Texas Workforce Report

2018 to 2019

Texas Workforce Commission's
Labor Market & Career Information

I. Introduction

The 2018 Texas Annual Economic Report provides a detailed analysis of the state's demographics, labor market, job market, and occupational employment trends.

The Labor Market and Career Information Department of the Texas Workforce Commission (TWC) has produced this report to fulfill its commitment to providing the past year's statistical information to the Employment and Training Administration (ETA).

II. Executive Summary – State of the Workforce

The Texas economy is as large and diverse as the land the state covers. If Texas were a nation, it would rank as the 10th largest economy in the world based on GDP, ahead of Russia, Canada, Mexico and many others. Also, Texas remains the nation's top exporter for the 18th consecutive year. Texas has experienced strong job growth largely spurred by oil and natural gas production thanks to new technologies that help to tap into these deep residing resources.

Closely mirroring the movement of oil prices, annual job growth had increased almost continuously since June 2016. Texas led all states in terms of seasonally adjusted annual job growth by adding 323,300 jobs from July 2018 to July 2019 which equaled a strong 2.6 percent annual growth rate. All this contributed to the Texas labor market outperforming the nation for 29 consecutive months.

Conducive to this expanding labor market, Texas reached an all-time low seasonally adjusted unemployment rate of 3.4 percent for June and July of 2019 after the unemployment rate had mostly trended downward since early 2010.

With continued strong job opportunities in many parts of Texas, the state has attracted many people from throughout the world and nation, as Texas' population added 379,128 new residents from 2017 to 2018 according to the U.S. Census Bureau. According to the Texas Demographer's Office, Texas will add another 5 million new residents by 2028, all of whom will put new demand on goods and services.

For Texas to continue to lead in economic output, it must continue to embrace the new technologies that employers are adding to their production processes. Texas must train for the skills of tomorrow to remain competitive in a global marketplace. Of the 2.1 million new jobs added by 2026, just over 37 percent will require some form of postsecondary education and training.

III. Demographics

General population trends

Between 2017 and 2018, the Texas population grew at a faster rate than the national population, increasing by 1.3 percent as compared to 0.6 percent, respectively. Texas ranked 8th in percentage growth over the year. The state ranked first in absolute population over the year, growing by 379,128 people, more than any other state as shown in the table below.

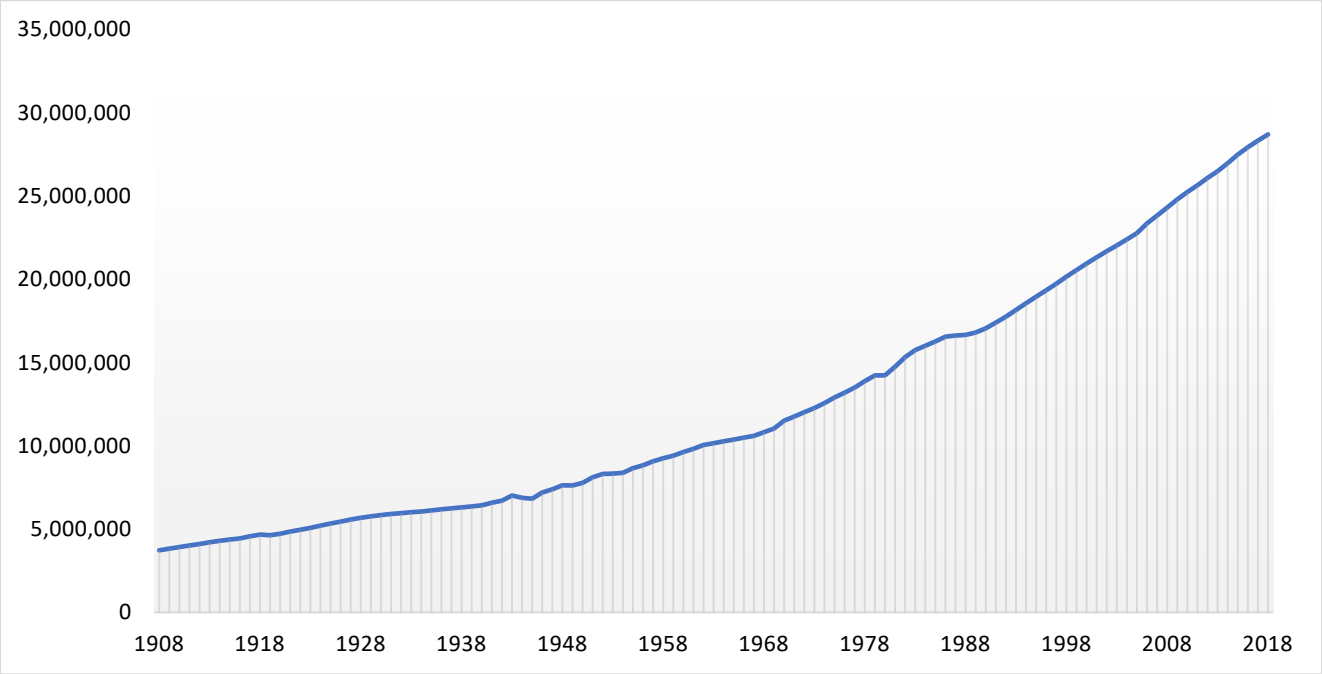
Table 1: Population Growth in Texas and the United States, 2017 to 2018

Area	2017	2018	OTY Change	OTY % Change
United States	325,147,121	327,167,434	2,020,313	0.6%
Texas	28,322,717	28,701,845	379,128	1.3%
Florida	20,976,812	21,299,325	322,513	1.5%
California	39,399,349	39,557,045	157,696	0.4%
Arizona	7,048,876	7,171,646	122,770	1.7%
North Carolina	10,270,800	10,383,620	112,820	1.1%

Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2017 to July 1, 2018

Figure 1 shows the historical population trends in Texas since 1908. While other states have seen plateaus or gradual declines in population, Texas has had exponential growth. The US Census Bureau estimates Texas population at 28,701,845 persons in 2018. That represents an increase of 4.4 million persons or 18.1 percent over the last decade.

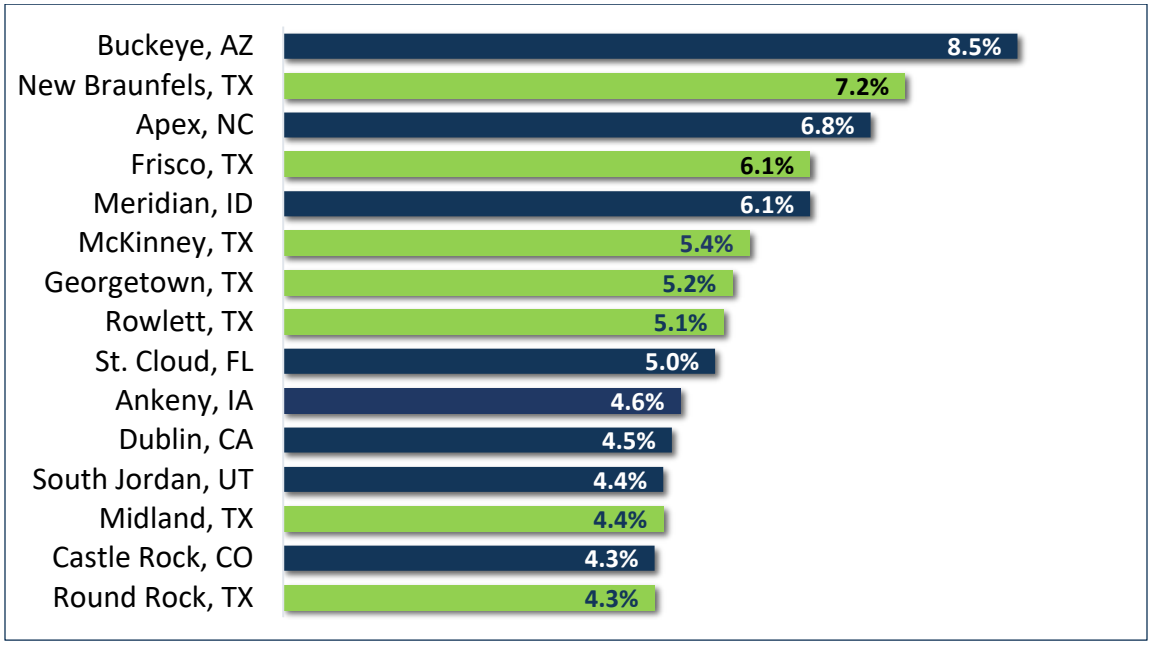
Figure 1: Texas Historical Population Trend, 1908 to 2018



Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2017 to July 1, 2018

Texas has become notorious for its population growth in the United States. This trend could be attributed to many perks such as the climate and low taxes. According to the Census Bureau, seven of the top 15 fastest growing cities are in Texas with Frisco and New Braunfels topping the list as shown in Figure 2.

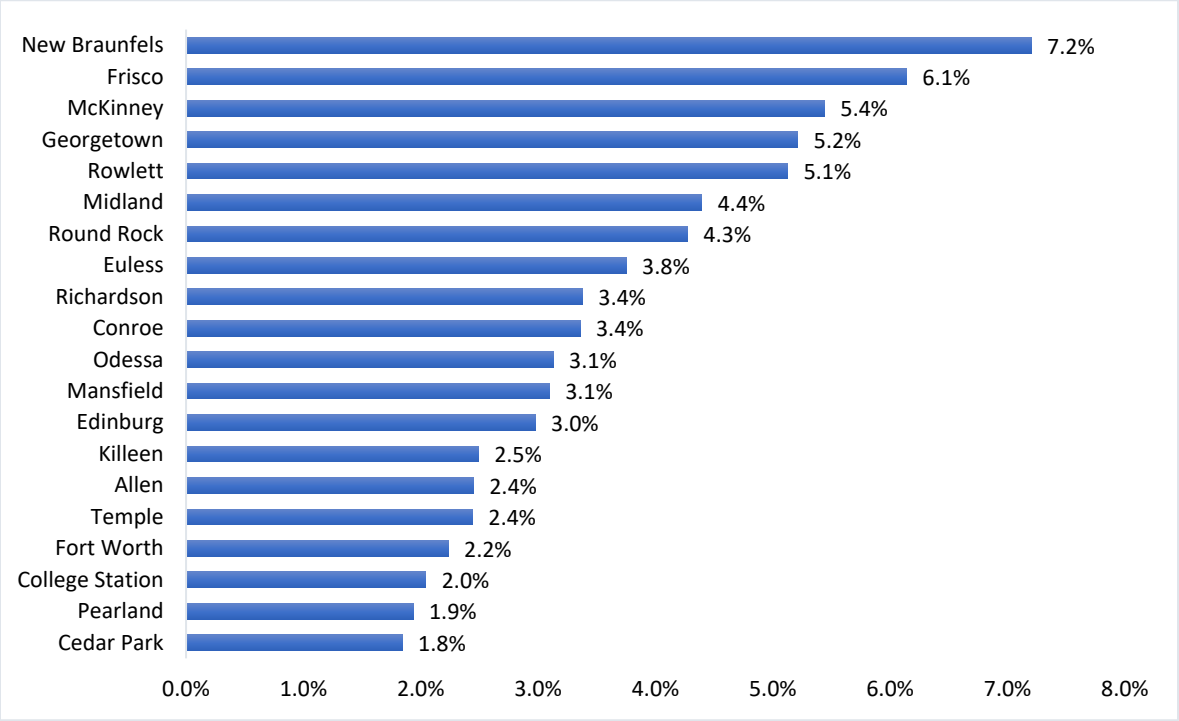
Figure 2: Fastest Growing Cities in the Country are Deep in the Heart of Texas, 2017 to 2018



Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2017 to July 1, 2018

Figure 3 shows the fastest growing Texas cities. This rapid population growth puts mounting pressure on housing availability and urban planning to address regional traffic problems. Adequate transportation and real estate is important to companies considering expanding or relocating to Texas and not fully addressing these key issues will ultimately limit potential economic growth.

