

# Outlook for the Texas Economy



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<b>About this Report</b> .....	3
<b>2020 Annual Summary</b> .....	4
<b>Economic Activity</b> .....	10
Major Metros Gross Domestic Product .....	10
Major Metros Business Cycle Index .....	10
Texas Business Cycle Index and Leading Index .....	11
Consumer Confidence Index .....	11
<b>Financial Activity</b> .....	12
30-Year Mortgage Rate and Ten-Year Bond Yield .....	12
Texas Mortgage Applications .....	12
<b>Housing</b> .....	13
Total Housing Sales .....	13
Texas Residential Construction Index .....	13
<b>Energy</b> .....	14
Crude Oil and Natural Gas Prices .....	14
Texas Production of Crude Oil and Rig Count .....	14
<b>Employment</b> .....	15
Total Nonfarm Annual Employment .....	15
Labor Force Participation Rate.....	15
Unemployment Insurance Claims: Initial Applications .....	16
Unemployment Rate .....	16
Major Metros Unemployment Rate.....	17
Total Private Employee Hourly Earnings.....	17
Major Metros Total Private Employee Hourly Earnings .....	18
Major Metros Employment Growth Rate .....	18
Employment Growth Rate .....	19
<b>Manufacturing</b> .....	20
Manufacturing Employment .....	20
Major Metros Manufacturing Employment.....	20
Manufacturing Employee Hourly Earnings .....	21
Major Metros Manufacturing Employee Hourly Earnings.....	21
Manufacturing Outlook Survey .....	22
<b>Construction</b> .....	23
Construction Employment .....	23
Construction Employee Hourly Earnings .....	23
Texas Construction Values .....	24
Major Metros Total Construction Values.....	24



**Services**.....25  
    Services Sector Outlook Survey .....25  
    CPI Inflation Rates .....25  
    CPI Inflation Rates (Houston Components) .....26  
**Trade**.....27  
    Real Trade Weighted Value of U.S. Dollar .....27  
    Exports (All Commodities).....27  
    Manufacturing Exports.....28  
    Crude Oil Exports.....28  
    Texas Exports by Country.....29

## About this Report

Texas Real Estate Research Center economists continuously monitor many facets of the global, national, and Texas economies. *Outlook for the Texas Economy* summarizes significant state economic activity and trends. All measurements are calculated annually, unless stated otherwise.

This publication is designed to be a one-stop resource for economic indicators. We hope you find them as useful as we do. Your feedback is always appreciated. Send comments and suggestions to [info@recenter.tamu.edu](mailto:info@recenter.tamu.edu).

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# 2020 Annual Summary<sup>1</sup>

WTI OIL PRICE PER BARREL

▼ \$39

NONFARM EMPLOYMENT

▼ -431,150 jobs

LABOR FORCE PARTICIPATION RATE

▼ 62.7%

REAL COMMODITY EXPORTS

▼ -12.8% ANNUALLY

The COVID-19 pandemic didn't just end the longest economic expansion in Texas' history, it also pervaded every facet of the state's economy. Global shutdowns in spring weighed heavily on the manufacturing, energy, and trade sectors as industrial output plummeted, and the West Texas intermediate (WTI) crude oil spot price averaged \$39 per barrel.

Conditions improved as factories reopened with social distancing and mask-wearing mandates. Cautious public and consumer sentiment had a greater impact on oil demand and the leisure/hospitality sector via extremely reduced business and pleasure travel, dining at restaurants, and trips to museums and other contact-intensive recreational businesses. Many of the direct stimulus checks Americans received went to paying off debt, building up savings, or paying rent/mortgage rather than being spent on consumer goods and services.

Labor-market conditions deteriorated compared with strong 2019 levels. Layoffs could have been worse if not for federal loans to small businesses that incentivized employee retention. One of the few bright spots, Texas' housing market boomed with record sales amid historically low interest rates, although depleted inventory is a significant headwind in 2021. The nature of the pandemic-induced recession this year, however, suggests a silver lining. If the virus is contained through vaccinations, immunity, and continued measures to prevent the spread of the disease (e.g., social distancing, mask wearing), economic activity and mobility may recover to pre-pandemic levels in the short-term.

Recently released 2019 real **gross domestic product** (GDP) data revealed economic activity within Texas slowed even before the global pandemic. Austin led the state's major Metropolitan Statistical Areas (MSAs) with a 3.1 percent annual increase in real GDP but still decelerated compared with the 2018 growth rate. According to the Bureau of Economic Analysis, Williamson County (north of Austin proper) was the fastest-growing large county (more than 500,000 residents) in the nation. The durable-goods manufacturing industry was the top contributor to the county's 6 percent inflation-adjusted improvement. In Dallas-Fort Worth (DFW), real GDP rose at a more modest rate of 1.7 percent, with San Antonio and Houston posting similar upticks of 1.8 and 1.9 percent, respectively.

The Lone Star State's economic expansion ended in February with the initial impacts of the COVID-19 virus pulling activity down through May. Although Texas regained positive momentum in the

<sup>1</sup> All measurements are calculated annually, unless stated otherwise.

second half of the year, the **Dallas Fed's Texas Business-Cycle Index** fell 6 percent annually in 2020, double the magnitude of the 2009 contraction. After substantial growth the past three years in Fort Worth, the index plummeted 12.2 percent. San Antonio's metric decreased 7.5 percent, while Houston's dropped 5.7 percent. In Dallas and Austin, where the local economies are less energy- and-manufacturing-focused and could better weather the economic shutdown due to a higher capability of residents to work remotely, the index slipped 2.0 and 3.4 percent, respectively.

The state's long-term outlook dropped drastically in the first four months of the year as indicated by the **Texas Leading Economic Index** (a measure of *future* directional changes in the business cycle), which plummeted 20 points. Although the index registered steady improvements the second half of the year as the economy reopened, still-elevated initial unemployment claims hindered the recovery and weighed on growth prospects for 2021. The **Consumer Confidence Index** also took a hit during 2020, falling to its lowest annual level since 2013, and ending the year on a soft note amid a resurgence of positive COVID-19 cases.

