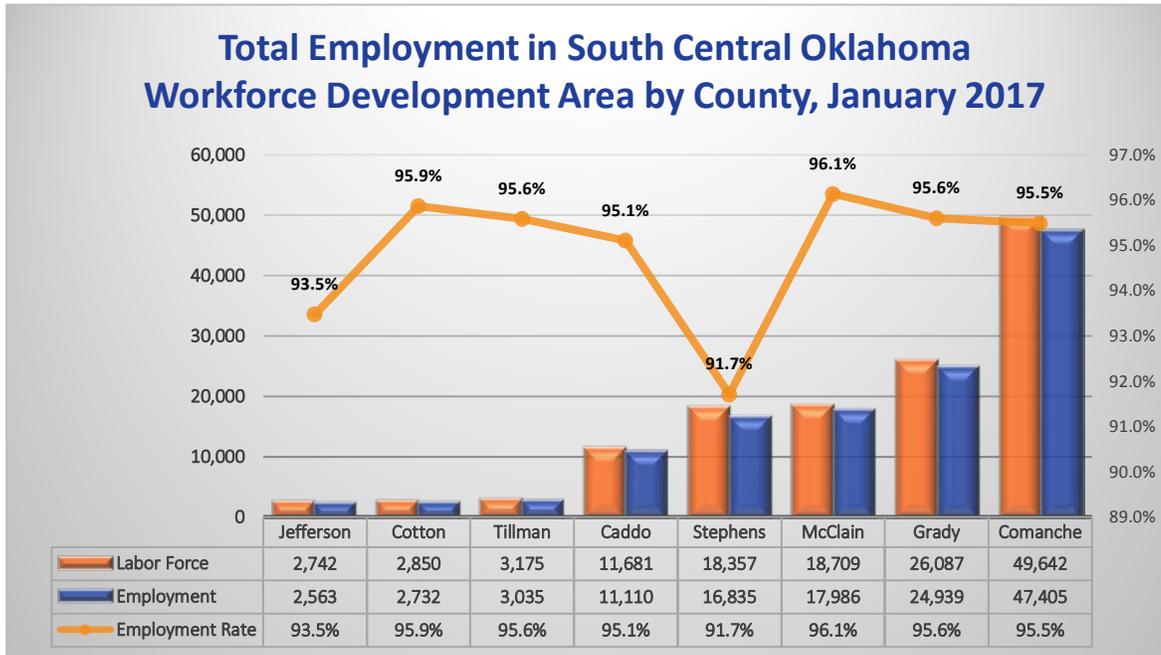


Source: Bureau of Labor Statistics, Local Area Unemployment Statistics (BLS LAUS)

- During this time frame, the state and national rates varied only minutely, by no more than 0.5% in the short term, maintaining a relatively smooth trend line. Conversely, the unemployment rates for the Area experienced significant variation, producing sharp peaks and valleys in the trend line. For example, between April 2013 and June 2013, the rate rose from 4.8% to 5.8% -- a 1% variance across three months -- then swiftly lost 0.5 percentage points to 5.3 by August 2013. Two additional 1 percentage point spikes occurred, the first between April 2015 and June 2015, and the second between April 2016 and June 2016.
- During the five-year span examined, the unemployment rate for the Area peaked at 6.3% in June 2016 and reached its lowest level of 3.7% in December 2014. From November 2016 to January 2017, the Area unemployment rate has hovered around 5%. In January, the Area unemployment rate was 4.98%. Preliminary data for February and March 2017 indicate the Area unemployment rate is trending downward, reaching a low of 4.42% for March 2017, although it must be noted that preliminary data is subject to change.

Total Employment by County

In contrast to the unemployment rates discussed previously, this report section focuses on the number and percentage of individuals in the South Central Oklahoma Workforce Development Area who were *employed*. Employment data are cited for January 2017.



