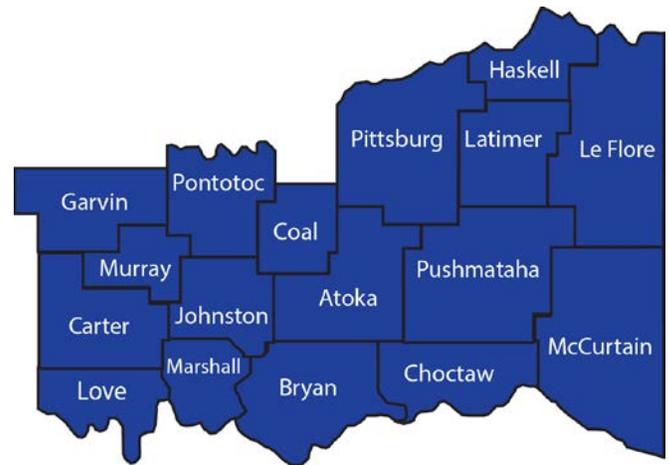# Southern Oklahoma Workforce Area Briefing
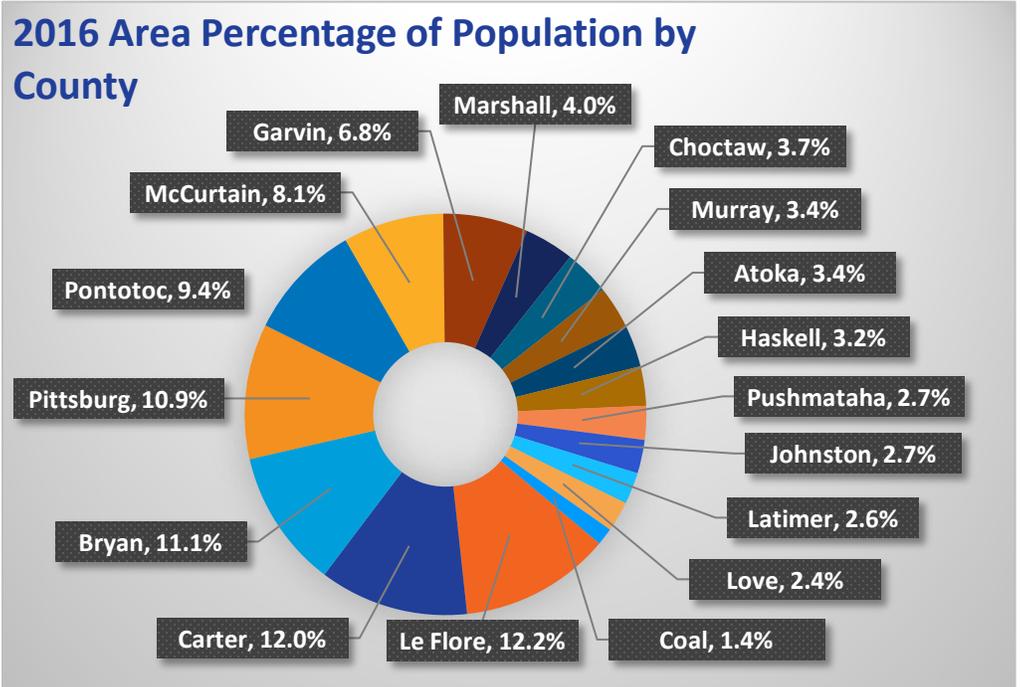## June 2017

Overview

The Southern Oklahoma Workforce Development Area is composed of 17 Oklahoma counties: Atoka, Bryan, Carter, Choctaw, Coal, Garvin, Haskell, Johnston, Latimer, Le Flore, Love, Marshall, McCurtain, Murray, Pittsburg, Pontotoc, and Pushmataha. According to the U.S. Census Bureau, this combined region of Oklahoma covers 15,336 square miles, making it the second largest of the state's workforce areas in land mass. Over 407,000 Oklahoma citizens live in the 17-county area – approximately 10.3% of the state's total population. Four cities in the area boast populations of 10,000 residents or more, including Ardmore, McAlester, Ada, and Durant.

Note that for simplicity, the Southern 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 Ardmore, the county seat of Carter County, is the largest city in the Area with an estimated population of 24,955. Carter County, the second most populous County in the Area, is home to a total of 48,935 individuals, representing 12.0% of the population of the Area.

- Le Flore County reports the largest population at 49,563, 12.2% of the Area population. Poteau is the county seat, with a population of 8.624.

- Coal County, the third smallest county

2016 Area Percentage of Population by County

Garvin, 6.8% | Marshall, 4.0% | Choctaw, 3.7% | Murray, 3.4% | Atoka, 3.4% | Haskell, 3.2% | Pushmataha, 2.7% | Johnston, 2.7% | Latimer, 2.6% | Love, 2.4% | Coal, 1.4% | Le Flore, 12.2% | Carter, 12.0% | Bryan, 11.1% | Pittsburg, 10.9% | Pontotoc, 9.4% | McCurtain, 8.1%

Source: EMSI 2017.2

geographically with only 521 square miles, is the least populous county in the Area and home to 5,624 residents or 1.4% of the Area population.
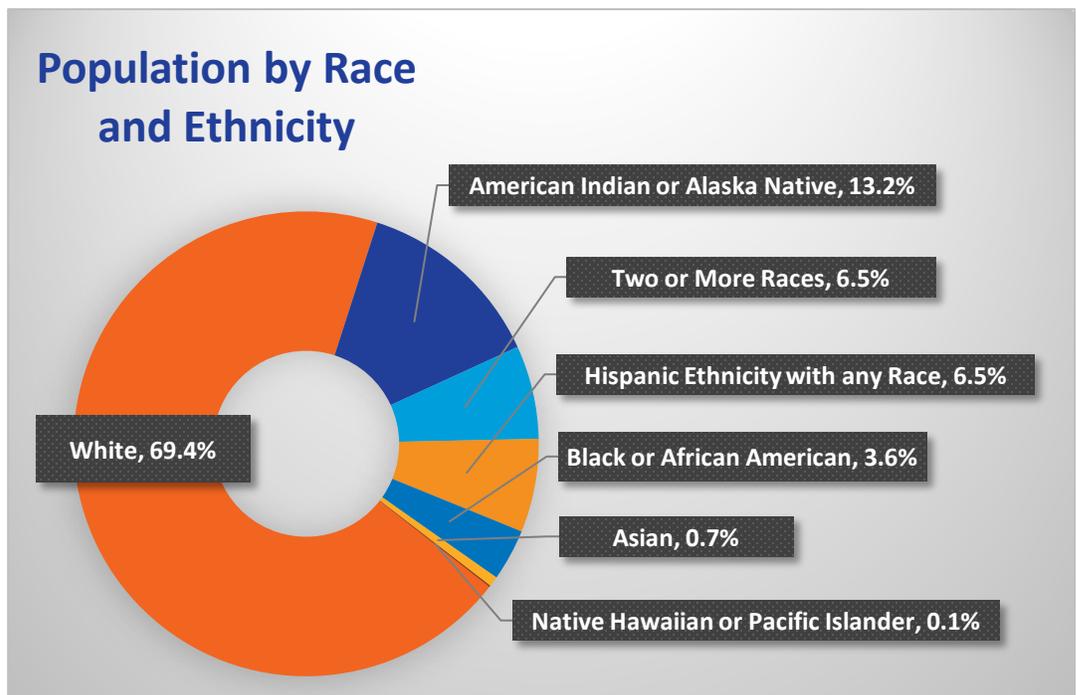
- Between 2010 and 2016, the Area experienced a nominal growth rate of 0.46%, a net increase of 1,870 residents. This small overall growth rate was fueled by population increases in nine of the 17 counties. Bryan County experienced the greatest increase in population, adding 2,691 individuals, an increase of 6.31%. Johnston County grew the least, adding 30 residents, a growth rate of 0.27%.

  In contrast, between 2010 and 2016, eight Area counties decreased in population: Latimer County, -6.65% representing a loss of 741 residents; Coal County, -4.58%, -270 residents; Pushmataha County, -4.14%, -479 residents; Pittsburg County, -3.05%, -1,398 residents; Atoka County, -2.97%, -421 residents; Le Flore County, -1.80%, -910 residents; Choctaw County, -1.56%, -237 residents; and, McCurtain County, -0.49%, representing a loss of 164 residents.

- In additional to overall population representation, it is helpful to examine population density, measured in the number of persons living in a one-square-mile area. Most of the Southern Oklahoma Workforce Development Area is rural; all 17 counties exhibit population density rates under 60 persons per square mile. Pushmataha is notable for being the least densely populated county in the Area with approximately 8 persons per square mile. The most densely populated county is Carter, home of the largest city in the Area, Ardmore. An average of 59 individuals live in each square mile of Carter County. 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 to the right illustrates the racial and ethnic diversity of residents living in the Southern 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.

Population by Race and Ethnicity

American Indian or Alaska Native, 13.2%

Two or More Races, 6.5%

Hispanic Ethnicity with any Race, 6.5%

Black or African American, 3.6%

White, 69.4%

Asian, 0.7%

Native Hawaiian or Pacific Islander, 0.1%

Source: EMSI 2017.2

- Over 282,700 Area residents identify themselves as "White." This equates to 69.4% of the total Area population, a racial representation slightly higher than the statewide average which is reported at 66.1%.

