



Texas Workforce Report

2020 to 2021



**Texas Workforce Commission's
Labor Market & Career Information**

I. Introduction

The 2020 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

Fifteen months after an April 2020 precipitous decline in seasonally adjusted total nonfarm employment, the Texas labor market is poised for a return to pre-COVID levels. Over the month, employment grew 14 instances since April 2020, with the state adding 657,300 jobs from June 2020 to June 2021. The unemployment rate mirrored this movement as it fell 6.4 percentage points from a series-high rate of 12.9 percent in April 2020 to 6.5 percent in June 2021. All 25 metropolitan statistical areas recorded a year-over-year decline in unemployment rates ending June 2021 with an average annual decline of 1.5 points.

Continued claims fell by just under 1.1 million annually from the second highest level on record of around 1.3 million claims as job opportunities improved, with series-high job openings across the state. As employers look to attract needed workers, average hourly wages for all private workers in Texas grew by 6.3 percent annually and marked the highest year-over-year gain in series history to this point.

While all major industries were negatively affected by shutdown orders designed to protect the public from the spread of COVID-19, three industries surpassed pre-coronavirus employment levels by June 2021. As indexed to February 2020, industries that allowed for more telework fared better than industries that rely on in-person physical work. In June 2021, Financial Activities and Professional and Business Services had already recovered from an employment standpoint, while Trade, Transportation, and Utilities led with 101.4 percent of February 2020 employment. The Transportation, Warehousing, and Utilities subsector buoyed the major industry, enjoying 132 consecutive months of positive annual growth as more and more consumers switched to online shopping during the pandemic.

As Texas emerges from COVID, the future looks bright as new employers continue to call the state home and the population swells. The challenge for workforce professionals will be to continue to match employers and job seekers in a post-COVID world in which ever-changing technology and the delivery of goods and services have evolved abruptly this past year.

III. Demographics

General population trends

Between 2019 and 2020, the Texas population grew at a faster rate than the national population, increasing by 1.3 percent as compared to 0.4 percent, respectively. Texas ranked fifth in percentage growth over the year and increased its population more than any other state, adding 373,965 people as noted in the table below.

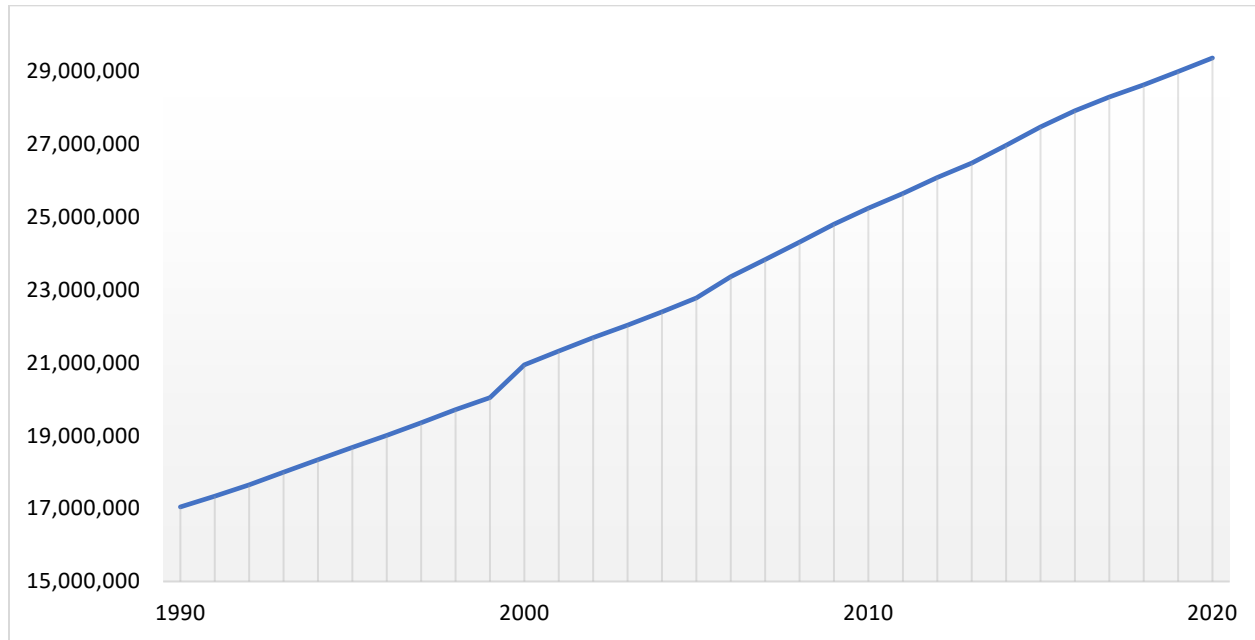
Table 1: Population Growth in Top Five States and the U.S., 2019 to 2020

Area	2019	2020	OTY Change	OTY % Change
United States	328,329,953	329,484,123	1,154,170	0.4%
Texas	28,986,794	29,360,759	373,965	1.3%
Florida	21,492,056	21,733,312	241,256	1.1%
Arizona	7,291,843	7,421,401	129,558	1.8%
North Carolina	10,501,384	10,600,823	99,439	0.9%
Georgia	10,628,020	10,710,017	81,997	0.8%

Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2019 to July 1, 2020

Figure 1 shows the historical population trends in Texas since 1990. The U.S. Census Bureau estimates Texas population at 29,360,759 persons in 2020. That represents an increase of 4.1 million persons or 16.3 percent over the last decade.

Figure 1: Texas Historical Population Trend, 1990 to 2020



Data Source: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 1990 to July 1, 2020

Population growth among metropolitan areas in Texas continues to increase. Texas metro areas held the first, third, fourth and ninth rankings in actual growth among Metropolitan Statistical Areas in the United States and Puerto Rico from July 1, 2019 to July 1, 2020. The Dallas-Fort Worth-Arlington MSA added the most people of any MSA nationally from 2019 to 2020. The Houston-The Woodlands-Sugar Land and Austin Round-Rock MSAs ranked third and fourth, respectively for number of people added from 2019 to 2020, and San Antonio-New Braunfels ranked ninth. All six of Texas' largest metropolitan areas experienced growth over the year as shown in Table 2.

The table below also contains percentages of population with a high school diploma or higher and a bachelor's degree or higher for the largest MSAs. Educational attainment is closely watched since it is highly correlated with high-wage jobs.

Table 2: Annual Growth Rates and Educational Attainment in Texas' Largest Metropolitan Statistical Areas, 2019-2020

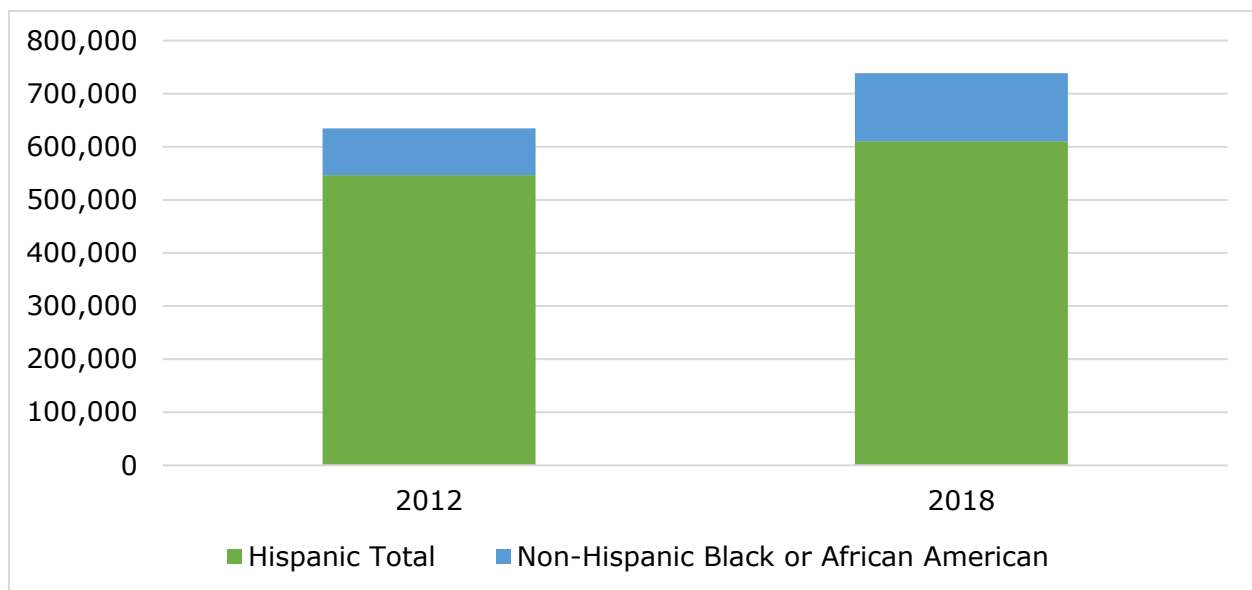
Texas Metropolitan Statistical Area	Population Estimate July 1, 2019	Population Estimate July 1, 2020	Number Change, 2019-2020	Percent Change, 2019-2020	Percent of Population with HS Diploma and Above	Percent of Population with Bachelor's Degree and Above
Dallas-Fort Worth-Arlington	7,574,390	7,694,138	119,748	1.6%	86.6%	36.3%
Houston-The Woodlands-Sugar Land	7,063,400	7,154,478	91,078	1.3%	84.6%	33.3%
San Antonio-New Braunfels	2,550,147	2,590,732	40,585	1.6%	85.6%	28.8%
Austin-Round Rock	2,228,106	2,295,303	67,197	3.0%	90.4%	46.2%
McAllen-Edinburg-Mission	867,221	875,200	7,979	0.9%	67.5%	19.0%
El Paso	842,376	846,192	3,816	0.5%	79.6%	23.3%

Data Sources: U.S. Census Bureau, Annual Estimates of Resident Population, July 1, 2019 to July 1, 2020; U.S. Census Bureau, American Community Survey, 1-Year Estimates, 2019. Educational attainment Age 25 and older.

Minority Business Ownership

As Texas becomes more diverse, so do our businesses. According to the US Census Bureau's 2018 Annual Business Survey, 52,910 Texas firms are Hispanic-owned, with a payroll of \$19.8 billion and 610,308 employees. In 2018, 9,607 Texas firms are owned by non-Hispanic African-Americans, with a payroll of \$3.2 billion and 128,105 employees. According to the 2012 Census Bureau Survey of Business Owners, 48,596 Texas firms were Hispanic-owned, with a payroll of \$15.3 billion and 546,523 employees. In 2012, 9,042 Texas firms were owned by non-Hispanic African-Americans with a payroll of \$2.1 billion and 88,175 employees.

Figure 2: Number of Paid Employees by both Hispanic Total and Non-Hispanic Black or African American Business Owners in Texas 2012 and 2018

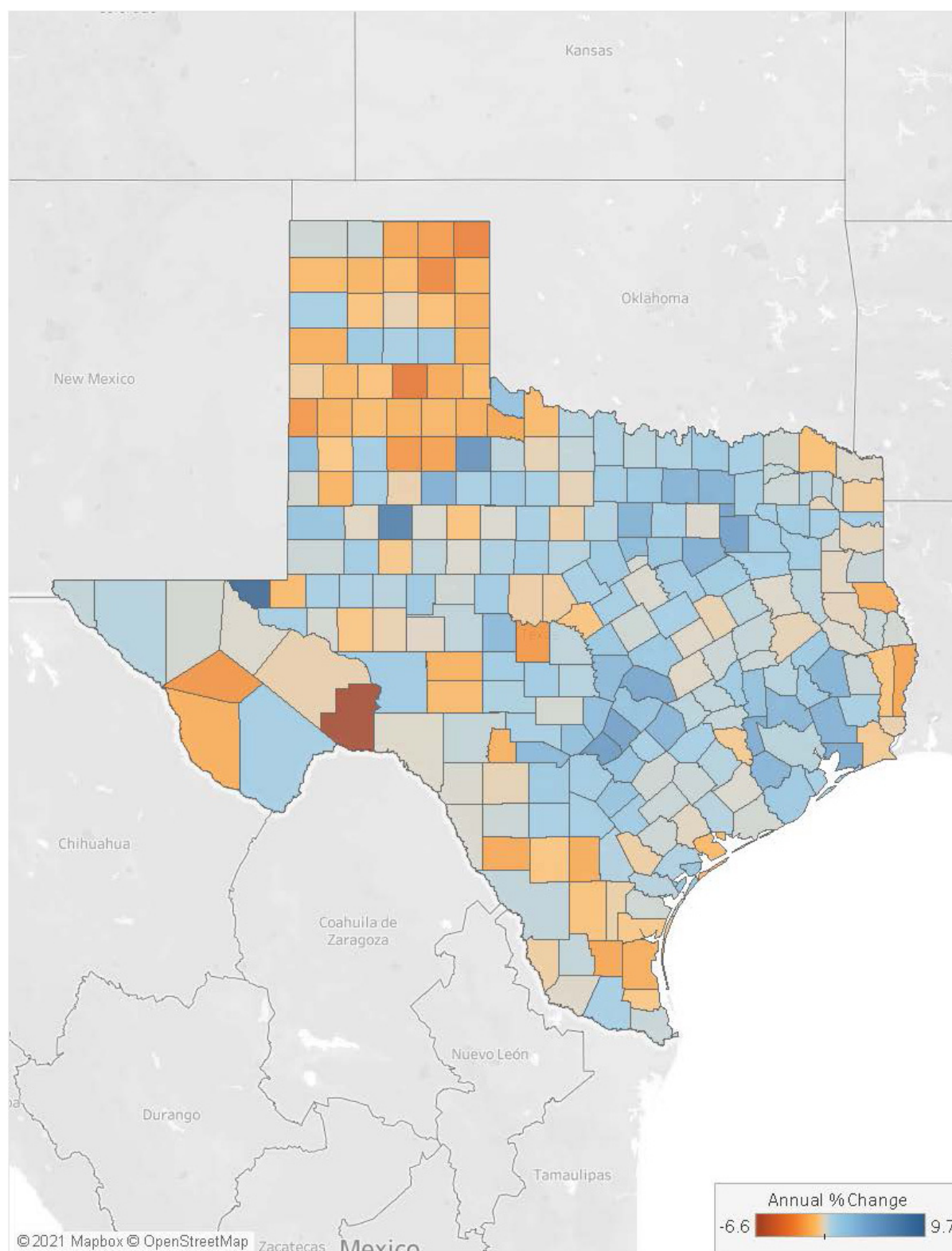


Data Sources: U.S. Census Bureau, Survey of Business Owners, 2012; U.S. Census Bureau, American Business Survey, 2018

County Population Growth

Population growth rates varied considerably across counties from 2019 to 2020, ranging from a low of -6.6 percent in Terrell County to a high of 9.7 percent in Loving County as shown in Figure 3 below. Twenty counties had a population growth rate of 3.0 percent or higher. Fifteen of the top 20 counties were also located within Metropolitan Statistical Areas. This suggests that in Texas, metropolitan areas continue to be a target for population growth. From 2019 to 2020, 165 counties experienced growth over the year, while 89 counties experienced a decline in population.