Figure 3: Fastest Growing Cities in Texas, 2017 to 2018



Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2017 to July 1, 2018

IV. Local Area Unemployment Statistics

Unemployment & Labor Force Participation Rates

Since peaking during the great recession in late 2009 (at 8.4 percent), the unemployment rate for Texas has dropped considerably. Texas, for a variety of economic and demographic reasons, weathered the worst of the recession better than many other states. More recently, the unemployment rate in July 2019 stood at 3.4 percent, slightly lower than that of the United States as is shown in Figure 4.

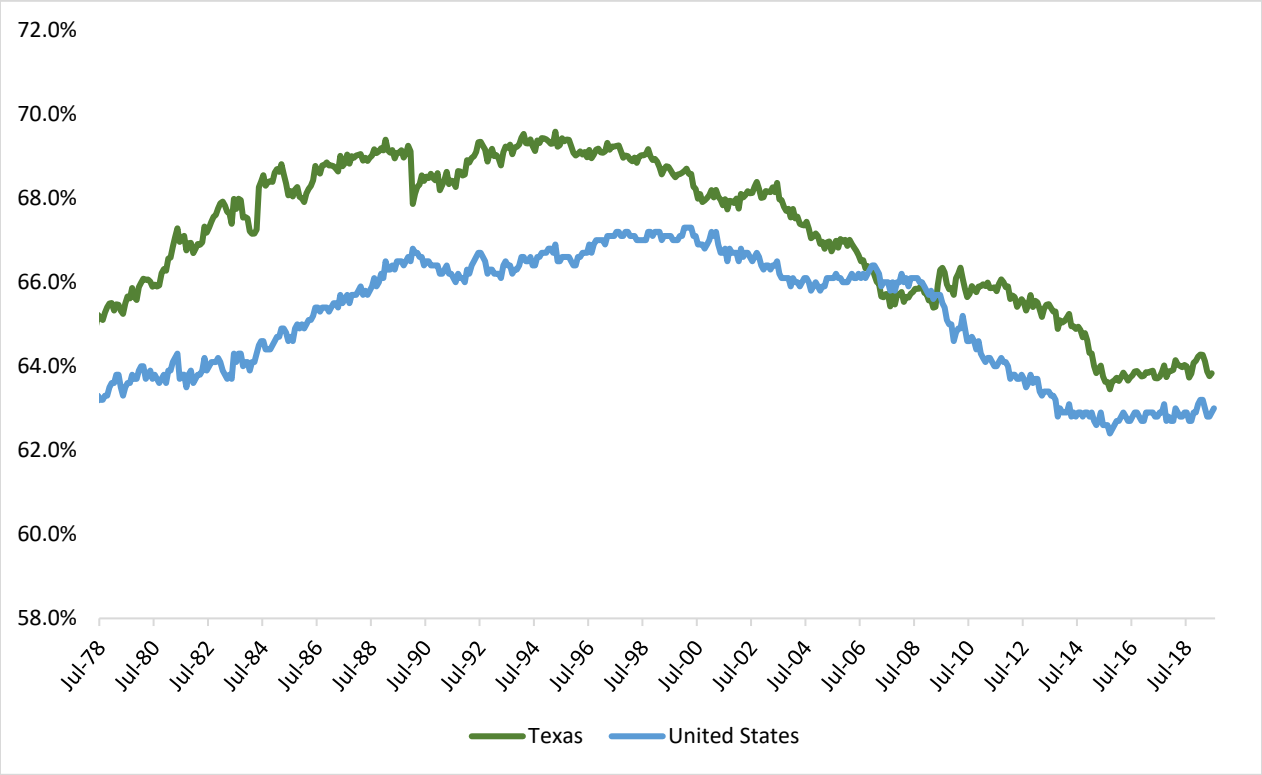
Figure 4: Unemployment Rates, Seasonally Adjusted

Data Source: Local Area Unemployment Statistics

The unemployment rate is a relatively simple measure of labor surplus, representing the fraction of the total labor force that is not employed, but looking for work. Because of this, many experts consider the labor force participation rate (LFPR) a better gauge of labor market conditions. The LFPR is the percentage of the total civilian population that is either employed or unemployed (that is, either working or actively seeking work).

Figure 5 shows LFPR for both Texas and the United States since 1978. In July 2019, 63.8 percent of Texas' civilian non-institutional population participated in the labor force. The United States had a 63.0 percent participation rate during the same period. As can be seen in figure 5, participation rates have been declining over time for both Texas and the United States. This decline can be attributed to a variety of factors including: an aging population, an increase in disability, and an increase in young people delaying work to pursue higher education.

Figure 5: Labor Force Participation Rates

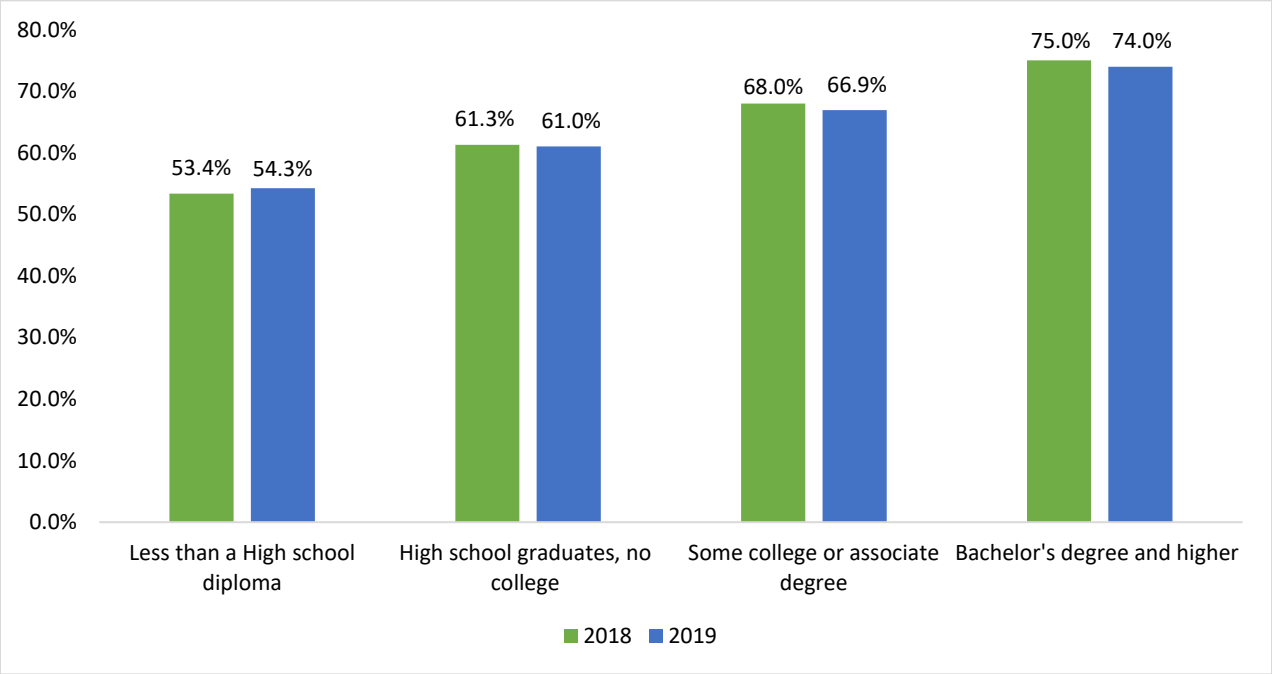


Data Source: Local Area Unemployment Statistics

Educational Attainment

Figure 6 displays the average Labor Force Participation rate by educational attainment as of July 2018 and 2019. A clear trend is displayed, showing that those with more education have a higher likelihood of participating in the labor force. The fact that the estimates do not change severely from year to year indicates they accurately depict the behavior of the state's population.

Figure 6: Texas' Labor Force Participation Rate by Education Attainment



Data Source: Local Area Unemployment Statistics & Current Population Survey

Table 2 lists the July 2019 Labor Force Participation Ratio (LFPR), Employment to Population Ratio (EP), and Unemployment Rate (U Rate), including a comparison to what the estimate was a year ago. As evidenced in the table, those with more education have a higher tendency to be both employed and participating in the labor force. Those with some college or an associate degree have an unemployment rate of less than three percent, while the unemployment rate of those with less than a high school diploma is higher.

Table 2: Educational Attainment by Labor Force Statistics

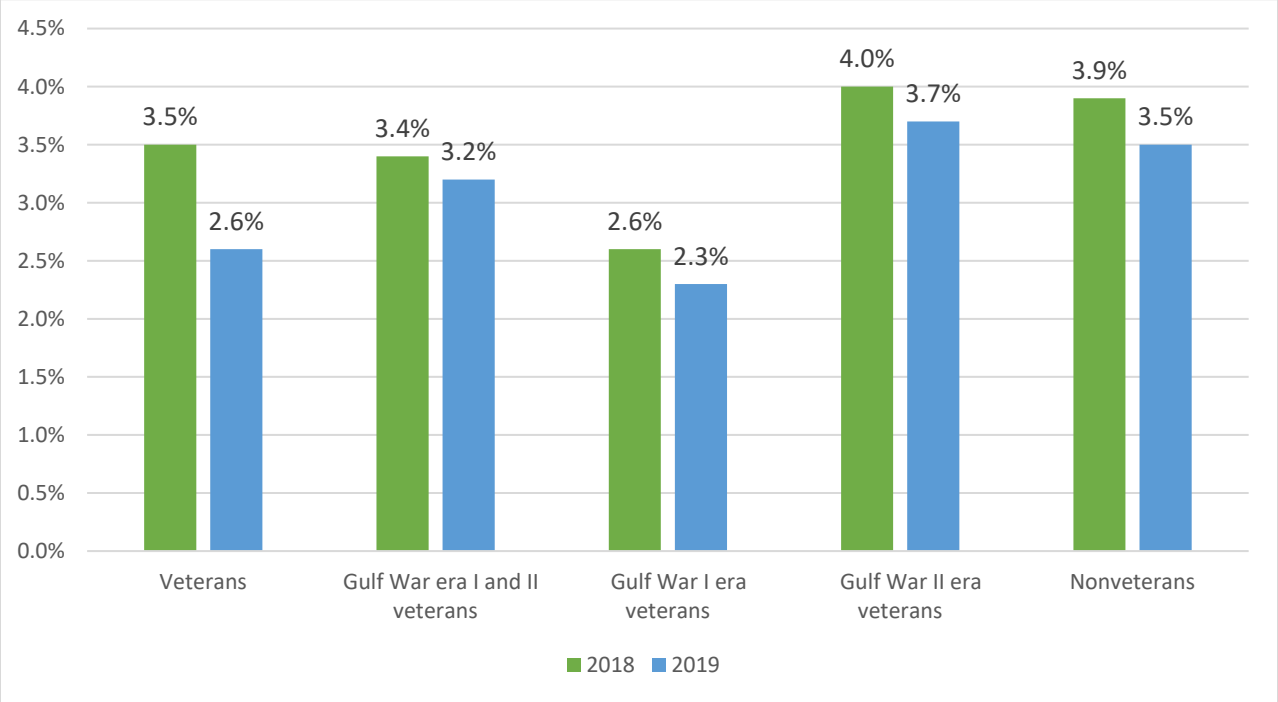
Education Level	LFPR	Annual Change	EP Ratio	Annual Change	U Rate	Annual Change
Less than a high school diploma	54.3%	0.9%	52.5%	1.1%	3.3%	-0.4%
High school graduates, no college	61.0%	-0.3%	59.2%	0.4%	3.0%	-1.1%
Some college or associate degree	66.9%	-1.1%	65.0%	-0.5%	2.9%	-0.9%
Bachelor's degree and higher	74.0%	-1.0%	72.1%	-1.2%	2.5%	0.2%