Source: Bureau of Labor Statistics Local Area Unemployment Statistics

- In January 2017, 133,243 Area residents were in the workforce with 126,605 employed. This results in an employment rate of 95.0%.
- Despite possessing the greatest overall population, largest labor force, and most individuals employed in the Area, Comanche County exhibits only the fifth highest employment rate at 95.5%.
- McClain County experienced the highest employment rate in the Area in January 2017 at 96.1%. This is not a unique occurrence. McClain County traditionally maintains a high employment rate, averaging 95.99% in the five-year span between January 2012 and December 2016, the highest average of any county in the Area.
- While most of the counties exhibited employment rates between 95% and 96%, two counties reported significantly lower employment rates. Jefferson County experienced employment rates of 93.5% in January 2017 while Stephens County dropped even lower to 91.7%. It should be noted that, with regards to the size of the labor force, Jefferson is the smallest county in the Area while Stephens has the fourth largest labor force. Cotton County, with the second smallest labor force, reports a high level of employment at 95.9%.
- Three of the Area counties possess significantly smaller labor forces than the remainder of the Area – Jefferson, Cotton, and Tillman Counties. A direct comparison between Jefferson and Cotton Counties reveals that, while there is only a 4% difference in the size of the labor forces, Cotton County experiences an employment rate 2.4 percentage points higher than Jefferson. Likewise, Tillman County reports only 433 more residents in the labor force than Jefferson County, a difference of 15.8%, but exhibits an employment rate 2.1 percentage points higher than Jefferson. Additional analysis of data regarding job density and employer size reveals that the Jefferson County labor force experiences limited local employment opportunities with only 1,257 reported jobs available in 2016 and no large businesses employing 250 or more individuals.

Top Employment Sectors

The following list encompasses the top 10 sectors in the Area in number of jobs available. *Government* is the top sector, offering over 37,000 jobs for Area residents at 565 payrolled business locations. *Retail Trade* ranks second, providing 11,726 jobs at 996 business locations. The 9th/10th ranked sectors in the Area are *Professional, Scientific, and Technical Services* and *Finance and Insurance*, each of which reports 3,295 jobs, only 11% as many as offered by the top-ranking *Government*. Overall, the top 10 employment sectors represent 93,058, 88% of all jobs reported in the South Central Oklahoma Workforce Development Area in 2016.

NAICS Sector Group	Sector	2016 Jobs
90	Government	37,245
44	Retail Trade	11,726
62	Health Care and Social Assistance	9,075
72	Accommodation and Food Services	8,751
31	Manufacturing	7,478
23	Construction	4,908
56	Administrative and Support and Waste Management and Remediation Services	3,732
81	Other Services (except Public Administration)	3,553
54	Professional, Scientific, and Technical Services	3,295
52	Finance and Insurance	3,295