Figure 3: Annual Population Growth Rates for Counties in Texas, 2019-2020



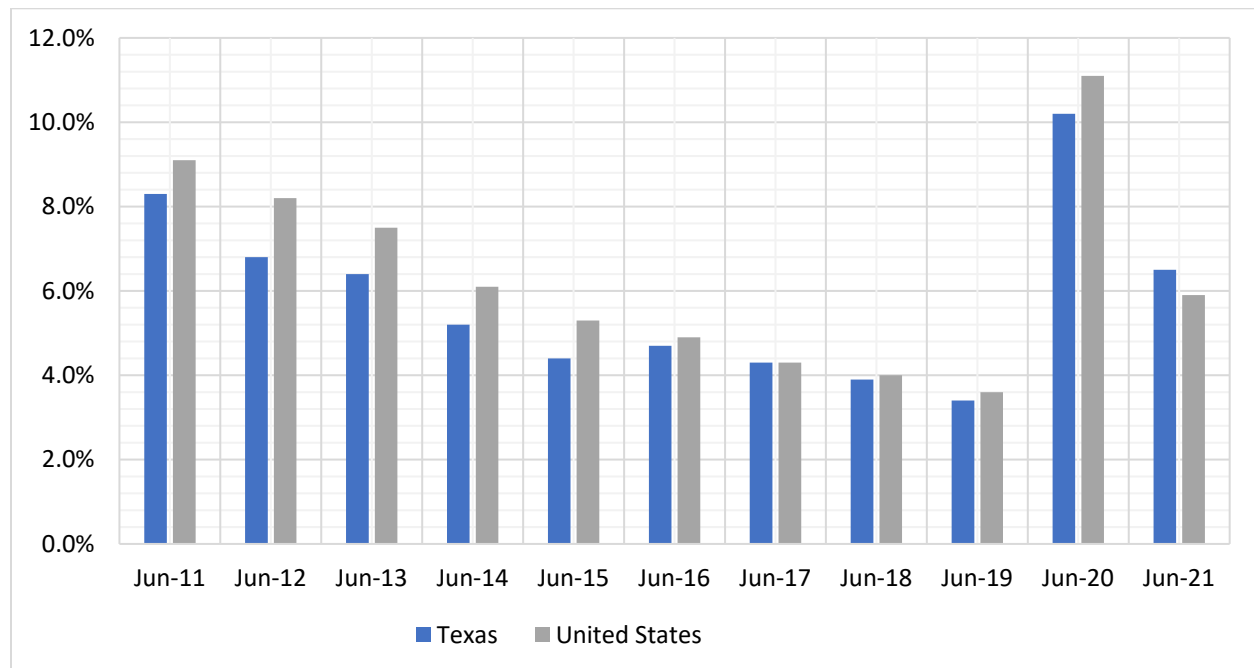
Data Sources: U.S. Census Bureau, Annual Estimates of Resident Population for Counties in Texas, July 1, 2019 to July 1, 2020

IV. Local Area Unemployment Statistics

Unemployment & Labor Force Participation Rates

Due to the impact of the novel coronavirus in 2020, labor forces across the United States and the world were heavily impacted by government mandated closures of many industries, causing both labor force participation rates to drop and unemployment rates to rise to unprecedented levels. Since June 2020 (at 10.2 percent), the unemployment rate for Texas has dropped by 3.7 percentage points only one year later. Texas, for a variety of economic and demographic reasons, has weathered COVID-19 better thus far than many other states. More recently, the unemployment rate for Texas in June 2021 (at 6.5 percent) is only six-tenths of a percentage point above that of the United States rate of 5.9 percent 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 June 2021, 62.2 percent of Texas' civilian non-institutional population participated in the labor force. The United States had a 61.6 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

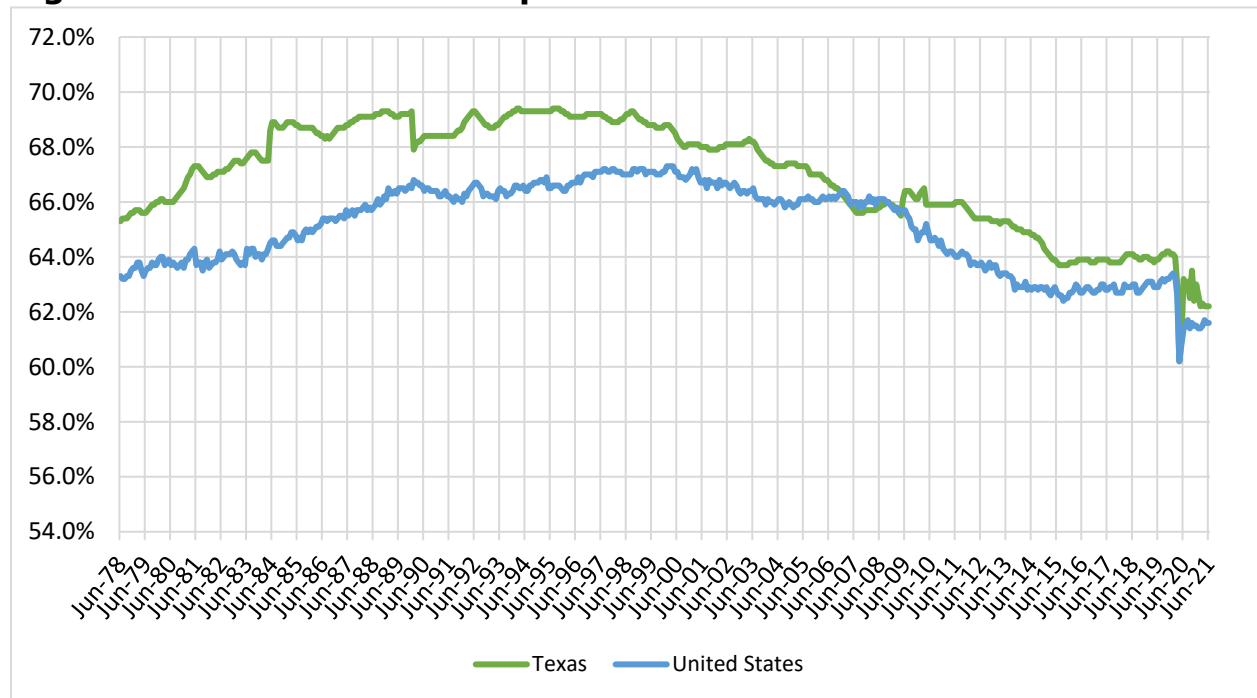
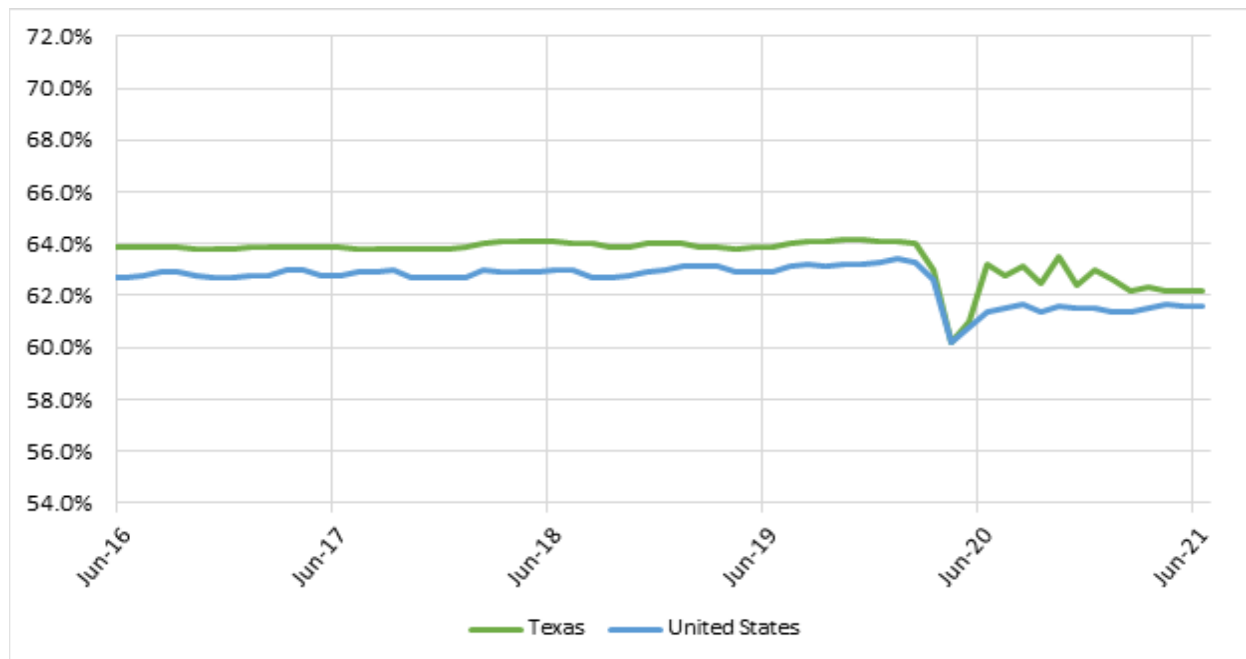


Figure 6: Labor Force Participation Rates June 2016 to June 2021



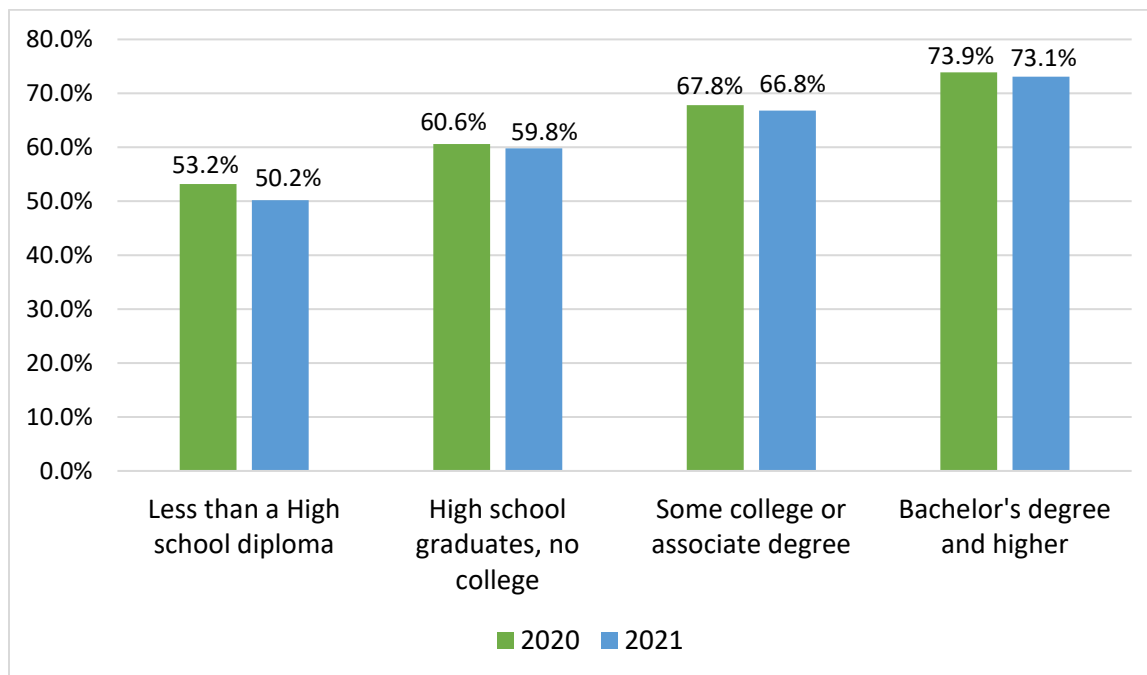
Data Source: Local Area Unemployment Statistics (Seasonally Adjusted)

As shown in the figure above, between June 2016 and February 2020, the labor force participation rate held nearly constant at about 64 percent for Texas and 63 percent for the United States. In April 2020, both Texas and the United States hit their lowest rates, both at 60.2 percent. The rate has not yet risen to pre-pandemic levels; however, Texas continues to have a participation rate that is higher than that of the United States.

Educational Attainment

Figure 7 displays the average LFPR by educational attainment as of June 2020 and 2021. A clear trend is displayed, showing that those with more education have a higher likelihood of participating in the labor force. However, the effects of COVID-19 can be seen when comparing 2020 to 2021 data. Participation rates dropped across all groups during that time. Those with less than a high school diploma were the most affected, as they experienced a drop of 3 percentage points.

Figure 7: Texas' Labor Force Participation Rate by Educational Attainment



Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Table 3 lists the June 2021 LFPR, Employment to Population Ratio (EP), and Unemployment Rate (U Rate), including a comparison to what the estimate was a year ago. The table shows those with more education have a higher tendency both of participating in the labor force and being employed. Those with some college or an associate degree have an unemployment rate of less than seven percent, while the unemployment rate of those with less than a high school diploma is highest at 9.4 percent.

Table 3: Educational Attainment by Labor Force Statistics

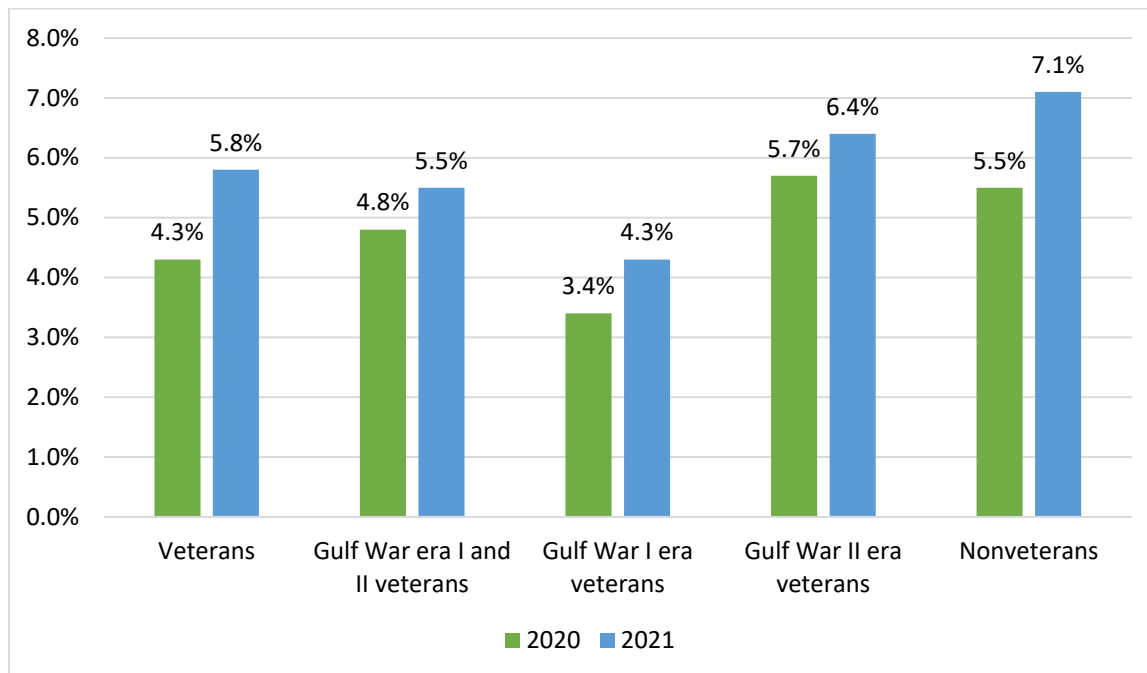
Education Level	LFPR	Annual Change	EP Ratio	Annual Change	U Rate	Annual Change
Less than a high school diploma	50.2%	-3.0%	45.4%	-3.9%	9.4%	2.1%
High school graduates, no college	59.8%	-0.8%	55.0%	-1.8%	7.9%	1.8%
Some college or associate degree	66.8%	-1.0%	62.3%	-2.3%	6.8%	2.0%
Bachelor's degree and higher	73.1%	-0.8%	70.1%	-1.8%	4.2%	1.4%

Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Veterans

Figure 8 compares unemployment rates for veterans and nonveterans, including the rates for veterans of Gulf War I and II. As with other demographic groups, Veterans experienced an increase in unemployment rates due to COVID-19. The comparison shows that over the last two years veterans in Texas, for the most part, have 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 8: Unemployment Rates for Veterans in Texas

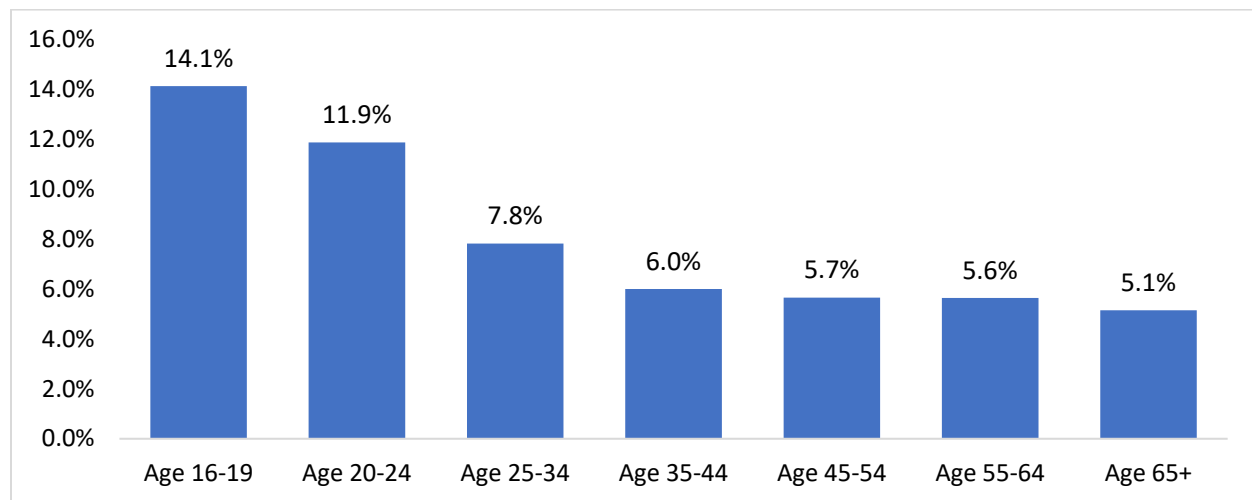


Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Age Groups

Unemployment rates in Texas vary noticeably by age group. Figure 9 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 7.8 percent or below.

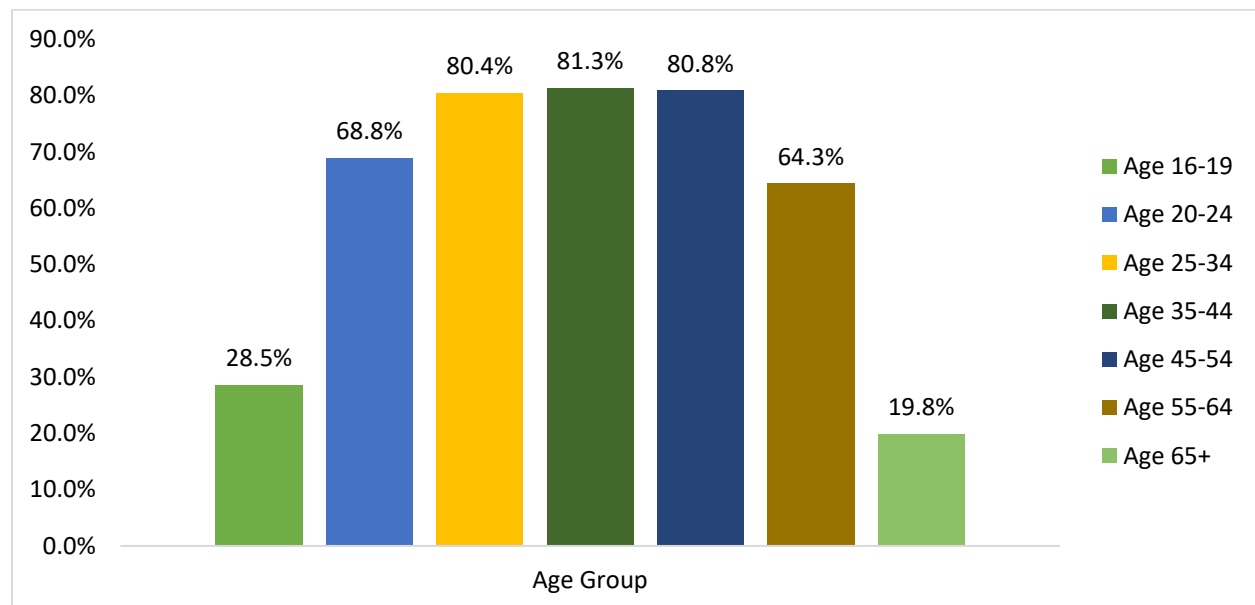
Figure 9: Unemployment Rates by Age Group in Texas



Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Figure 10 lists the LFPR 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 25 to 54 have the highest LFPRs, all of which are above 80 percent.