- At 0.1% (454 total Area residents) Native Hawaiians or Pacific Islanders, Non-Hispanic, comprise the smallest racial classification.

- Individuals of native descent are categorized by the Census Burea as "American Indians or Alaska Native." For simplicity, individuals in this racial category will be referrenced in this report as "Native American." This racial group is significantly over-represented in the Southern Oklahoma Workforce Development Area compared with the Oklahoma statewide population. Native Americans, Non-Hispanic, represent 13.2% of the population in the Area compared with 8.2% in the state.

- Individuals self-identifying as "Black or African American, Non-Hispanic" are significantly under-represented in the Area at 3.6% compared to a statewide population of 7.5%.

- Individuals who self-identify as being of Hispanic ethnicity account for 6.5% 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 24.9%. This is slightly higher than the statewide growth rate of 22.7%.

- Though the second smallest racial group in the Area, the Asian, Non-Hispanic cohort experienced the greatest growth rate at 33.9% between 2010 and 2016. This equated to 693 new residents in the Area.

- Between 2010 and 2016, the growth rate for the Non-Hispanic population overall was -0.9%, resulting in a decline in population in that category of an estimated -3,421 individuals. These data include individuals of any race who report Non-Hispanic ethnicity.
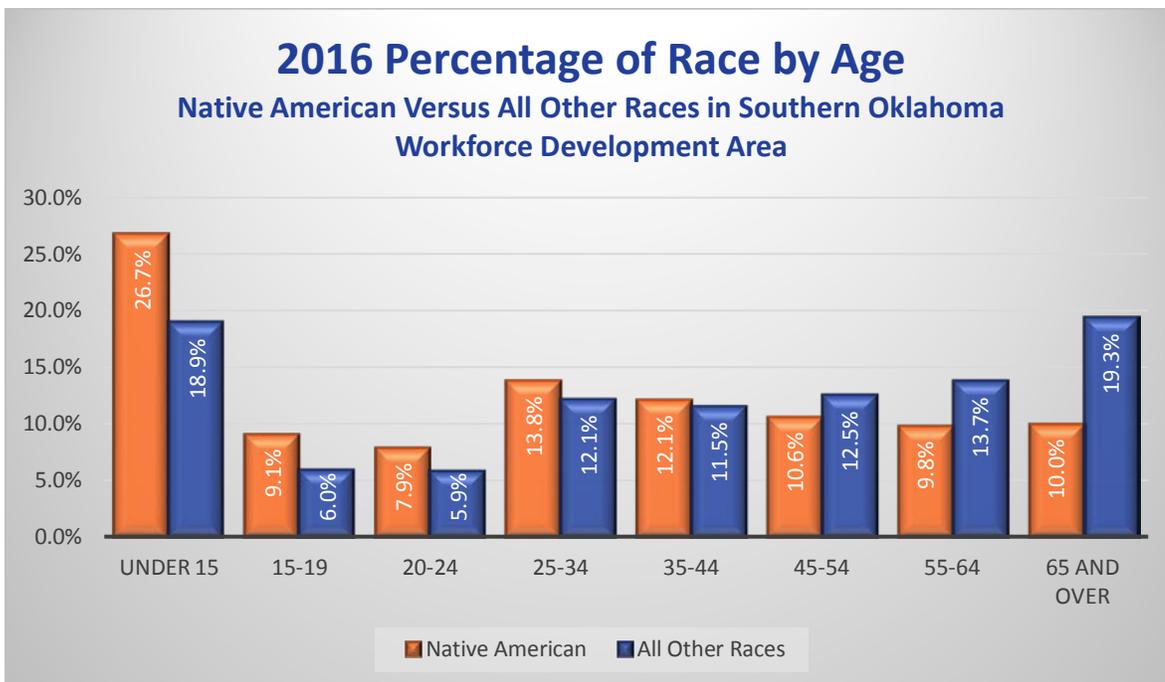
Native American Population

Based upon the significant over-representation of the Native American population in the Area, this group was selected for further analysis. A chart titled "2016 Percentage of Race by Age" illustrating the Native American population by age as compared to populations who identify as any other race, follows the analysis summary.

- As noted previously, individuals who self-identify as Native American, Non-Hispanic, account for 13.2% of the Area population. When individuals identifying themselves as Native American, Hispanic are included, the total Native American population in the Area reaches 14.1%. This figure is significantly higher than the 9.1% Native American representation statewide, regardless of ethnicity. These data reflect the cultural and historical role of the region in Oklahoma's pre-statehood Indian Territory. The Area remains the site of the headquarters of two prominent Oklahoma tribes: the Chickasaw Nation in Ada (Pontotoc County) and the Choctaw Nation in Durant (Bryan County).

- The majority of the Native American population is 34 years of age or younger (57.5%) while the majority of those who self-identify as any race other than Native American are over the age of 34 (57.0%). Over 19% of Non-Native American residents have surpassed the presumed retirement age of 65. In comparison, the percentage of Native Americans over the age of 65 is only 10.0%, nearly one half that of their non-native counterparts. These data hold significant implication for the ethnic diversity of the future workforce in the Southern Oklahoma Workforce

Development Area. Many of those individuals self-identifying as any race other than Native American 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 Native American employees.

- Of particular importance for the Native American population is the youth. Over 26% of all Native Americans residing in the Area are under the age of 15; 35.8% are 19 years old or less. In comparison, only a total of 24.9% of individuals identifying as any other race are 19 years old or less – a 10.9 percentage point difference. Based upon age, these individuals are either preparing to enter, or are currently students of, the K-12 school system as well as, possibly, the Career Technology system. This differential will significantly alter the ethnic representation of academic cohorts. Based upon these data, educators must be prepared to engage, mentor, and motivate an increased population of Native American youth to enhance educational outcomes, student success, and workforce preparation.
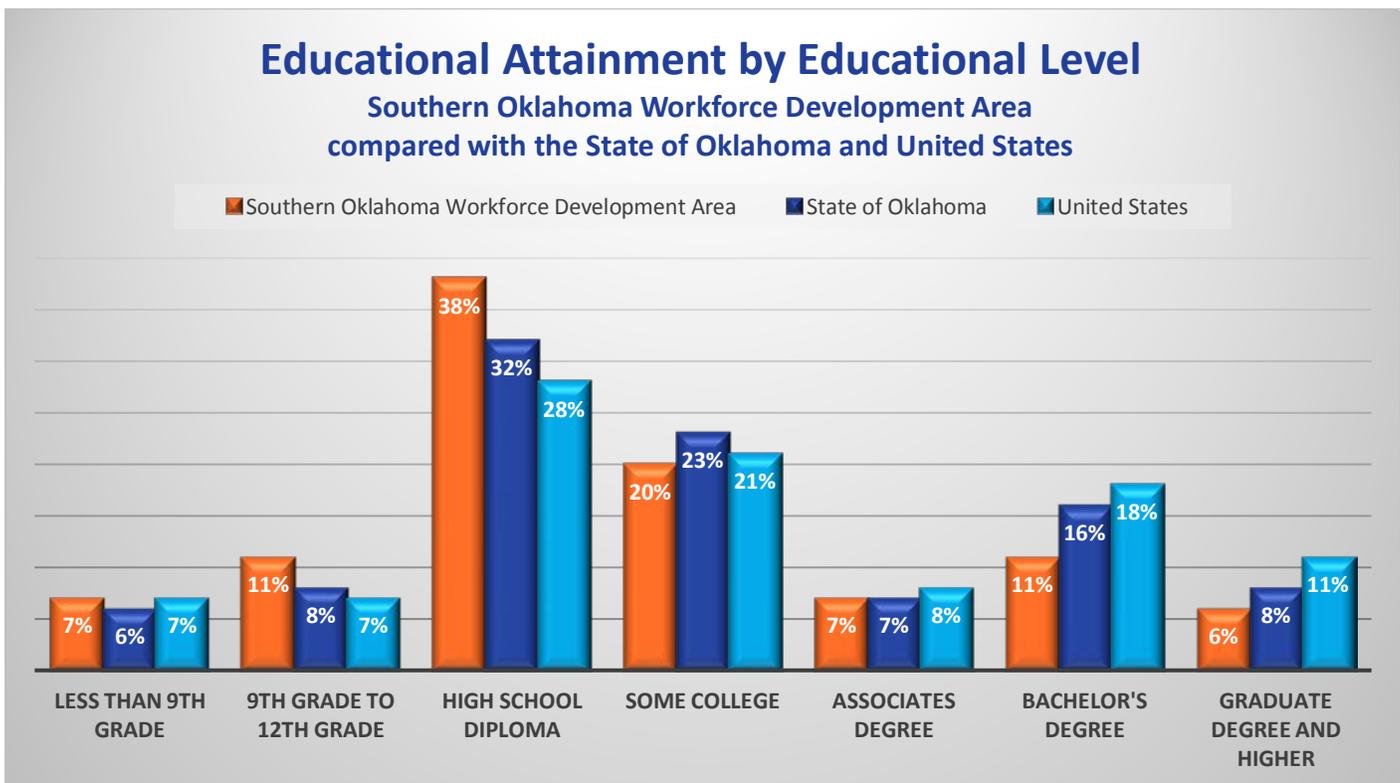
2016 Percentage of Race by Age
Native American Versus All Other Races in Southern Oklahoma Workforce Development Area