Source: EMSI 2017.2

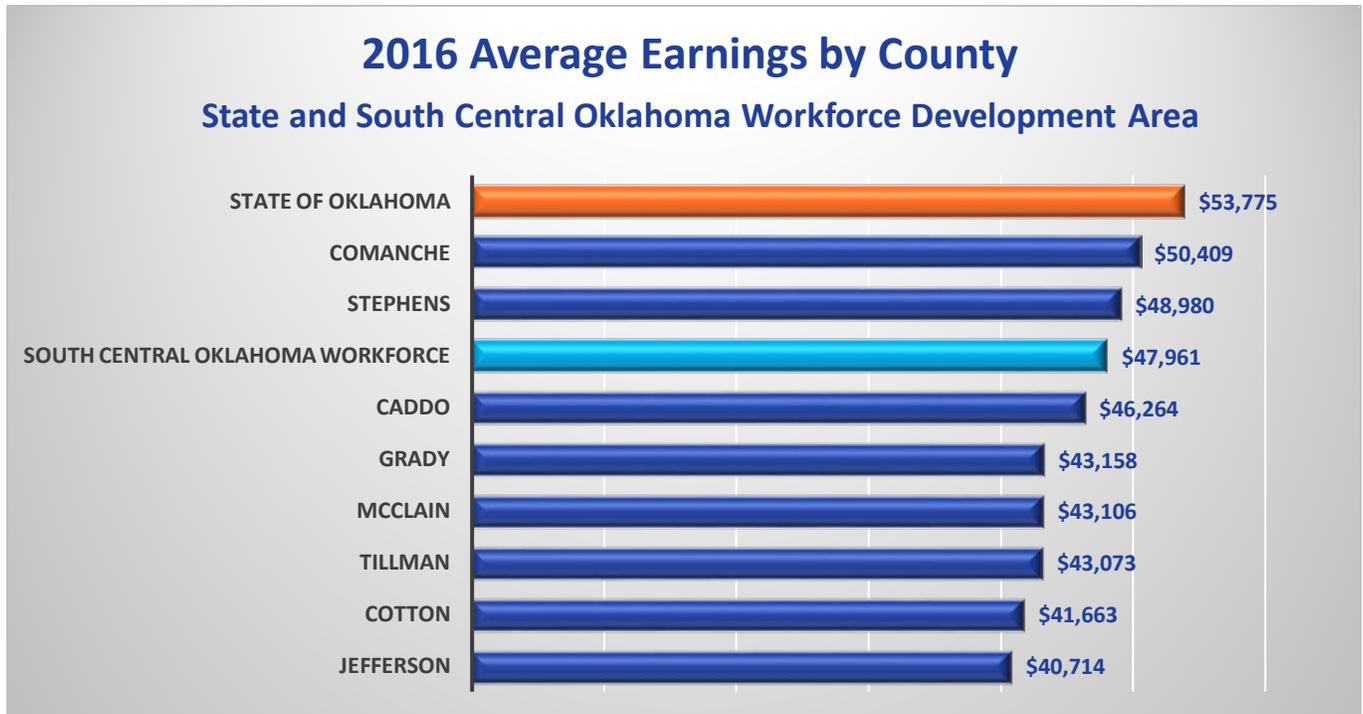
Average Earnings by County

The chart titled “2016 Average Earnings by County,” located immediately following this analysis, illustrates average annual earnings for the eight Area counties as well as the Area average and Oklahoma statewide average. A comparison of these data reveal the following:

- The average annual earnings in the South Central Oklahoma Workforce Development Area as well as the average annual earnings for each Area county are below the average for the state of Oklahoma. Average annual earnings for the Area as a whole are \$47,961; while the latest earnings data available indicate the average earnings for the state of Oklahoma are \$53,775. This represents a gap of 12.1%.
- At \$50,409, Comanche County ranks first in average earnings. This figure represents a 5.1% increase over the Area average but a 6.7% decrease from the state average. Jefferson County exhibits the lowest average earnings at \$40,714 – 15% below the Area average. When a direct comparison is made between Jefferson County and Comanche County, there is a 23.8% differential.
- As previously indicated elsewhere in this report, residents of all of the South Central Oklahoma Workforce Development Area counties working outside the Area typically commute to the Oklahoma City MSA. Not only is the job density higher there, so too are the wages. Average wages for a job in the Oklahoma City MSA were reported to be \$57,109. This figure is 32% higher than wages in McClain County where 34% of the work force commuted to

Oklahoma City MSA for employment. Likewise, individuals in the Grady County labor force experience an average increase of 32.3% in annual salary by choosing to work in Oklahoma City.

- The majority of counties in the Area report average annual earnings below the Area average of \$47,961. The Area average is skewed upward by the higher average wages and the larger size of the workforce associated with Comanche County. Removing Comanche County from the calculation of Area wages results in a significant drop of \$2,700 annually to an average wage of \$45,256.