Figure 10: Labor Force Participation Rate by Age Group

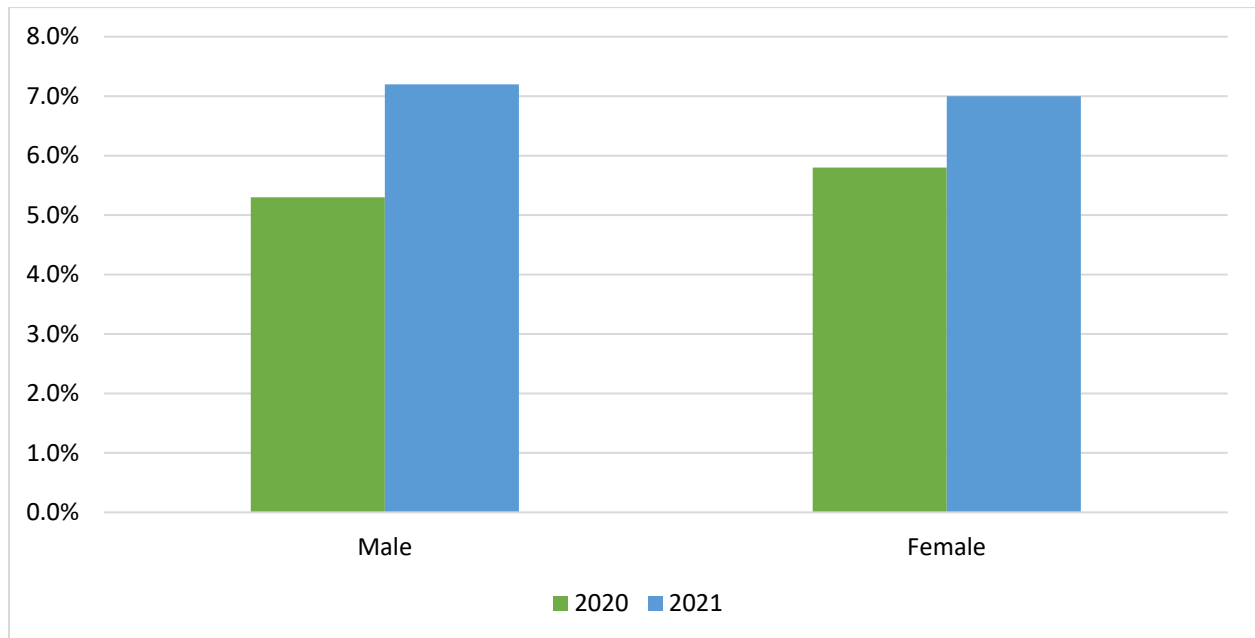


Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Gender

Figure 11 illustrates the unemployment rates for Males and Females age 16 and up for 2020 and 2021 in Texas. In 2020, males had a lower unemployment rate than females. This was not the case in 2021. This may have been due to a much lower labor force participation rate for women (55.0 percent) than men (70.7 percent) resulting from Covid-19. Due to the pandemic, the 12-month rolling average unemployment rate for both groups has increased.

Figure 11: Unemployment Rate by Gender

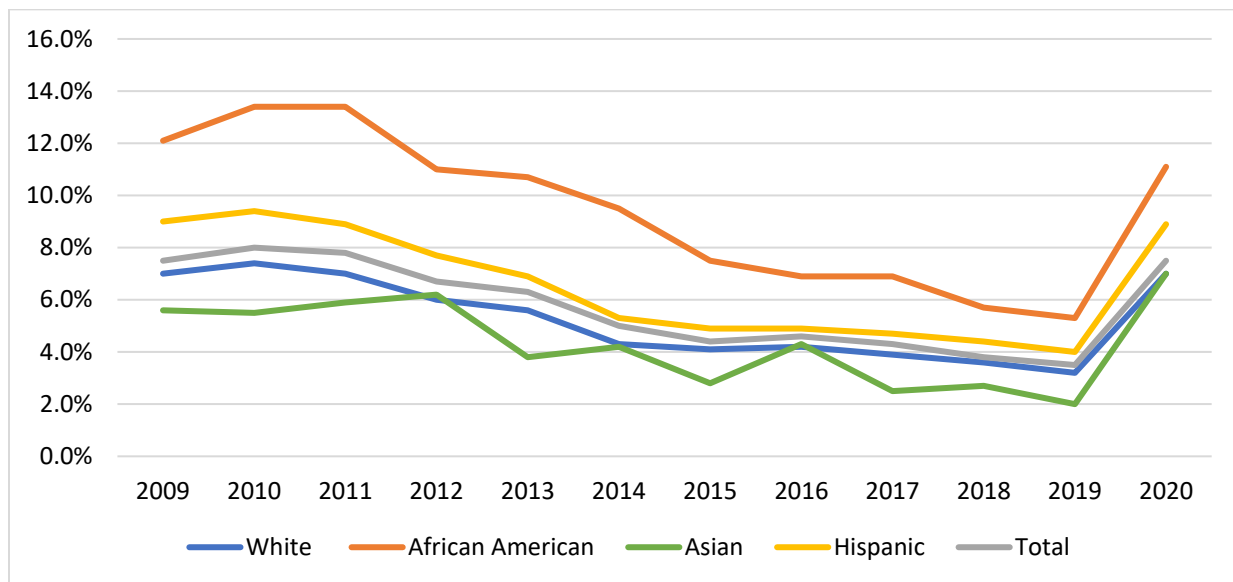


Data Source: Local Area Unemployment Statistics & Current Population Survey, 12-month rolling average July 2020 to June 2021 (Based on CPS)

Unemployment Rates by Race

African Americans have historically had higher unemployment rates than other race groups in Texas. Starting in 2012, we can see the gap in unemployment rates between African Americans and other races begin to close. Despite the unemployment rates rising for all groups in 2020 due to COVID-19, African Americans are closer in line with the trends in other racial groups.

Figure 12: Unemployment Rates by Race in Texas

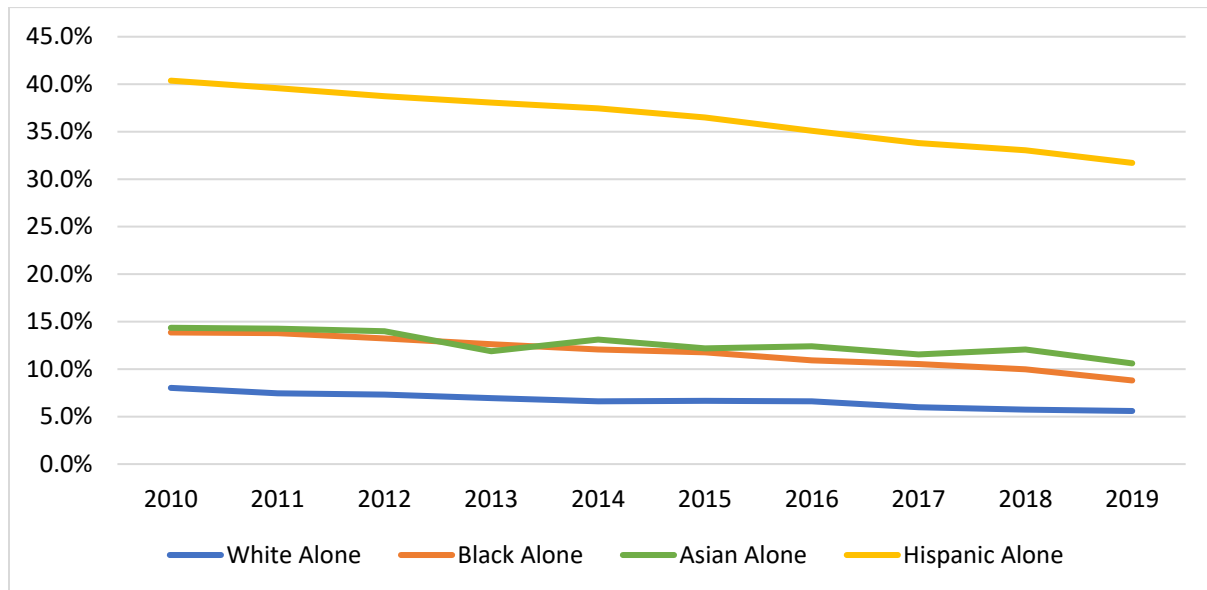


Data Source: BLS Geographic Profile, Table 14 (2009-2020)

Educational Attainment by Race

Since 2010, people identifying as Hispanic have trailed behind other races in terms of educational attainment with over 30 percent of the population receiving less than a H.S. Degree or equivalent. Hispanics have shown the most improvement since 2010 as the percentage for this category fell from a 2010 level 40.4 percent to 31.7 percent in 2019. White alone in 2019 had the lowest percentage of other races with less than a H.S. degree at 5.6 percent.

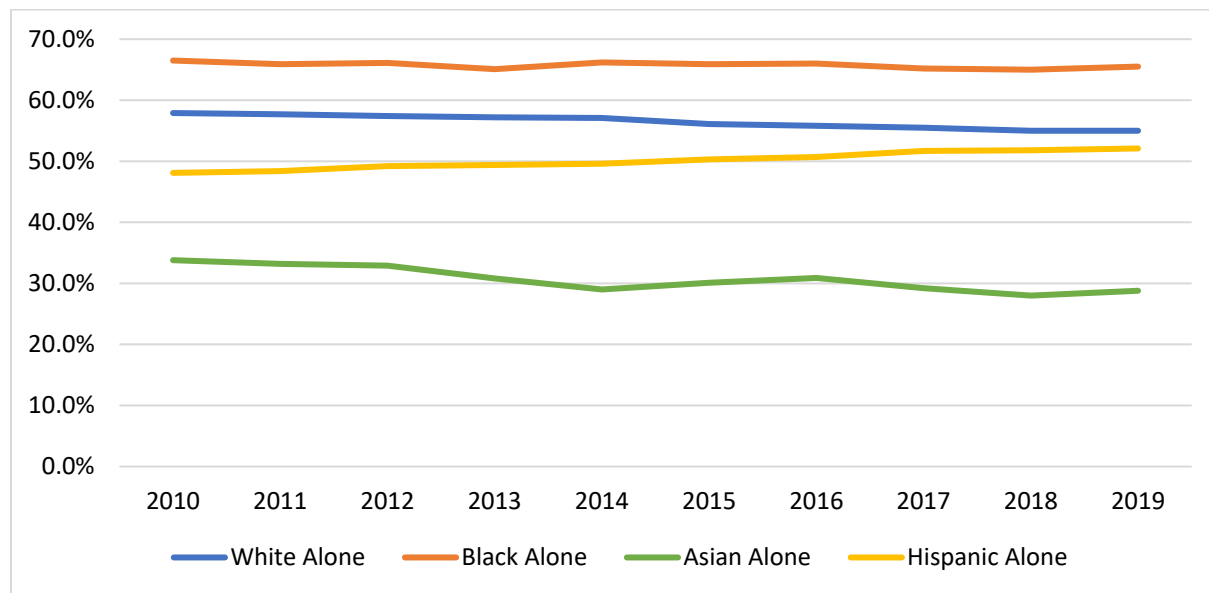
Figure 13: Educational Attainment by Race: Less than High School



Data Source: American Community Survey 1-Year Estimates

Over the last decade, people that identify as Asian alone have experienced a steady decline in the rate of people that obtain a High School degree and/or Associate's degree. In 2014 the rate drops below 30 percent, the lowest of all races. One reason for this drop could be due to the fact that Asians are getting Bachelor's degrees and higher at a higher rate over the same period as seen in Figure 14.

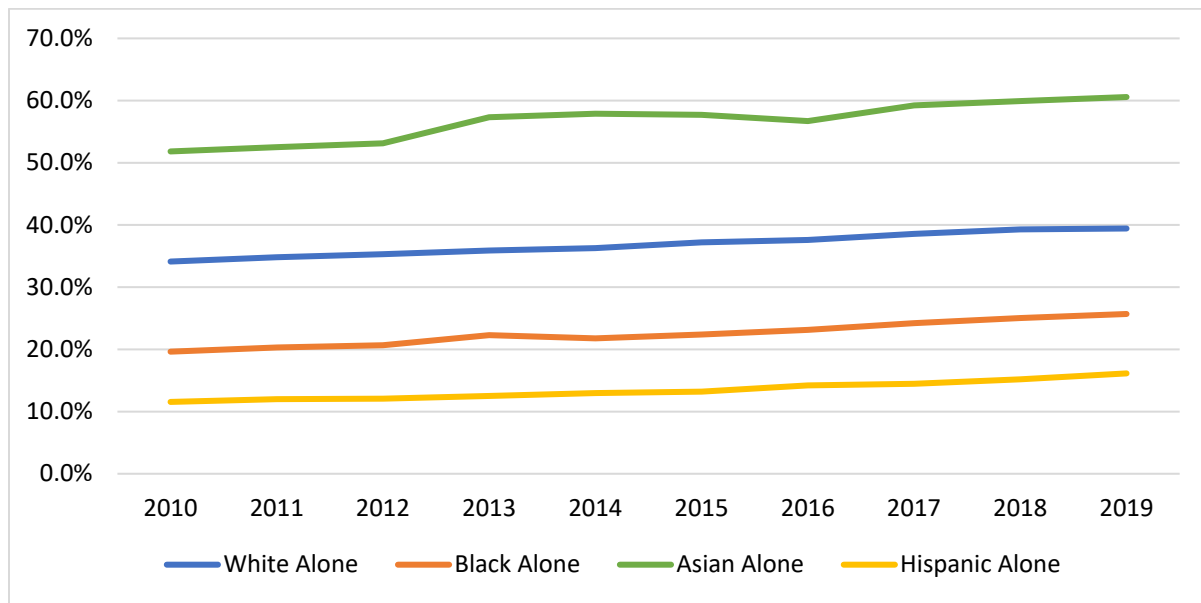
Figure 14: Educational Attainment by Race: High School but less than Bachelor's Degree



Data Source: American Community Survey 1-Year Estimates

In 2019, Hispanics continued to trail other races in terms of Bachelor's Degree or higher with only 16.1 percent of those aged 25 years or older having attained this level, although this has improved slightly. Asians continue to lead all races in this category with more than half of all Asians receiving a Bachelor's Degree or higher.

Figure 15: Educational Attainment by Race: Bachelor's Degree or higher

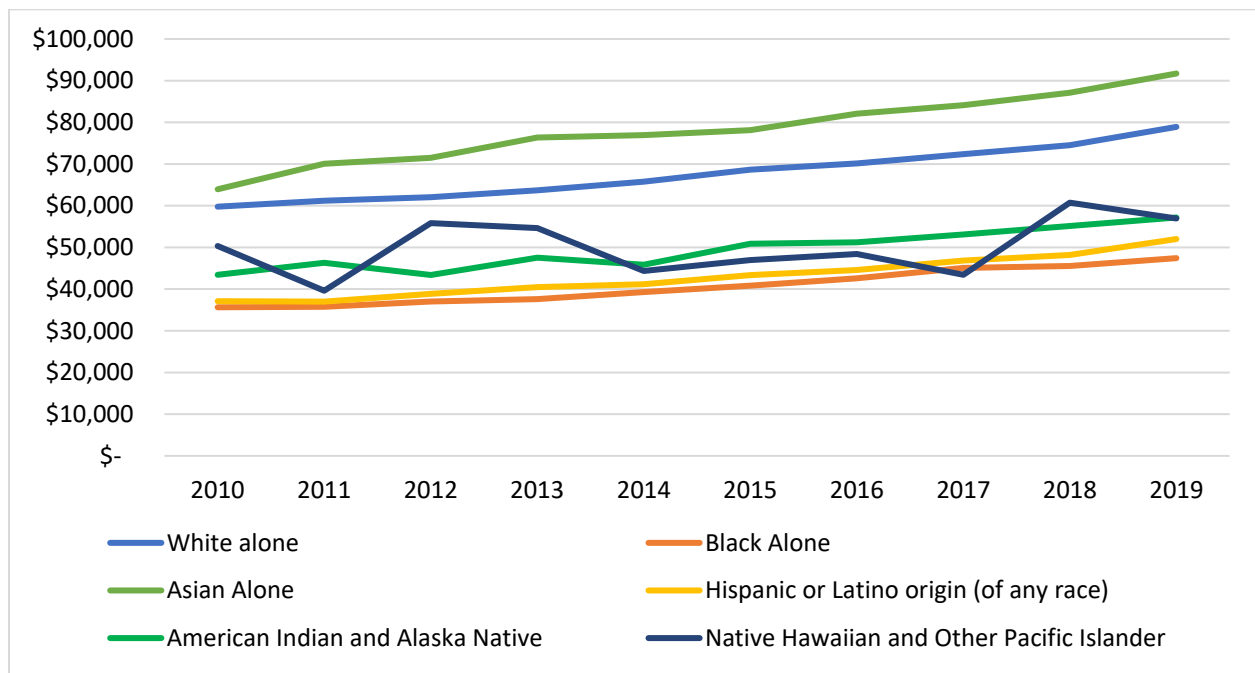


Data Source: American Community Survey 1-Year Estimates

Median Household Income by Race

Median household incomes have been steadily increasing for most racial groups over the last 10 years. Save for Native Hawaiians and Other Pacific Islanders, median household incomes for racial groups have continued to trend upwards from 2010 through 2019. In 2019, Asians had the highest Median household income of \$91,706.