Economic uncertainty surrounding the pandemic prompted investors to purchase safe-haven assets at an accelerated rate during the first half of the year, pulling interest rates to historically low levels. Expansionary monetary measures by the Federal Reserve and development on the vaccine front generated higher growth expectations, pushing interest rates up in the fourth quarter, but the **ten-year U.S. Treasury bond yield** still fell 125 basis points in 2020, averaging a record-low 0.9 percent. Meanwhile, the **Federal Home Loan Mortgage Corporation's 30-year fixed-rate** sank to 3.1 percent. Mortgage rates slid to decades-low levels within Texas, falling from 4.2 to 3.2 percent for conventional, or nonGSE, loans. For GSE borrowers, the median mortgage rate in 2020 was slightly higher at 3.3 percent but still registered a significant decline from 4.4 percent the previous year. Texans capitalized on lower rates, pushing mortgage applications for home purchases up 24 percent compared with 2019. Refinance mortgage applications, which are more sensitive to interest rate fluctuations, more than doubled during the same time period after tripling during 2019. The growth rate of refinances is expected to decelerate in 2021 as the pool of households able to refinance shrinks. (For more information, see [Finding a Representative Interest Rate for the Typical Texas Mortgagee.](#))

More than 393,100 homes were sold through Texas' Multiple Listing Services (MLS) during 2020, a 9.4 percent increase over the previous year. Current building activity, measured by the Texas **Residential Construction Cycle (Coincident) Index** flattened as industry hiring was sluggish during the pandemic. The Texas **Residential Construction Leading Index**, however, reached an all-time annual high due to record-low interest rates and strong building permits and housing starts, indicating construction activity will pick up in the new year. These metrics in Texas' major MSAs also trended upward, especially in Austin and Houston, supporting a positive outlook. (For additional housing commentary and statistics, see [Texas Housing Insight](#) at [recenter.tamu.edu](http://recenter.tamu.edu).)

The **WTI crude oil spot price** averaged just \$39 per barrel in 2020 after spring shutdowns across the world pulled the metric down to just over \$16 per barrel in April. Reduced travel, storage capacity concerns, and general uncertainty surrounding the pandemic diminished demand for oil through

much of the year, keeping prices low despite OPEC+ production cuts. Texas' crude oil output declined for the fourth straight month to 4.6 million barrels per day in November<sup>2</sup>. Although the Lone Star State still accounted for more than 40 percent of national production, the number of Texas' **active rigs** at year end decreased to 155 from 406 in December 2019. On the bright side, vaccine rollouts—which encourage more mobility—and additional fiscal stimulus should help the oil market's recovery in 2021. On the natural gas front, unseasonably warm summer temperatures and less industrial consumption as manufacturing activity paused during the economic shutdown weakened demand. Despite a slide in oil-associated natural gas production, the average 2020 **Henry Hub natural gas spot price** fell half a dollar per million British thermal unit (BTU) to \$2.04 per million BTU. The Waha hub price in West Texas plummeted into negative territory early in year due to insufficient takeaway capacity. The recent startup of Kinder Morgan's Permian Highway Pipeline, however, should relieve some downward price pressure to start 2021.

Texas shed a record-breaking 431,150 **nonfarm jobs** in 2020, amounting to 3.4 percent of payrolls, the greatest annual percentage decline since 1945 but less than the national loss of 5.8 percent. Moreover, Texas' **labor force participation rate** ticked down to an all-time low of 62.7 percent as more than 81,500 Texans exited the labor force amid pandemic-related disruptions and uncertainty. Women in the 25-34 year age group were more likely than men to leave the labor force to take care of children amid in-person school closures. The total contribution to the labor-force contraction, however, was double for men than for women in percentage terms.

Almost 4.2 million **initial unemployment insurance claims** were filed during 2020 (with more than 40 percent submitted in March and April), about three-and-a-half times the number in 2009 compared with just two-and-a-half times nationally. Although the data around the holidays is more volatile, Texas claims climbed in December as COVID-19 cases surged, a divergence from the U.S. eight-month downtrend. Meanwhile, the statewide **unemployment rate** rose more than 4 percentage points annually to average 7.7 percent. Among the major MSAs, joblessness was highest in Houston, where the rate shot up to 8.6 percent due to a higher-proportion of energy-related jobs in the metro. The metric in San Antonio and DFW was lower than the state average at 7.3 and 7.1 percent, respectively, but Austin maintained the lowest rate of 6.2 percent, although unemployment still increased considerably.

After two straight years of sluggish growth, **average real private hourly earnings** improved 1.8 percent but remained flat compared with the post-Great Recession average. The uptick may be a mechanical adjustment to the disparate impacts of the pandemic and its economic aftermath. In general, high-wage earners have seen an acceleration in wage growth, while low-income workers have observed a deceleration. Moreover, low-income jobs were disproportionately at risk during the shutdown, and many have not been brought back, giving higher-earning positions more weight in the overall average metric. Austin and Dallas paid the highest nominal wages at more than \$30 per hour each, rising 1.8 and 2.5 percent in real terms, respectively. Fort Worth real earnings

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<sup>2</sup> The release of crude oil production typically lags the *Outlook for the Texas Economy* by one month. Data is seasonally adjusted.

surged 8.8 percent after falling between 2015-18. Houston wages also fell four straight years but instead of rebounding, flattened in 2020. On the other hand, San Antonio posted a fifth consecutive annual increase, jumping 1.3 percent.

Houston shed 122,700 nonfarm jobs, a steeper decline than the state average in percentage terms (3.9 percent). Leisure/hospitality accounted for more than a third of the decrease, followed by the goods-producing sector. The other major MSAs registered the largest drops in leisure/hospitality and education/health services employment. Although Fort Worth regained all the retail layoffs from the previous year plus some, total payrolls still shrank by 35,500 employees (3.3 percent). Transportation/utilities was the bright spot in San Antonio with double-digit annual growth, but the metro still cut 33,400 positions altogether (3.1 percent). In Austin and Dallas, hiring in the financial activities sector offset some of the overall contractions to cap losses at 23,000 (2.1 percent) and 49,250 jobs (1.8 percent), respectively.