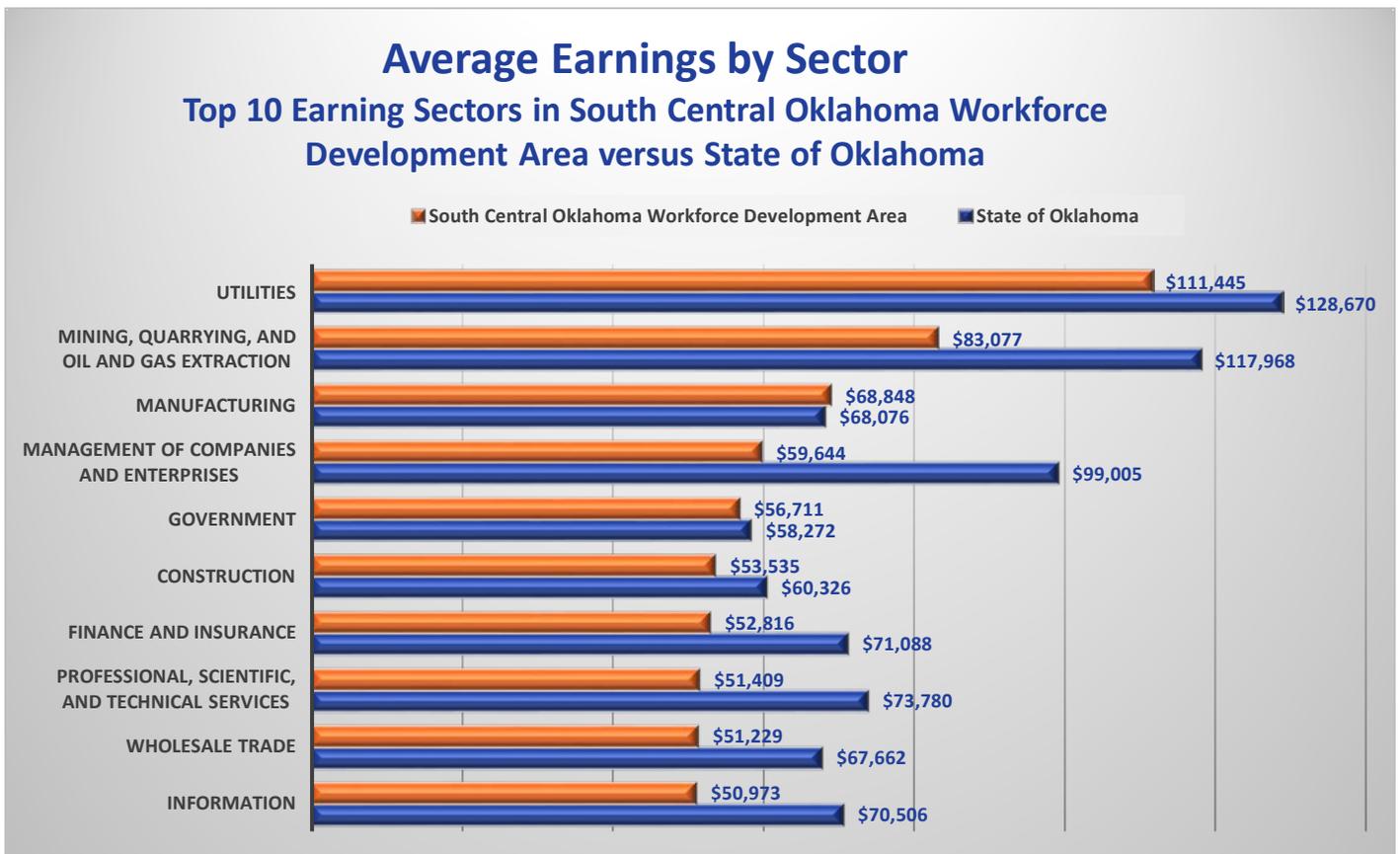
Source: EMSI 2017.2

Average Earnings by Sector

Annual employee earnings, averaged by sector, are examined in this section of the report. A chart, titled “Average Earnings by Sector, Top 10 Earning Sectors in South Central Oklahoma Workforce Development Area versus State of Oklahoma,” follows the analysis.

- The average earnings for nine of the top 10 sectors in the South Central Oklahoma Workforce Development Area are below the average earnings for the same sector statewide. The greatest disparity in earnings is found in the *Management of Companies and Enterprises* sector where Area residents earn only 60% of the average statewide annual salary. The smallest differential in earnings is found in the *Government* sector, a difference of less than 3%.
- Manufacturing* is the only sector for which the Area average annual earnings (\$68,848) are greater than those statewide (\$68,076). This annual wage difference of \$772 equates to just over 1%.

- The *Utilities* sector reports higher average earnings than any other sector in the Area at \$111,445. This is 13.4% below the statewide average for the same sector of \$128,670.
- Despite ranking second in the Top 10 Employment Sectors for overall numbers of jobs available, *Retail Trade* fails to rank in the top 10 earnings for the Area. Earnings for this sector rank seventeenth at \$29,785 annually. Likewise, the *Health Care and Social Assistance* sector, ranking third in employment opportunities in the Area, ranks thirteenth in annual salary at \$41,541. *Government*, the sector employing the highest number of Area residents, ranks only fifth on the earnings scale. The average earnings for a *Government* sector employee is \$56,711.
- *Offices of All Other Miscellaneous Health Practitioners*, an industry included in the *Health Care and Social Assistance* sector, reports the highest average earnings in the Area at \$148,580. *Electric Power Distribution*, an industry included in the *Utilities* sector, ranks second at an average of \$136,889 annually. It should be noted that while these industries report the highest earnings, there are limited opportunities for employment as each industry reports 200 jobs or fewer in 2016.



Source: EMSI, 2017.2

Top Occupations by Number of Jobs

This analysis examines the prevalence of job classifications in the South Central Oklahoma Workforce Development Area. A table summarizing the top 10 occupations by number of jobs follows the analysis.

- The top 10 occupations represent 19,353 jobs; 18.4% of the total jobs reported in the Area.
- The most prevalent job in the Area is *Cashier*. In 2016, 3,118 jobs existed in this classification with a median hourly wage of \$8.63. *Retail Salespersons* is the second ranked occupational category with 2,883 reported jobs and median hourly earnings of \$9.86.
- With regard to educational requirements, seven of the top 10 occupations require the completion of a high school diploma or less, generally in combination with some level of on-the-job training. The occupation of *Registered Nurses* requires the completion of an Associates degree while the occupation of *General and Operations Managers* requires a Bachelor's degree. The position of *Bookkeeping, Accounting, and Auditing Clerks* requires the completion of some college hours, but not the completion of a college degree.
- The second-ranked job category in the Area, *Retail Salespersons*, exhibits the greatest potential for growth by 2025, increasing by 478 jobs – a growth rate of 16.6%. The second highest growth rate, 12.2%, is associated with the occupation of *General and Operations Managers* which is expected to gain 161 new jobs by 2025. *Bookkeeping, Accounting, and Auditing Clerks* is the only job category for which employment is anticipated to decline by 2025, losing 34 positions.