Figure 16: Median Household Income by Race

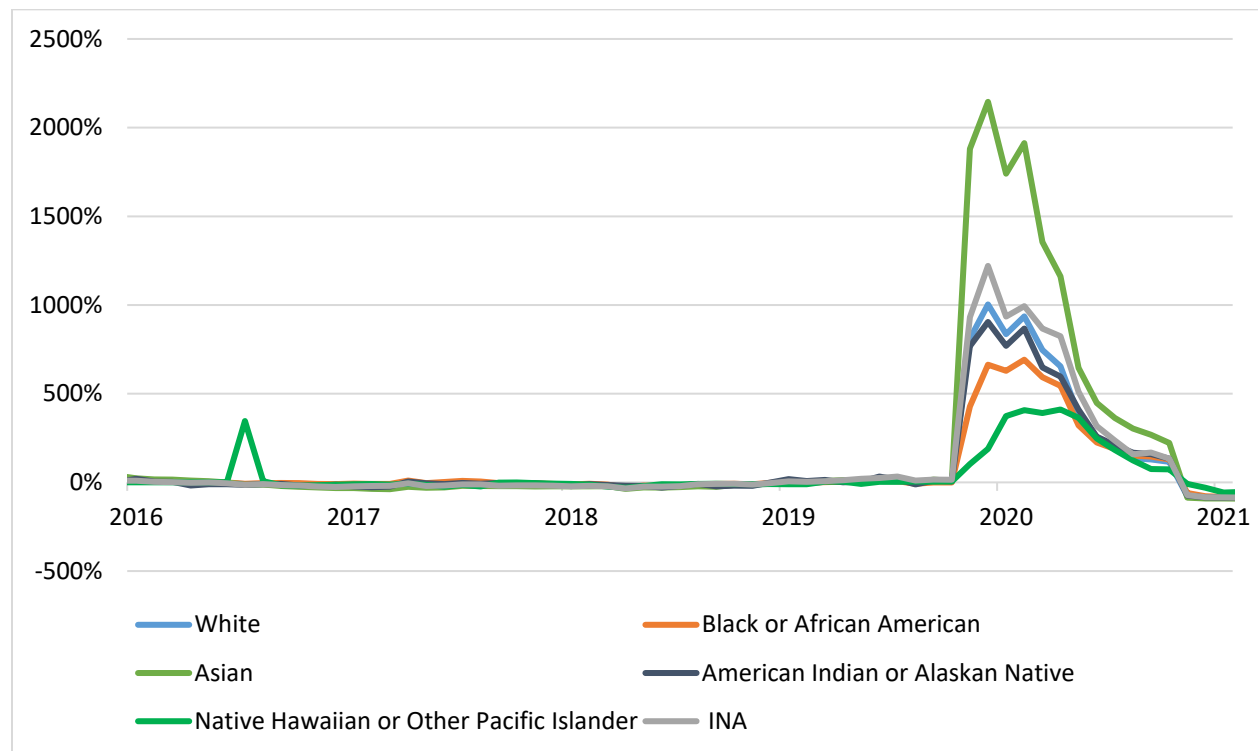


Data Source: American Community Survey 1-Year Estimates

Unemployment Claimant Characteristics

Figure 17 shows the over the year percent change in the number of UI claimants by race. In May 2020, Asians experienced an OTY claims increase of over 2000 percent, the largest of all races. Native Hawaiian or Other Pacific Islanders were the least affected of all races, experiencing an increase of over 400 percent in September 2020.

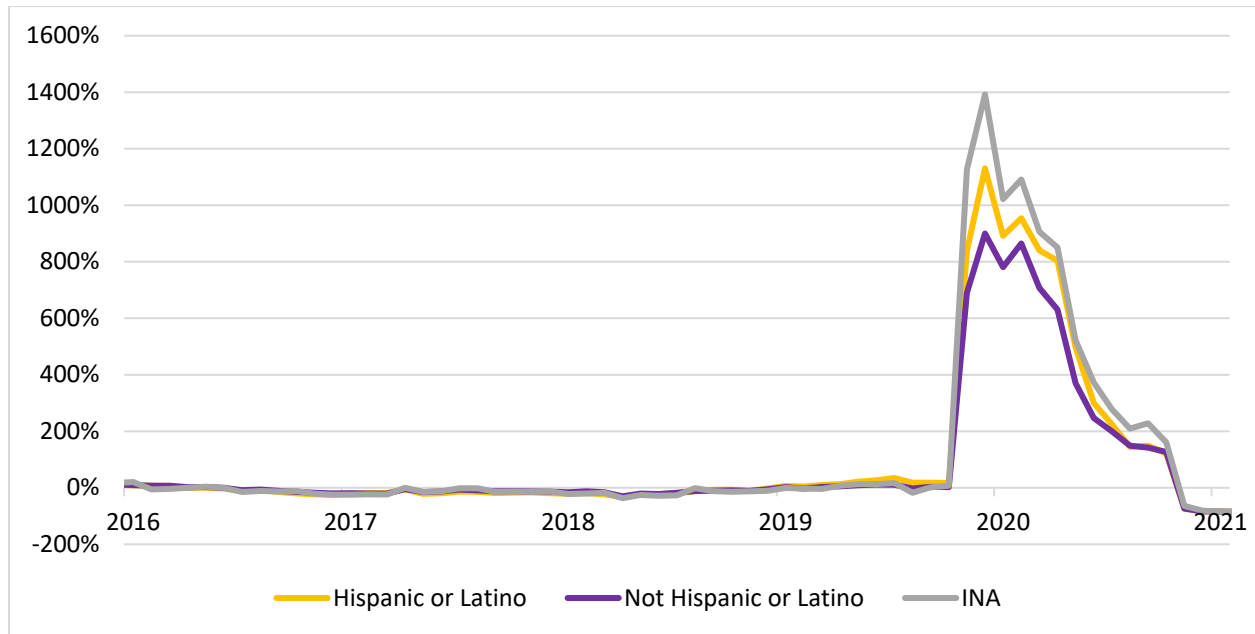
Figure 17: UI Claimants by Race: OTY Percent Time Series



Data Source: DOL ETA Characteristics of Unemployment Insurance Claimants

As shown in Figure 18, Hispanics or Latinos experienced a higher percent increase in UI claimants over Not Hispanics or Latinos. In May 2020, Hispanics or Latinos experienced an increase of 1,131 percent versus a 900 percent in the latter group. In June 2021, both groups experienced an OTY UI claims decrease of 84 percent.

Figure 18: UI Claimants by Ethnicity: OTY Percent Time Series

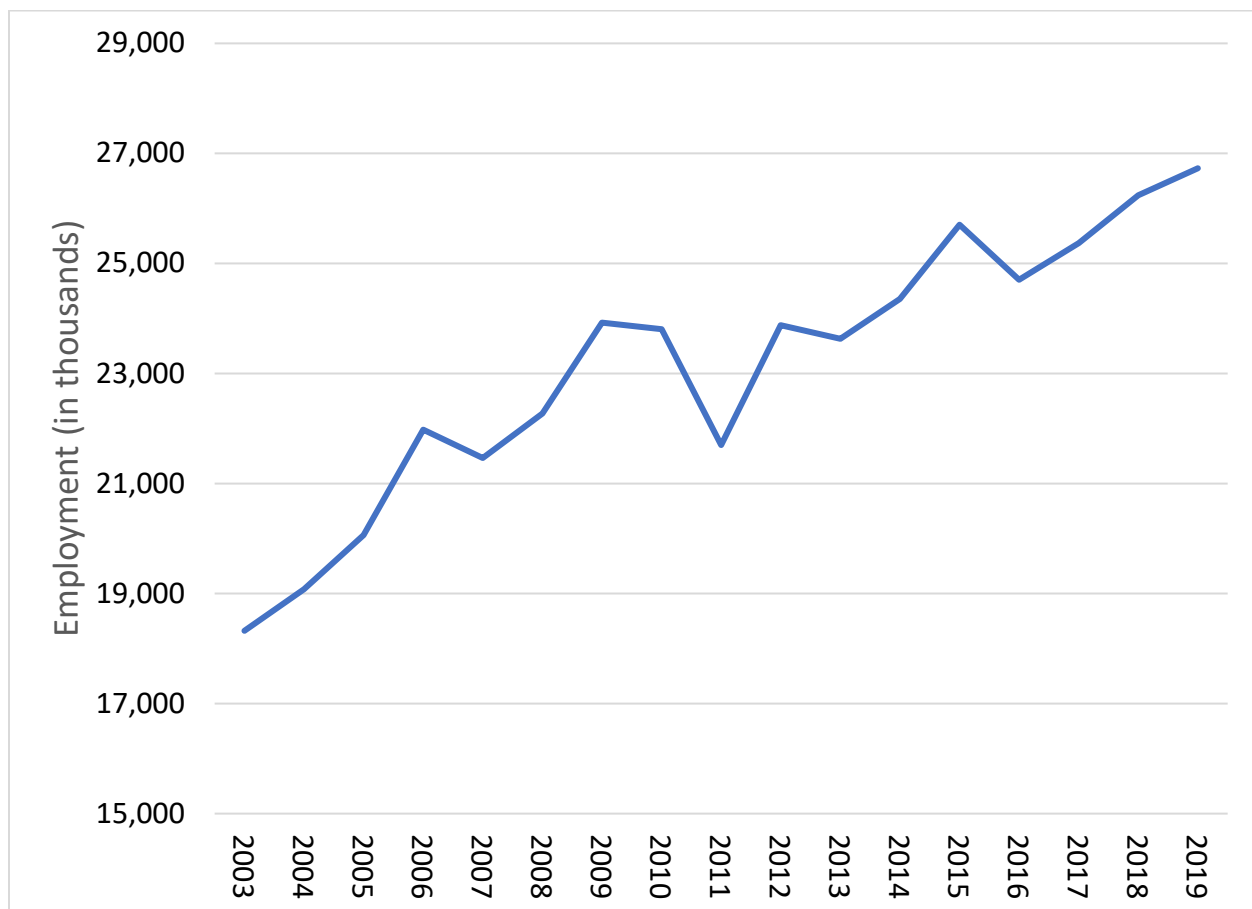


Data Source: DOL ETA Characteristics of Unemployment Insurance Claimants

V. Telework

COVID-19 brought about great challenges in the world of work as employers were faced with shifting as much work as possible to a virtual environment. On a national level according to the results of the Bureau of Labor Statistics' American Time Use Survey (ATUS), those workers who reported as having worked from home on an average day was already increasing before COVID as the number of employees grew from 18.3 million in 2003 to 26.7 million in 2019. The advent of the Coronavirus pushed previous work arrangements to the limits as social distancing mandates were put in place nationwide. According to the latest ATUS results, "the percent of employed persons working at home on days they worked nearly doubled, rising from 22 percent in 2019 to 42 percent in 2020."

Figure 19: Number of Employed Working from Home on Average Day, U.S.

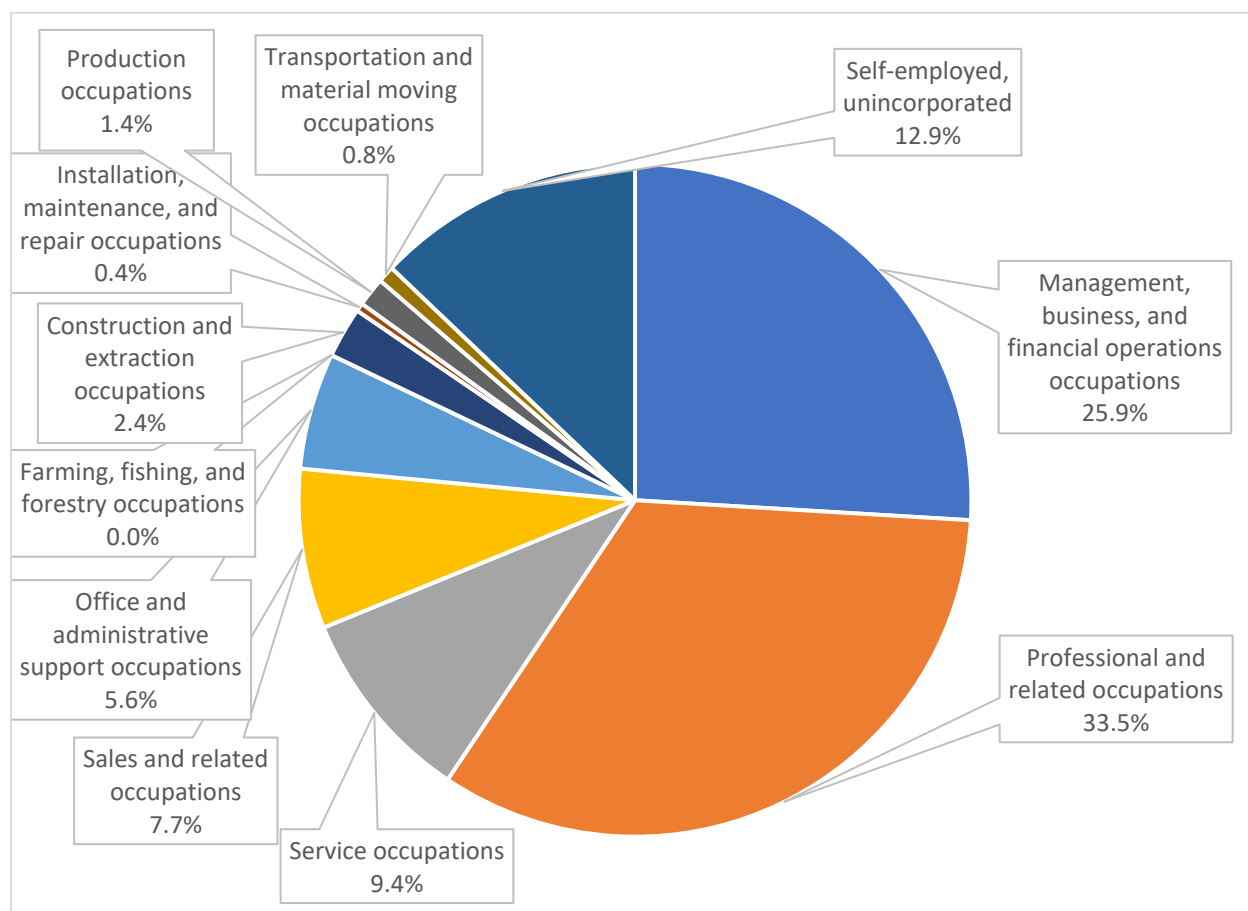


Source: Bureau of Labor Statistics, American Time Use Survey

The ability to work from home is conducive to many conditions including but not limited to occupational type and internet availability. In this report we will explore these two conditions and how this plays a role along racial and ethnic groups as well as how teleworking status varies by educational attainment. Finally, we will explore how internet connectivity varies among different regions of the state.

Of the 10 main occupational categories released by the ATUS in 2019, nationwide Professional and Related Occupations had the largest share of the total for all occupational groups that worked from home on an average day at 33.5 percent. This was followed by the Management, Business, and Financial Operations Occupations group with 25.9 percent of all occupational types working from home on an average day. The next group's share of the total drops by almost half with 12.9 percent of those working from home on an average day being Self-employed, unincorporated. After this, the remaining seven occupational groups proportions drop to single digits.

Figure 20: Participating on an Average Day – Working from Home in 2019 by Occupation Type



Source: Bureau of Labor Statistics, American Time Use Survey

When looking at the Census Bureau’s Occupation Classification System which is based on the Standard Occupational Classification System, we find that *Professional and Related Occupations* is composed of Computer, Engineering, and Science Occupations as well as Education, Legal, Community Service, Arts, and Media Occupations, and Healthcare Practitioners and Technical Occupations. When viewing ONET job tasks for some of these occupations, we see many job tasks that can be done remotely such as *designing test plans, scenarios, scripts, or procedures* for Software Quality Assurance Analysts and Testers, or *produce three-dimensional models, using computer-aided design (CAD) software* for Mechanical Drafters.

Occupational groups that reported little work from home status such as Construction and Extraction have far more tasks that must be completed in person. Construction Laborers must *lubricate, clean, or repair machinery, equipment, or tools*, while Electricians may be called upon to *connect wires to circuit breakers, transformers, or other components*.