Data Source: Local Area Unemployment Statistics & Current Population Survey

Veterans

Figure 7 compares unemployment rates for veterans and nonveterans, including the rates for veterans of Gulf War I and II. The comparison shows that over the last two years veterans in Texas have largely had a lower unemployment rate than that of nonveterans. There is also a notable contrast between the unemployment rate for Gulf War I veterans when compared to the more recent war in the gulf. A likely cause is the longer time frame that Gulf War I veterans have had to work and gain experience, when compared to that of their Gulf War II counterparts.

Figure 7: Unemployment Rates for Veterans in Texas

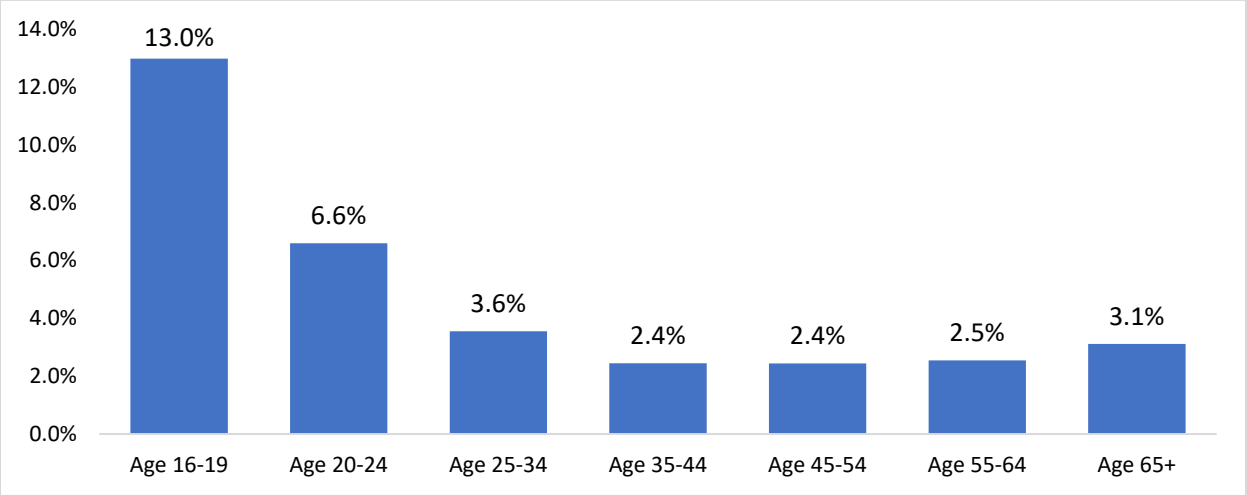


Data Source: Local Area Unemployment Statistics & Current Population Survey

Age Groups

Unemployment rates in Texas vary noticeably by age group. Figure 8 below shows higher unemployment rates among younger age groups. A significant decrease is experienced by those age 25 or above, with all these age groups having a rate of 3.6 percent or below.

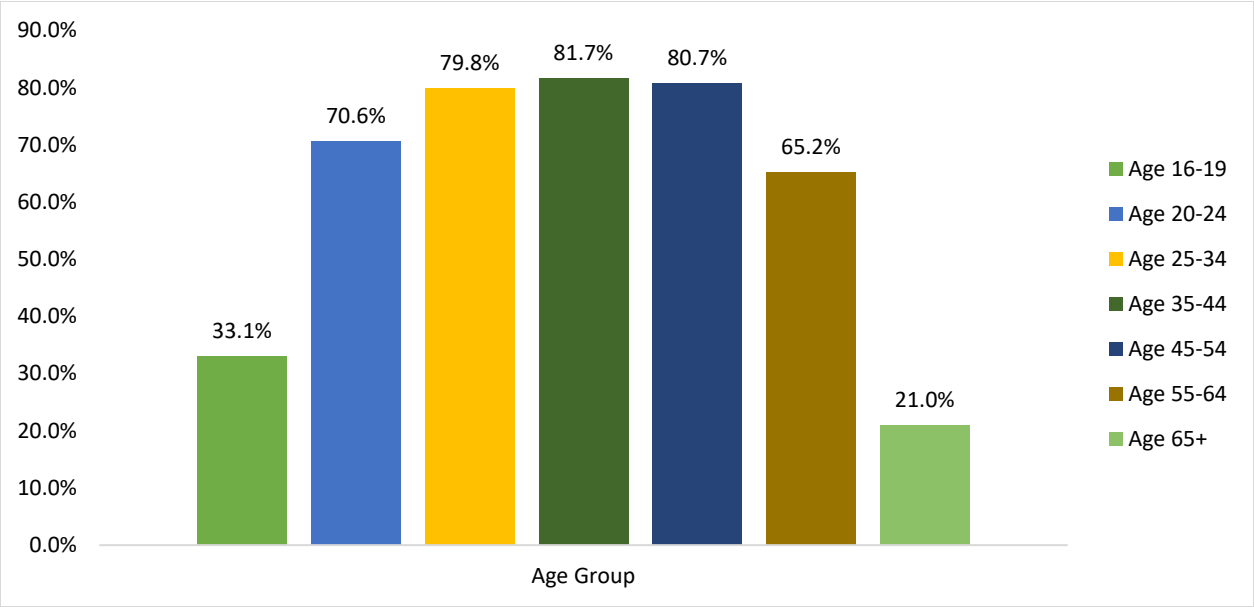
Figure 8: Unemployment Rates by Age Group in Texas



Data Source: Local Area Unemployment Statistics & Current Population Survey

Figure 9 lists both the LFPR and Unemployment Rate for all available age groups 16 and above. LFPRs are on the lower ends for both the younger and older age ranges. This is to be expected, as those on the lower end of the age spectrum often forgo working to pursue education, and those on the upper end have a higher likelihood of being retired. The age ranges from 35 to 54 have the highest LFPRs, all of which are at or above 80 percent.

Figure 9: Labor Force Participation Rate by Age Group

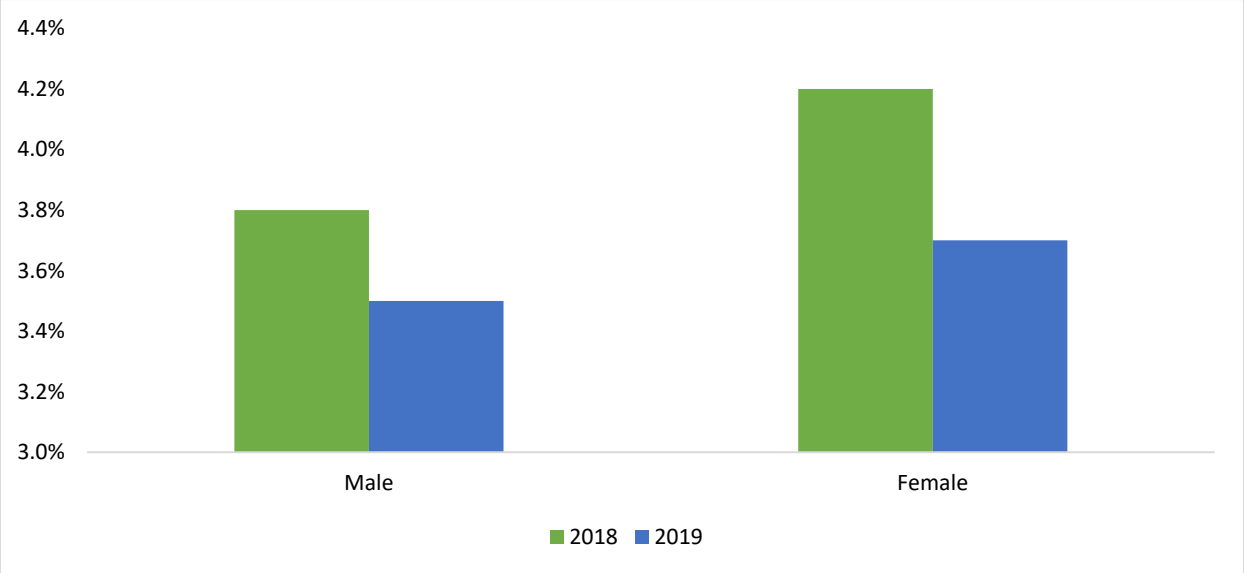


Data Source: Local Area Unemployment Statistics & Current Population Survey

Gender

Figure 10 illustrates the unemployment rates for Males and Females age 16 and up for both 2018 and 2019 in Texas. Over this two-year period, males tended to have a lower unemployment rate than females.

Figure 10: Unemployment Rate by Gender



Data Source: Local Area Unemployment Statistics & Current Population Survey

V. Current Employment Statistics

Statewide Payroll Employment

Texas Total Nonagricultural Employment grew 10.7 percent from July 2014 to July 2019. This growth rate exceeded that of the whole United States, which expanded at 8.9 percent over five years. Construction led major industries in Texas with 20.3 percent growth over the five-year period. Texas' five-year Mining and Logging employment declined by 18.2 percent consistent with an overall downward trend in West Texas Intermediate crude oil prices since 2017. The industry has outpaced Texas' total nonfarm employment in terms of annual growth rates since May 2017 but slowed to 3.6 percent annual growth in July 2019. No other major industry in Texas has contracted over five years. Private Sector employment expanded at 11.6 percent, more than doubling the rate of Government employment, which expanded at 5.4 percent over five years.