Texas' goods-producing sector decreased by 87,000 workers with 45,000 of the discharges energy-related. Due to still-diminished employment levels from the 2015-16 oil bust, however, 2020 mining/logging losses were less than half compared with the mid-decade industry downturn, with hiring resuming, albeit modestly, in the fourth quarter. More than 24,300 manufacturers were laid off, mostly in Houston and Fort Worth's durable-goods industry. On the bright side, the **Texas Manufactured Housing Survey** indicated the state's manufactured housing sector registered improved production in December, with sales expected to accelerate to start 2021. Amid fluctuations in overall industry employment, **average real hourly manufacturing earnings** rebounded 5.5 percent annually following three straight contractions. Gains were concentrated in North Texas as inflation-adjusted wages fell to a series-low in Houston (starting in 2003). San Antonio's real earnings ticked down on top of a double-digit percentage decline the previous year. The **Dallas Fed's Manufacturing Outlook Survey** corroborated jobs data as the employment index slowed, while respondents noted increased nominal wages. General business conditions, company outlook, and capital expenditures all dropped significantly relative to 2019 amid pandemic-related disruptions, but the production index remained in positive growth territory. Availability of skilled labor and pandemic-related materials shortages, however, are concerns heading into the new year.

The construction industry laid off more than 17,700 employees with the majority of losses in Houston. **Real hourly construction earnings** fell 1.2 percent on average as inflation offset nominal gains for the second straight year. **Total construction values** flattened at \$68.4 billion in 2020 after sluggish activity the first four months, sinking 1.6 percent in real terms. The drop in values was attributed to the nonresidential sector, which normalized to its four-year average before a record year in 2019. Office-building construction in particular declined across all four major MSAs, outweighing increased warehouse values in Central and North Texas and school values in Houston. On the residential side, construction activity shifted from the apartment to the single-family sector in DFW and Houston whereas both components expanded in Austin and San Antonio.



Service-providing employment marked its worst year on record (series starting in 1990), falling by 344,100 positions annually. Coinciding with the economic shutdown, almost 1.3 million jobs<sup>3</sup> were lost in March and April alone. On the subsector level, only transportation/utilities and financial activities eked out modest gains, increasing 1.3 and 1.2 percent, respectively. Leisure/hospitality payrolls declined by 13.9 percent, or 194,000 jobs. Education/health services shed 46,800 positions. Other service-providing services, including personal/laundry services, posted the second-largest percentage decrease of 5 percent. The **Dallas Fed's Service Sector Outlook Survey** corroborated weakened business conditions due to the pandemic and related uncertainty. Respondents commented on potential political and regulatory changes being a headwind in 2021, but overall general business activity is expected to improve.

The number of Texas retailers declined for the second straight year as the pandemic accelerated e-commerce activity. Health/personal care stores, miscellaneous store retailers, and electronics/appliance stores bore the brunt of the overall decrease, while building material/garden equipment/supplies dealers and general merchandise stores were the winners. Inflation-adjusted retail sales plunged about 6 percent in 2020, corresponding to an annual decline in the **Dallas Fed's Retail Outlook Survey's** revenue index. Perceptions of future activity and company outlook for the new year, however, were optimistic due to vaccine rollouts and additional fiscal stimulus.

The **U.S. Consumer Price Index (CPI)** rose 1.4 percent year over year (YOY) in December, averaging 1.2 percent growth over the year and remaining well below the Federal Reserve's 2 percent YOY benchmark. There have been worries that inflation may run rampant in 2021 as the economy recovers, but Federal Reserve Chair Jerome Powell remains unconcerned. Although core inflation increased 1.6 percent at year-end, it only reached the target rate the first quarter of 2020. The Houston CPI ticked up in December as local food/beverage and housing prices accelerated. Transportation costs, however, continued to pull the overall metric down, falling 5.5 percent from year-ago levels.

The **Texas trade-weighted value of the dollar** increased for the third straight year after skyrocketing in March, although the rate cooled during the rest of the year. Nevertheless, unfavorable currency fluctuations and reduced economic activity worldwide pulled **Texas' commodity exports** down 12.8 percent in real terms. Inflation-adjusted **crude oil exports** fell the first half of the year, contributing to the 22.1 percent annual decline. Still, the state accounted for more than 85 percent of the national total. On top of flat activity the previous year, **real manufacturing exports** plummeted 14.1 percent amid decreased energy-related products and transportation equipment shipments.

Continued weakness in the global energy and manufacturing sectors and restricted cross-border travel within North America altered Texas' export distribution. Mexico's share decreased for the fourth consecutive year, but the country remained the Lone Star State's top trading partner as the United States-Mexico-Canada Agreement went into effect on July 1, 2020. Long-term ratifications

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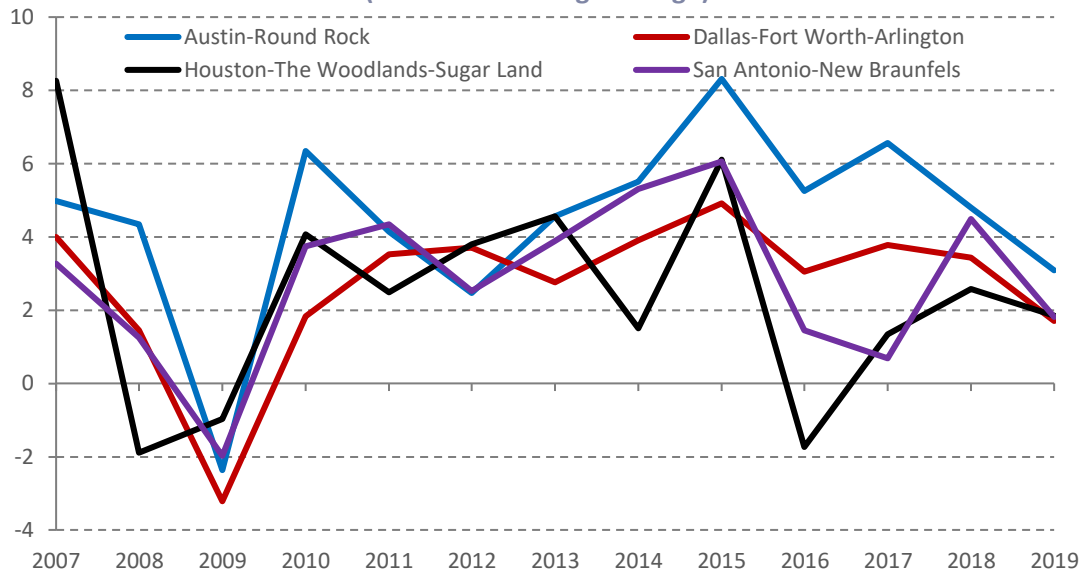
<sup>3</sup> Seasonally adjusted.

of the trade pact are as of yet unknown, especially since two extra years were granted to automakers to reach duty-free origin and labor requirements (three-fourths of the product must originate from North America and workers must earn at least \$16 per hour) due to the pandemic. China's purchase of crude oil from Texas skyrocketed in 2020 when prices plummeted in spring, with the intent to replenish the country's emergency reserves. Agriculture shipments to China also accelerated under the phase one U.S.-China trade deal. COVID-19 affected many aspects of Texas' economy, not the least of which was the state's growing trade industry. Containment of the virus is essential to Texas' economic recovery in 2021.