According to the U.S. Census Bureau American Community Survey's 1-Year Estimates, the top five occupational groups varied between racial and ethnic groups in Texas. For African American Alone, Office and Administrative Support Occupations and Management, Business, and Financial Occupations were the top two groups with 13.3 percent and 12.9 percent respectively. For Asians, Computer, Engineering, and Science Occupations represented the largest share of people working in this career field with 21.2 percent, followed by Management, Business, and Financial Occupations at 17.7 percent. White Alone, Not Hispanic Texans had the largest share working in Management Business, and Financial Occupations at 21.2 percent followed by Education, Legal, Community Service, Arts, and Media Occupations with 13.5 percent.

For those who identified as Hispanic, the largest occupational group was Construction and Extraction Occupations with 13.0 percent followed by Office and Administrative Support Occupations and Management, Business, and Financial Occupations at 10.2 percent, each. Food Preparation and Serving Related Occupations rounded the top five at 8.0 percent. Coincidentally, this last group also has a high degree of tasks that must be performed in person and is less conducive to telework.

Table 4: Race/Race Ethnicity by Top Five Occupation Groups, African American Alone

Total	1,693,010	100.0%
Office and Administrative Support Occupations	224,694	13.3%
Management, Business, and Financial Occupations	218,109	12.9%
Education, Legal, Community Service, Arts, and Media Occupations	168,328	9.9%
Sales and Related Occupations	162,697	9.6%
Transportation Occupations	128,850	7.6%

Table 5: Race/Race Ethnicity by Top Five Occupation Groups, Asian Alone

Total	763,589	100.0%
Computer, Engineering, and Science Occupations	161,904	21.2%
Management, Business, and Financial Occupations	135,169	17.7%
Healthcare Practitioners and Technical Occupations	85,919	11.3%
Sales and Related Occupations	70,312	9.2%
Education, Legal, Community Service, Arts, and Media Occupations	67,346	8.8%

Table 6: Race/Race Ethnicity by Top Five Occupation Groups, Hispanic

Total	5,234,564	100.0%
Construction and Extraction Occupations	681,212	13.0%
Office and Administrative Support Occupations	534,485	10.2%
Management, Business, and Financial Occupations	531,796	10.2%
Sales and Related Occupations	520,391	9.9%
Food Preparation and Serving Related Occupations	416,741	8.0%

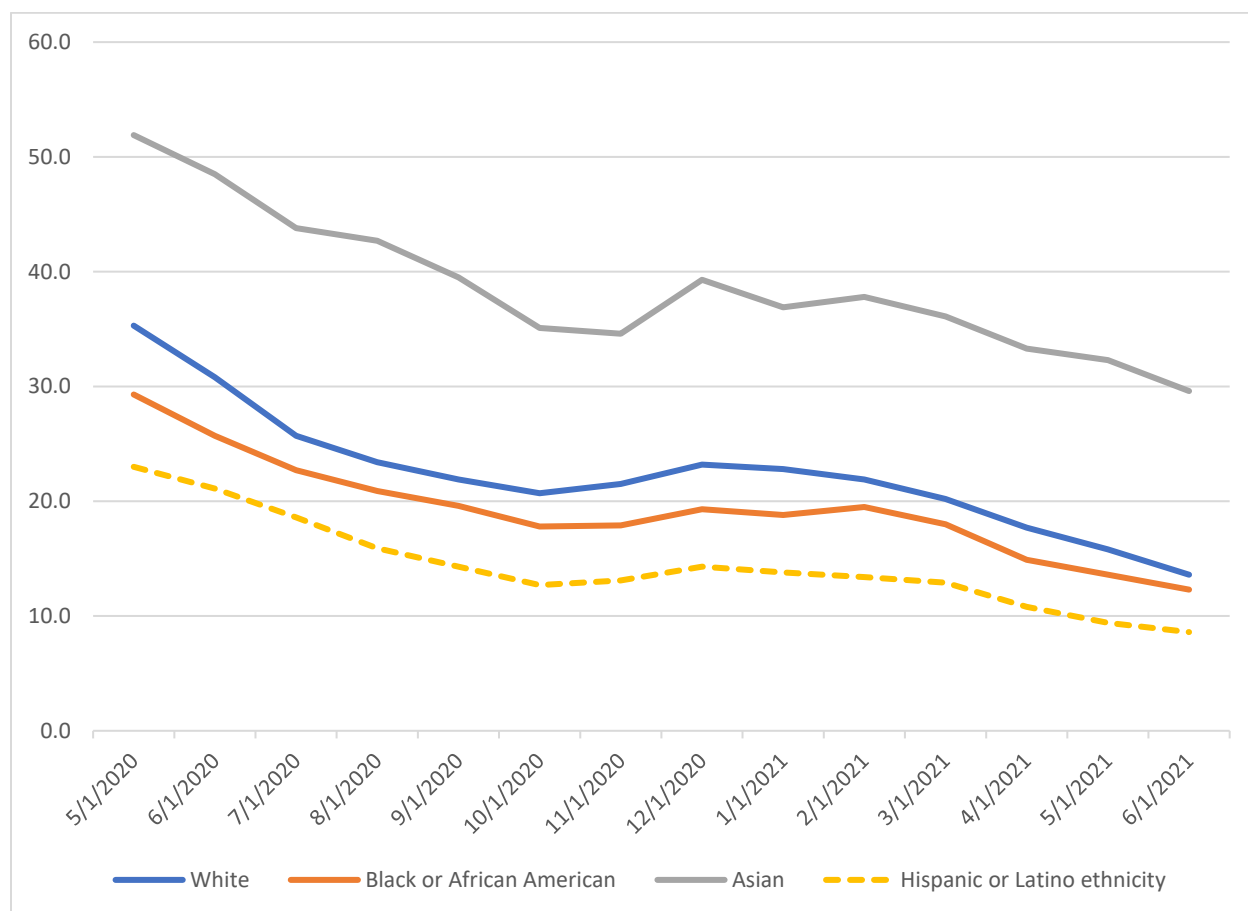
Table 7: Race/Race Ethnicity by Top Five Occupation Groups, White Alone

Total	5,920,422	100.0%
Management, Business, and Financial Occupations	1,253,558	21.2%
Education, Legal, Community Service, Arts, and Media Occupations	798,629	13.5%
Sales and Related Occupations	682,518	11.5%
Office and Administrative Support Occupations	630,110	10.6%
Computer, Engineering, and Science Occupations	430,442	7.3%

Source Tables 4-7: U.S. Census Bureau, 2019 American Community Survey Texas 1-Year Estimates

For the nation, according to the joint U.S. Census Bureau/Bureau of Labor Statistics' Current Population Survey (CPS), Asians had the highest proportion of people who teleworked because of the Coronavirus Pandemic from the start of the program's tracking in May 2020 through June 2021.

Figure 21: Persons Who Teleworked because of the Coronavirus Pandemic, U.S. by Race & Ethnicity



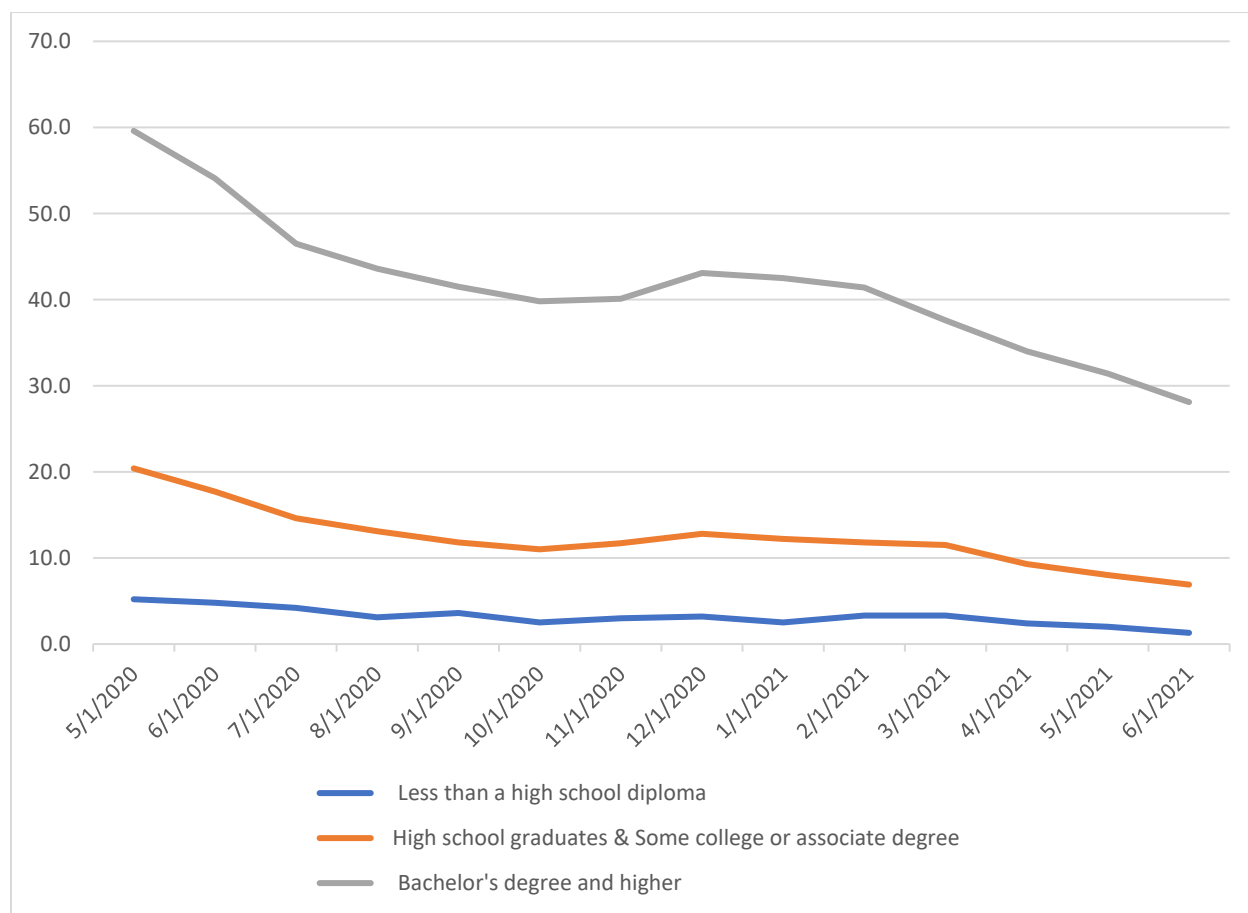
Source: Current Population Survey

In May 2020, just above half of all employed Asian people worked from home due to Coronavirus. This contrasts with the two racial and ethnic groups who had the lowest rates of telework with Black or African Americans at 29.3 percent and those with Hispanic or Latino Ethnicity at 23.0 percent. Telework participation rates for all groups fell overtime as the economy reopened and restrictions fell with about 30.1 percent of Asian people teleworking in June 2021 compared to 12.3 percent of White people, 10.8 percent of Black or African American, and 8.0 percent for people of Hispanic or Latino Ethnicity.

Persons who teleworked in the U.S. because of coronavirus also varied by level of educational attainment with those employed individuals having attained a

Bachelor's degree or higher being far more likely to telework versus employed individuals with less than a high school diploma or those with a high school education up to some college less than a four year degree.

Figure 22: Persons Who Teleworked because of the Coronavirus Pandemic, U.S. by Educational Attainment



Source: Current Population Survey

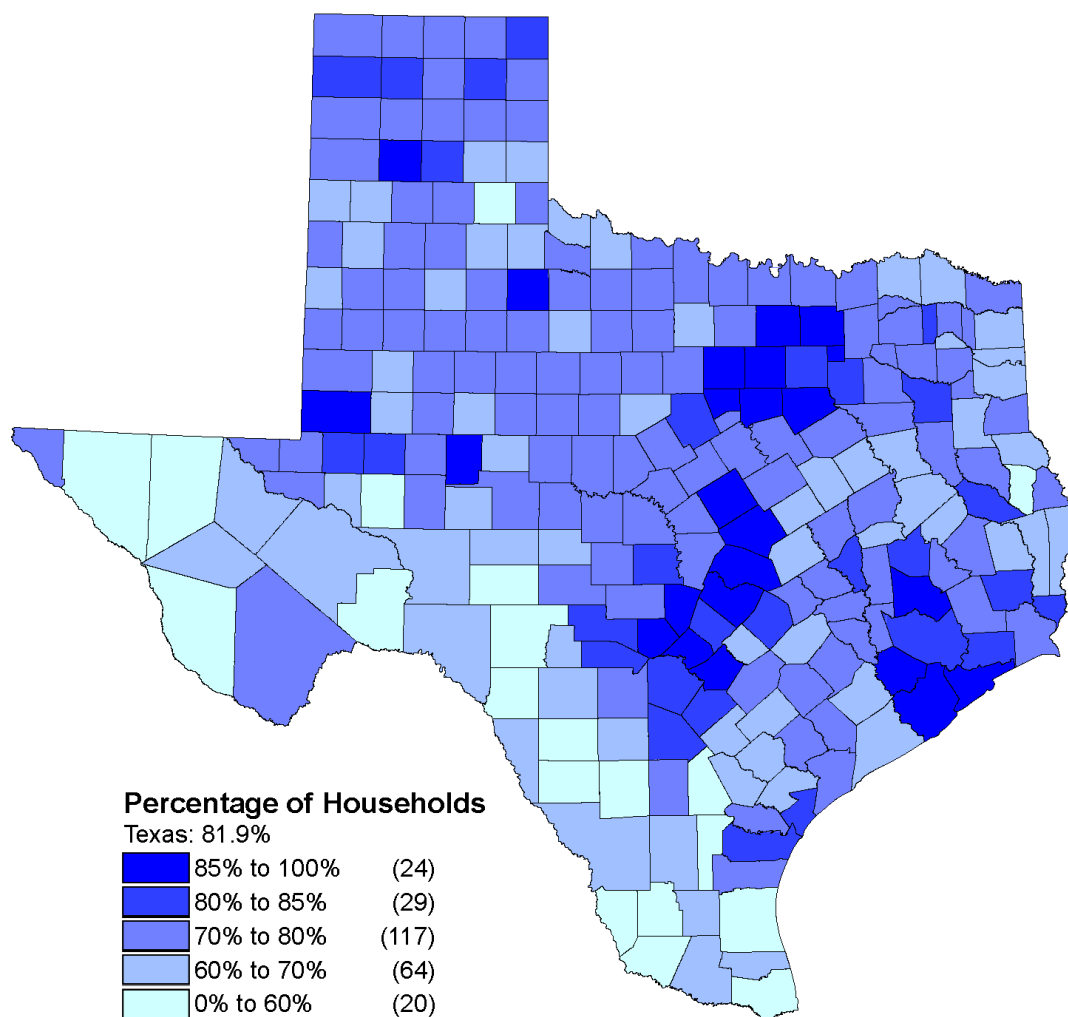
In May 2020, 59.6 percent of employed individuals with a Bachelor's degree or higher worked from home versus 20.4 percent of high school graduates and those with some college or associate degree, and 5.2 percent of those with less than a high school degree. Similar to racial and ethnic groups, persons who teleworked because of coronavirus by educational attainment fell over time due to the reopening of the economy and less restrictions.

Internet Connectivity

In Texas in 2019 according to the U.S. Census Bureau's 2015-2019 American Community Survey 5-Year Estimates, households with broadband subscriptions were more concentrated in urban and suburban counties with a few exceptions along the Texas-Mexico border and throughout the state. According to the survey, broadband includes internet service over cable, fiber optic, DSL, a cellular data plan, satellite, fixed wireless subscription, or other non-dial up subscription type.

The top eight counties in terms of broadband subscriptions were all located in suburban counties of the Dallas-Fort Worth, Houston, San Antonio, and Austin MSAs as shown on the map below. Overall, Rockwall and Collin Counties located in the Dallas-Fort Worth-Arlington MSA had the highest concentrations of households with a broadband subscription with a 2019 value of 93.1 and 92.8 percent, respectively.

Figure 23: Broadband Subscriptions by County



Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

In terms of counties home to Texas's most populated cities, Travis County, home to Austin, had the highest concentration of broadband subscriptions by household at 88.2 percent followed by Tarrant County which is home to Fort Worth at 86.9 percent. Of this group, El Paso County had the lowest concentration of households at 78.5 percent.

Table 8: Percent of Households with a Broadband Subscription

County	Percent Households with a Broadband Subscription
Travis (Austin)	88.2
Tarrant (Fort Worth)	86.9
Harris (Houston)	83.6
Texas	81.9
Bexar (San Antonio)	81.3
Dallas (Dallas)	81.1
El Paso (El Paso)	78.5

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

In far South Texas, Hidalgo County which is home to the fifth most populated MSA in Texas, the McAllen-Edinburg-Mission MSA, broadband concentration lagged behind other major metros and the state with only 68.4 percent of households having subscriptions. Nearby Cameron County which is home to the Brownsville-Harlingen MSA also ranked low in broadband connections at 57.5 percent. Finally, Webb County home to the Laredo MSA with a 2019 Census estimated population of 276,652, also ranked low among counties with 66.9 percent of households having a broadband subscription.