Table 3: Industry Employment, 2014 to 2019

Industry	July 2014	July 2019	Change	% Change
Total Nonagricultural	11,609,300	12,845,900	1,236,600	10.7%
Total Private	9,748,100	10,883,500	1,135,400	11.6%
Goods-Producing	1,855,900	1,952,900	97,000	5.2%
Service-Providing	9,753,400	10,893,000	1,139,600	11.7%
Mining & Logging	313,300	256,400	-56,900	-18.2%
Construction	654,000	786,500	132,500	20.3%
Manufacturing	888,600	910,000	21,400	2.4%
Wholesale Trade	561,200	619,300	58,100	10.4%
Retail Trade	1,258,600	1,333,500	74,900	6.0%
Transportation, Warehousing, & Utilities	483,500	580,000	96,500	20.0%
Information	201,600	204,000	2,400	1.2%
Financial Activities	700,900	804,800	103,900	14.8%
Professional & Business Services	1,560,500	1,778,000	217,500	13.9%
Education & Health Services	1,520,900	1,746,200	225,300	14.8%
Leisure & Hospitality	1,190,300	1,412,000	221,700	18.6%
Other Services	414,700	452,800	38,100	9.2%
Government	1,861,200	1,962,400	101,200	5.4%

Data Source: Current Employment Statistics

The Mining and Logging and Construction industries each comprise a larger share of Texas employment than they do at the national level. Combined, the two industries account for 8.1 percent of Texas employment, while accounting for 5.5 percent of all jobs at the national level. Texas has a lower share of Education and Health Services jobs compared to the United States (13.6 percent to 16.0 percent). From July 2014 to July 2019, the Construction industry in Texas grew 20.3 percent, the highest five-year growth rate among major industries. Mining and Logging has continued to decline over a five-year period at both the state (-18.2 percent) and national (-16.2 percent) levels.

Table 4: Comparing Texas to U.S. Industry Percent Share and Growth Rates, 2014 to 2019

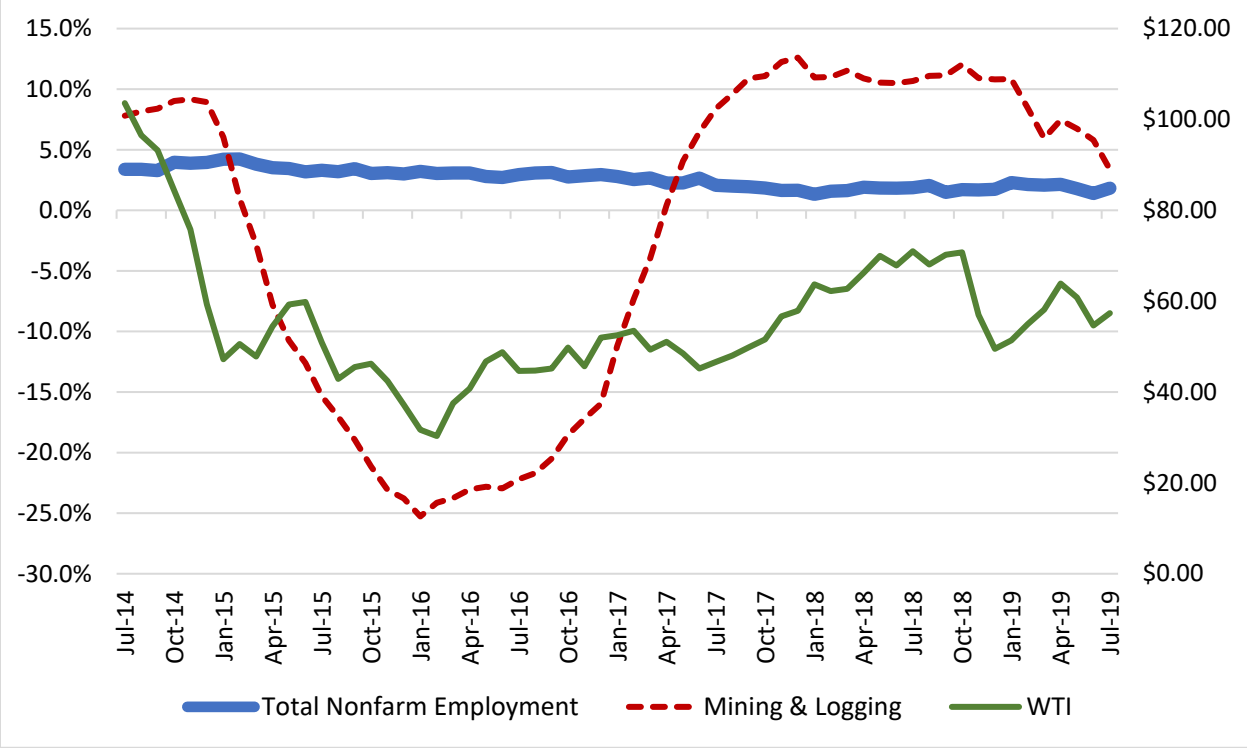
Industry	Texas % Share	U.S. % Share	Texas Growth Rate	U.S. Growth Rate
Total Nonagricultural	100.0%	100.0%	10.7%	8.9%
Total Private	84.7%	85.1%	11.6%	10.0%
Goods-Producing	15.2%	13.9%	5.2%	9.6%
Service-Providing	84.8%	86.1%	11.7%	8.8%
Mining & Logging	2.0%	0.5%	-18.2%	-16.2%
Construction	6.1%	5.0%	20.3%	21.5%
Manufacturing	7.1%	8.5%	2.4%	5.5%
Wholesale Trade	4.8%	3.9%	10.4%	3.3%
Retail Trade	10.4%	10.4%	6.0%	2.5%
Transportation, Warehousing, & Utilities	4.5%	3.7%	20.0%	18.9%
Information	1.6%	1.9%	1.2%	3.5%
Financial Activities	6.3%	5.7%	14.8%	8.7%
Professional & Business Services	13.8%	14.2%	13.9%	12.2%
Education & Health Services	13.6%	16.0%	14.8%	13.3%
Leisure & Hospitality	11.0%	11.0%	18.6%	13.7%
Other Services	3.5%	3.9%	9.2%	6.9%
Government	15.3%	14.9%	5.4%	2.9%

Data Source: Current Employment Statistics

Statewide Payroll Employment Growth and the Price of Oil

As the nation's top oil-producing state, the Texas economy's Mining and Logging industry employment has been sensitive to the price of oil. Figure 11 below shows the fluctuations of West Texas Intermediate (WTI) crude oil prices compared to Mining and Logging and Total Nonfarm annual employment growth rates. Mining and Logging annual growth plunged by as much as 25.3 percent in January 2016 right as WTI was bottoming out at $30.32/bbl in February 2016. As the WTI edged back upward, so did Mining and Logging, hovering above 10 percent from September 2017 to January 2019. But most recently Mining and Logging employment growth has slowed commensurate with the stagnation of WTI in 2019. Total Nonfarm employment annual growth has slowed more incrementally – though still positive – to 1.8 percent in July 2019 after peaking at 4.2 percent in early 2015.

Figure 11: Annual Employment Growth (Actual) vs. West Texas Intermediate Crude Spot Price



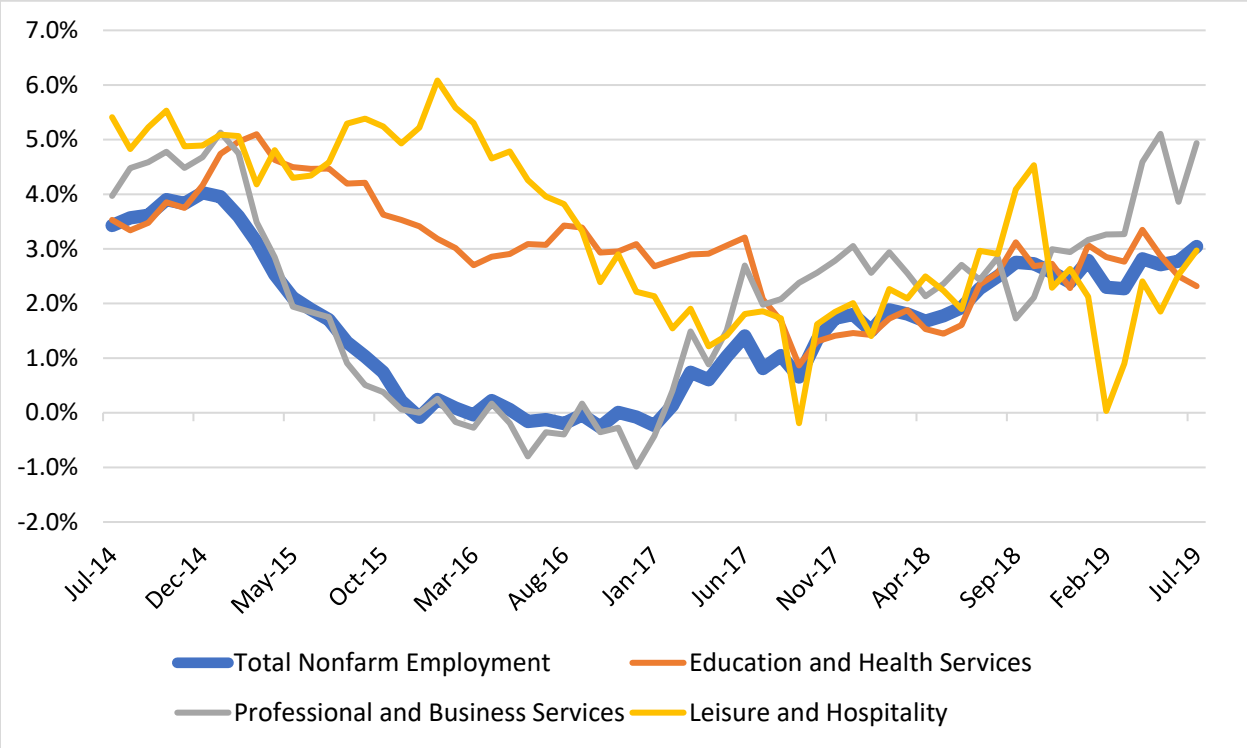
Data Source: Current Employment Statistics, Not Seasonally Adjusted

Payroll Employment Growth in Largest Metro Areas

Houston-The Woodlands-Sugarland MSA

Of the largest Metropolitan Statistical Areas (MSAs), the Houston-the Woodlands-Sugar Land MSA expanded the least over the last five years with 7.9 percent growth. From July 2014 to July 2019 the Mining and Logging industry contracted more than any other industry, with an employment decrease of 23.4 percent. Other industries in the Houston area offset those losses however. The largest shares of overall Houston employment gain came in Education and Health Services (52,700 jobs added), Professional and Business Services (52,200 added), and Leisure and Hospitality (50,900 added). Annual employment growth has continued to trend up overall, reaching 3.0 percent in July 2019 with 93,600 jobs added.