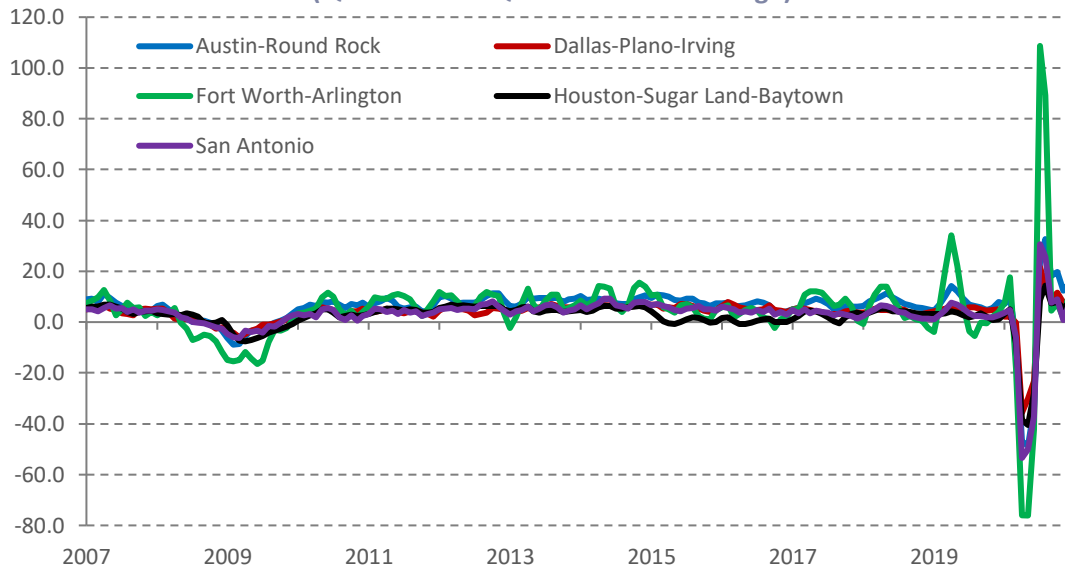
# Economic Activity

### Major Metros Gross Domestic Product (Annual Percentage Change)



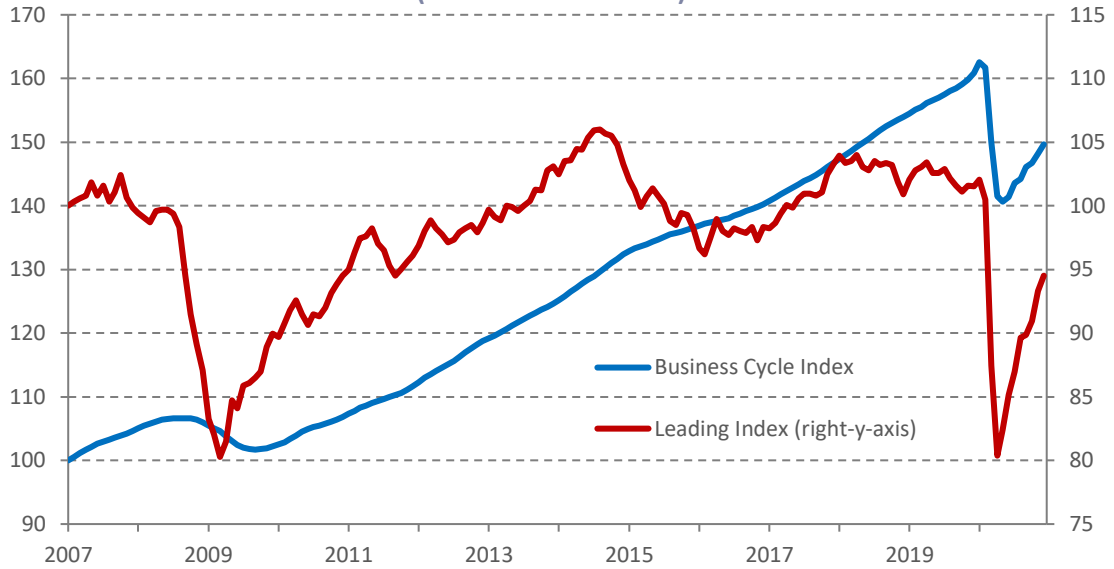
Note: Annual. Not seasonally adjusted.  
Source: Bureau of Economic Analysis

### Major Metros Business Cycle Index (Quarter-over-Quarter Percent Change)



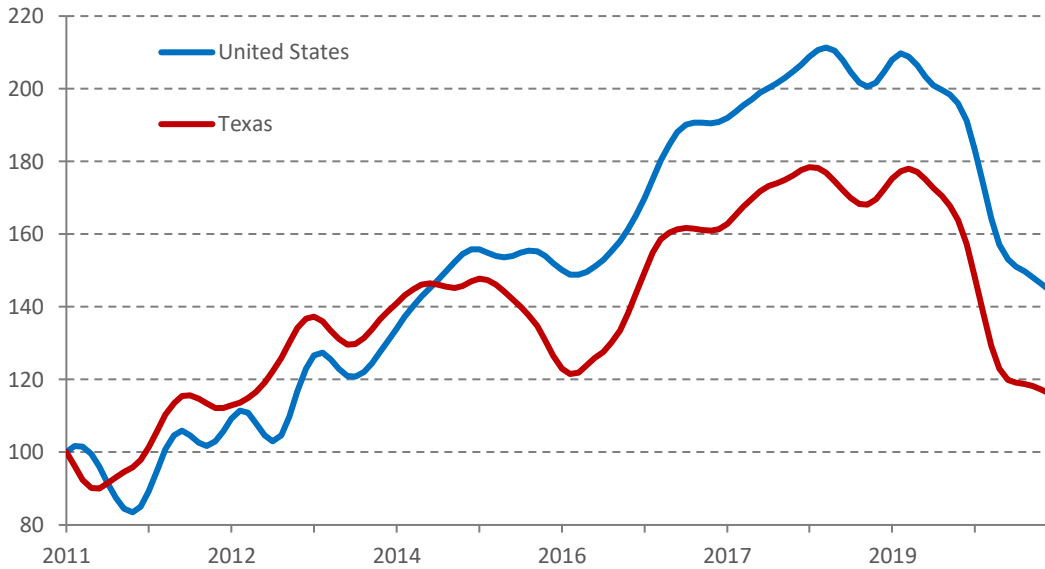
Note: Seasonally adjusted. For more information, see [Texas Business Cycle Index](#).  
Source: Federal Reserve Bank of Dallas