Age Group	Native American	All Other Races
UNDER 15	26.7%	18.9%
15-19	9.1%	6.0%
20-24	7.9%	5.9%
25-34	13.8%	12.1%
35-44	12.1%	11.5%
45-54	10.6%	12.5%
55-64	9.8%	13.7%
65 AND OVER	10.0%	19.3%

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."
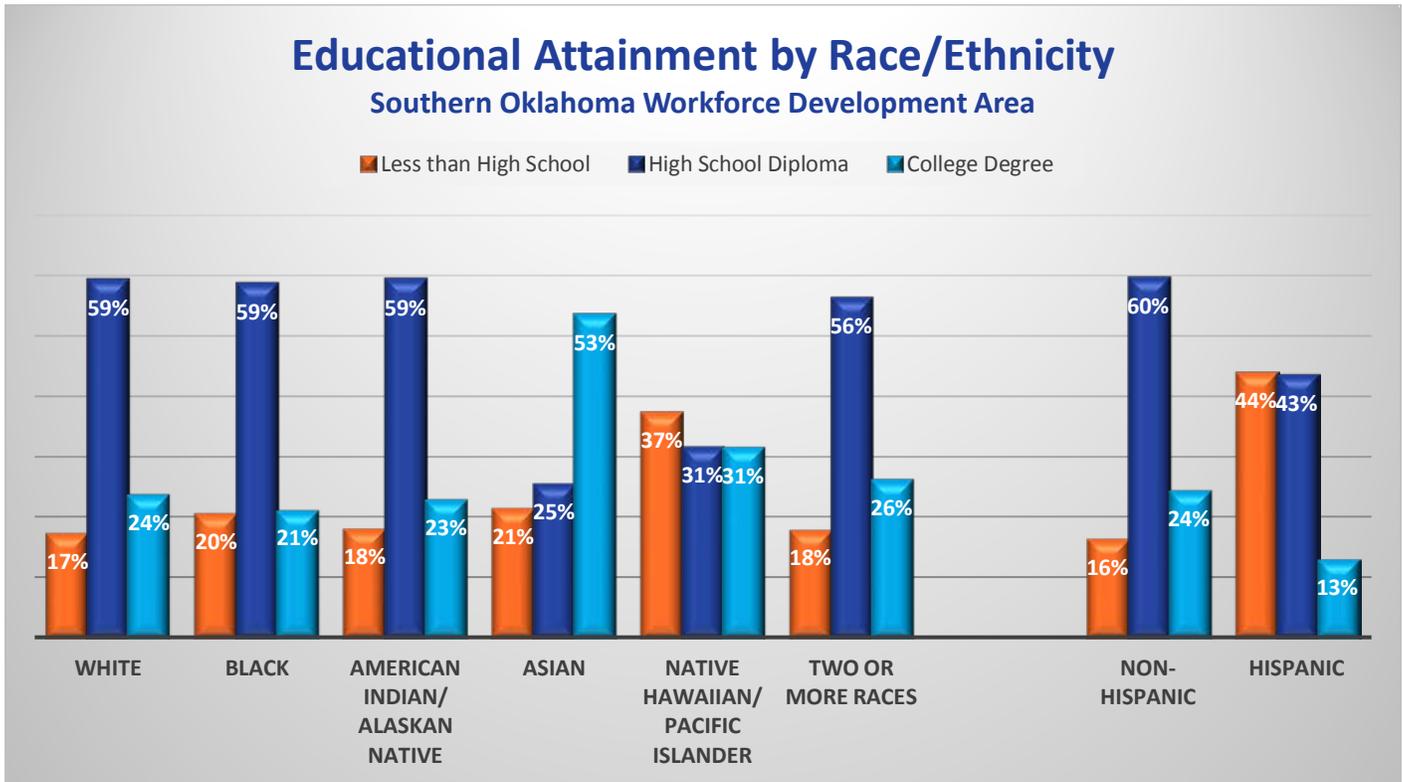
- Educational attainment in the Southern Oklahoma Workforce Development Area is heavily centered in the areas of "High school diploma" and "Some college." Just over 38% of residents have earned a diploma while an additional 20% have attended college courses without completing a degree. This high school completion rate is significantly higher than the state or national averages at 32% and 28%, respectively.

- Over one half of the Area residents (56%) have completed a high school diploma or less.

- Eighty-two percent of Southern Oklahoma Workforce Development Area residents have attained a high school diploma or higher. This level of educational attainment is four percentage points below both the state and national averages at 86%. With regard to postsecondary degrees – Associates Degrees and higher – the Area attainment level of 24% is lower than both the state (31%) and the national (37%) levels.

- Eleven percent of Area residents have completed a Bachelor's Degree and 6% have completed a Graduate Degree or higher. The Area's 17% completion rate at this level are below both the state and national aggregated levels at 24% and 29%, respectively.

Educational Attainment by Educational Level
Southern Oklahoma Workforce Development Area
compared with the State of Oklahoma and United States

■Southern Oklahoma Workforce Development Area ■State of Oklahoma ■United States

Source: EMSI 2017.2

- The variables of race and ethnicity figure prominently in educational achievement. With regard to race, regardless of ethnicity, 24.1% of Area residents self-identifying as "White" report attaining a college degree; for individuals who report being "Black or African American" or Native American, the percentages drop to 21.3% and 23.3%, respectively. The highest college degree completion rates are those of individuals who self-identify as Native Hawaiian or Pacific Islander (31.4%) and Asian (53.4%), though it should be noted that these two racial categories are extremely small, comprising less than 1% of the Area population.

- The most significant educational attainment gap is revealed by an examination of data associated with ethnicity, particularly at the lower educational levels. Nearly 44% of Area Hispanics possess an educational level less than a high school diploma as compared with 16.2% for individuals of Non-Hispanic ethnicity, a differential of over 27 percentage points. Only 43.4% of Hispanics have attained a high school diploma versus 59.5% of Non-Hispanics, and at the college completion level, 12.8% of Hispanics have earned a degree versus 24.3% of Non-Hispanics.

Educational Attainment by Race/Ethnicity
Southern Oklahoma Workforce Development Area

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

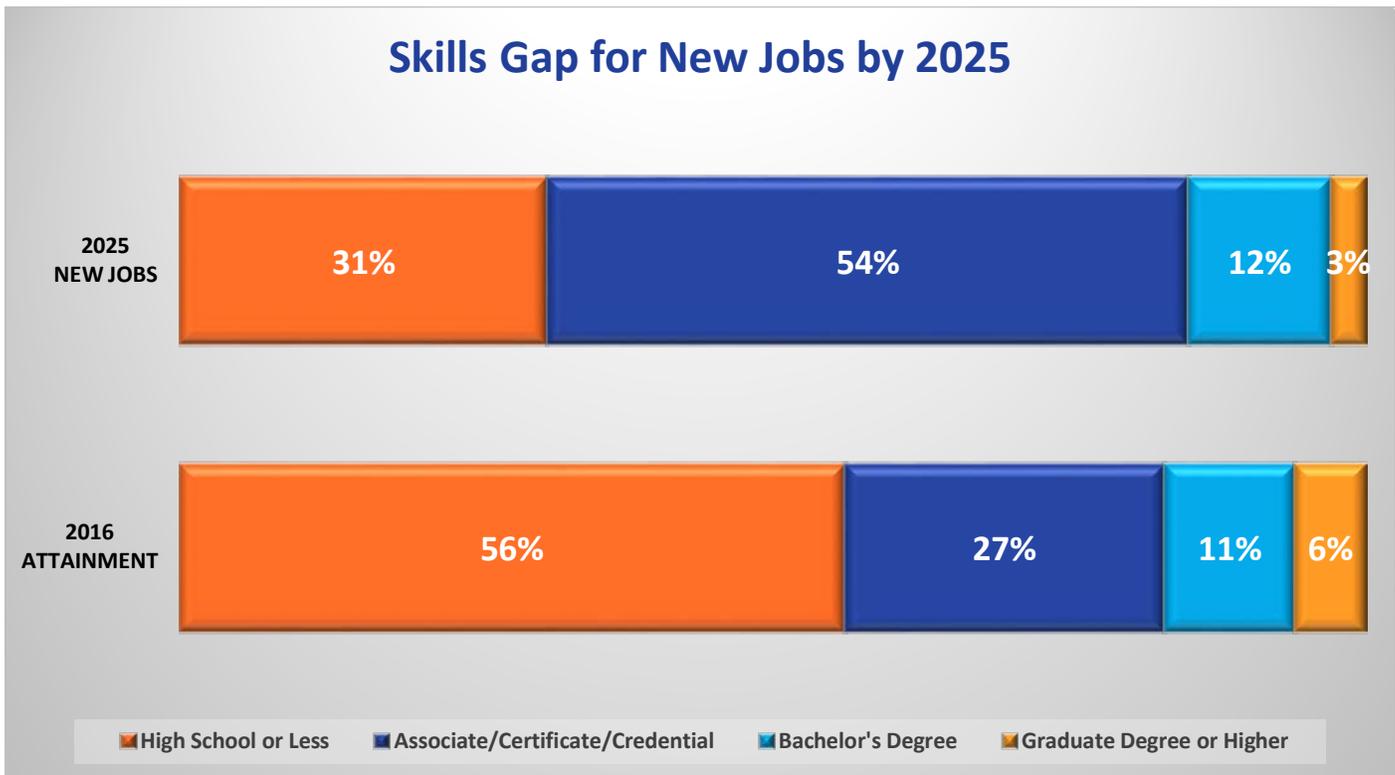| Race/Ethnicity	Less than High School	High School Diploma	College Degree
WHITE	17%	59%	24%
BLACK	20%	59%	21%
AMERICAN INDIAN/ ALASKAN NATIVE	18%	59%	23%
ASIAN	21%	25%	53%
NATIVE HAWAIIAN/ PACIFIC ISLANDER	37%	31%	31%
TWO OR MORE RACES	18%	56%	26%
NON- HISPANIC	16%	60%	24%
HISPANIC	44%	43%	13%