Figure 12: Houston-The Woodlands-Sugarland MSA Annual Employment Growth Rate

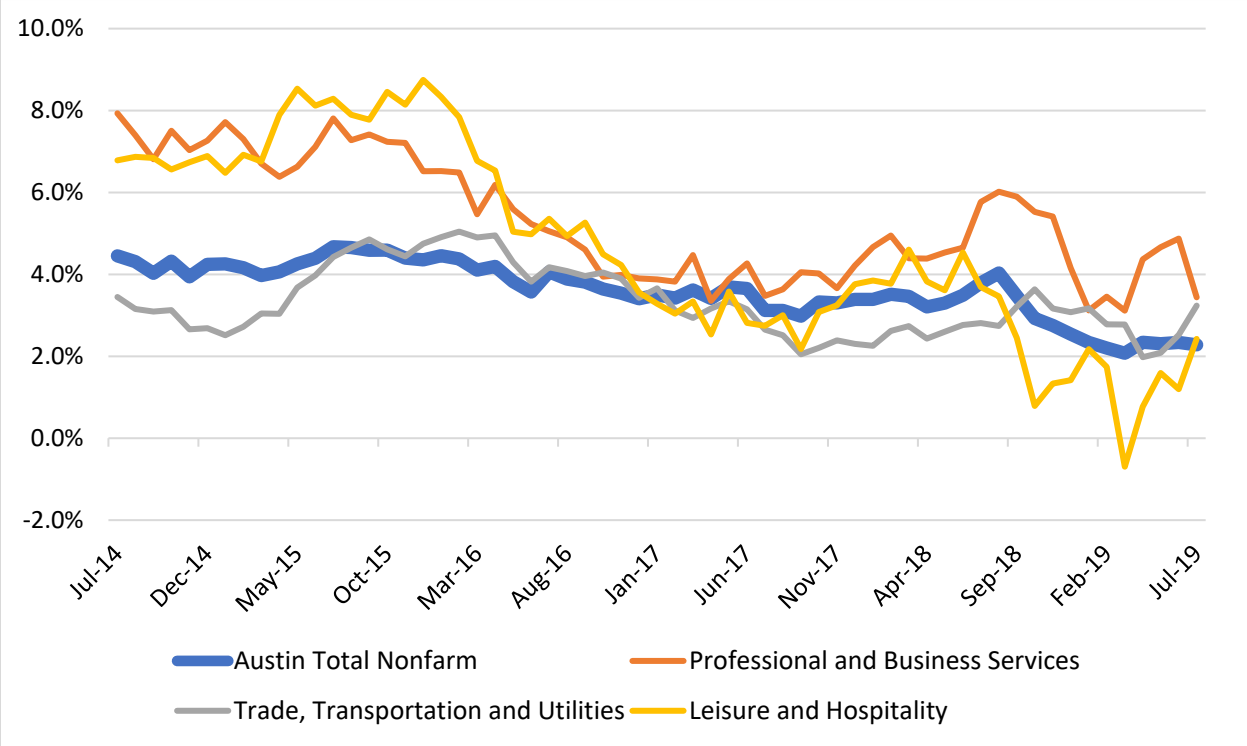


Data Source: Current Employment Statistics, Not Seasonally Adjusted

Austin-Round Rock MSA

Austin-Round Rock MSA's five-year growth rate is highest among the four largest MSAs in Texas. From July 2014 to July 2019 Austin metro area employment has expanded by 19.2 percent. The Professional and Business Services, Trade, Transportation and Utilities and Leisure and Hospitality industries contributed the largest share of area employment growth over the past five years, accounting for almost 56 percent of the job gains. The Austin area's annual job growth has slowed somewhat since peaking at 4.7 percent in Summer 2015, averaging 2.3 percent so far in 2019.

Figure 13: Austin-Round Rock MSA Annual Employment Growth Rate



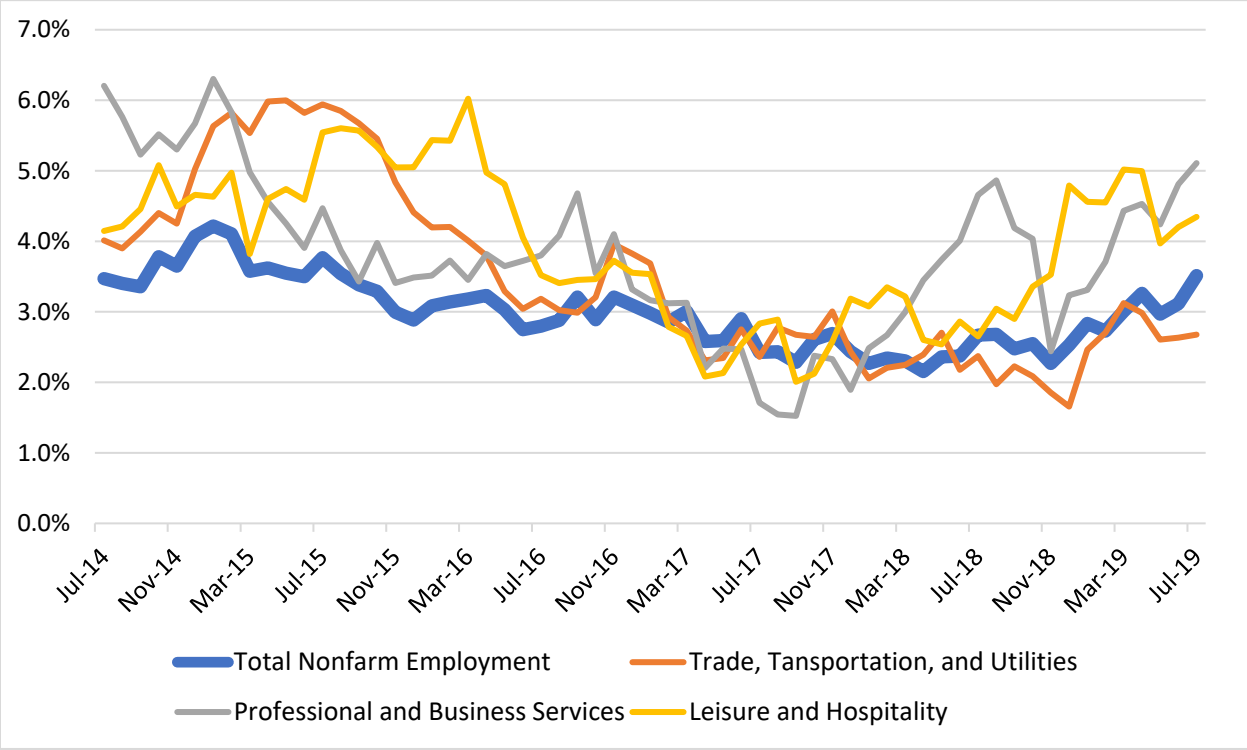
Data Source: Current Employment Statistics, Not Seasonally Adjusted

Dallas-Fort Worth-Arlington MSA

The Dallas-Fort Worth-Arlington MSA has added 528,600 jobs from July 2014 to July 2019 – almost as many jobs as were added in the Houston (232,400), Austin (176,600), and San Antonio (120,300) areas combined. The area has also led in annual growth among the large MSAs throughout calendar year 2019, during which time it has averaged 3.1 percent.

Trade, Transportation and Utilities added the most jobs over the past five years with 120,100 jobs followed by Professional and Business Services with 115,000 positions.

Figure 14: Dallas-Fort Worth-Arlington MSA Annual Employment Growth Rate

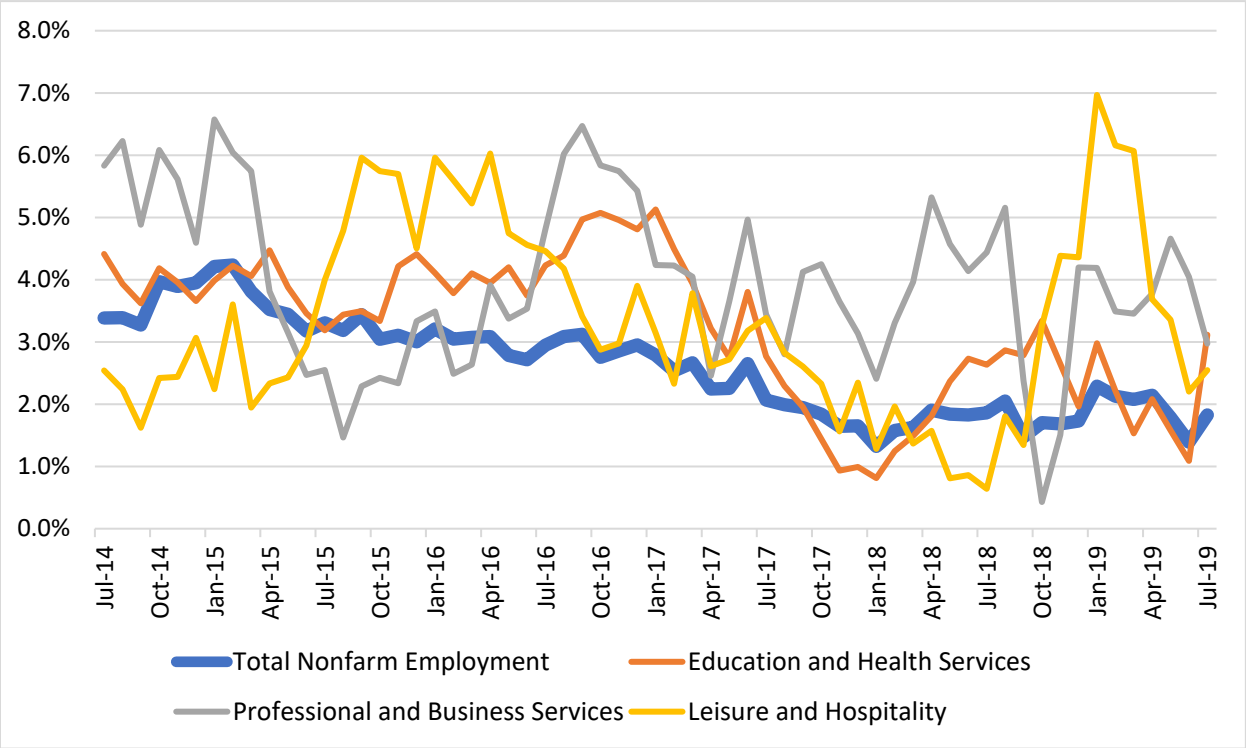


Data Source: Current Employment Statistics, Not Seasonally Adjusted

San Antonio-New Braunfels MSA

The San Antonio-New Braunfels MSA added 120,300 jobs from July 2014 to July 2019. The Education and Health Services and Professional and Business Services industries combined for just over 40 percent of the area's employment growth. Leisure and Hospitality and Trade, Transportation, and Utilities employment both added 31 percent of the overall employment gains in the San Antonio area in the last five years. The San Antonio-New Braunfels MSA's Total Nonfarm annual growth rate has averaged 1.9 percent over the last 12 months.