**Texas Business Cycle Index and Leading Index**  
(Index Jan 2007 = 100)



Note: Seasonally adjusted. For more information, see [Texas Business Cycle Index](#).  
Source: Federal Reserve Bank of Dallas

**Consumer Confidence Index**  
(Index Jan 2011 = 100)

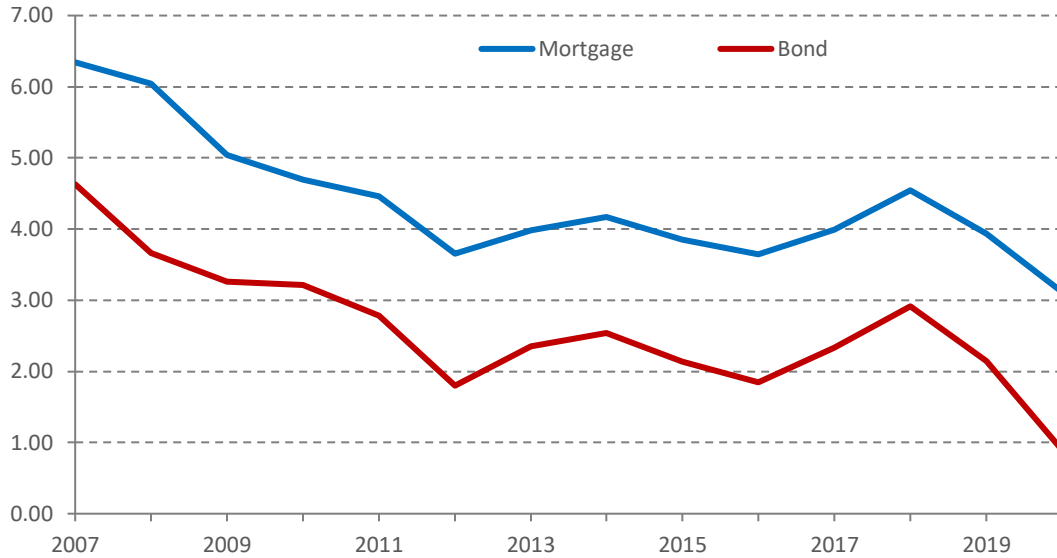


Note: Seasonally adjusted and detrended.  
Source: Conference Board



# Financial Activity

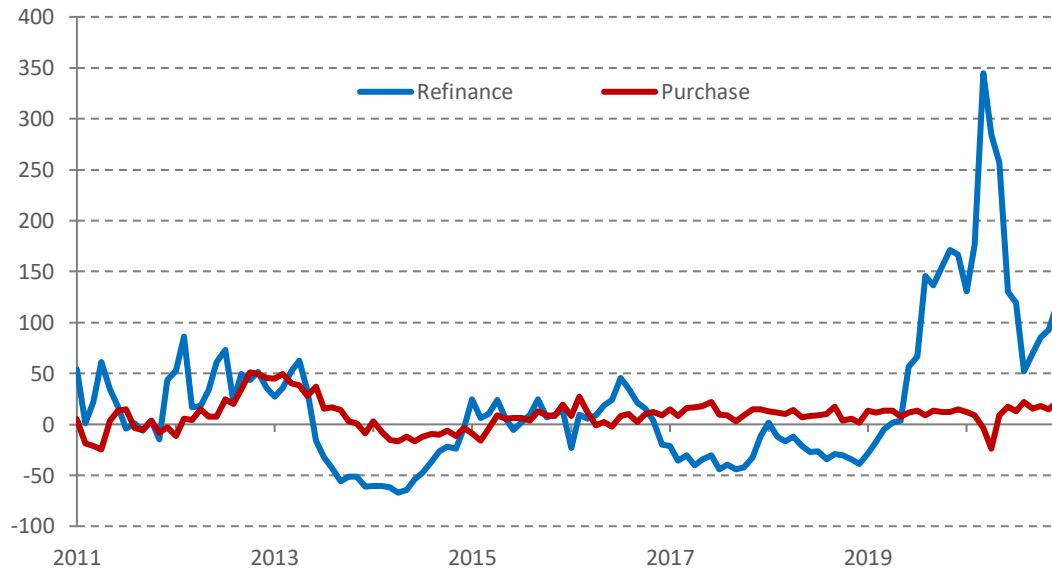
### 30-Year Mortgage Rate and Ten-Year Bond Yield (Percent)



Note: Annual average.

Sources: Federal Home Loan Mortgage Corporation and Federal Reserve Board

### Texas Mortgage Applications (Year-over-Year Percentage Change)



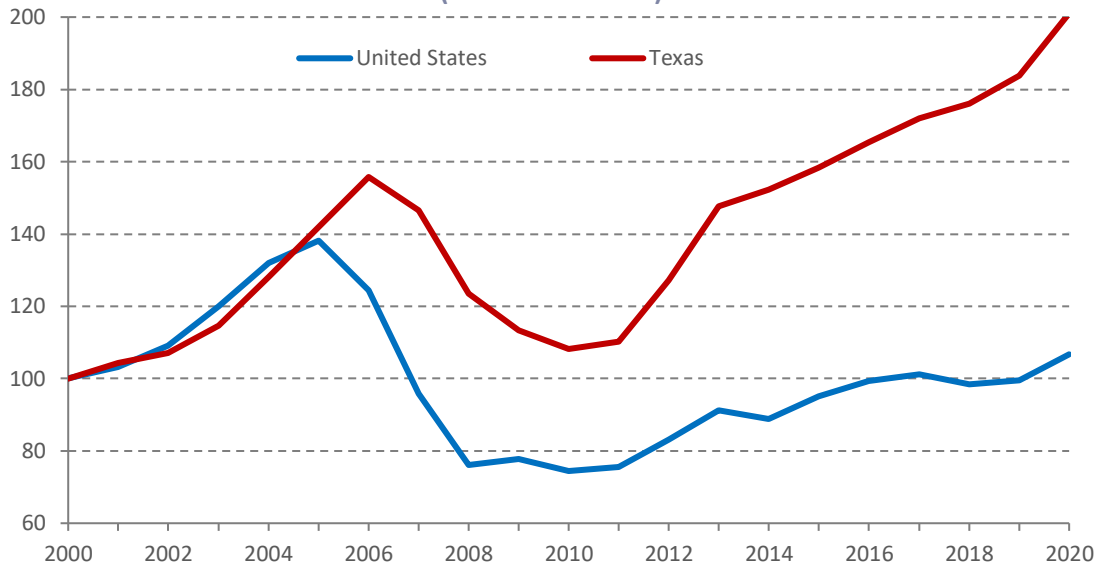
Note: Seasonally adjusted.