Occupation	2016 Jobs	2025 Jobs	Change	Median Hourly Earnings	Education or Experience Level
Cashiers	3,118	3,262	144	\$8.63	Short-term on-the-job training
Retail Salespersons	2,883	3,361	478	\$9.86	Short-term on-the-job training
Office Clerks, General	2,208	2,323	115	\$12.18	Short-term on-the-job training
Combined Food Preparation and Serving Workers, Including Fast Food	1,950	2,134	184	\$8.47	Short-term on-the-job training
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,781	1,855	74	\$13.43	Short-term on-the-job training
Waiters and Waitresses	1,777	1,898	121	\$8.62	Short-term on-the-job training
Registered Nurses	1,511	1,579	68	\$27.04	Associates degree
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,501	1,591	90	\$9.78	Short-term on-the-job training
General and Operations Managers	1,320	1,481	161	\$33.03	Bachelor's degree
Bookkeeping, Accounting, and Auditing Clerks	1,304	1,270	-34	\$14.92	Some college, no degree

Source: EMSI, 2017.2

Top Paying Occupational Groups

For this analysis, individual occupations are aggregated and reported by Standard Occupational Classification (SOC) major group. The table that follows highlights the top paying occupational groups by median hourly earnings.

- The top 10 occupational groups include 28,313 individual jobs; 26.9% of the total jobs reported in the Area. The median hourly earnings for nine of the top 10 highest paying occupation groups fall below the state median hourly wages. One occupational group – *Computer and Mathematical Occupations* – exceeds the state earnings by \$0.15 per hour. The greatest differential in earnings is found in the major group of *Legal Occupations* where the Area median hourly wage falls below the state wage by 18%.
- *Architecture and Engineering Occupations* earn the highest median hourly wage in the Area at \$32.84; however, this wage is still 10.4% below the Oklahoma statewide median hourly earnings for the same occupational group.
- The fifth-ranked *Legal Occupations* provides comparatively high Area median hourly earnings of \$27.50 but there are fewer employment opportunities with only 392 jobs reported. Likewise, the sixth-ranked *Life, Physical, and Social Science Occupations* offers competitive median wages at \$27.41 per hour, but only 474 jobs are available.
- *Construction and Extraction Occupations* are ranked 10th in the Area with median hourly earnings of \$18.18. This salary is 4.8% below the state average and 45% below the top-ranked *Architecture and Engineering Occupations*.
- The top three occupational groups in the Area, ordered by the number of jobs represented, are *Office and Administrative Support Occupations* (14,295 jobs), *Food Preparation and Serving Related Occupations* (9,361 jobs) and *Sales and Related Occupations* (9,172 jobs). While these three major groups represent 32,828 and 31% of the total jobs in the Area, none are included in the top 10 paying occupational group list due to low median salaries ranging from \$8.93 to \$13.83 per hour.

SOC Code Group	Occupation Group	2016 Jobs	Area Median Hourly Earnings	State Median Hourly Earnings
17-0000	Architecture and Engineering Occupations	1,392	\$32.84	\$36.26
11-0000	Management Occupations	4,528	\$32.74	\$37.91
15-0000	Computer and Mathematical Occupations	1,260	\$29.56	\$29.41
29-0000	Healthcare Practitioners and Technical Occupations	5,820	\$28.20	\$30.57
23-0000	Legal Occupations	392	\$27.50	\$33.54
19-0000	Life, Physical, and Social Occupations	474	\$27.41	\$27.60
13-0000	Business and Financial Operations Occupations	3,432	\$26.69	\$26.83
49-0000	Installation, Maintenance and Repair Occupations	4,566	\$18.83	\$19.37
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	812	\$18.38	\$18.61
47-0000	Construction and Extraction Occupations	5,637	\$18.18	\$19.10

Source: EMSI, 2017.2

Ecosystems Impact on Occupations and Salaries

Oklahoma has identified five key, in demand, industry clusters known as “ecosystems” which provide the state with a competitive advantage in a global economy. They exhibit significant potential for employment growth and provide wealth generating employment opportunities. The five key ecosystems’ demand industries produce or provide similar goods and services and therefore have similar needs in workforce, infrastructure, and economic development policy. These ecosystems include Aerospace and Defense, Agriculture and Biosciences, Energy, Information and Finance, and Transportation and Distribution.