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, 54% of all newly created jobs in the Area will require the completion of postsecondary training (a certificate or some college) or an Associates Degree. Currently only 27% of individuals in the Area have achieved this educational level. Conversely, only 31% of newly created jobs will require a high school diploma or less while 56% 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 27 percentage point skills gap. Based upon projected population growth rates for 2025, an estimated minimum of 76,500 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.

- Three percent of new jobs created by 2025 will require a graduate degree or higher. With 6% of individuals in the Area currently possessing this level of education, residents should be well positioned to fulfill the needs of employers for these new jobs.

- Twelve percent of new jobs created by 2025 will require the attainment of a Bachelor's Degree. Currently, 11% of the population of the Southern Oklahoma Workforce Development Area possess this level of education. While it appears these data illustrate a minor skills gap of only one percentage point, this surface analysis may significantly underestimate the continued need for the attainment of a Bachelor's Degree. Two key factors directly impact the analysis. The first is variability. The projected need for positions in the future is by definition an estimate which will change as workforce demand evolves. Any margin of error in the prediction model would most probably necessitate a greater need for Bachelor's Degrees than the current calculated one percent deficit. The second factor important to any analysis of the need for this level of educational attainment is the possibility of a misalignment between degree specialties and employer need. The existence of a sufficient number of individuals with Bachelor's Degrees fails to meet the needs of employers if those degrees do not provide the appropriate training necessary to fulfill job requirements. As a result of these two factors, it must be considered that the need for individuals who have attained a Bachelor's Degree by 2025 should be greater than the current one percent estimated increase.

Skills Gap for New Jobs by 2025

	High School or Less	Associate/Certificate/Credential	Bachelor's Degree	Graduate Degree or Higher
2025 NEW JOBS	31%	54%	12%	3%
2016 ATTAINMENT	56%	27%	11%	6%

Source: EMSI, 2017.2

Educational Assets

Colleges, Universities, and CareerTechs are instrumental in developing the workforce of the Southern 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 three CareerTechs with twelve locations in the Area:

- **Kiamichi Technology Center** (Antlers, Atoka, Durant, Hugo, Idabel, McAlester, Poteau, Spiro, Stigler, and Talihina)
- **Pontotoc Technology Center** (Ada)
- **Southern Oklahoma Technology Center** (Ardmore)

Source: CareerTech.org

Colleges and Universities.

There are six colleges and universities in the Area with eight campus locations:

- **Carl Albert State College** (Poteau)
- **East Central University** (Ada)
- **Eastern Oklahoma State College** (McAlester and Wilburton)
- **Murray State College** (Tishomingo)
- **Southeastern Oklahoma State University** (Durant and Idabel)
- **University Center of Southern Oklahoma** (Ardmore)

*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 69% of Southern Oklahoma Workforce Development Area residents remain in the Area for employment while 31% 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 approximately 4% from Latimer and Pushmataha Counties to 7% from Atoka, Garvin, and Johnston Counties. Tulsa and Norman are also frequent destinations for Area residents commuting for employment. Individuals living in counties on the eastern border of the Area, including Le Flore and McCurtain, may commute to Arkansas. Likewise, counties on the southern border of the Area often cross the state line to work in Texas.

- Five Area counties retain over 50% of working residents: Bryan (51.79%), Carter (61.22%), McCurtain (56.91%), Pittsburg (51.41%), and Pontotoc (61.84%). In each of these five counties, an additional 12%-16% leave the county, but remain in the Area, for employment. Predictably, four of these counties are home to the largest cities in the Area: Ardmore in Carter County; McAlester in Pittsburg County, Ada in Pontotoc County, and Durant in Bryan County. In 2016 these four counties reported the highest job densities in the Area – ranging from 24,655 jobs available in Carter County to 16,736 jobs in Pittsburg County – significantly reducing the need for inter-county or inter-state travel for employment. Examples of major employers in these counties include:

  o Carter County: Michelin North America, Inc.; Mercy Hospital; Walmart; Best Buy Distribution Center; Valero Ardmore Refinery; and City of Ardmore, all located in Ardmore.

  o Pittsburg County: Oklahoma State Penitentiary; Choctaw Casino; McAlester Regional Health Center; Spirit Aero Systems, all located in McAlester.

  o Pontotoc County: Chickasaw Nation Medical Center; Mercy Hospital of Ada; Walmart; Dart Container Solo; and Legal Shield, all located in Ada.

  o Bryan County: Southeastern Oklahoma State University; Choctaw Archiving Enterprise; Walmart; Choctaw Nation Tribal Complex; Stephenson Wholesale Company; and Indian Nation Wholesale Company, all located in Durant.

- The remaining 12 counties in the Area retain between 22% and 41% of the working population. Coal County is notable for retaining the lowest percentage of workers at 22.9%. Employment opportunities are limited in the county; in 2016, Coal County reported the lowest number of existing jobs in the Area at 1,217 and no large businesses employing over 250 individuals. At the same time, Coal County's population stood at 5,624 with a labor force of over 2,100. As a result, over 49% of Coal County workers travel outside the county, but still maintain employment within the Area. Those that leave the Area predominantly commute to Oklahoma City (6.5%) and Tulsa (1.9%).

- Le Flore County experiences the highest rate of workers leaving the Area for employment at 47.51%. Le Flore is located on the eastern border of the Area, on the state line between Oklahoma and Arkansas. Over 17% of Le Flore County residents commute across the state line to work in the Fort Smith area in Sebastian County, Arkansas. An

examination of job density and wage data reveals that although Le Flore County reported the fifth highest number of existing jobs in the Area in 2016 at 13,467 and average wages of $43,424 annually, Sebastian County eclipsed these opportunities with over 68,000 jobs available at an average annual wage of $49,228. In short, Sebastian County offered employment at a rate five times higher than Le Flore County and at a 13.4% increase in wages.

- It must be noted that "commuting" can no longer be strictly defined as physical relocation for employment. Data indicate that Southern 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.
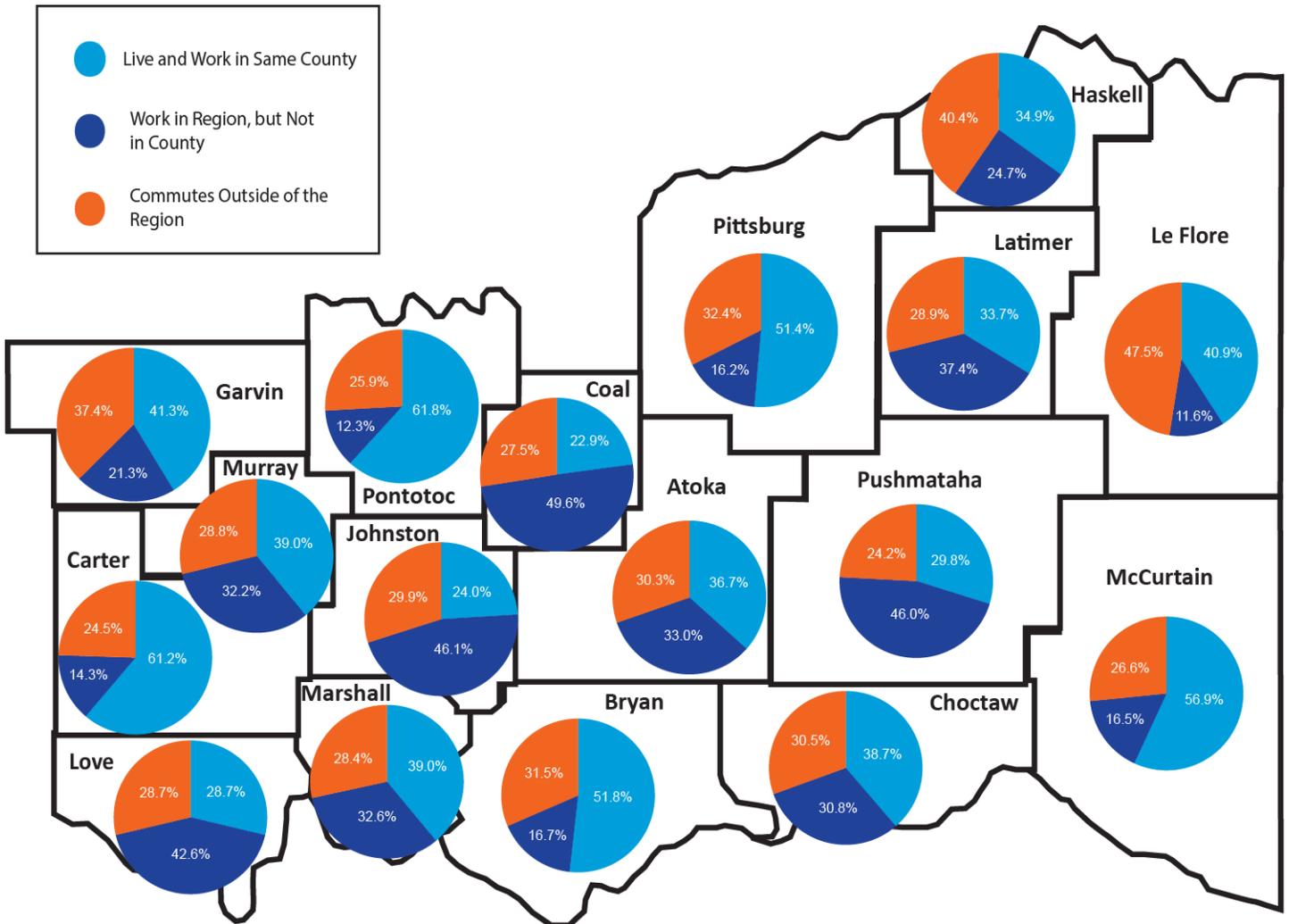