Source: Mortgage Bankers Association



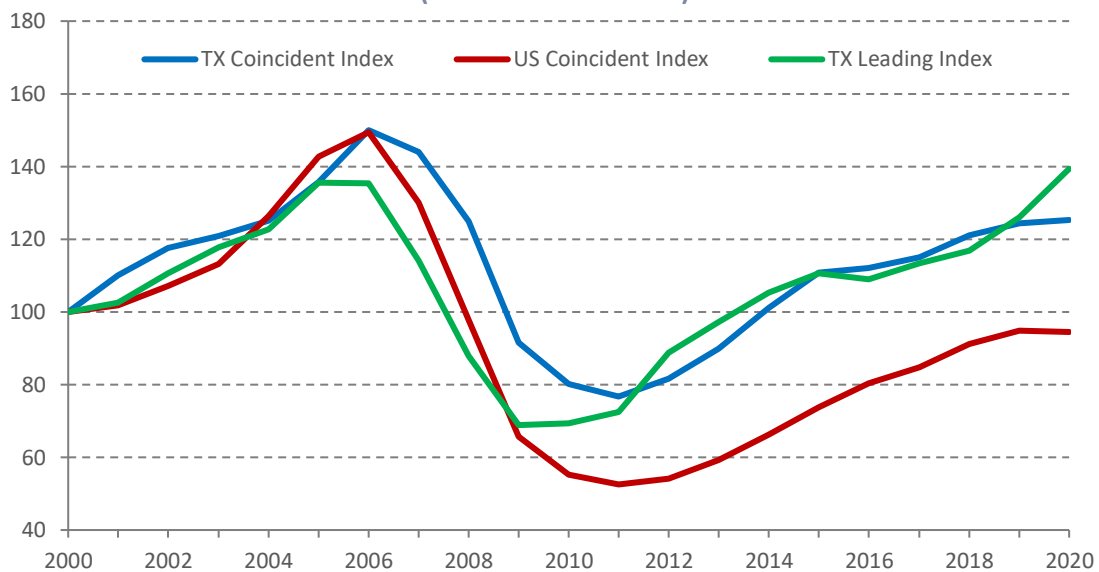
# Housing

### Total Housing Sales (Index 2000 = 100)



Note: Annual sum. Sales for the United States include all existing homes and new single-family homes; new non-single-family homes are not included. Texas includes all existing and new homes. For more information, see [Housing Sales](#).  
Sources: U.S. Census Bureau, National Association of Realtors, and Texas Real Estate Research Center at Texas A&M University

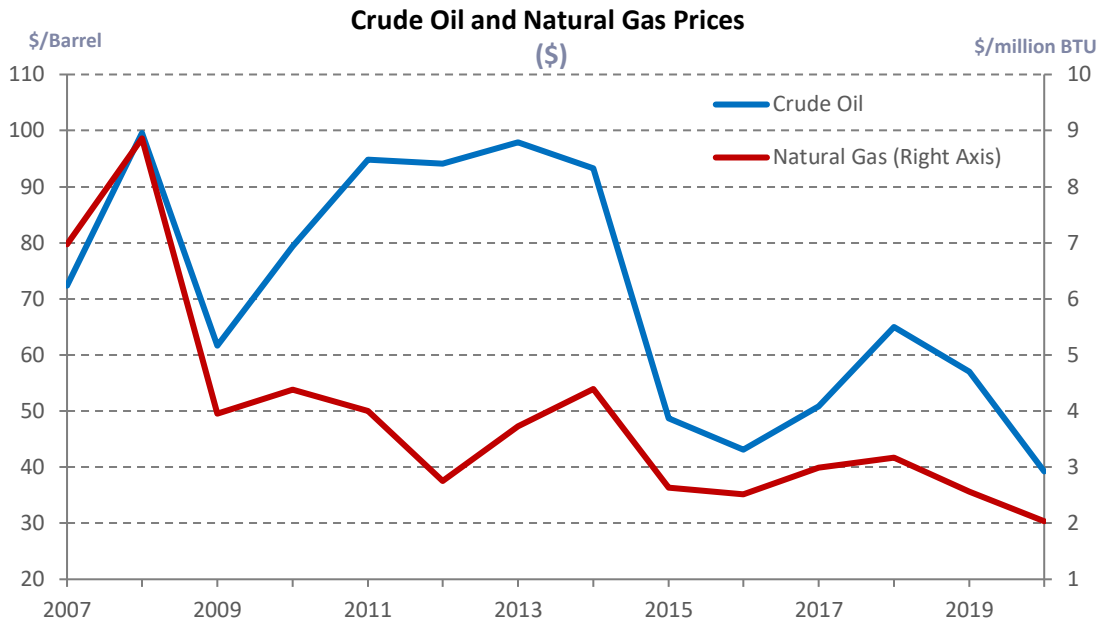
### Texas Residential Construction Index (Index Jan 2000 = 100)