VI. Current Employment Statistics

Statewide Payroll Employment

Texas Total Nonagricultural Employment contracted by 1.3 percent from June 2019 to June 2021. Like the nation, Texas faced unprecedented employment drops in 2020 due to COVID-19 and efforts to slow its spread and continues to recover from those declines. However, declines in Texas were less severe than nationwide, where employment fell by 3.2 percent in the two years ending June 2021. Professional and Business Services led major industries in Texas, overcoming its COVID-related declines and growing by 3.6 percent from June 2019 to June 2021. Over two years Mining and Logging employment declined by 25.1 percent, but the industry did break back into positive annual growth as West Texas Intermediate crude oil prices climbed back from anemic—even negative—levels in Spring 2020 to approaching \$70 per barrel in June 2021. Eight major industries in Texas have yet to climb back to employment levels reached in June 2019, though every major industry enjoyed positive two-year employment growth as recently as January 2020. Overall, Private Sector employment contracted by 1.4 percent over two years.

Table 9: Industry Employment, June 2019 to June 2021

Industry	June 2019	June 2021	Change	Percent Change
Total Nonagricultural	12,794,500	12,627,400	-167,100	-1.3%
Total Private	10,820,100	10,666,500	-153,600	-1.4%
Goods-Producing	1,933,500	1,789,600	-143,900	-7.4%
Service-Providing	10,861,000	10,837,800	-23,200	-0.2%
Mining & Logging	252,600	189,200	-63,400	-25.1%
Construction	771,700	726,000	-45,700	-5.9%
Manufacturing	909,200	874,400	-34,800	-3.8%
Trade, Transportation, & Utilities	2,508,900	2,570,100	61,200	2.4%
Information	210,500	203,100	-7,400	-3.5%
Financial Activities	801,400	825,700	24,300	3.0%
Professional & Business Services	1,793,300	1,857,200	63,900	3.6%
Education & Health Services	1,736,100	1,720,900	-15,200	-0.9%
Leisure & Hospitality	1,392,800	1,293,100	-99,700	-7.2%
Other Services	443,600	406,800	-36,800	-8.3%
Government	1,974,400	1,960,900	-13,500	-0.7%

Data Source: Current Employment Statistics, Seasonally Adjusted

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 7.2 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 16.1 percent). From June 2019 to June 2021, the Professional and Business Services industry in Texas grew 3.6 percent, the highest two-year growth rate among major industries. Mining and Logging has continued to decline over a two-year period at both the state (-25.1 percent) and national (-14.0 percent) levels.

Table 10: Comparing Texas to U.S. Industry Percent Share and Growth Rates, June 2019 to June 2021

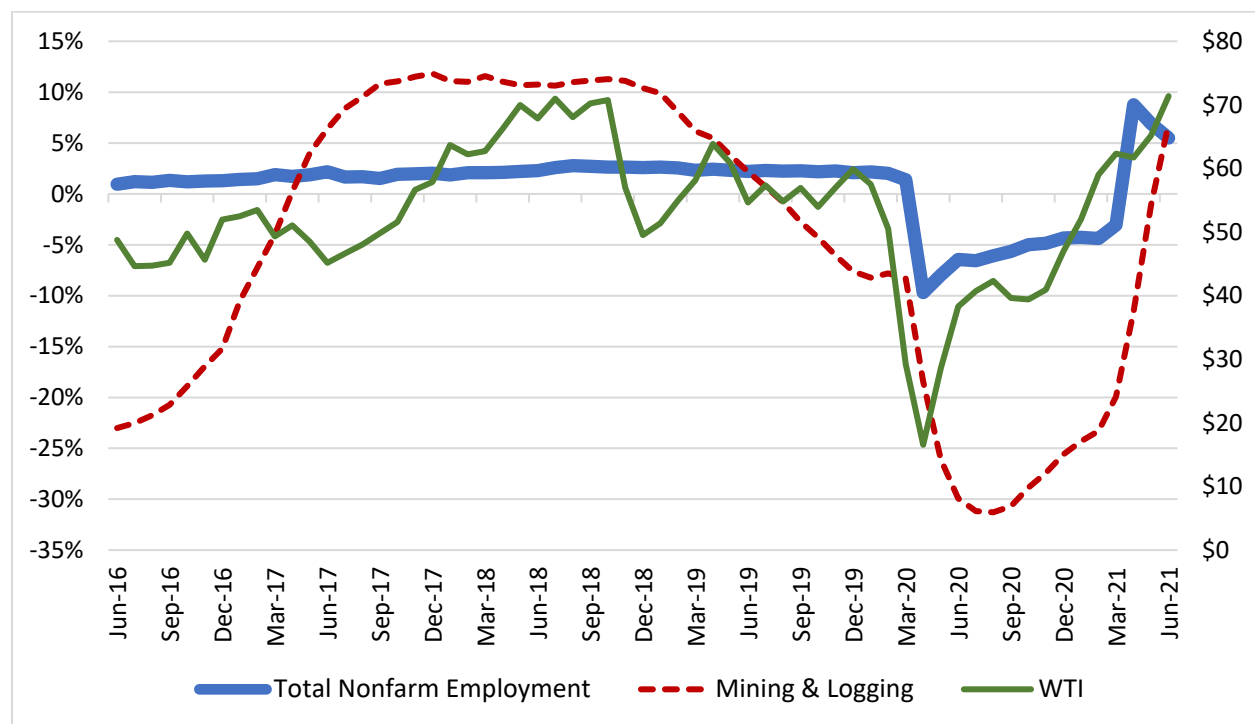
Industry	Texas Percent Share	U.S. Percent Share	Texas Growth Rate	U.S. Growth Rate
Total Nonagricultural	100.0%	100.0%	-1.3%	-3.2%
Total Private	84.5%	85.0%	-1.4%	-3.2%
Goods-Producing	14.2%	14.0%	-7.4%	-3.2%
Service-Providing	85.8%	86.0%	-0.2%	-3.2%
Mining & Logging	1.5%	0.4%	-25.1%	-14.0%
Construction	5.7%	5.1%	-5.9%	-1.2%
Manufacturing	6.9%	8.5%	-3.8%	-3.8%
Trade, Transportation, & Utilities	20.4%	18.7%	2.4%	-1.4%
Information	1.6%	1.9%	-3.5%	-5.2%
Financial Activities	6.5%	6.0%	3.0%	0.8%
Professional & Business Services	14.7%	14.3%	3.6%	-1.9%
Education & Health Services	13.6%	16.1%	-0.9%	-2.5%
Leisure & Hospitality	10.2%	10.1%	-7.2%	-10.4%
Other Services	3.2%	3.9%	-8.3%	-3.9%
Government	15.5%	15.0%	-0.7%	-3.3%

Data Source: Current Employment Statistics, Seasonally Adjusted

Statewide Payroll Employment Growth, the Price of Oil, and Pandemic Recovery

Figure 24 below shows the last five years of growth and decline for West Texas Intermediate (WTI) crude oil prices compared to Mining and Logging and Total Nonfarm annual employment growth rates. WTI fluctuated cyclically and Mining and Logging followed going into 2020. In early 2020 the industry was impacted by international oil price wars and COVID-19, precipitating a sharp drop in fuel demand and thereby the price-per-barrel. This naturally led to sharp declines in Texas' Mining and Logging industry and Total Nonfarm employment. However, since the trough of April 2020, the WTI price has overall trended up, and Mining and Logging employment in Texas has responded. As of June 2021, Total Nonfarm employment and WTI are both increasing. WTI surpassed \$70 a barrel in June 2021. Texas' annual growth rate improved in June stood at 5.5 percent. For the first time since July 2019, Mining and Logging achieved positive annual growth at 6.9 percent.

Figure 24: Annual Employment Growth (Actual) vs. West Texas Intermediate Crude Spot Price



Data Source: Current Employment Statistics, Not Seasonally Adjusted

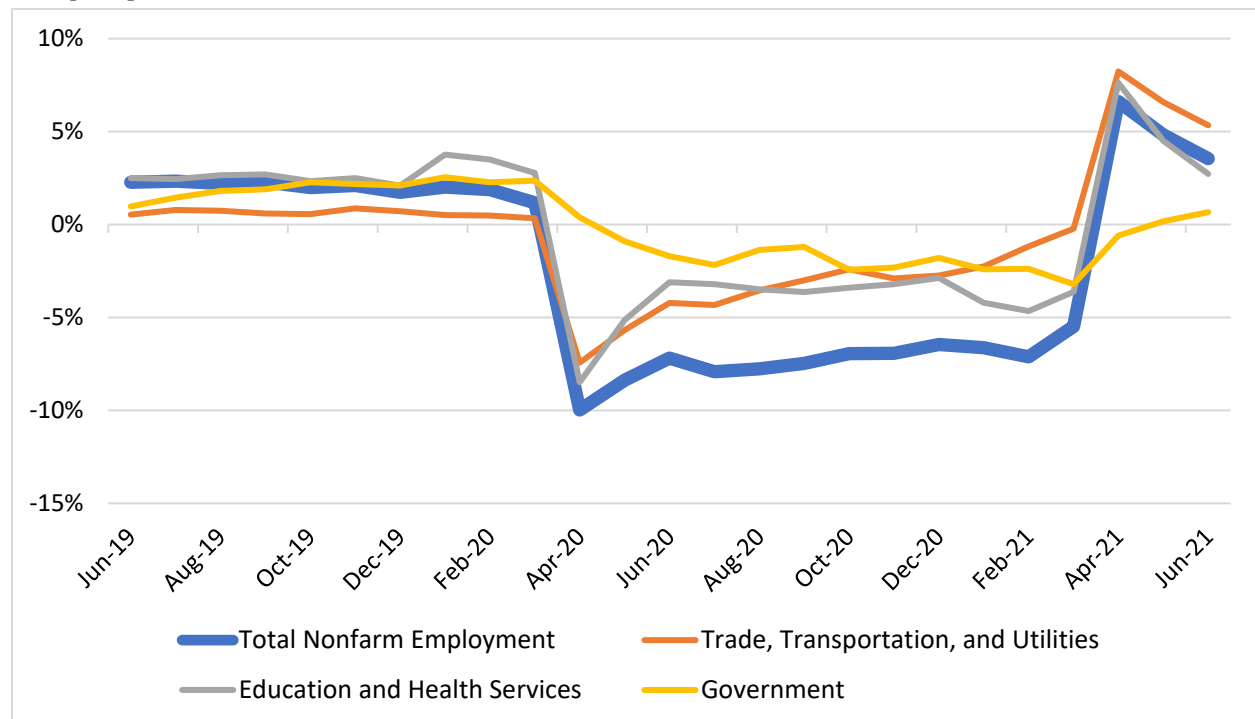
Payroll Employment Change in Largest Metro Areas

Houston-The Woodlands-Sugar Land MSA

The Houston-The Woodlands-Sugar Land Metropolitan Statistical Area (MSA) experienced two-year employment declines for the first time in over three years beginning in April 2020 when it dropped to -7.7 percent. Two-year employment growth remained negative but improving in June 2021 at -3.9 percent. From June 2019 to June 2021 the Mining and Logging industry contracted by a higher percentage than any other industry, with an employment change of -14.5 percent. Ten of the 11 major industries in the Houston MSA have yet to exceed June 2019 employment levels. The sole exception as of June 2021 was Trade, Transportation, and Utilities which expanded by 5,600 positions for 0.9 percent growth since June 2019.

Leisure and Hospitality dropped from 343,000 jobs in June 2019 to 274,900 jobs in June 2020, a decline of 68,100 positions or 19.9 percent. From June 2020 to June 2021 the major industry added back 51,700 to reach an employment level of 326,600—a positive annual growth rate of 18.8 percent, but still 16,400 jobs down over two years.

Figure 25: Houston-The Woodlands-Sugar Land MSA Annual Employment Growth Rate



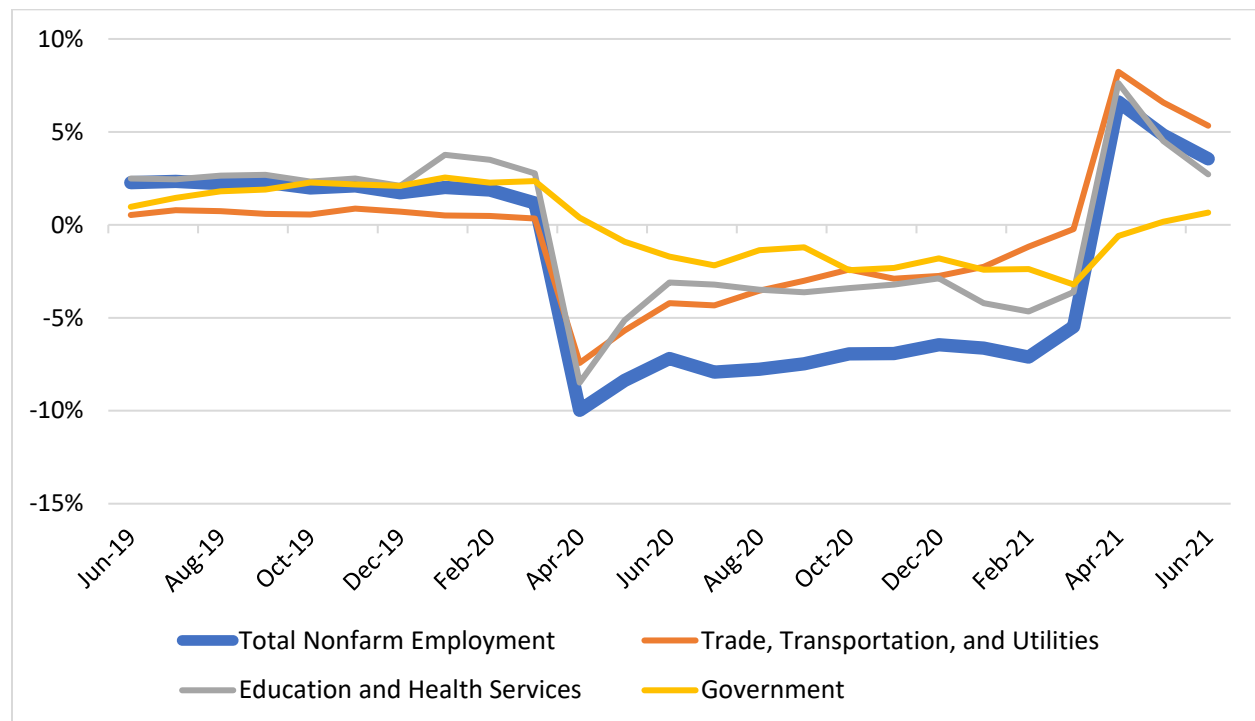
Data Source: Current Employment Statistics, Not Seasonally Adjusted

Austin-Round Rock MSA

In October 2020 the Austin-Round Rock MSA became the first of the four largest MSAs to achieve positive growth measured over two years following COVID-19. As of June 2021 the area's two-year growth rate climbed to 1.4 percent. It remains the only large MSA in Texas showing employment expansion over two years. The area added 15,400 jobs compared to June 2019. Six of the area's 10 major industries exceeded June 2019 employment. Professional and Business Services led with 20,300 jobs added over two years, and Trade, Transportation, and Utilities added 12,600 positions.

Though the industry has not reached June 2019 employment levels, Leisure and Hospitality indicated recovery when it achieved double-digit annual growth beginning in April 2021. In June 2021 its annual growth rate stood at 21.1 percent.

Figure 26: Austin-Round Rock MSA Annual Employment Growth Rate



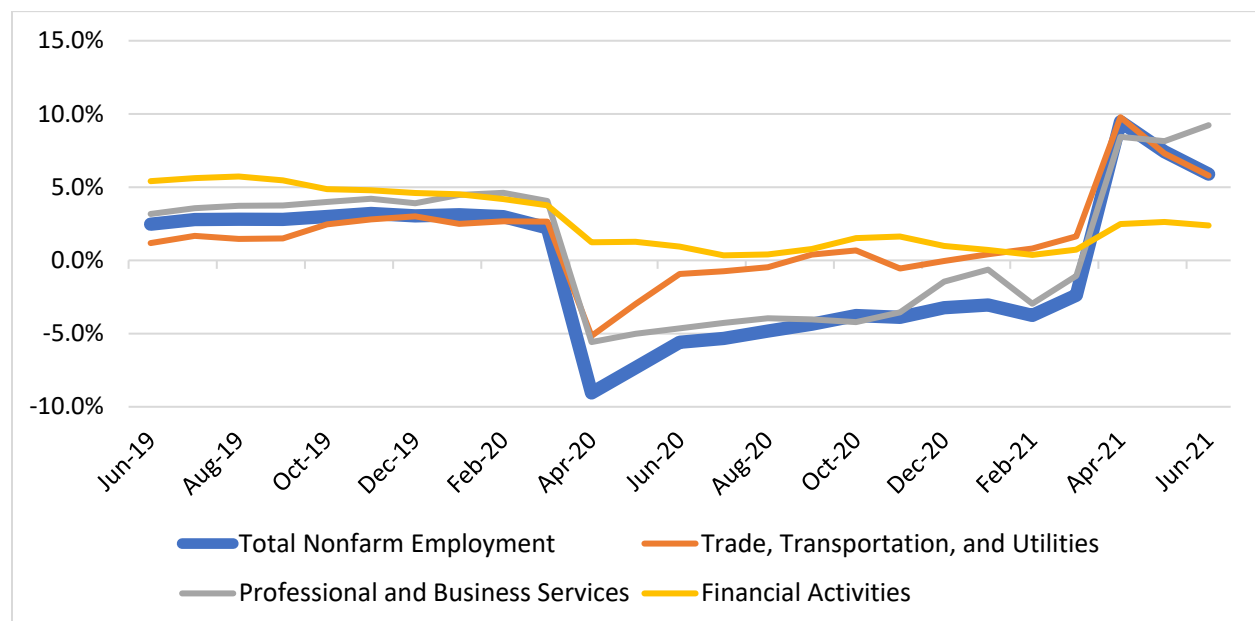
Data Source: Current Employment Statistics, Not Seasonally Adjusted

Dallas-Fort Worth-Arlington MSA

The Dallas-Fort Worth-Arlington MSA came within 1,200 jobs of its June 2019 employment level in June 2021. Three out of 10 major industries grew during that time. Trade, Transportation, and Utilities added 37,900 positions for 4.8 percent growth over two years. Professional and Business Services expanded by 4.2 percent adding 26,500 positions. Financial Activities increased by 3.3 percent with 10,700 jobs added.