Source: U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD)

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 Southern 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, the unemployment rate in the Area continuously remained above the statewide average. It generally trended below the national average until January 2015 when it surpassed and remained above the national average.

Unemployment Rate
Southern Oklahoma Workforce Development Area versus State and Nation
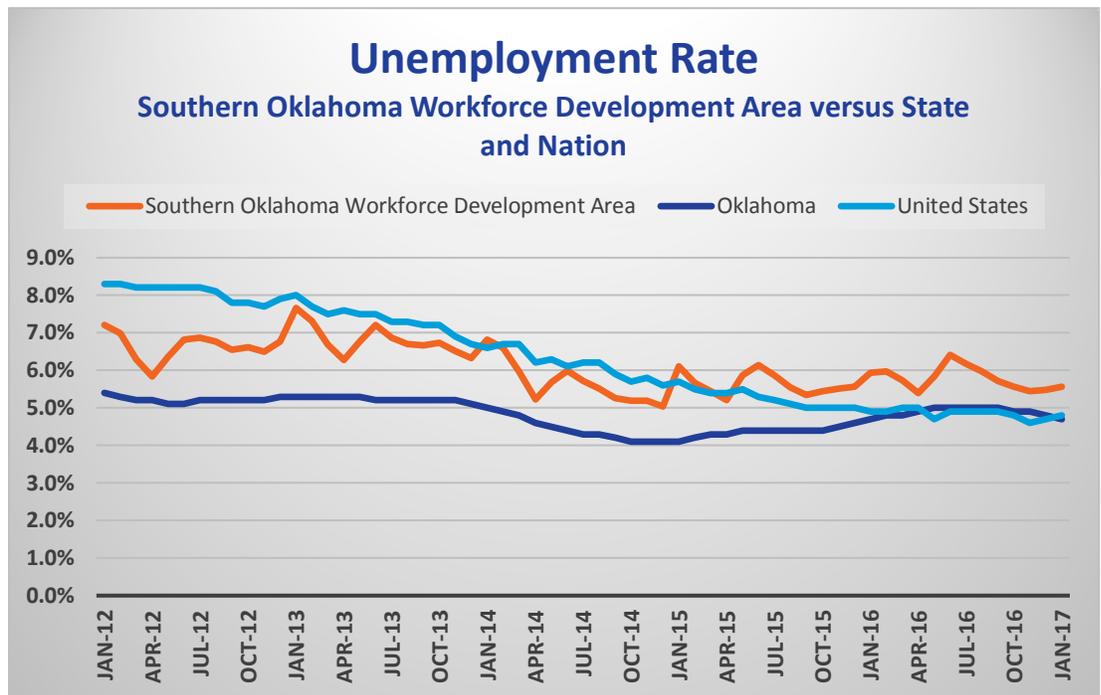
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics (BLS LAUS)
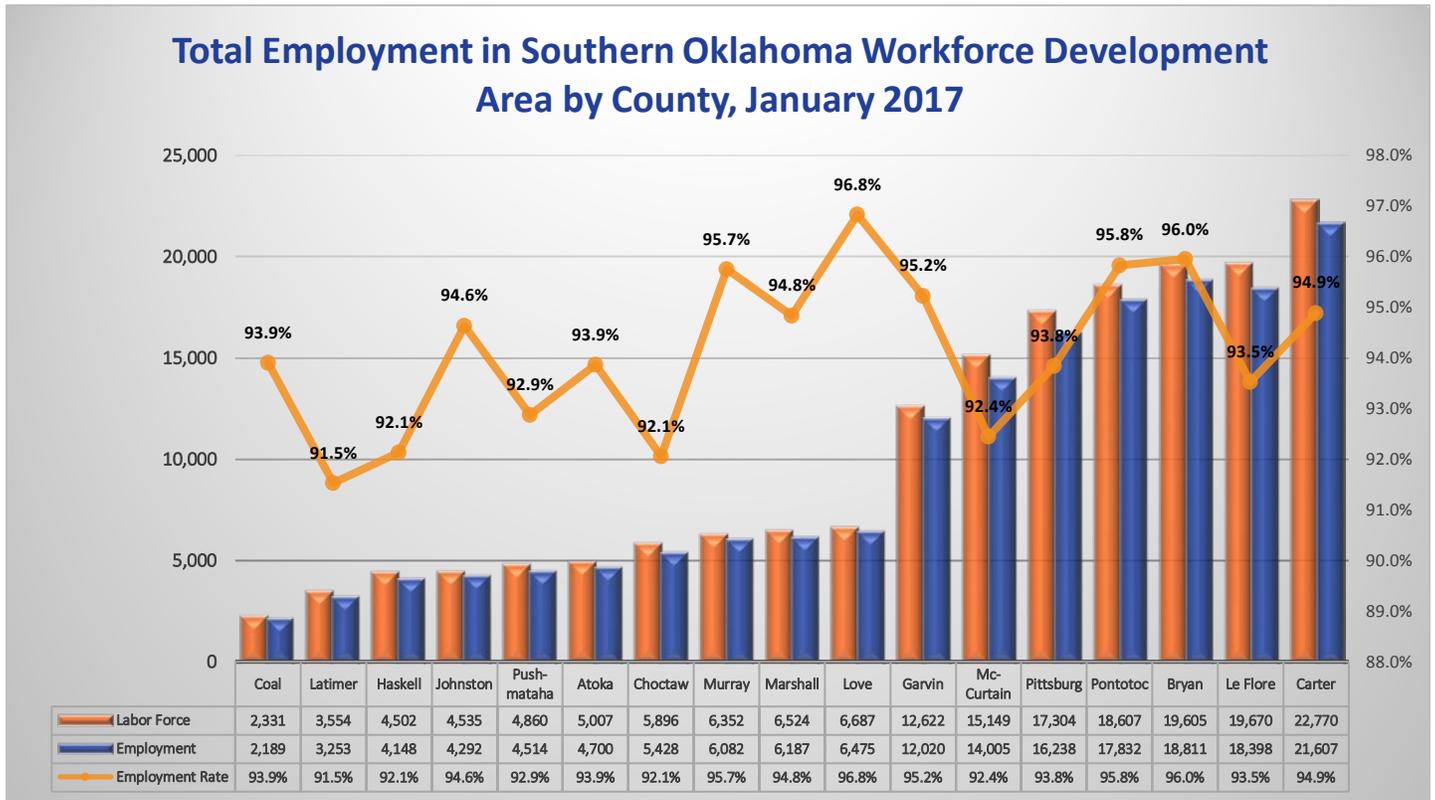
- During this time frame, the state and national rates varied only minutely, by no more than 0.5% in the short term, maintaining a relatively smooth trend line. Conversely, the unemployment rates for the Area experienced significant variation, producing sharp peaks and valleys in the trend line. For example, between September 2012 and January 2013, the rate rose from 6.5% to 7.7% -- a 1.2 percentage point variance across three months – then swiftly lost one percentage point to 6.7% by March 2013. An additional example of this volatility can be observed between December 2013 and June of 2014. The unemployment rate of the Area was initially 6.3% in December. The rate rose sharply to 6.8% in January 2014, dropped to 5.2% in April 2014, and rose again to 6.0% in June 2014.

- During the five-year span examined, the unemployment rate for the Area peaked at 7.7% in January 2013 and reached its lowest level of 5.0% in December 2014. From October 2016 to January 2017, the Area unemployment rate has hovered around 5.5%. In January, the Area unemployment rate was reported at 5.57%. Preliminary data for February 2017 through April 2017 indicate the Area unemployment rate is trending downward, reaching a low of 4.5% in April, although it must be noted that this 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 Southern Oklahoma Workforce Development Area who were *employed*. Employment data are cited for January 2017.