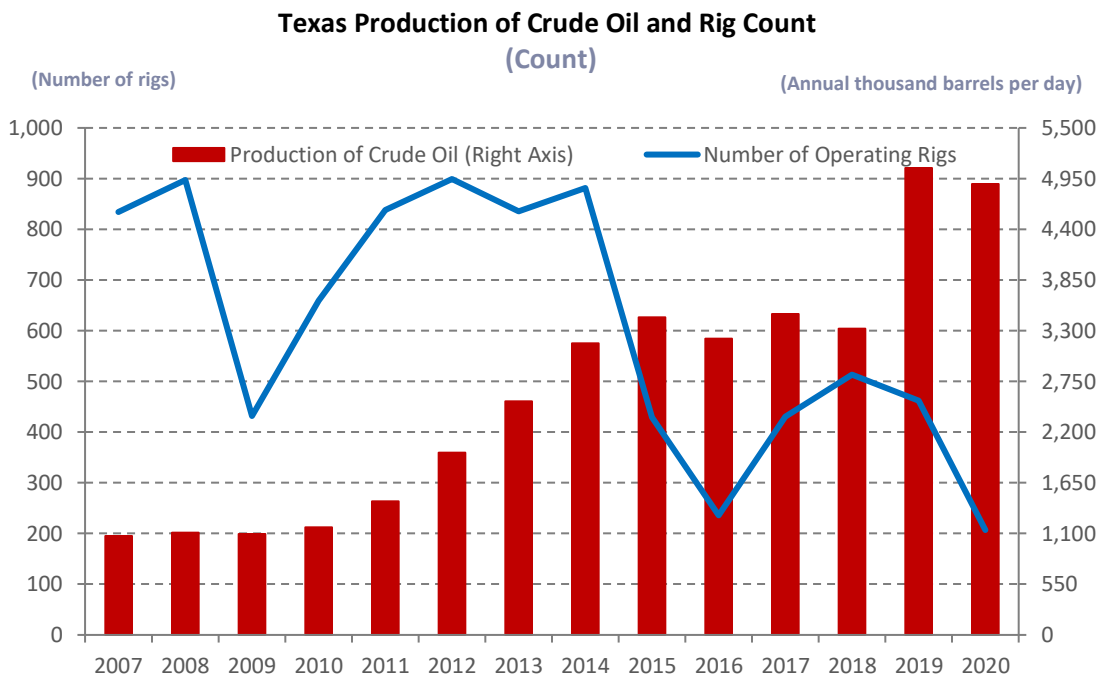
Note: Annual average.  
Sources: Texas Real Estate Research Center at Texas A&M University and Federal Reserve Bank of Dallas



# Energy



Note: Annual average. For more information, see [Crude Oil and Natural Gas Prices](#).  
 Source: U.S. Energy Information Administration received from Thomson Reuters

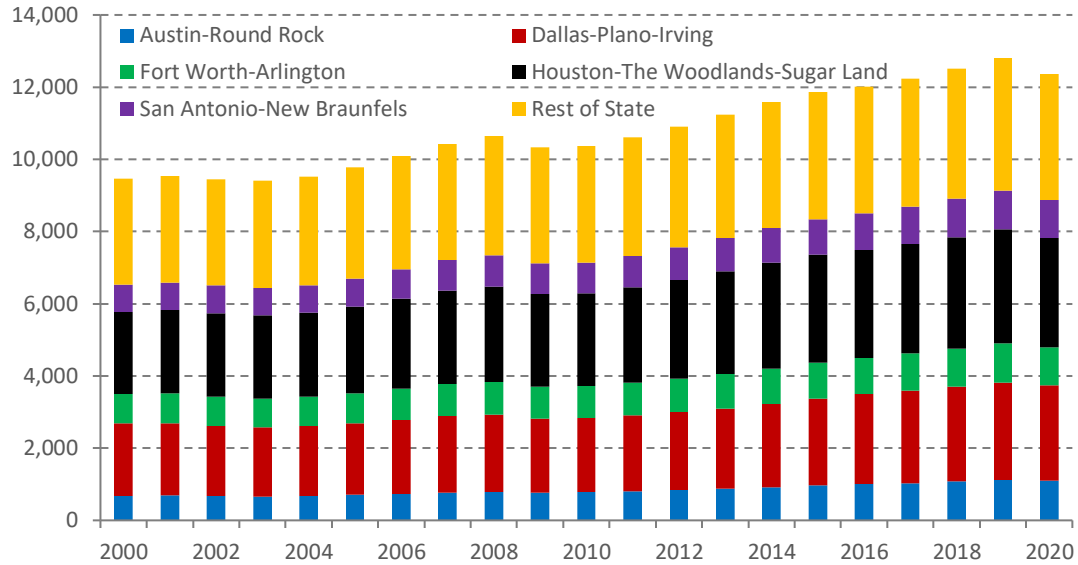


Note: Annual average. For more information, see [Texas Production of Crude Oil and Rig Count](#).  
 Sources: Baker Hughes and U.S. Energy Information Administration



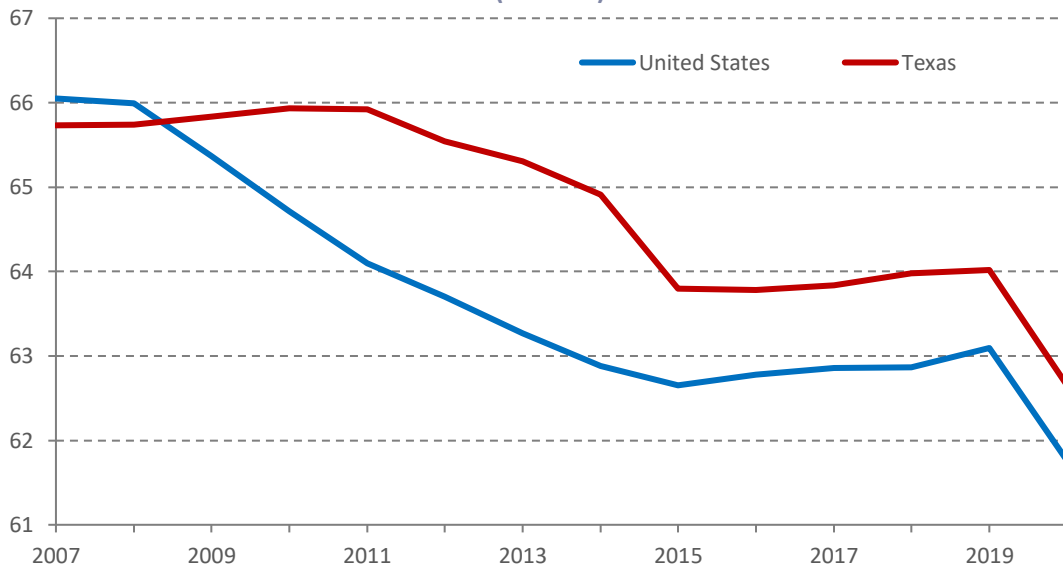
# Employment

### Total Nonfarm Annual Employment (Average in Thousands)



Note: Annual average. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).  
Source: Bureau of Labor Statistics