In addition to the five statewide ecosystems, four localized complimentary ecosystems important to regional economies have been identified, including Construction, Education, Health Care, and Manufacturing. A summary table of ecosystem data pertinent to the Area is provided for ease of ecosystem comparison, followed by an analysis of each individual key and complimentary ecosystem.

Ecosystem Comparison South Central Oklahoma Workforce Development Area				
Ecosystem	Estimated Net Job Growth (2016-2025)	Ecosystem Growth Rate (2016-2015)	Average Annual Earnings	Comments
Aerospace and Defense	480	3.20%	\$55,361	Employs the most residents.
Agriculture and Bioscience	417	12.46%	\$52,174	
Energy	34	0.68%	\$63,001	Second highest salary.
Information and Financial Services	348	8.62%	\$60,428	Second largest growth rate.
Transportation and Distribution	-120	-1.96%	\$62,374	
Construction	1271	16.59%	\$47,525	Largest growth rate. Most new jobs created.
Education	-429	-4.64%	\$56,344	
Health Care	973	8.04%	\$49,981	Second most jobs created.
Manufacturing	-499	-22.58	\$68,848	Highest salary.

Aerospace and Defense.

In 2016, there were approximately 14,988 jobs in the Aerospace and Defense Ecosystem in the Area with average annual earnings per job of approximately \$55,361. By 2025, employment within this ecosystem is projected to grow to over 15,400. While projections indicate that 1,089 new jobs will be created, 37 occupational categories are expected to experience a decrease in demand. Overall, employment within the ecosystem will increase by a net 480 jobs; a growth rate of 3.2%.

The list below, ordered alphabetically by occupation, highlights a few of the occupations employed by industries within the Aerospace and Defense Ecosystem in the Area. It should be noted that these positions are not limited to employment within the Aerospace and Defense Ecosystem, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
49-3011	Aircraft Mechanics and Service Technicians	\$25.82	Postsecondary nondegree award
15-1131	Computer Programmers	\$31.71	Bachelor's degree
15-1151	Computer User Support Specialists	\$19.91	Some college, no degree
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$17.68	Moderate-term on-the-job training
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
49-9041	Industrial Machinery Mechanics	\$23.52	Long-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$14.83	Moderate-term on-the-job training
51-4041	Machinists	\$17.57	Long-term on-the-job training
13-1111	Management Analysts	\$28.74	Bachelor's degree
51-4121	Welders, Cutters, Solderers, and Brazers	\$17.27	Moderate-term on-the-job training

Source: EMSI, 2017.2

Agriculture and Bioscience.

In 2016, there were over 3,300 jobs in the Agriculture and Bioscience Ecosystem in South Central Oklahoma Workforce Development Area with average annual earnings per job of \$52,174. By 2025, employment within this ecosystem is projected to grow to over 3,700. While projections indicate that 431 new jobs will be created, 11 occupational categories are expected to experience a decrease in demand. Overall, employment within the ecosystem will increase by a net 417 jobs; a growth rate of 12.46%.

The list below, ordered alphabetically by occupation, highlights some of the occupations employed by industries within the Agriculture and Bioscience Ecosystem in the Area. These positions are not limited to employment within this particular ecosystem, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
45-2091	Agricultural Equipment Operators	\$12.28	Short-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	\$10.43	Short-term on-the-job training
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$18.16	Postsecondary nondegree award
53-7051	Industrial Truck and Tractor Operators	\$13.95	Short-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$14.83	Moderate-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$20.29	Moderate-term on-the-job training
29-1131	Veterinarians	\$38.72	Doctoral or professional degree
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$9.39	Short-term on-the-job training
29-2056	Veterinary Technologists and Technicians	\$15.73	Associates degree

Source: EMSI, 2017.2

Energy.

In 2016, there were 4,997 jobs in the Energy Ecosystem in South Central Oklahoma Workforce Development Area with average annual earnings per job of approximately \$63,001. By 2025, employment within this ecosystem is projected to grow to over 5,000. While projections indicate that approximately 425 new jobs will be created, 105 occupational categories are expected to experience a decrease in demand, resulting in the loss of 391. As a result, employment within the ecosystem will increase by a net 34 jobs; a growth rate of 0.68%.