Figure 15: San Antonio-New Braunfels MSA Annual Employment Growth Rate



Data Source: Current Employment Statistics, Not Seasonally Adjusted

VI. Quarterly Census of Employment and Wages

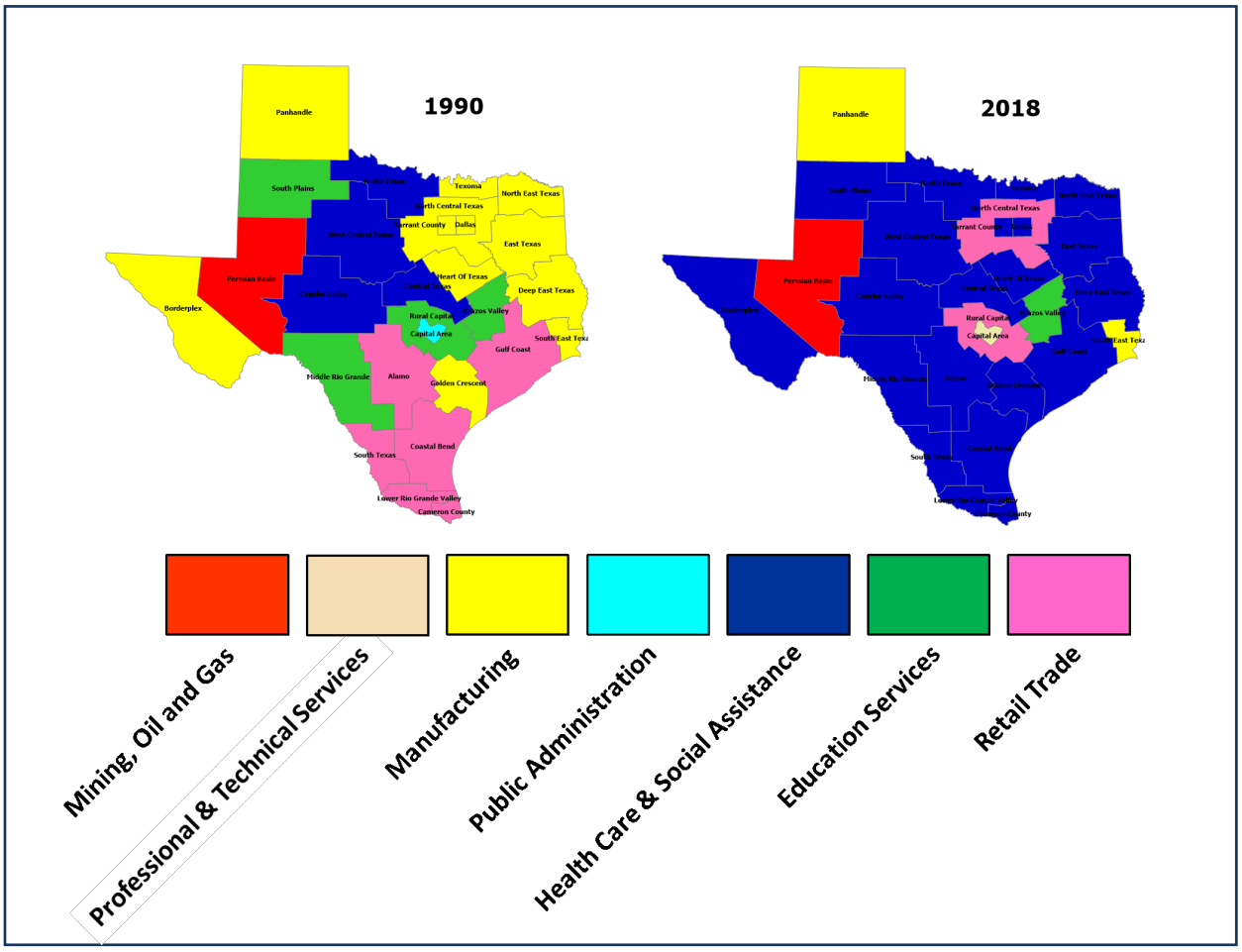
Industry Composition

While oil and gas continues to be the leading industry in only one workforce development area in the state, it continues to drive economic growth. The developments in the Barnett and Eagle Ford shale areas as well as the high oil prices from 2007 to 2009 insulated Texas from the full force of the national economic downturn. When oil prices lowered in 2015 and 2016, so did Texas' Total Nonagricultural Employment growth rate, below the national rate. However, with the recovery of the Oil and Gas industry the Total Nonagricultural Employment state growth rate has remained above the U.S. annual growth rate since March of 2017.

In 2018 a major driver of the oil and gas industry is increased exports. "In May [2018], the most recent data available, the [Texas Gulf] region exported nearly 500,000 more barrels of crude each day than it imported, bringing into the region billions of dollars that are driving new investment, creating jobs and helping to make Texas one of the nation's fastest growing economies," the Houston Chronicle reported on August 21.

With oil and gas adding jobs to the economy, the state's population continues to increase. Age is helping to drive demand in the Health Care & Social Assistance industry, which dominates in 21 of the state's 28 workforce development areas, as shown in Figure 16. As of 2019, oil and gas continue to dominate the Permian Basin area, where companies continue to invest billions in pipelines and other infrastructure to facilitate the exports reported on in the Houston Chronicle. Manufacturing continues to dominate the Panhandle and South East Texas. Retail Trade dominates North Central Texas and Rural Capital, each of which surround large metro areas. Because of Texas A&M University, Education Services continues to dominate Brazos Valley. Finally, Professional and Technical Services continues to dominate Capital Area, continuing to attract more and more tech companies over the last few years.

Figure 16: Top Industry by Employment, 1990-2018



Data Source: Quarterly Census of Employment and Wages

Total Wages

The Quarterly Census of Employment and Wages (QCEW) provides insight into wages paid by industry as well as ownership-private versus government for example. From second quarter 2018 to first quarter 2019, 13.8 percent of all wages in Texas were paid to government employees while 86.2 percent of wages were paid to private sector employees. The nation, on the other hand, paid a slightly larger share of wages to government employees: 14.8 percent vs. 85.2 percent to private.

In the private sector, most of Texas wages in the year ending with first quarter 2019 were paid to Professional and Business Services (18.3 percent), Trade, Transportation and Utilities (18.2 percent), Education and Health Services (11.1 percent), Manufacturing (9.6 percent) and Financial Activities (8.9 percent). Furthermore, the two private industries of Trade, Transportation and Utilities and Natural Resources and Mining paid a significantly higher percent of wages in Texas

than they do nationwide (18.2 percent and 4.8 percent for the respective industries in Texas vs. 15.6 percent and 1.4 percent in the United States).

Table 5: Total Wages by Major Industry, Q2-2018 to Q1-2019

Industry	Texas Total Wages	Texas Total Wages % Share	U.S. Total Wages % Share
Total, All Industries	$720,784,144,187	100%	100%
Government	$99,616,357,198	13.8%	14.8%
Federal	$16,040,984,707	2.2%	2.8%
State	$21,666,143,628	3.0%	3.3%
Local	$61,909,228,863	8.6%	8.7%
Total Private	$621,167,786,989	86.2%	85.2%
Natural Resources and Mining	$34,354,081,622	4.8%	1.4%
Construction	$49,324,869,392	6.8%	5.4%
Manufacturing	$69,197,061,600	9.6%	10.3%
Trade, Transportation and Utilities	$130,843,393,689	18.2%	15.6%
Information	$18,024,524,475	2.5%	3.9%
Financial Activities	$63,965,031,086	8.9%	9.3%
Professional and Business Services	$131,554,377,263	18.3%	18.8%
Education and Health Services	$79,824,839,194	11.1%	13.6%
Leisure and Hospitality	$30,049,492,967	4.2%	4.7%
Other Services	$13,369,266,884	1.9%	2.1%
Unclassified	$660,837,480	0.1%	0.1%

Data Source: Quarterly Census of Employment and Wages

Average Weekly Wages

Table 6 compares the average weekly wages by major industry in Texas and the United States. Texas' private sector weekly earnings in certain industries are above the national average, while others are below over the year ending in First Quarter 2019. For example, in the Information and Financial Services industries, Texas workers receive 23.8 percent and 12.6 percent less than employees of the same industries nationwide on average. It is important to note here though that Texas has no state income tax and the wages from the QCEW are pre-tax wages.

In all private sector industries, the wages in Texas were $28.65 or 2.6 percent higher than those nationwide. The wage gap was particularly significant in Natural Resources and Mining, where Texas' employees earned 83.5 percent more than their national counterparts ($2,138.32 versus $1,165.50).

Table 6: Average Weekly Wages by Major Industry, Q2-2017 to Q1-2018

Industry	Texas	U.S.	Difference	% Difference
Total, All Industries	$1,120.08	$1,109.75	$10.33	0.9%
Government	$1,021.69	$1,109.00	-$87.31	-7.9%
Federal	$1,531.56	$1,165.50	$366.06	31.4%
State	$1,162.45	$1,213.00	-$50.55	-4.2%
Local	$905.24	$1,321.75	-$416.51	-31.5%
Total Private	$1,137.65	$1,109.00	$28.65	2.6%
Natural Resources and Mining	$2,138.32	$1,165.50	$972.82	83.5%
Construction	$1,268.80	$1,213.00	$55.80	4.6%
Manufacturing	$1,498.08	$1,321.75	$176.33	13.3%
Trade, Transportation and Utilities	$1,017.40	$923.75	$93.65	10.1%
Information	$1,693.51	$2,222.25	-$528.74	-23.8%
Financial Activities	$1,617.44	$1,850.00	-$232.56	-12.6%
Professional and Business Services	$1,445.80	$1,460.50	-$14.70	-1.0%
Education and Health Services	$929.46	$976.00	-$46.54	-4.8%
Leisure and Hospitality	$423.59	$467.00	-$43.41	-9.3%
Other Services	$764.96	$746.50	$18.46	2.5%

Data Source: Quarterly Census of Employment and Wages

VII. Industry and Occupational Projections

Positive growth continues to drive demand for workers in Texas and across the nation. In some key occupations, local supply has at times struggled to keep up with demand. Texas remains driven by a continued economic shift towards high-skilled jobs in the Professional and Business Services sector, while the state's rapid population growth and aging baby-boomer population increases demand for service sector jobs, primarily in Education and Health Services. These two industries in addition to Trade, Transportation, and Utilities account for over 56 percent of the jobs in Texas.

The Projections program examines more than 800 occupations, segmenting them for specific industries. Employment in Texas is projected to grow by 16.6 percent from 2016 to 2026, which represents approximately 2.1 million jobs. On an annual basis, Texas is projected to have about 1.7 million job openings due to exits from the labor force, transfers from occupations, and growth. In this section, we will examine more closely projected growth in key industries and in-demand occupations in Texas over the 10-year period.

Health Care and Social Assistance

The Health Care and Social Assistance industry grew to 1,678,111 positions in first quarter 2019. The industry has averaged 2.7 percent annual employment growth over the past 5 years, resulting in 210,254 jobs added. According to long term industry projections, Health Care and Social Assistance employment is expected to grow to approximately 1,929,312 jobs by 2026, with 26.1 percent projected from growth 2016 to 26.

Ambulatory Health Care Services, which consists of doctors' and dentists' offices, outpatient care centers and medical and diagnostic laboratories, comprises about 45 percent of employment in the Health Care and Social Assistance industry. Ambulatory Health Care Services has averaged 3.2 percent annual employment growth over the past five years, slightly faster than Health Care and Social Assistance overall.

A consistent need for nurses drives occupational demand within the Health Care and Social Assistance industry. According to Help Wanted Online (HWOL), the industry job postings are up 1.0 percent over-the-year. Registered Nurses, Nursing Assistants, Medical and Health Services Managers, Licensed Practical and Licensed Vocational Nurses (LVNs), and Medical Assistants are the top five occupations by job listings according to HWOL for July 2019. This historically strong demand is reflected in long term occupational projections with RNs and LVNs projected to add the most positions over the coming years.