Leisure and Hospitality contracted by 6.8 percent from June 2019 to June 2021. However, the industry added 59,800 jobs from June 2020 to June 2021, more than any other major industry in the MSA.

Figure 27: Dallas-Fort Worth-Arlington MSA Annual Employment Growth Rate



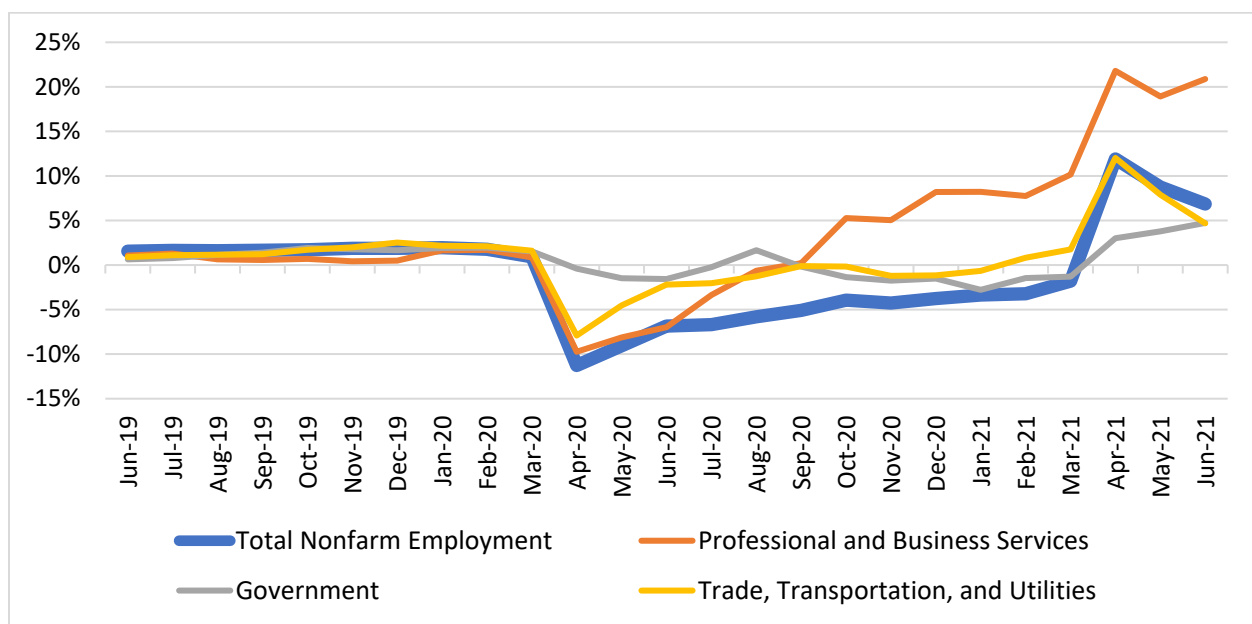
Data Source: Current Employment Statistics, Not Seasonally Adjusted

San Antonio-New Braunfels MSA

The San Antonio-New Braunfels MSA came within 5,000 jobs of its June 2019 employment level. Six of the area's 11 major industries achieved positive growth over the two years ending June 2021. Professional and Business Services added 17,700 jobs over that period to achieve 12.5 percent expansion. Government sector employment grew by 5,300 positions, and Trade, Transportation, and Utilities added 4,300 jobs.

Leisure and Hospitality shed 16,100 jobs from June 2019 to June 2021, but the industry added 19,300 jobs over the year to achieve 17.8 percent growth.

Figure 28: San Antonio-New Braunfels MSA Annual Employment Growth Rate



Data Source: Current Employment Statistics, Not Seasonally Adjusted

VII. Quarterly Census of Employment and Wages

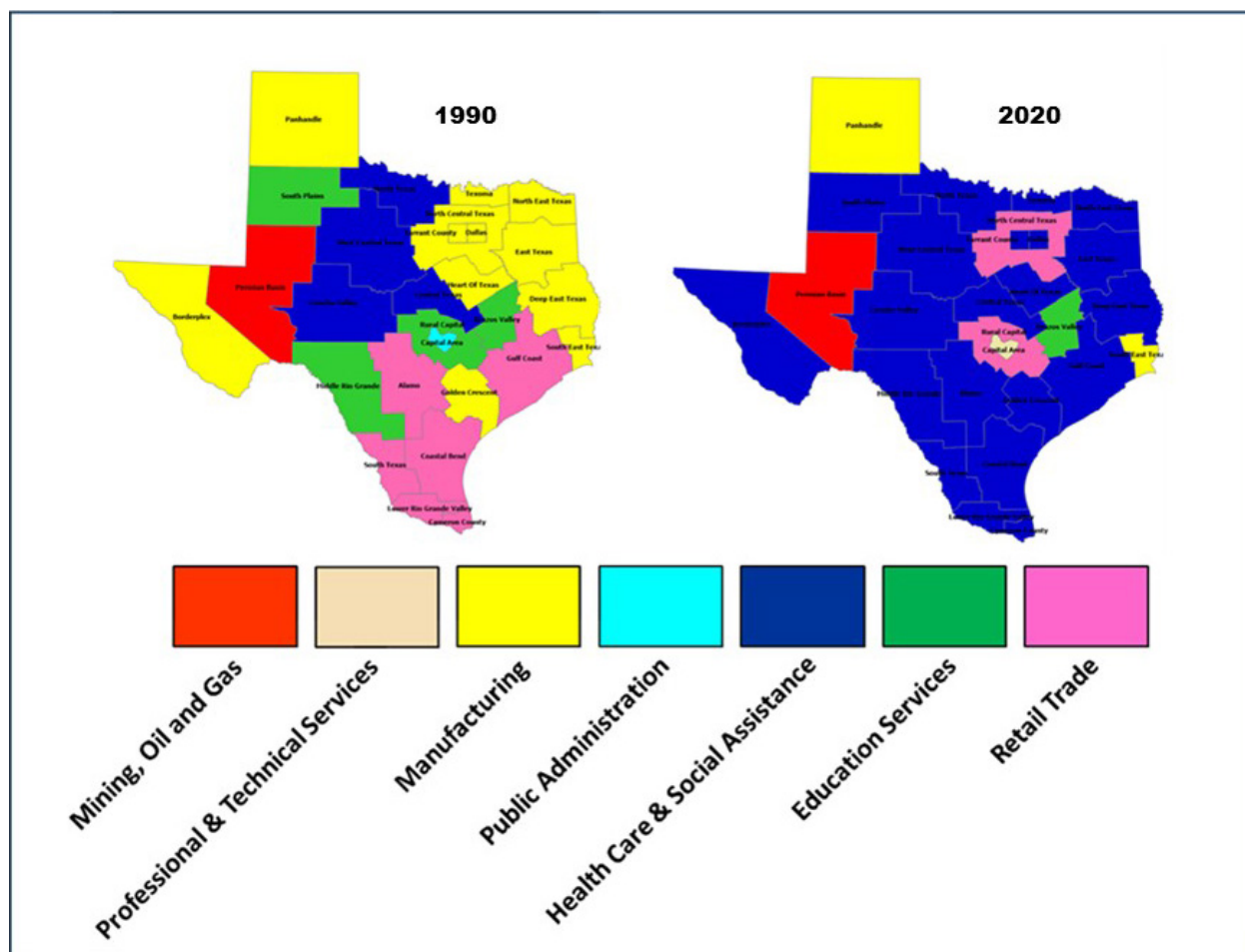
Industry Composition

The predominant industry across Texas is Health Care and Social Assistance. It is the largest industry in 21 of 28 Workforce Development Areas in the state, as shown in Figure 29. The industry increased by slightly over 48,000 jobs from the first quarter of 2020 to the first quarter of 2021. Generally, this industry has shown to be resilient in Texas during slower economic times, because the population includes aging residents, including retirees. However, claims filed indicate that this industry was heavily affected by layoffs related to elective procedures as the state battled COVID-19. The population of Texas continues to increase, with Health Care displaying long-term employment growth through early 2021.

Manufacturing continues to dominate the Panhandle and South East Texas WDAs. Often very closely connected with the Oil and Gas industry, Manufacturing still picked up over 5,800 jobs over the year from first quarter 2020 to first quarter 2021. The Retail Trade industry dominates North Central Texas and Rural Capital workforce development areas, each of which surround large metro urban counties. The industry has changed considerably over the last two years as Retail shifts from brick and mortar stores to online retail. The industry is recovering from jobs lost during covid with close to 103,000 jobs gained from first quarter 2020 to first quarter 2021. Because of Texas A&M University, Educational Services continues to dominate the Brazos Valley Workforce Development Area. Finally, Professional and Technical Services continues to dominate the Capital Area driven by Computer Systems Design and Related Services, attracting more and more tech companies over the last few years. With substantial job numbers in metropolitan areas in Texas, Professional, Scientific, and Technical Services showed a job gain of over 38,000 jobs from first quarter 2020 quarter to first quarter 2021.

All private UI accounts have grown for all size classes since 2013 with the exception of the most recent 4 quarters experienced during covid times. During the period April 2020 to March 2021 all UI accounts for small employers (<10 employees) increased, while UI accounts for employers with (> 10 employees) decreased. UI accounts with 1-4 employees grew by 2.8 percent while those accounts with 5-9 employees increased by 2.9 percent. Employment with small employers (<10) increased from April 2020-March 2021. The largest employment increase occurred for employers with 1-4 employees at 1.4 percent and employers with 5-9 employees increased by 0.9 percent. From April 2020 to March 2021 wages with employers (<50) increased while all other size classes decreased.

Figure 29: Top Industry by Employment, 1990 to 2020



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 type that identifies public and private employers. From second quarter 2020 to first quarter 2021, 14.4 percent of all wages in Texas were paid to government employees, an increase of 0.7 percentage points from the previous time frame. For private sector employees 85.6 percent of wages were paid, a decrease from last year of 0.7 percent. In comparison the nation paid a slightly larger share of wages to government employees with 14.9 percent and a lower share of wages to private employers with 85.1 percent.

In the private sector, the highest percentage of Texas wages in the year ending with first quarter 2021 were paid to Professional and Business Services (19.1 percent), followed by Trade, Transportation, and Utilities (18.3 percent), Education and Health Services (11.3 percent), Financial Activities (9.7 percent) and Manufacturing (9.2 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 nationwide (18.3 percent and 3.5 percent for the respective industries in Texas vs. 15.6 percent and 1.2 percent in the United States).

Table 11: Total Wages by Major Industry, Second Quarter 2020 to First Quarter 2021

Industry	Texas Total Wages	Texas Total Wages Percent Share	U.S. Total Wages Percent Share
Total, All Industries	\$755,203,580,284	100%	100%
Government	\$108,670,609,290	14.4%	14.9%
Federal	\$17,641,865,192	2.3%	2.8%
State	\$23,667,061,987	3.1%	3.4%
Local	\$67,361,682,111	8.9%	8.7%
Total Private	\$646,532,970,994	85.6%	85.1%
Natural Resources and Mining	\$26,337,412,710	3.5%	1.2%
Construction	\$49,618,422,119	6.6%	5.4%
Manufacturing	\$69,279,611,660	9.2%	9.9%
Trade, Transportation and Utilities	\$138,109,462,571	18.3%	15.6%
Information	\$20,645,165,997	2.7%	4.3%
Financial Activities	\$72,880,012,456	9.7%	10.0%
Professional and Business Services	\$144,418,511,395	19.1%	19.4%
Education and Health Services	\$85,431,044,571	11.3%	13.8%
Leisure and Hospitality	\$26,017,783,431	3.4%	3.5%
Other Services	\$17,058,044,184	2.3%	1.9%
Unclassified	\$455,670,568	0.1%	0.1%

Data Source: Quarterly Census of Employment and Wages

Average Weekly Wages

Table 12 compares the average weekly wages by major industry in Texas and the United States. Texas' private sector weekly earnings in several industries are above the national average, while others are below over the year ending in First Quarter 2021. For example, in the Information and Financial Services industries, Texas workers receive 24.3 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.

In all private sector industries, the wages in Texas were \$5 or 0.4 percent higher than those nationwide. The wage gap was particularly significant in Natural Resources and Mining, where Texas' employees earned 92.4 percent more than their national counterparts (\$2,201 versus \$1,144).

Table 12: Average Weekly Wages by Major Industry, Second Quarter 2020 to First Quarter 2021

Industry	Texas	U.S.	Difference	Percent Difference
Total, All Industries	\$1,216	\$1,231	-\$14	-1.2%
Government	\$1,113	\$1,218	-\$106	-8.7%
Federal	\$1,575	\$1,655	-\$80	-4.8%
State	\$1,224	\$1,271	-\$47	-3.7%
Local	\$1,003	\$1,104	-\$101	-9.2%
Total Private	\$1,259	\$1,254	\$5	0.4%
Natural Resources and Mining	\$2,201	\$1,144	\$1,057	92.4%
Construction	\$1,347	\$1,298	\$49	3.8%
Manufacturing	\$1,586	\$1,415	\$172	12.1%
Trade, Transportation and Utilities	\$1,107	\$1,013	\$94	9.3%
Information	\$2,074	\$2,101	-\$665	-24.3%
Financial Activities	\$1,836	\$1,924	-\$265	-12.6%
Professional and Business Services	\$1,609	\$1,645	-\$36	-2.2%
Education and Health Services	\$1,027	\$1,073	-\$46	-4.3%
Leisure and Hospitality	\$450	\$500	-\$49	-9.9%
Other Services	\$1,075	\$839	\$237	28.2%

Data Source: Quarterly Census of Employment and Wages

VIII. 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 12.7 percent from 2018 to 2028, which represents approximately 1.7 million jobs. On an annual basis, Texas is projected to have about 1.8 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 contained 1,674,707 positions in Texas during the First Quarter 2021. In Texas, this industry has regained much of the employment lost during the COVID pandemic. According to seasonally adjusted Current Employment Statistics data, industry employment for July 2021 is at 97.1 percent of Feb. 2020 levels, less than 50,000 jobs below pre-pandemic levels. As the economy reopens and more elective medical procedures occur, employment in the industry is expected to rebound. According to long-term industry projections, Health Care and Social Assistance employment is expected to grow to approximately 1,898,313 jobs by 2028, with 20.9 percent projected from growth 2018 to 2028.

Ambulatory Health Care Services, which consists of doctors' and dentists' offices, outpatient care centers and medical and diagnostic laboratories, comprises about 46 percent of employment in the Health Care and Social Assistance industry during the First Quarter 2021. Employment in this subset of health care and social assistance has continued to rebound from the economic disruption prompted by the COVID pandemic and is now above pre-pandemic levels. Specifically, July 2021 employment in Ambulatory Health Care Services is at 100.9 percent of Feb. 2020 levels, an increase of 7,200 jobs, according to not seasonally adjusted Current Employment Statistics data.

Help Wanted OnLine data from Burning Glass: Labor Insight continues to show strong demand for nursing. Registered Nurses ranks first among occupations in the Help Wanted OnLine database with 8,780 job postings. In June 2020, Registered Nurses ranked sixth among occupations in the HWOL database for June 2020 with 4,756 postings.

Table 13: Health Care and Social Assistance Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Registered Nurses	185,291	217,668	32,377	17.5	\$75,323
Licensed Practical and Licensed Vocational Nurses	62,952	69,583	6,631	10.5	\$47,761
Medical and Health Services Managers	25,466	31,047	5,581	21.9	\$100,320
Dental Hygienists	12,670	17,459	4,789	37.8	\$78,081*
Nurse Practitioners	10,567	14,290	3,723	35.2	\$113,797
Speech-Language Pathologists	8,884	12,299	3,415	38.4	\$70,893
Respiratory Therapists	10,951	14,164	3,213	29.3	\$60,592
Dentists, General	7,817	10,739	2,922	37.4	\$158,287
Physician Assistants	7,132	10,024	2,892	40.5	\$113,415
Physical Therapists	14,654	17,453	2,799	19.1	\$90,626

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Educational Services

Demand for Educational Services will continue to grow in Texas due to an ever-expanding population. From 2010 to 2019, Texas added 3,738,767 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 565,374 from 2010 to 2019, a 7.9 percent increase.