Total Employment in Southern Oklahoma Workforce Development Area by County, January 2017

	Coal	Latimer	Haskell	Johnston	Push-mataha	Atoka	Choctaw	Murray	Marshall	Love	Garvin	Mc-Curtain	Pittsburg	Pontotoc	Bryan	Le Flore	Carter
Labor Force	2,331	3,554	4,502	4,535	4,860	5,007	5,896	6,352	6,524	6,687	12,622	15,149	17,304	18,607	19,605	19,670	22,770
Employment	2,189	3,253	4,148	4,292	4,514	4,700	5,428	6,082	6,187	6,475	12,020	14,005	16,238	17,832	18,811	18,398	21,607
Employment Rate	93.9%	91.5%	92.1%	94.6%	92.9%	93.9%	92.1%	95.7%	94.8%	96.8%	95.2%	92.4%	93.8%	95.8%	96.0%	93.5%	94.9%

Source: Bureau of Labor Statistics Local Area Unemployment Statistics

- In January 2017, 175,975 Area residents were in the workforce with 166,179 employed. This results in an employment rate of 94.43%.

- Despite possessing the second greatest overall population, largest labor force, and most individuals employed in the Area, Carter County exhibits only the sixth highest employment rate at 94.9%.

- While most of the counties exhibited employment rates between 92% and 96% in January 2017, two counties reported rates outside this range, Love and Latimer Counties.

Love County experienced the highest level of employment in the Area at 96.83%. Records indicate that this county traditionally experiences a high employment rate. Over the five-year period between January 2012 and December 2016, Love County reported an average employment rate of 96.25% and was the only county to experience a five-year average above 96%. It is also interesting to note that Love County possesses the second smallest population in the Area at 9,957 but the eighth largest labor force. Over 67% of the population in Love County are in the labor force in January 2017.

Latimer County reported an employment rate of 91.53%, nearly one half percentage point below the county with the next highest rate, Choctaw at 92.06%, and 5.3 percentage points below Love County. It should be noted that, with regards to the size of the labor force, Love County falls within the mid-range of the Area, with 6,687 individuals in the labor force. Latimer is the second smallest county in regards to labor force size with only 3,554 residents (34.18% of the county population) participating in the workforce.

Top Employment Sectors

The following list highlights the top 10 sectors in the Area in number of jobs available. *Government* is the top sector, offering over 47,000 jobs for Area residents at 1,191 payrolled business locations. The *Health Care and Social Assistance* sector ranks second, providing 17,689 jobs at 1,022 business locations. It is interesting to note the extreme disparity between these top two sectors – the top-ranked *Government* sector offers 2.6 times as many jobs as the second-ranked *Health Care* sector. The 10th ranked sector in the Area is *Administrative and Support and Waste Management and Remediation*, which reports 3,940 jobs, only 8% as many as the top-ranking sector of *Government*.

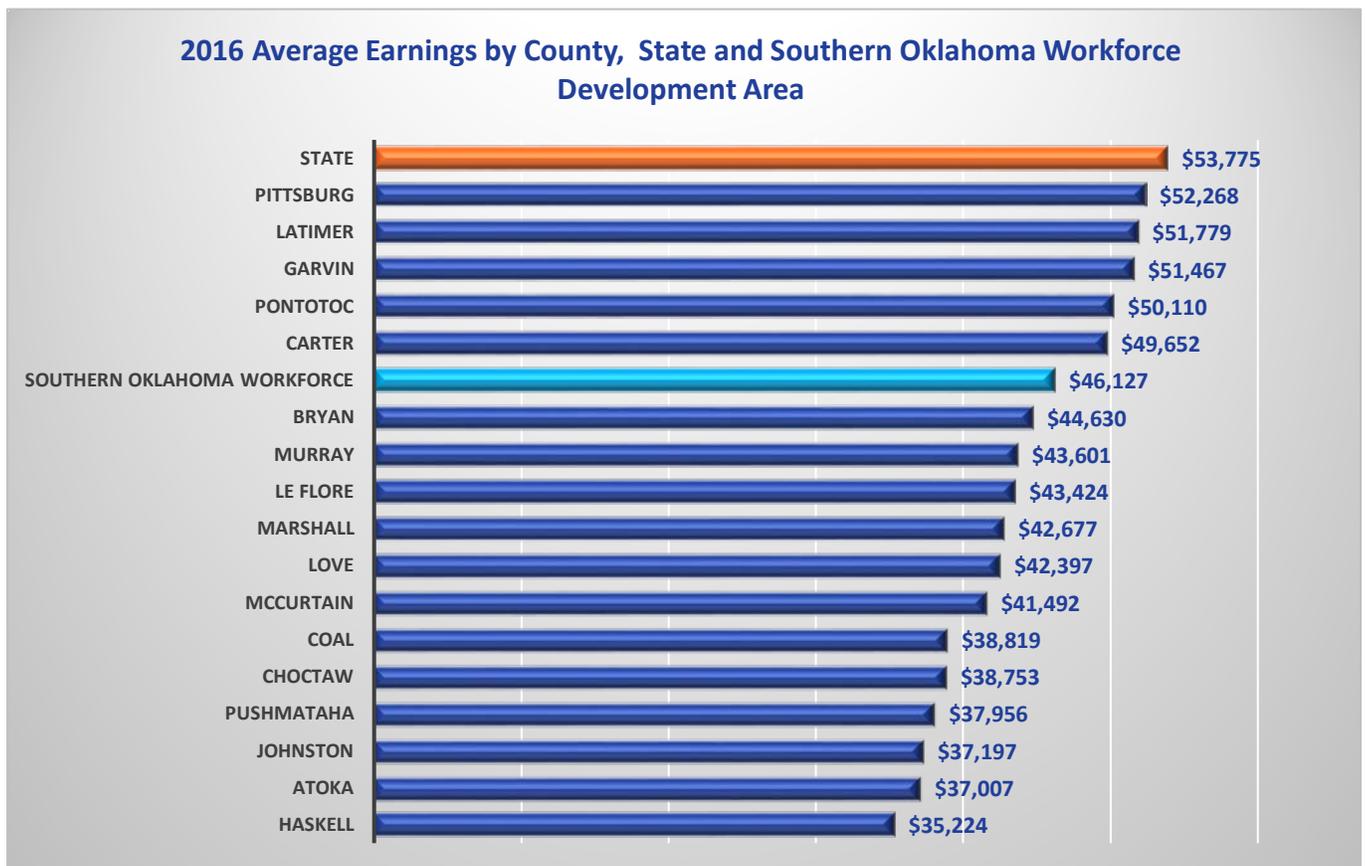| NAICS Sector Group	Sector	2016 Jobs
90	Government	47,026
62	Health Care and Social Assistance	17,689
44	Retail Trade	15,934
31	Manufacturing	15,435
72	Accommodation and Food Services	11,648
48	Transportation and Warehousing	6,743
23	Construction	6,140
21	Mining, Quarrying, and Oil and Gas extraction	4,967
81	Other Services (except Public Administration)	4,506
56	Administrative and Support and Waste Management and Remediation Services	3,940

Source: EMSI 2017.2

Average Earnings by County

The chart titled "2016 Average Earnings by County, State and Southern Oklahoma Workforce Development Area" located immediately following this analysis, illustrates average annual earnings for the 17 Area counties as well as the Area average and Oklahoma statewide average. A comparison of these data reveal the following:

- The average annual earnings for the Southern Oklahoma Workforce Development Area, as well as the average annual earnings for each Area county, are less than the average earnings for the state as a whole. Average annual earnings for the Area are $46,127; while average earnings for the state of Oklahoma are $53,775. This represents a gap of 16.6%.

- At $52,268, Pittsburg County ranks first in average earnings. This figure represents a 13.3% increase over the Area average and a 2.8% decrease from the state average. Haskell County exhibits the lowest average earnings at

$35,224 – 23.6% below the Area average. When a direct comparison is made between Haskell County and Pittsburg County, there is a 48% differential.

- As previously indicated, residents of all of the Southern 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 approximately 54% above the wages in Atoka ($37,007) and Johnston Counties ($37,197), and 11% higher than in Garvin County ($51,467), all of which experienced a commuter rate of 6.7% to the Oklahoma City MSA for employment.

- The majority of counties in the Area, 12 of the 17, report average annual earnings below the Area average of $46,127; only five counties report earnings higher than average. Often, this upward skew in the Area average wage reflects the impact of a very large metropolitan area in a single county possessing significantly higher job density and wages. This is the case, for example, in the central region of the state where the prevailing wages and job density of the Oklahoma City MSA overshadow those in surrounding rural counties. Removal of the over-weighted county from the calculations will often result in a more balanced average, revealing the extent of the impact of that single locale. In this instance, however, analysis shows that no single county or metropolitan area is responsible for driving the Area average wage upward. Rather it is a combination of a few larger cities spread across multiple counties.