Table 7: Health Care and Social Assistance Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Registered Nurses	181,073	227,276	46,203	25.5%	$72,781
Licensed Practical and Licensed Vocational Nurses	61,358	73,471	12,113	19.7%	$47,003
Medical and Health Services Managers	18,872	24,863	5,991	31.7%	$102,453
Office Clerks, General	36,597	41,183	4,586	12.5%	$38,299
Physicians and Surgeons, All Other	16,399	20,609	4,210	25.7%	$215,356
Respiratory Therapists	11,182	15,255	4,073	36.4%	$60,026
Physical Therapists	13,419	17,487	4,068	30.3%	$93,662
Nurse Practitioners	7,929	11,707	3,778	47.6%	$112,031
Radiologic Technologists	14,935	18,464	3,529	23.6%	$58,483
General and Operations Managers	11,742	14,686	2,944	25.1%	$118,580

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Educational Services

Demand for Educational Services will continue to grow in Texas due to an ever-expanding population. From 2010 to 2018, Texas added 3,459,166 people--more than any other state in the nation. According to the U.S. Census Bureau's American Community Survey, school enrollment for the Texas population three years of age and over increased by 481,363 from 2010 to 2017, a 6.7 percent increase.

Quarterly Census of Employment and Wage data shows Educational Services employment added 92,760 jobs over five years beginning first quarter 2014, an 8.2 percent gain that puts industry employment at 1,230,077 jobs for first quarter 2019. The industry is expected to expand by another 16.3 percent from 2016 to 2026 according to the Texas Workforce Commission's long-term industry projections. Help Wanted Online's job posting data shows 2.4 percent growth in job postings over the year, demonstrating continuing demand for labor in this industry.

TWC's Occupational projections data estimate that Elementary, Secondary, and Middle School Teachers as well as Educational Administrators for both public and private Texas schools will all increase by more than 20 percent from 2016 to 2026. Educational Services occupations projected to add the most jobs in the long term that pay a wage above the state median are listed below.

Table 8: Educational Services Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Elementary School Teachers, Except Special Ed.	143,517	172,825	29,308	20.4%	$56,536
Secondary School Teachers, Except Special and Career/Technical Education	105,746	127,485	21,739	20.6%	$58,207
Education Admin., Elementary & Secondary	24,696	29,858	5,162	20.9%	$85,649
Educational, Guidance, School, and Vocational Counselors	22,046	26,515	4,469	20.3%	$60,807
Self-Enrichment Education Teachers	11,248	14,391	3,143	27.9%	$46,792
Kindergarten Teachers, Except Special Education	13,642	16,535	2,893	21.2%	$56,477
Health Specialties Teachers, Postsecondary	8,780	11,255	2,475	28.2%	$139,778
Preschool Teachers, Except Special Education	10,723	13,155	2,432	22.7%	$50,935
Coaches and Scouts	10,663	13,015	2,352	22.1%	$52,788
Instructional Coordinators	11,280	13,512	2,232	19.8%	$66,006

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Retail Trade

Retail Trade is a large, important and changing industry in Texas, where an expanding economy and population have increased demand for retail goods. According to the Dallas Federal Reserve Bank Retail Survey, gross sales in Texas' Retail Trade industry reached over $132 billion in the first quarter of 2019.

Not seasonally adjusted Current Employment Statistics data in the month of July 2019 indicate this industry represents 10.4 percent of all employment in Texas at 1,327,200 jobs. According to industry projections, the Retail Trade industry will add nearly 180,565 jobs by 2026, growing to 1,490,796 jobs total. Finally, the Quarterly Census of Employment and Wage data from the first quarter of 2014 to the first quarter of 2019 indicate employment in the Texas' Retail Trade industry grew by more than 6.0 percent across the five-year period. The industry is evolving due to the competition between brick and mortar retail and online marketplaces. Technology has established itself into the industry and becoming a requirement for companies who want to continue being successful in the retail world by personalizing the shopper experience through data analytics on customers, inventory and conversions.

Retail Trade industry jobs projected to add the most positions over the long-term are listed below. Typical Retail Trade industry jobs such as retail sales people, stock clerks and order fillers, cashiers, and customer service representatives are projected to grow by the largest number. However, these occupations have average wages lower than the state median wage and therefore do not appear below. For this Texas industry, the median wage is $25,134 while the state median wage for all industries is $37,099.

Table 9: Retail Trade Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
First-Line Supervisors of Retail Sales Workers	89,295	103,081	13,786	15.4%	$45,446
Automotive Service Technicians and Mechanics	25,141	29,372	4,231	16.8%	$45,158
General and Operations Managers	17,503	20,565	3,062	17.5%	$91,642
First-Line Supervisors of Office and Administrative Support Workers	14,997	17,120	2,123	14.2%	$47,165
Sales Representatives, Services, All Other	10,888	12,505	1,617	14.9%	$43,104
Pharmacists	12,916	14,479	1,563	12.1%	$129,368
First-Line Supervisors of Mechanics, Installers, and Repairers	4,844	5,828	984	20.3%	$62,015
Sales Rep., Wholesale & Manufacturing, Except Tech. & Scientific Products	5,005	5,866	861	17.2%	$65,623
Automotive Body and Related Repairers	3,478	4,255	777	22.3%	$48,546
Securities, Commodities, and Financial Services Sales Agents	2,607	3,193	586	22.5%	$97,974

Data source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Construction

The construction industry is projected to grow by 21.2 percent from 2016 to 2026, creating the need for 144,346 workers over 10 years. Occupational projections also indicate that the highest demand will be for construction laborers, supervisors of construction and extraction workers, followed by specialty trade workers to fill positions such as plumbers, electricians, and carpenters.

According to first quarter 2019 QCEW report, employment with the Construction industry reached 785,444 workers and has grown 19.9 percent over the last five years. Demand for construction workers continues to rise. The average price of a home in Texas exceeded $300,000 for the first time in series history according to Texas A&M's Real Estate Center for the months of May and June 2019 while the housing inventory remains limited at 4.0 months. Year over year average home price has increased consistently since March 2012 as also reported by the Real Estate Center at Texas A&M University. These trends indicate strong demand for residential building projects.

Construction occupations projected to add the most jobs in the long term and pay above the Texas median wage of $37,099 are listed below in Table 10.

Table 10: Construction Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Supervisors of Construction and Extraction Workers	50,070	61,182	11,112	22.2%	$66,280
Plumbers, Pipefitters, and Steamfitters	32,573	41,137	8,564	26.3%	$48,882
Electricians	44,269	52,467	8,198	18.5%	$49,778
Carpenters	30,016	36,110	6,094	20.3%	$40,636
Operating Engineers and Other Construction Equipment Operators	24,056	29,801	5,745	23.9%	$42,664
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	16,966	21,712	4,746	28.0%	$44,852
Construction Managers	21,957	26,681	4,724	21.5%	$96,810
General and Operations Managers	17,485	21,399	3,914	22.4%	$122,053
Welders, Cutters, Solderers, and Brazers	14,154	17,187	3,033	21.4%	$51,813
Office Clerks, General	27,576	30,581	3,005	10.9%	$40,128

Data source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Professional, Scientific, and Technical Services

From 2016 to 2026, the Professional and Technical Services industry is projected to grow by 19.4 percent, resulting in 131,495 jobs added. Establishments in this industry employ workers in many different occupations. Software Developers, Applications are projected to be the most in-demand through 2026 with an estimated employment of 33,324 jobs. Projections indicate other highly skilled jobs will be for Accountants and Auditors, Computer Systems Analysts, and Lawyers.

In CES, Professional, Scientific, and Technical Services employment grew 21.0 percent over the past five years not seasonally adjusted, representing the addition of 143,700 jobs. This growth outpaced Texas' Total Nonfarm employment increase of 10.9 percent over the past five years. Computer Systems Design and Related Services had the largest annual growth over the past five years of 33.2 percent for the industry. Management, Scientific, and Technical Consulting Services grew at a 31.9 percent over this same time frame, representing the addition of 38,100 jobs.

Professional, Scientific, and Technical Services occupations projected to be the most in-demand over the long term are listed below.

Table 11: Professional, Scientific, & Technical Services Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Software Developers, Applications	23,073	33,324	10,251	44.4%	$109,577
Accountants and Auditors	40,265	49,323	9,058	22.5%	$82,242
Computer Systems Analysts	22,393	27,080	4,687	20.9%	$102,459
Lawyers	27,903	32,069	4,166	14.9%	$155,112
General and Operations Managers	18,311	22,424	4,113	22.5%	$149,630
Paralegals and Legal Assistants	17,320	21,151	3,831	22.1%	$54,614
Civil Engineers	12,734	16,084	3,350	26.3%	$106,744
Management Analysts	12,734	16,059	3,325	26.1%	$103,886
Computer User Support Specialists	14,951	18,243	3,292	22.0%	$55,044
Sales Representatives, Services, All Other	14,494	17,753	3,259	22.5%	$69,945

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Transportation and Warehousing

According to long term industry projections, Transportation and Warehousing employment is expected to grow to approximately 575,171 positions by 2026. From 2016 to 2026 the Transportation and Warehousing industry is projected to grow by 15.1 percent resulting in 75,384 jobs added. Heavy and Tractor-Trailer Truck Drivers are expected to be the most in-demand through 2026 with an estimated employment of 109,743 jobs. Light Truck or Delivery Services Drivers is projected to add 4,305 employees from 2016 to 2026.

According to CES not seasonally adjusted data, Transportation and Warehousing employment grew 21.2 percent over the past five years, representing the addition of 91,500 jobs. Warehousing and Storage employment grew 61.2 percent over the past five years representing the addition of 33,500 jobs. Growth in Couriers and Messengers was 40.3 percent over the same time frame representing 15,600 jobs being added.

Transportation and Warehousing occupations projected to add the most jobs in the long term are listed in Table 12.

Table 12: Transportation and Warehousing Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Heavy and Tractor-Trailer Truck Drivers	92,118	109,743	17,625	19.1%	$46,980
Light Truck or Delivery Services Drivers	21,838	26,143	4,305	19.7%	$48,993
Flight Attendants	15,397	17,939	2,542	16.5%	$58,873
Postal Service Mail Carriers	23,229	25,153	1,924	8.3%	$51,624
Cargo and Freight Agents	9,839	11,623	1,784	18.1%	$45,705
Bus and Truck Mechanics and Diesel Engine Specialists	6,795	8,032	1,237	18.2%	$49,140
General and Operations Managers	6,070	7,236	1,166	19.2%	$122,829
Aircraft Mechanics and Service Technicians	9,428	10,537	1,109	11.8%	$69,326
Sales Representatives, Services, All Other	5,622	6,729	1,107	19.7%	$65,932
Reservation and Transportation Ticket Agents and Travel Clerks	9,783	10,796	1,013	10.4%	$49,166

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

Manufacturing

According to the Federal Reserve Bank of Dallas, Texas produces more than 10 percent of the total manufactured goods in the United States. According to the U.S. Census Bureau's Not Seasonally Adjusted U.S. International Trade Data, it also exported more manufactured commodities by dollar value than to any other state in July 2019 with $16.4 billion. California was a distant second at $8.9 billion. Despite a strong dollar, which typically reduces demand for exports, the Dallas Fed's manufacturing production index posted 38 consecutive positive readings in July, showing manufacturing output continues to expand in Texas.