Educational Services employment added 69,784 jobs over four years from first quarter 2016, a 5.9 percent increase. Unfortunately, the impact of Covid-19 on the economy is evident when comparing employment levels from first quarter 2020 to first quarter 2021. During this period, Educational Services jobs dropped by 53,733 jobs, a 4.3 percent decrease. Regardless, QCEW data shows Educational Services employment levels are higher now than they were five years ago. Educational Services employment added 16,051 jobs over five years beginning first quarter 2016, a 1.3 percent gain that puts industry employment at 1,207,273 jobs for First Quarter 2021. The industry is expected to expand by another 10.2 percent from 2018 to 2028 according to TWC’s long-term industry projections.

TWC’s Occupational projections data estimates that Coaches and Scouts, Health Specialties Teachers, Postsecondary, and Speech-Language Pathologists employment will all increase by more than 20 percent from 2018 to 2028. 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 14: Educational Services Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Secondary School Teachers, Except Special and Career/Technical Education	107,782	119,583	11,801	10.9%	\$58,400
Coaches and Scouts	10,912	14,669	3,757	34.4%	\$42,115
Health Specialties Teachers, Postsecondary	13,185	16,465	3,280	24.9%	\$99,938
Education Administrators, Elementary and Secondary School	27,574	30,739	3,165	11.5%	\$84,716
Educational, Guidance, School, and Vocational Counselors	22,523	25,371	2,848	12.6%	\$60,349
Instructional Coordinators	12,785	14,332	1,547	12.1%	\$66,048
Business Operations Specialists, All Other	12,041	13,130	1,089	9.0%	\$78,943*
Vocational Education Teachers, Postsecondary	9,458	10,543	1,085	11.5%	\$56,196
Speech-Language Pathologists	4,818	5,869	1,051	21.8%	\$70,893
Business Teachers, Postsecondary	5,871	6,916	1,045	17.8%	\$84,846

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Retail Trade

Retail Trade is a large and changing industry. Texas' expanding economy and population have increased demand for retail goods.

Not seasonally adjusted Current Employment Statistics data for June 2021 indicates the industry represents 10.4 percent of Total Nonfarm employment in Texas at 1,318,900 jobs. According to industry projections, Retail Trade will add nearly 122,777 jobs by 2028, growing to 1,450,882 jobs total. COVID-19 sent the industry into negative five-year change starting in April 2020 after a long period of expansion. Starting in June 2021, the five-year change has become positive for the first time since the onset of Covid-19. From July 2016 to July 2021, the industry saw a change rate of 0.1 percent. Technological advances like personalized shopper experiences and online ordering capabilities were already changing the industry when COVID-19 hit. From April 2020 to March 2021, the industry saw the highest 12-month decline in employment since January 1991.

Retail Trade occupations projected to add the most jobs in the long term that pay a wage above the state median are listed below. For this Texas industry, the median wage is \$27,398 while the state median wage for all industries is \$39,637.

Table 15: Retail Trade Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
First-Line Supervisors of Retail Sales Workers	87,571	97,048	9,477	10.8%	\$41,006
General and Operations Managers	22,356	25,248	2,892	12.9%	\$97,674
Automotive Service Technicians and Mechanics	25,217	27,750	2,533	10.0%	\$45,521
Sales Representatives, Services, All Other	19,066	20,125	1,059	5.6%	\$52,747*
First-Line Supervisors of Mechanics, Installers, and Repairers	5,456	6,261	805	14.8%	\$67,424
First-Line Supervisors of Office and Administrative Support Workers	14,572	15,307	735	5.0%	\$56,925
Pharmacists	11,678	12,406	728	6.2%	\$129,300
Sales Managers	3,865	4,405	540	14.0%	\$134,284
Heavy and Tractor-Trailer Truck Drivers	3,651	4,142	491	13.5%	\$45,627
Automotive Body and Related Repairers	3,137	3,616	479	15.3%	\$43,426

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Construction

The construction industry is projected to grow by 16.1 percent from 2018 to 2028, creating the need for 118,909 more workers over 10 years.

Occupational projections also indicate that some of 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 2021 Quarterly Census of Employment and Wages report, private employment with the Construction industry reached 713,185 workers and has declined 7.7 percent over the last year.

Demand for construction workers has begun to recover from 12 months of decline onset by Covid-19. The average price of a home in Texas was \$312,388 in 2020, an annual increase of \$22,564 over the 2019 average price according to Texas A&M's Real Estate Center.

For the month of May 2021, the housing inventory is the lowest (1.3 months) in the series that dates back to 1990 published by Texas A&M Real Estate Center. This indicates a high demand for and a shortage of residential housing in Texas. The year-over-year average home price increased sharply in 2021 after increasing very consistently since 2012 as reported by the Real Estate Center at Texas A&M University. These trends indicate very strong demand for residential building projects.

Construction occupations projected to add the most jobs long-term and pay above the Texas median wage of \$39,637 are listed below in Table 16.

Table 16: Construction Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Supervisors of Construction and Extraction Workers	55,140	64,955	9,815	17.8%	\$62,393
Electricians	48,347	55,780	7,433	15.4%	\$50,103
Plumbers, Pipefitters, and Steamfitters	36,241	42,787	6,546	18.1%	\$50,476
Operating Engineers and Other Construction Equipment Operators	28,494	34,076	5,582	19.6%	\$43,581
Carpenters	30,974	35,601	4,627	14.9%	\$41,676
Construction Managers	25,201	29,533	4,332	17.2%	\$86,295
General and Operations Managers	22,205	26,045	3,840	17.3%	\$97,674
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	17,298	20,515	3,217	18.6%	\$48,029
Heavy and Tractor-Trailer Truck Drivers	12,962	15,562	2,600	20.1%	\$45,627
Welders, Cutters, Solderers, and Brazers	11,328	13,381	2,053	18.1%	\$45,254

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

Professional, Scientific, and Technical Services

In June 2021 Professional, Scientific, and Technical Services reached an all-time high of 891,000 jobs. In the 12 months ending June 2021, Professional, Scientific, and Technical Services grew by 72,300 positions for an annual growth rate of 8.8 percent. June marks the seventh consecutive month of positive annual growth for the industry. From June 2019 to June 2021 the industry grew over the 2 years by 8.3 percent. After losing 38,600 jobs in March and April of last year due to Covid restrictions the industry added back 79,300 jobs from May 2020 to June 2021. In 13 of the last 14 months Professional, Scientific, and Technical Services added back jobs monthly. In June the industry achieved 104.5 percent of pre-pandemic employment levels reported in February 2020. In not seasonally adjusted CES, three industries achieved over 100 percent recovery from pre-pandemic employment levels reported in February 2020: Legal Services 107.5 percent, Computer Systems Design and Related Services 114.4 percent and Management, Scientific and Technical Consulting Services 104.8 percent.

According to First Quarter 2021 QCEW report, employment in the Professional, Scientific, and Technical Services reached an average 859,572 workers and has grown 5.5 percent over the last two years. The average weekly wage from QCEW for First Quarter 2021 was \$1,938.

From 2018 to 2028, the Professional, Scientific, and Technical Services industry is projected to grow by 23.6 percent, resulting in 184,615 jobs added. Establishments in this industry employ workers in many different occupations. Software Developers, Applications are projected to be the most in-demand through 2028 with an estimated employment of 42,808 jobs. Projections indicate other highly skilled jobs will be for Accountants and Auditors and General and Operations Managers.

Professional, Scientific, and Technical Services occupations projected to add the most jobs in the long term that pay a wage above the state median are listed below.

**Table 17: Professional, Scientific, & Technical Services Industry
Long-Term Occupational Projections**

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Software Developers, Applications	30,459	42,808	12,349	40.5%	\$108,150*
Accountants and Auditors	42,448	54,243	11,795	27.8%	\$73,415
General and Operations Managers	22,539	29,725	7,186	31.9%	\$97,674
Sales Representatives, Services, All Other	18,938	24,922	5,984	31.6%	\$52,747*
Lawyers	28,739	34,607	5,868	20.4%	\$120,985
Computer Systems Analysts	20,014	25,802	5,788	28.9%	\$97,234*
Management Analysts	12,724	18,381	5,657	44.5%	\$89,700
Paralegals and Legal Assistants	19,429	24,806	5,377	27.7%	\$52,338
Computer User Support Specialists	18,138	23,410	5,272	29.1%	\$47,459*
Market Research Analysts and Marketing Specialists	7,993	12,278	4,285	53.6%	\$69,619

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Transportation and Warehousing

According to long term industry projections, Transportation and Warehousing employment is expected to grow to approximately 615,744 positions by 2028. From 2018 to 2028 the Transportation and Warehousing industry is projected to grow by 11.9 percent resulting in 65,277 jobs added. Heavy and Tractor-Trailer Truck Drivers are expected to be the most in-demand through 2028 with an estimated employment of 120,894 jobs.

According to CES not seasonally adjusted data, in June 2021 Transportation and Warehousing employment grew 23.9 percent over the past five years. NAICS 493 Warehousing and Storage grew at a rate of 37.7 percent between January 2020 and June 2021.

Part of this enormous growth is due to the e-commerce boom that has taken place for delivery and warehousing companies during the COVID-19 pandemic. According to the United States Census Bureau e-commerce as a percent of retail sales was 11.4 percent in Q1 2020 and peaked in Q2 2020 at 15.7 percent in the US.

Total Retail e-commerce sales rose 43.8 percent from Q2 2020 when compared to Q2 2019.

Transportation and Warehousing occupations projected to add the most jobs in the long term are listed in Table 18.

Table 18: Transportation and Warehousing Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Heavy and Tractor-Trailer Truck Drivers	102,488	120,894	18,406	18.0%	\$45,627
First-line supervisors of transportation and material moving workers, except aircraft cargo handling supervisors	13,614	15,638	2,024	14.9%	\$53,857*
Flight Attendants	15,468	17,230	1,762	11.4%	\$62,906
Bus and Truck Mechanics and Diesel Engine Specialists	7,982	9,258	1,276	16.0%	\$49,812
General and Operations Managers	6,536	7,676	1,140	17.4%	\$97,674
Aircraft Mechanics and Service Technicians	10,654	11,612	958	9.0%	\$66,264
Sales Representatives, Services, All Other	5,523	6,416	893	16.2%	\$52,747*
Reservation and Transportation Ticket Agents and Travel Clerks	12,605	13,452	847	6.7%	\$55,504
Petroleum Pump System Operators, Refinery Operators, and Gaugers	2562	3358	796	31.1%	\$81,313
Production, Planning, and Expediting Clerks	3514	4054	540	15.4%	\$47,468

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Manufacturing

According to the Federal Reserve Bank of Dallas, in 2019 Texas produced 10 percent of the total manufactured goods in the United States as cited in the July 2021 edition of Your Texas Economy. According to the Federal Reserve Bank of Dallas monthly Texas Manufacturing Outlook survey, "Texas factory activity continued to increase in August, albeit at a slower pace, according to business executives responding to the Texas Manufacturing Outlook Survey. The production index, a key measure of state manufacturing conditions, slipped 10 points to 20.8. The reading was well above average and indicative of robust output growth. Other measures of manufacturing activity also pointed to slower but above-average growth this month [August 2021]." In 2020, Texas Manufacturing produced 13.1 percent of the gross state product, \$231.1 billion in manufacturing output according to the Texas Comptroller of Public Accounts.

Texas Manufacturing employment has begun to rebound from the economic downturn that occurred during the COVID 19 pandemic. As of July 2021, statewide seasonally adjusted employment in manufacturing is 97.0 percent of the Feb. 2020 value (the last month prior to the pandemic-induced downturn.) The July 2021 manufacturing employment is 27,500 jobs above where it was in April 2020 (the trough of the economic downturn).

With increased automation and robotics, the Manufacturing industry has changed in recent years with increased computerization, driving up manufacturing wages. This continues a demand increase for higher-skilled employees. Manufacturing industry employment is expected to increase by 5,678 jobs or 0.65 percent from 2018 to 2028. This increase includes a broad range of occupations including Welders, Cutters, Solderers and Brazers, Machinists, and Industrial Engineers, as well as some occupations with high employment levels such as Electromechanical and Equipment Assemblers, and Chemical Equipment Operators and Tenderers, among others as shown in Table 19 below.

Table 19: Manufacturing Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Welders, Cutters, Solderers, and Brazers	26,530	29,471	2,941	11.1%	\$45,254
Machinists	18,778	20,557	1,779	9.5%	\$46,646
Industrial Engineers	11,277	12,495	1,218	10.8%	\$96,298
Industrial Machinery Mechanics	12,299	13,490	1,191	9.7%	\$54,982
First-Line Supervisors of Production and Operating Workers	32,965	34,138	1,173	3.6%	\$64,202
Sales Reps, Wholesale and Manufacturing, Except Technical and Scientific Products	17,904	18,866	962	5.4%	\$61,726
Maintenance Workers, Machinery	5,368	6,043	675	12.6%	\$46,311
General and Operations Managers	16,831	17,491	660	3.9%	\$97,674
Software Developers, Applications	7,077	7,535	458	6.5%	\$108,150*
Electronics Engineers, Except Computer	5,332	5,790	458	8.6%	\$116,772

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Agriculture and Forestry

The Agriculture and Forestry industry in Texas is one of the most robust in the country. Approximately 248,400 farms, 89.9 percent family owned, cover over 127 million acres across the state. 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.

After an increase in average employment from 2016 to 2017, the industry followed a trend of negative growth over the last four years. From First Quarter 2016 to First Quarter 2021, the Agriculture and Forestry industry shrank by 1.6 percent, losing 951 jobs. Overall, the industry is projected to lose 2,776 jobs by 2028, shrinking to 57,078 jobs total.

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

Table 20: Agriculture and Forestry Industry Long-Term Occupational Projections

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Directors, Religious Activities and Education	70	75	5	7.1%	\$52,830
Human Resources Specialists	53	52	-1	-1.9%	\$63,299
Plumbers, Pipefitters, and Steamfitters	73	65	-8	-11.0%	\$50,476
Farm Equipment Mechanics and Service Technicians	261	251	-10	-3.8%	\$43,294
First-Line Supervisors of Production and Operating Workers	70	60	-10	-14.3%	\$64,202
Bus and Truck Mechanics and Diesel Engine Specialists	115	101	-14	-12.2%	\$49,812
First-Line Supervisors of Office and Administrative Support Workers	209	178	-31	-14.8%	\$56,925
Logging Equipment Operators	655	580	-75	-11.5%	\$43,199
Bookkeeping, Accounting, and Auditing Clerks	786	686	-100	-12.7%	\$41,150
Heavy and Tractor-Trailer Truck Drivers	1441	1328	-113	-7.8%	\$45,627

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

Mining, Quarrying, and Oil and Gas Extraction

The Mining, Quarrying, and Oil and Gas Extraction industry is projected to grow by 12.9 percent from 2018 to 2028, resulting in 31,483 jobs added. By 2028 the industry is projected to have 275,893 jobs. Service Unit Operators, Heavy and Tractor-Trailer Truck Drivers and Rotary Drill Operators 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 25.2 percent from **June 2019** to **June 2021**. However, the industry achieved positive annual growth for the first time since July 2019, reaching 7.1 percent growth in June 2021, representing 12,400 positions added. The industry experienced its series low annual change rate of -31.6 percent in July 2020, largely due to COVID-19 and global turmoil in energy markets.

Mining, Quarrying, and Oil and Gas Extraction occupations projected to add the most jobs in the long term that pay a wage above the state median are listed below.

**Table 21: Mining, Quarrying, and Oil and Gas Extraction Industry
Long-Term Occupational Projections**

Occupational Title	Employment 2018	Employment 2028	Change	Percent Growth	Median Annual Wage 2020
Service Unit Operators, Oil, Gas, and Mining	21,924	26,273	4,349	19.8%	\$44,626
Heavy and Tractor-Trailer Truck Drivers	13,593	16,055	2,462	18.1%	\$45,627
Rotary Drill Operators, Oil and Gas	6,839	8,224	1,385	20.3%	\$57,280
Derrick Operators, Oil and Gas	5,847	7,052	1,205	20.6%	\$46,748
Petroleum Engineers	8,855	9,520	665	7.5%	\$152,865
Geological and Petroleum Technicians	3,803	4,220	417	11.0%	\$40,856*
Wellhead Pumpers	6,608	6,900	292	4.4%	\$62,568
Bus and Truck Mechanics and Diesel Engine Specialists	1,166	1,421	255	21.9%	\$49,812
Control and Valve Installers and Repairers, Except Mechanical Door	1,330	1,575	245	18.4%	\$42,579
Pump Operators, Except Wellhead Pumpers	1,151	1,378	227	19.7%	\$46,256

Data Source: Texas Statewide Projections 2018 to 2028

Ranked by employment change for occupations with 2020 OEWS median wages higher than Texas median annual wage of \$39,637

*** 2020 OEWS estimate - SOC and/or title change**

IX. Glossary

Local Area Unemployment Statistics (LAUS)

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 (LFPR) - 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 (CES)

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 (QCEW)

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 sent to the Bureau of Labor Statistics (BLS).

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 (OEWS)

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.

Hybrid Wage- OEWS estimates are calculated using data collected from six survey panels over three years. Because data will be collected under two different Standard Occupational Classification (SOC) systems, estimates for May 2020 will be based on a hybrid of the two classification systems. During the transition to the 2018 SOC system, OEWS estimates will be based on a "hybrid" structure that is a combination of the 2010 SOC and 2018 SOC.

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 Asset Logistics Management Information System (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 analyses.

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) - National 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 Summary 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 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.

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). An MD in Texas is made up of one or more counties.

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. A WDA in Texas is made up of one or more counties and every county resides in a WDA.