2016 Average Earnings by County, State and Southern Oklahoma Workforce Development Area

County	Average Earnings
STATE	$53,775
PITTSBURG	$52,268
LATIMER	$51,779
GARVIN	$51,467
PONTOTOC	$50,110
CARTER	$49,652
SOUTHERN OKLAHOMA WORKFORCE	$46,127
BRYAN	$44,630
MURRAY	$43,601
LE FLORE	$43,424
MARSHALL	$42,677
LOVE	$42,397
MCCURTAIN	$41,492
COAL	$38,819
CHOCTAW	$38,753
PUSHMATAHA	$37,956
JOHNSTON	$37,197
ATOKA	$37,007
HASKELL	$35,224

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 Southern Oklahoma Workforce Development Area versus State of Oklahoma," follows the analysis.

- The average earnings for all of the top 10 sectors in the Southern Oklahoma Workforce Development Area are below the average earnings for the same sector statewide. The greatest disparity in earnings is found in the *Mining, Quarrying, and Oil and Gas Extraction* sector. State residents earn 61% more on average than Area residents working in the same sector. The smallest differential in earnings is found in the *Construction* sector, a difference of 10.4%.

- The *Utilities* sector reports higher average earnings than any other sector in the Area at $100,577. This is 21.8% 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 provided previously, *Health Care and Social Assistance* fails to rank in the top 10 Earnings by Sector for the Area. Earnings for this sector rank thirteenth at $39,240 annually. Likewise, the *Retail Trade* sector, ranking third in the number of job opportunities in the Area, ranks seventeenth in annual salary at $29,441. *Government*, the sector offering the highest number of jobs to Area residents, ranks only eighth on the earnings scale. The average earnings for a *Government* sector employee is $52,585 annually.

- The highest average earnings in the Area are found in industries included in the *Mining, Quarrying, and Oil and Gas Extraction* sector. *Petroleum Refineries* reports the highest earnings in the Area at $161,929, followed by *Pipeline Transportation of Refined Petroleum Products* at $125,583. These two industries combined provided a total of 782 jobs in the Area in 2016. *Electric Bulk Power Transmission and Control*, an industry included in the *Utilities* sector which accounted for 120 Area jobs in 2016, ranks third providing an average worker wage of $121,308 annually.

Average Earnings by Sector
Top 10 Earning Sectors in Southern Oklahoma Workforce Development Area versus State of Oklahoma

Legend: Southern Oklahoma Workforce Development Area | State of Oklahoma

Sector	Southern Oklahoma Workforce Development Area	State of Oklahoma
UTILITIES	$100,577	$128,670
MINING, QUARRYING, AND OIL AND GAS EXTRACTION	$73,228	$117,968
MANAGEMENT OF COMPANIES AND ENTERPRISES	$61,898	$99,005
MANUFACTURING	$60,176	$68,076
CONSTRUCTION	$54,627	$60,326
INFORMATION	$54,618	$70,506
WHOLESALE TRADE	$53,718	$67,662
GOVERNMENT	$52,585	$58,272
TRANSPORTATION AND WAREHOUSING	$51,557	$64,677
FINANCE AND INSURANCE	$50,088	$71,088

Source: EMSI, 2017.2

Top Occupations by Number of Jobs

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

- The top 10 occupations represent 31,217 jobs; 20.7% of the total jobs reported in the Area.

- The most prevalent job in the Area is *Cashier*. In 2016, 4,607 *Cashier* jobs existed with a median hourly wage of $8.98. *Office Clerks, General,* is the second ranked occupation with 3,643 reported jobs and median hourly earnings of $11.64.

- With regard to educational requirements, seven of the top 10 occupations require the completion of a high school diploma or less, generally in conjunction with some level of on-the-job training. The occupation of *Registered Nurses* requires the completion of an Associates degree while the occupation of *Heavy and Tractor-Trailer Truck Drivers* requires a Postsecondary nondegree award. The position of *Bookkeeping, Accounting, and Auditing Clerks* requires the completion of some college hours, but not the completion of a degree.

- The fourth-ranked job category in the Area, *Heavy and Tractor-Trailer Truck Drivers*, exhibits the greatest potential for growth by 2025, increasing by 741 jobs – a growth rate of 21.8%. The second highest growth rate, 17.1%, is associated with the occupation of *Laborers and Freight, Stock, and Material Movers, Hand* which is expected to gain 484 new jobs by 2025.

Occupation	2016 Jobs	2025 Jobs	Change	Median Hourly Earnings	Education or Experience Level
Cashiers	4,607	4,959	352	$8.98	Short-term on-the-job training
Office Clerks, General	3,643	3,991	348	$11.64	Short-term on-the-job training
Retail Salespersons	3,496	4,067	571	$9.49	Short-term on-the-job training
Heavy and Tractor-Trailer Truck Drivers	3,406	4,147	741	$18.52	Postsecondary nondegree award
Combined Food Preparation and Serving Workers, Including Fast Food	3,350	3,724	374	$8.69	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers, Hand	2,830	3,314	484	$13.54	Short-term on-the-job training
Secretaries and Administrative Assistants, Except legal, Medical, and Executive	2,691	2,932	241	$13.06	Short-term on-the-job training
Registered Nurses	2,545	2,754	209	$26.94	Associates degree
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,414	2,636	222	$9.90	Short-term on-the-job training
Bookkeeping, Accounting, and Auditing Clerks	2,236	2,266	30	$14.30	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 41,368 individual jobs; 27.4% of the total jobs reported in the Area.

- The median hourly earnings for all of the top 10 highest paying occupation groups fall below the state median hourly wages. The greatest differential in earnings is found in the major group of *Computer and Mathematical* Occupations where the Area median hourly wage falls below the state wage by 21.3%. *Architecture and Engineering* Occupations earn the highest median hourly wage in the Area at $34.29; however, this wage is still 5.4% below the Oklahoma statewide median hourly earnings for the same occupational group.

- The fifth-ranked *Life, Physical, and Social Science* Occupations provides competitive Area median hourly earnings of $25.57 but there are fewer employment opportunities with only 988 jobs reported. Likewise, the third-ranked *Legal* Occupations offers high median wages at $31.16 per hour, but only 1,054 jobs are available.

- *Arts, Design, Entertainment, Sports, and Media* Occupations are ranked 10th in the Area with median hourly earnings of $17.52. This salary is 5.8% below the state average and 49% below the top-ranked *Architecture and Engineering* Occupations.

- The top three occupational groups in the Area, ordered by the number of jobs represented in 2016, are:
  - *SOC Group 43-0000: Office and Administrative Support* Occupations (22,844 jobs);
  - *SOC Group 35-0000: Food Preparation and Serving Related* Occupations (13,892 jobs); and,
  - *SOC Group 41-0000: Sales and Related* Occupations (12,842 jobs).

  While these three major groups represent 49,578 and 32.8% of the total jobs in the Area, none are included in the list of Top 10 Paying Occupational Groups due to low median salaries ranging from $9.20 to $13.47 per hour.

SOC Code Group	Occupation Group	2016 Jobs	Area Median Hourly Earnings	State Median Hourly Earnings
17-0000	Architecture and Engineering Occupations	1,490	$34.29	$36.26
11-0000	Management Occupations	6,925	$33.01	$37.91
23-0000	Legal Occupations	1,054	$31.16	$33.54
29-0000	Healthcare Practitioners and Technical Occupations	8,467	$27.50	$30.57
19-0000	Life, Physical, and Social Science Occupations	988	$25.57	$27.60
13-0000	Business and Financial Operations Occupations	4,413	$23.27	$26.83
15-0000	Computer and Mathematical Occupations	1,455	$23.16	$29.41
49-0000	Installation, Maintenance, and Repair Occupations	7,143	$18.19	$19.37
47-0000	Construction and Extraction Occupations	8,221	$18.05	$19.10
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	1,212	$17.52	$18.61

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 Southern Oklahoma Workforce Development Area			
Ecosystem	**Estimated Net Job Growth (2016-2025)**	**Ecosystem Growth Rate (2016-2015)**	**Average Annual Earnings**	**Comments**
Aerospace and Defense	454	10.48%	$52,410	
Agriculture and Bioscience	374	5.05%	$49,323	
Energy	1,304	16.73%	$59,087	2nd highest salary; 2nd highest growth rate
Information and Financial Services	621	12.96%	$56,858	
Transportation and Distribution	2,011	16.16%	$57,079	2nd most new jobs created
Construction	3,016	22.96%	$47,013	Highest growth rate
Education	-848	-6.30%	$52,469	
Health Care	2,943	14.11%	$47,220	Most new jobs created; Employs the most individuals
Manufacturing	700	13.79%	$60,176	Highest salary

Aerospace and Defense.

In 2016, there were approximately 4,300 jobs in the Aerospace and Defense Ecosystem in the Area with average annual earnings per job of approximately $52,410. By 2025, employment within this ecosystem is projected to grow to over 4,700. While projections indicate that 534 new jobs will be created, eight occupational categories are expected to experience a decrease in demand. Overall, employment within the ecosystem will increase by a net 454 jobs; a growth rate of 10.48%.