With increased automation and robotics, the Manufacturing industry has changed in recent years with increased computerization, driving up manufacturing wages for 121 consecutive months according to the Dallas Fed's monthly Manufacturing Outlook survey. This is likely due to an increase in demand for higher-skilled employees. These ongoing changes may have contributed to the contraction of 59,700 seasonally adjusted manufacturing jobs from December 2014 to November 2016 according to Current Employment Statistics data. Since December 2016 Manufacturing employment rebounded with a gain of 69,400 jobs through July 2019.

Manufacturing industry employment is expected to increase by 8.0 percent by 2026. This increase spans a broad range of occupations including Industrial Machinery Mechanics; Chemical Equipment Operators and Tenders; and Welders, Cutters, Solderers, and Brazers, among others as shown in Table 13 below.

Table 13: Manufacturing Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Welders, Cutters, Solderers, and Brazers	24,810	28,603	3,793	15.3%	$42,605
Machinists	18,871	22,115	3,244	17.2%	$46,634
First-Line Supervisors of Production and Operating Workers	32,169	35,372	3,203	10.0%	$71,994
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	19,352	21,459	2,107	10.9%	$71,418
Industrial Machinery Mechanics	9,931	11,867	1,936	19.5%	$57,005
Heavy and Tractor-Trailer Truck Drivers	14,478	16,405	1,927	13.3%	$42,184
General and Operations Managers	15,883	17,553	1,670	10.5%	$145,403
Industrial Engineers	9,263	10,925	1,662	17.9%	$104,022
Computer-Controlled Machine Tool Operators, Metal and Plastic	10,136	11,600	1,464	14.4%	$41,470
Team Assemblers*	34,488	33,230	-1,258	-3.6%	$33,903

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations

*** "Team Assemblers" data was included in the above table because of its large base employment. Wage data was compiled from Occupational Employment Statistics estimates based on Standard Occupation Code 51-2098, Assemblers & Fabricators, All Other for the manufacturing industry.**

Agriculture and Forestry

The Agriculture and Forestry industry is an integral part of the Texas economy. Approximately 248,400 farms cover over 127 million acres across the state. 97 percent of these farms are family owned. According to the 2017 Census of Agriculture Texas ranks third in the nation for market value of agricultural products sold. Texas tops the lists for cotton and cattle.

The industry continues to follow a trend of positive growth. For the first quarter of 2014 to the first quarter of 2019 the Agriculture and Forestry Industry in Texas grew by 4.1 percent, adding 2,313 jobs. The industry is projected to add 3,889 jobs by 2026, growing to 63,478 jobs total.

Agriculture and Forestry industry jobs projected to be the most in-demand over the long term are listed below. Note: Many agriculture workers are considered self-employed and therefore not included in the table below.

Table 14: Agriculture and Forestry Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Agricultural Equipment Operators	3,713	4,103	390	10.5%	$27,541
First-Line Supervisors of Farming, Fishing, and Forestry Workers	1,517	1,653	136	9.0%	$54,450
Animal Trainers	454	529	75	16.5%	$41,059
Animal Breeders	446	508	62	13.9%	$32,967
Heavy and Tractor-Trailer Truck Drivers	1,314	1,372	58	4.4%	$36,478
Maintenance and Repair Workers, General	500	542	42	8.4%	$29,925
Farm Equipment Mechanics and Service Technicians	323	361	38	11.8%	$40,114

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations

Mining, Quarrying, and Oil and Gas Extraction

The Mining, Quarrying, and Oil and Gas Extraction industry is projected to grow by 13.2 percent from 2016 to 2026, resulting in 27,855 jobs added. By 2026 the industry is projected to add 238,888 jobs. Service Unit Operators, Roustabouts and Heavy and Tractor-Trailer Truck Drivers are the top projected occupations for the industry.

According to not seasonally adjusted Current Employment Statistics data, employment in Mining, Quarrying, and Oil and Gas Extraction contracted by 18.5 percent from July 2014 to July 2019. More recently the industry's annual growth rates have been positive since April 2017 with a recent high of 12.8 percent for December 2017.Despite this, growth has slowed to single digits beginning February 2019 with 3.2 percent annual growth for July.

Table 15: Mining, Quarrying, and Oil and Gas Extraction Industry Long-Term Occupational Projections

Occupational Title	Employment 2016	Employment 2026	Change	% Growth	Mean Annual Wage 2018
Service Unit Operators, Oil, Gas, and Mining	15,583	18,067	2,484	15.9%	$50,273
Roustabouts, Oil and Gas	15,424	17,906	2,482	16.1%	$38,714
Heavy and Tractor-Trailer Truck Drivers	10,483	12,118	1,635	15.6%	$44,428
Petroleum Engineers	8,342	9,449	1,107	13.3%	$155,455
Rotary Drill Operators, Oil and Gas	5,510	6,399	889	16.1%	$55,460
Derrick Operators, Oil and Gas	4,299	4,997	698	16.2%	$45,182
Geoscientists, Except Hydrologists and Geographers	4,314	4,840	526	12.2%	$163,219
Geological and Petroleum Technicians	3,565	4,085	520	14.6%	$69,139
Wellhead Pumpers	3,838	4,342	504	13.1%	$54,461
Pump Operators, Except Wellhead Pumpers	1,852	2,138	286	15.4%	$46,025

Data Source: Texas Statewide Projections 2016 to 2026

Ranked by employment change for occupations with mean wages higher than Texas median wage of $37,099

VIII. Glossary

Local Area Unemployment Statistics

This Federal/State cooperative program produces employment and unemployment estimates by place of residence.

Civilian Labor Force (CLF) - All persons classified as employed or unemployed.

Employed - All persons 16 years and over who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees, worked on their own business, profession, or on their own farm, or worked 15 hours or more as unpaid family workers, or (b) were not working but who had jobs from which they were temporarily absent. Each employed person is counted only once, even if the person holds more than one job.

Employment Population Ratio - The proportion of the civilian non-institutional population who are employed over the age of 16. Used in conjunction with the unemployment rate to evaluate the status of the labor force, it provides a measure of change in employment.

Labor Force Participation Rate - Represents the proportion of the non-institutional population that is in the labor force. In the Current Population Survey (CPS), the participation rates are usually published for sex-age groups, often cross classified by other demographic characteristics.

Unemployed - All persons aged 16 years and over who had no employment, were available for work, and had made specific efforts to find employment. Includes persons who were waiting to be recalled to jobs from which they had been laid off.

Unemployment Rate - The unemployed number divided by the civilian labor force number.

Current Employment Statistics

This Federal/State cooperative program produces estimates drawn from a monthly survey of nonfarm business establishments used to collect wage and salary employment, worker hours and payroll by industry and area. It counts the number of jobs, not of people.

Nonagricultural Jobs - The total number of persons on establishment payrolls employed full or part time. Persons on the payroll of more than one establishment are counted in each establishment. Data exclude proprietors, self-employed, unpaid family or volunteer workers, farm workers, and domestic workers. Government employment only covers civilian employees.

Actual or Not Seasonally Adjusted - Describes the data series not subject to the seasonal adjustment process. In other words, the effects of regular, or seasonal, patterns have not been removed from these series.

Seasonally Adjusted - The effects of regular, or seasonal, patterns of hiring or layoffs (holidays, weather, etc.) have been removed from these series. These adjustments make it easier to observe the cyclical and other non-seasonal movements in a data series.

Quarterly Census of Employment and Wages

A Federal/State cooperative program which collects and compiles employment and wage data for workers covered by State unemployment insurance laws, and Federal civilian workers covered by unemployment compensation for federal employees. State employment security agencies collect and compile quarterly Unemployment Insurance (UI) contribution reports which are submitted by all employees. These data are maintained in the State in macro and microdata forms, and also sent to the Bureau of Labor Statistics (BLS). Any data from this program may be generically referred to as QCEW data.

Average Weekly Wages (AWW) - Average weekly wage values are calculated by dividing quarterly total wages by the average of the three-monthly employment levels (all employees) and dividing the result by 13, for the 13 weeks in the quarter.

Occupational Employment Statistics

The Federal/State cooperative program which produces current estimates of industry staffing patterns through periodic surveys of the nonfarm wage and salary sector of the economy. Occupational wages are also made through the survey.

Industry Staffing Patterns - The occupational make-up of an industry collected by the Occupational Employment Statistics (OES) survey

Standard Occupational Classification (SOC) - The SOC is a system for classifying all occupations in the economy. The 2010 SOC classifies workers at four levels of aggregation: major group, minor group, broad occupation, and detailed occupation. All occupations are clustered into one of the 23 major groups.

Projections

The Texas Workforce Commission’s Labor Market and Career Information Department produces industry and occupation employment projections. The program is funded by the Employment and Training Administration, U. S. Department of Labor. Projections are generated every two years for a 10-year period. The process of making employment projections depends on two main

ingredients: industry employment and occupation employment within each industry (staffing patterns).

Employment Projections - Estimates of projected 10-year industrial and occupational employment for Texas and the 28 Workforce Development Areas.

Long-Term Projection System (LTPS) - Long-Term Industry Projection System (LTPS) was developed through the ALMIS Long-Term Industry Consortium. It is a PC-based system used to produce industry employment projections for Texas and the 28 Workforce Development Areas (WDAs) for a 10-year period. Texas and the WDA historical employment trends and U.S. relationships are used in conjunction with the forecast of Texas unemployment rates, gross state product, population, personal income, and labor force. The projections were developed through various types of regression and shift-share analysis.

Miscellaneous

Help Wanted Online - The Conference Board's data series provides monthly measures of labor demand (advertised vacancies) at the national, regional, state, and metropolitan area levels.

Current Population Survey (CPS) - Monthly household survey of sample households approximately 60,000 of the non-institutional population 16 years of age and older, employment and unemployment, demographic data and related subjects which are analyzed and published by Bureau of Labor Statistics (BLS). Each month, labor force information from this survey is published by Department of Labor in Employment and Earnings, and in the Employment Situation press release. Annual demographic data are published in the Geographic Profile of Employment and Unemployment. Although the CPS is best known as the source for the monthly National unemployment rate, annual average CPS data for states are used in the Local Area of Unemployment Statistics (LAUS) program as benchmarks and monthly data are used either in the extrapolation procedures or directly where the estimates meet BLS reliability standards. The Consumer Price Index (CPI) is produced by BLS.

Texas Geography

Metropolitan Division (MD) - A Metropolitan Statistical Area with a population of 2.5 million which is subdivided into smaller groupings is referred to as Metropolitan Divisions (MDs).

Metropolitan Statistical Area (MSA) - A geographic area that contains at least one urbanized center of 50,000 or more population plus adjacent territory that has a high degree of social and economic integration with the core urban location. An MSA in Texas is made up of one or more counties.

Metro Area - Can refer either to a Metropolitan Statistical Area or a Metropolitan Division. Texas has 25 MSAs, including the Dallas-Fort Worth-Arlington MSA which is subdivided into two MDs.

Workforce Development Area (WDA) - The State of Texas is divided into twenty-eight (28) local workforce development areas.