The list below, ordered alphabetically by occupation, highlights a few of the occupations employed by industries within the Energy Ecosystem in the Area. It should be noted that these positions are not limited to employment within this ecosystem, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$17.68	Moderate-term on-the-job training
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$18.16	Postsecondary nondegree award
49-9041	Industrial Machinery Mechanics	\$23.52	Long-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$14.83	Moderate-term on-the-job training
51-4041	Machinists	\$17.57	Long-term on-the-job training
17-2141	Mechanical Engineers	\$40.30	Bachelor's degree
17-2171	Petroleum Engineers	\$45.80	Bachelor's degree
47-5071	Roustabouts, Oil and Gas	\$17.69	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	\$17.27	Moderate-term on-the-job training

Source: EMSI, 2017.2

Information and Financial Services.

In 2016, there were 4,036 jobs in the Information and Financial Services Ecosystem in South Central Oklahoma Workforce Development Area; by 2025, that figure is expected to increase to over 4,300. The average annual earnings per job are approximately \$60,428. While projections indicate that 441 new jobs will be created, 15 occupational categories are expected to experience a decrease in demand, resulting in the loss of 93. As a result, employment within the ecosystem is projected to increase by a net 348 jobs, a growth rate of 8.62%.

The list below, ordered alphabetically by occupation, highlights some of the occupations employed by industries within the Information and Financial Services Ecosystem in the Area. It should be noted that these positions are not limited to employment within the Information and Financial Services Ecosystem, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
13-2011	Accountants and Auditors	\$24.42	Bachelor's degree
15-1131	Computer Programmers	\$31.71	Bachelor's degree
15-1151	Computer User Support Specialists	\$19.91	Some college, no degree
11-3031	Financial Managers	\$28.61	Bachelor's degree
43-1011	First-Line Supervisors of Office and Administrative Support Workers	\$18.75	Less than 5 years experience
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
43-4131	Loan Interviewers and Clerks	\$13.16	Short-term on-the-job training
13-2072	Loan Officers	\$28.89	Bachelor's degree
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$25.24	Bachelor's degree
15-1132	Software Developers, Applications	\$36.18	Bachelor's degree

Source: EMSI, 2017.2

Transportation and Distribution.

In 2016, there were 6,136 jobs in the Transportation and Distribution Ecosystem in South Central Oklahoma Workforce Development Area with average annual earnings per job of approximately \$62,374. By 2025, employment within this ecosystem is projected to decrease by a net -120 jobs, a loss of -1.96%.

The list below, arranged alphabetically by occupation, highlights a few of the occupations employed by industries within the Transportation and Distribution Ecosystem in the Area. It should be noted that these positions are not limited to employment within this particular ecosystem, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
49-3011	Aircraft Mechanics and Service Technicians	\$25.82	Postsecondary nondegree award
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$14.92	Some college, no degree
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	\$14.72	Moderate-term on-the-job training
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
53-7051	Industrial Truck and Tractor Operators	\$13.95	Short-term on-the-job training
53-3033	Light Truck or Delivery Services Drivers	\$11.01	Short-term on-the-job training
49-9043	Maintenance Workers, Machinery	\$16.22	Moderate-term on-the-job training
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$18.34	Moderate-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$20.29	Moderate-term on-the-job training
51-2092	Team Assemblers	\$12.61	Moderate-term on-the-job training

Source: EMSI, 2017.2

Health Care (Regional Complementary).

While Health Care has not been identified as a key ecosystem, it is considered a regional complementary ecosystem and is very important to South Central Oklahoma Workforce Development Area. Over 12,100 jobs were reported in 2016 in Health Care in the Area, with average annual earnings per job of approximately \$49,981. By 2025, employment within this ecosystem is projected to increase to over 13,000. Over 1,000 new jobs will be created, with a loss of only 86 from 20 occupational categories. This results in a net increase in employment in Health Care of 973 jobs, a growth rate of 8.04%

The list below, organized alphabetically based on occupation, highlights some of the occupations employed by industries within the Health Care regional complementary ecosystem in the Area. While these positions appear to be highly specialized within the Health Care sector, it must be remembered that other industries do employ health care specialists and there is competition among several other sectors, industries, and ecosystems for these skilled workers.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
31-9091	Dental Assistants	\$16.07	Postsecondary nondegree award
31-1011	Home Health Aides	\$9.44	Short-term on-the-job training
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.25	Postsecondary nondegree award
11-9111	Medical and Health Services Managers	\$36.93	Bachelor's degree
31-9092	Medical Assistants	\$11.70	Postsecondary nondegree award
43-6013	Medical Secretaries	\$13.16	Short-term on-the-job training
31-1014	Nursing Assistants	\$9.95	Postsecondary nondegree award
29-1051	Pharmacists	\$51.80	Doctoral or professional degree
29-2052	Pharmacy Technicians	\$14.06	Moderate-term on-the-job training
29-1141	Registered Nurses	\$27.04	Associates degree

Source: EMSI, 2017.2

Construction (Regional Complementary).