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
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	$23.18	Moderate-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	$14.30	Some college, no degree
15-1151	Computer User Support Specialists	$17.01	Some college, no degree
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	$15.89	Moderate-term on-the-job training
11-1021	General and Operations Managers	$34.89	Bachelor's degree
49-9041	Industrial Machinery Mechanics	$21.43	Long-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	$16.72	Moderate-term on-the-job training
51-4041	Machinists	$19.37	Long-term on-the-job training
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$15.04	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	$19.37	Moderate-term on-the-job training

Source: EMSI, 2017.2

Agriculture and Bioscience.

In 2016, there were over 7,400 jobs in the Agriculture and Bioscience Ecosystem in Southern Oklahoma Workforce Development Area with average annual earnings per job of $49,323. By 2025, employment within this ecosystem is projected to grow to approximately 7,782. While projections indicate that 550 new jobs will be created, 27 occupational categories are expected to experience a decrease in demand. Overall, employment within the ecosystem will increase by a net 374 jobs; a growth rate of 5.05%.

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
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	$12.28	Short-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	$23.73	Less than 5 years experience
11-1021	General and Operations Managers	$34.89	Bachelor's degree
53-3032	Heavy and Tractor-Trailer Truck Drivers	$18.52	Postsecondary nondegree award
53-7051	Industrial Truck and Tractor Operators	$15.45	Short-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	$16.72	Moderate-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	$11.67	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$22.34	Moderate-term on-the-job training
51-3023	Slaughterers and Meat Packers	$11.14	Short-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	$13.86	Short-term on-the-job training

Source: EMSI, 2017.2

Energy.

In 2016, there were 7,794 jobs in the Energy Ecosystem in Southern Oklahoma Workforce Development Area with average annual earnings per job of approximately $59,087. By 2025, employment within this ecosystem is projected to grow to approximately 9,100. While projections indicate that approximately 1,362 new jobs will be created, 30 occupational categories are expected to experience a decrease in demand, resulting in the loss of 58. As a result, employment within the ecosystem will increase by a net 1,304 jobs; a growth rate of 16.73%.

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
43-3031	Bookkeeping, Accounting, and Auditing Clerks	$14.30	Some college, no degree
11-1021	General and Operations Managers	$34.89	Bachelor's degree
53-3032	Heavy and Tractor-Trailer Truck Drivers	$18.52	Postsecondary nondegree award
49-9041	Industrial Machinery Mechanics	$21.43	Long-term on-the-job training
17-2171	Petroleum Engineers	$54.38	Bachelor's degree
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	$30.63	Long-term on-the-job training
47-5012	Rotary Drill Operators, Oil and Gas	$17.67	Moderate-term on-the-job training
47-5013	Service Unit Operators, Oil, Gas, and Mining	$21.48	Moderate-term on-the-job training
47-5071	Roustabouts, Oil and Gas	$18.17	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	$16.49	Moderate-term on-the-job training

Source: EMSI, 2017.2

Information and Financial Services.

In 2016, there were 4,792 jobs in the Information and Financial Services Ecosystem in Southern Oklahoma Workforce Development Area; by 2025, that figure is expected to increase to over 5,400. The average annual earnings per job are approximately $56,858. While projections indicate that 693 new jobs will be created, six occupational categories are expected to experience a decrease in demand, resulting in the loss of 72. As a result, employment within the ecosystem is projected to increase by a net 621 jobs, a growth rate of 12.96%.

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	$23.62	Bachelor's degree
43-3011	Bill and Account Collectors	$12.87	Moderate-term on-the-job training
15-1151	Computer User Support Specialists	$17.01	Some college, no degree
11-3031	Financial Managers	$30.10	Bachelor's degree
43-1011	First-Line Supervisors of Office and Administrative Support Workers	$18.65	Less than 5 years experience
11-1021	General and Operations Managers	$34.89	Bachelor's degree
43-4131	Loan Interviewers and Clerks	$13.22	Short-term on-the-job training
13-2072	Loan Officers	$24.41	Bachelor's degree
43-4141	New Accounts Clerks	$13.07	Moderate-term on-the-job training
43-3071	Tellers	$11.08	Short-term on-the-job training

Source: EMSI, 2017.2

Transportation and Distribution.

In 2016, there were 12,447 jobs in the Transportation and Distribution Ecosystem in Southern Oklahoma Workforce Development Area with average annual earnings per job of approximately $57,079. By 2025, employment will grow to over 14,400. While it is anticipated that 2,092 new jobs will be created, 28 occupational categories will decline in employment, losing 81 jobs. As a result, the Transportation and Distribution Ecosystem is projected to gain a net 2,011 jobs, a growth rate of 16.16%.

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
43-3031	Bookkeeping, Accounting, and Auditing Clerks	$14.30	Some college, no degree
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	$17.57	Moderate-term on-the-job training
11-1021	General and Operations Managers	$34.89	Bachelor's degree
53-3032	Heavy and Tractor-Trailer Truck Drivers	$18.52	Postsecondary nondegree award
53-7051	Industrial Truck and Tractor Operators	$15.45	Short-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	$13.54	Short-term on-the-job training
53-3033	Light Truck or Delivery Services Drivers	$14.42	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$17.61	Moderate-term on-the-job training
51-2092	Team Assemblers	$13.07	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	$16.49	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 as the largest employing ecosystem, is very important to the Southern Oklahoma Workforce Development Area. Over 20,800 jobs were reported in 2016 in Health Care in the Area, with average annual earnings per job of approximately $47,220. By 2025, employment within this ecosystem is projected to increase to 23,837. Approximately 2, 990 new jobs will be created, with a loss of only 47 from 16 occupational categories. This results in a net increase in employment in Health Care of 2,943 jobs, a growth rate of 14.11%

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	$14.86	Postsecondary nondegree award
31-1011	Home Health Aides	$10.39	Short-term on-the-job training
29-2061	Licensed Practical and Licensed Vocational Nurses	$18.48	Postsecondary nondegree award
11-9111	Medical and Health Services Managers	$35.17	Bachelor's degree
31-9092	Medical Assistants	$12.77	Postsecondary nondegree award
43-6013	Medical Secretaries	$12.38	Short-term on-the-job training
31-1014	Nursing Assistants	$10.58	Postsecondary nondegree award
29-1051	Pharmacists	$54.46	Doctoral or professional degree
29-2052	Pharmacy Technicians	$12.15	Moderate-term on-the-job training
29-1141	Registered Nurses	$26.94	Associates degree

Source: EMSI, 2017.2

Construction (Regional Complementary).

Construction is also a regional complementary ecosystem with over 13,100 job reported in 2016. The average annual earnings per job in the Construction ecosystem were $47,013. By 2025, employment is projected to increase to over 16,000. Approximately 3,063 new jobs will be created, with a loss of only 47 from 15 occupational categories. This results in a net increase in employment in Construction of 3,016 jobs, a growth rate of 22.96%

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	$18.25	Apprenticeship
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	$15.89	Moderate-term on-the-job training
47-2061	Construction Laborers	$14.10	Short-term on-the-job training
47-2111	Electricians	$21.62	Apprenticeship
51-1011	First-Line Supervisors of Construction Trades and Extraction Workers	$24.29	5 years or more experience
11-1021	General and Operations Managers	$34.89	Bachelor's degree
51-4041	Machinists	$19.37	Long-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	$16.87	Apprenticeship
41-2031	Retail Salespersons	$9.49	Short-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	$16.49	Moderate-term on-the-job training

Source: EMSI, 2017.2

Education (Regional Complementary).

The regional complementary ecosystem of Education accounted for approximately 13,455 jobs in 2016, with average earnings per job of $52,469. By 2025, employment is projected to decrease by -848 jobs, a loss of -6.3%.

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
43-3031	Bookkeeping, Accounting, and Auditing Clerks	$14.30	Some college, no degree
25-2032	Career/Technical Education Teachers, Secondary School	$21.14	Bachelor's degree
11-9033	Education Administrators, Elementary and Secondary School	$34.18	Master's degree
21-1012	Educational, Guidance, School, and Vocational Counselors	$20.47	Master's degree
25-2021	Elementary School Teachers, Except Special Education	$18.72	Bachelor's degree
25-2012	Kindergarten Teachers, Except Special Education	$18.41	Bachelor's degree
25-2022	Middle School Teachers, Except Special Education and Career/Technical Education	$18.91	Bachelor's degree
25-1099	Postsecondary Teachers	$24.94	Doctoral or professional degree
25-3098	Substitute Teachers	$8.45	Bachelor's degree
25-9041	Teacher Assistants	$8.78	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 5,100 jobs in 2016, with average earnings per job of $60,176, the highest average wages for any ecosystem. By 2025, employment is projected to increase to over 5,800 jobs, with 723 new jobs created and 23 jobs lost in 10 occupational categories, a growth rate of 13.79%

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	$15.89	Moderate-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	$23.73	Less than 5 years experience
11-3051	Industrial Production Managers	$34.83	Bachelor's degree
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	$16.72	Moderate-term on-the-job training
51-4041	Machinists	$19.37	Long-term on-the-job training
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$15.04	Moderate-term on-the-job training
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	$20.34	Moderate-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$22.34	Moderate-term on-the job training
51-2092	Team Assemblers	$13.07	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	$16.49	Moderate-term on-the-job training

Source: EMSI, 2017.2