Construction is also a regional complementary ecosystem with over 7,600 jobs reported in 2016. The average annual earnings per job in the Construction ecosystem were \$47,525. By 2025, employment is projected to increase to over 8,900. Approximately 1,320 new jobs will be created, with a loss of only 49 from 19 occupational categories. This results in a net increase in employment in Construction of 1,271 jobs, a growth rate of 16.59%

The list below, arranged alphabetically by occupation, highlights some of the occupations employed by industries within the Construction regional complementary ecosystem in the Area. It should be noted that these positions are not limited to employment within Construction, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
47-2031	Carpenters	\$18.11	Apprenticeship
47-2061	Construction Laborers	\$12.12	Short-term on-the-job training
11-9021	Construction Managers	\$31.36	Bachelor's degree
47-2111	Electricians	\$21.77	Apprenticeship
51-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$29.79	5 years or more experience
11-1021	General and Operations Managers	\$33.03	Bachelor's degree
51-4041	Machinists	\$17.57	Long-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	\$18.13	Apprenticeship
47-2211	Sheet Metal Workers	\$22.19	Apprenticeship
51-4121	Welders, Cutters, Solderers, and Brazers	\$17.27	Moderate-term on-the-job training

Source: EMSI, 2017.2

Education (Regional Complementary).

The regional complementary ecosystem of Education accounted for approximately 9,200 jobs in 2016, with average earnings per job of \$56,344. By 2025, employment is projected to decrease by -429 jobs, a loss of -4.64%.

The list below, presented in alphabetical order by occupation, highlights some of the occupations employed by industries within the Education Ecosystem. Similar to the Health Care regional complementary ecosystem, many of the occupations within Education are extremely specialized but may still be in demand from other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$21.95	Bachelor's degree
15-1151	Computer User Support Specialists	\$19.91	Some college, no degree
11-9033	Education Administrators, Elementary and Secondary School	\$33.02	Master's degree
21-1012	Educational, Guidance, School, and Vocational Counselors	\$21.40	Master's degree
25-2021	Elementary School Teachers, Except Special Education	\$18.59	Bachelor's degree
25-2012	Kindergarten Teachers, Except Special Education	\$18.17	Bachelor's degree
25-2022	Middle School Teachers, Except Special Education and Career/Technical Education	\$19.69	Bachelor's degree
25-1099	Postsecondary Teachers	\$23.70	Doctoral or professional degree
25-3098	Substitute Teachers	\$8.68	Bachelor's degree
25-9041	Teacher Assistants	\$8.57	Some college, no degree

Source: EMSI, 2017.2

Manufacturing (Regional Complementary).

The regional complementary ecosystem of Manufacturing is unique in that it is not typically analyzed as a distinctive, separate ecosystem. Rather, components of the Manufacturing sector are consistently embedded throughout each key ecosystem and included in those analyses. However, it is interesting and broadens the base of knowledge about the sector to focus an analysis specifically on manufacturing-related occupations.

The Manufacturing regional complementary ecosystem accounted for approximately 2,200 jobs in 2016, with average earnings per job of \$68,848, the highest average wages for any ecosystem. By 2025, employment is projected to decrease by a net -499 jobs, a loss of -22.58%.

The list below, arranged in alphabetical order by occupation, highlights a few of the occupations employed by industries within the Manufacturing regional complementary ecosystem in the Area. These positions are not limited to employment strictly within Manufacturing Ecosystem industries, but rather, may be in demand by many other sectors, industries, and ecosystems across the state.

SOC	Occupation	Median Hourly Earnings	Education or Experience Level
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$17.68	Moderate-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	\$25.84	Less than 5 years experience
11-3051	Industrial Production Managers	\$37.69	Bachelor's degree
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$14.83	Moderate-term on-the-job training
51-4041	Machinists	\$17.57	Long-term on-the-job training
17-3013	Mechanical Drafters	\$25.84	Associates degree
17-2141	Mechanical Engineers	\$40.30	Bachelor's degree
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$18.34	Moderate-term on-the-job training
51-2092	Team Assemblers	\$12.61	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	\$17.27	Moderate-term on-the-job training

Source: EMSI, 2017.2