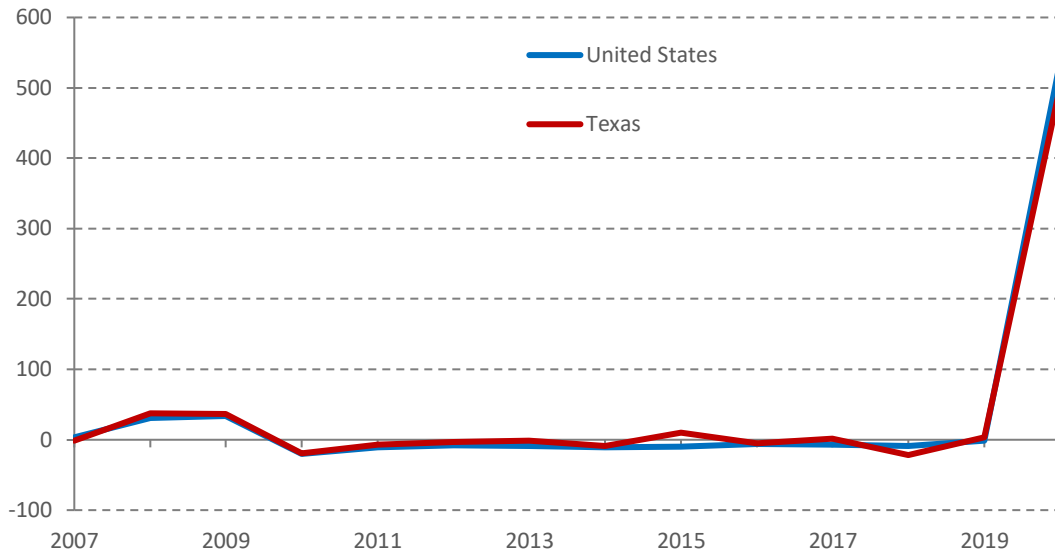
### Labor Force Participation Rate (Percent)



Note: Annual average. For more information, see [Unemployment Rate](#).  
Source: Bureau of Labor Statistics

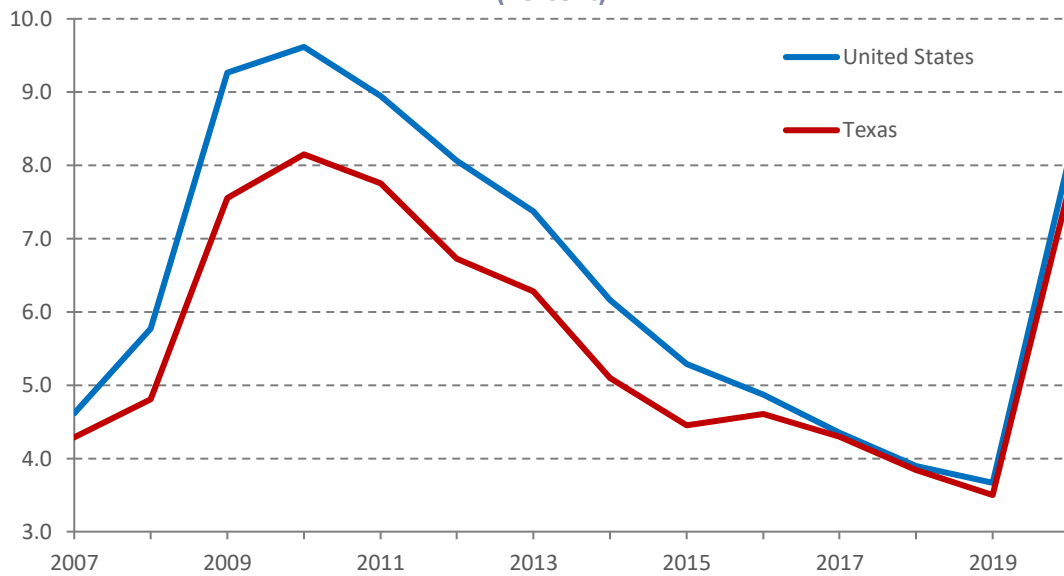


### Unemployment Insurance Claims: Initial Applications (Annual Percentage Change)



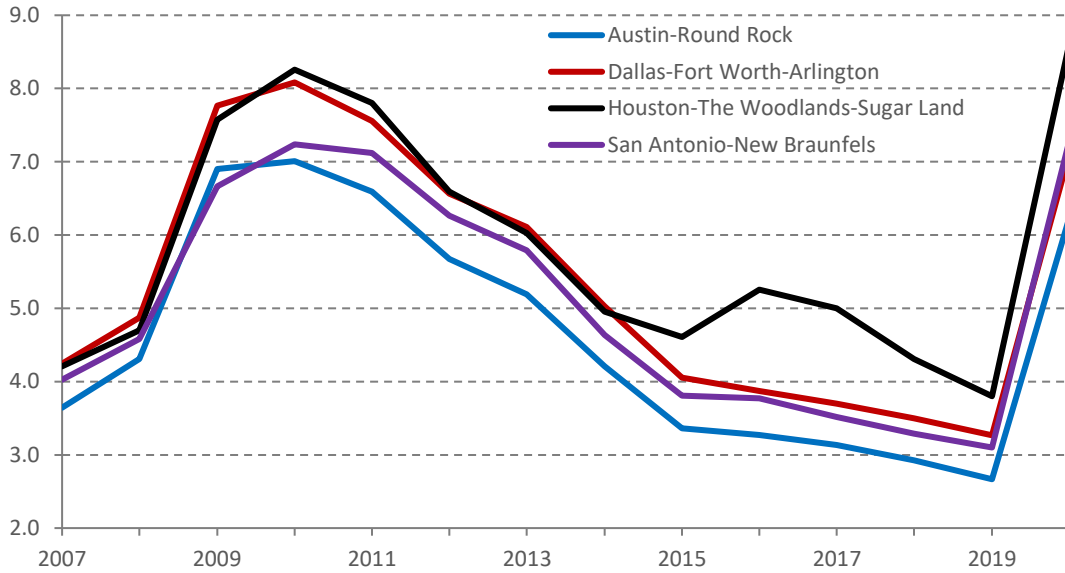
Note: Annual average. For more information, see [Unemployment Insurance Claims: Initial Applications](#).  
Source: Department of Labor

### Unemployment Rate (Percent)



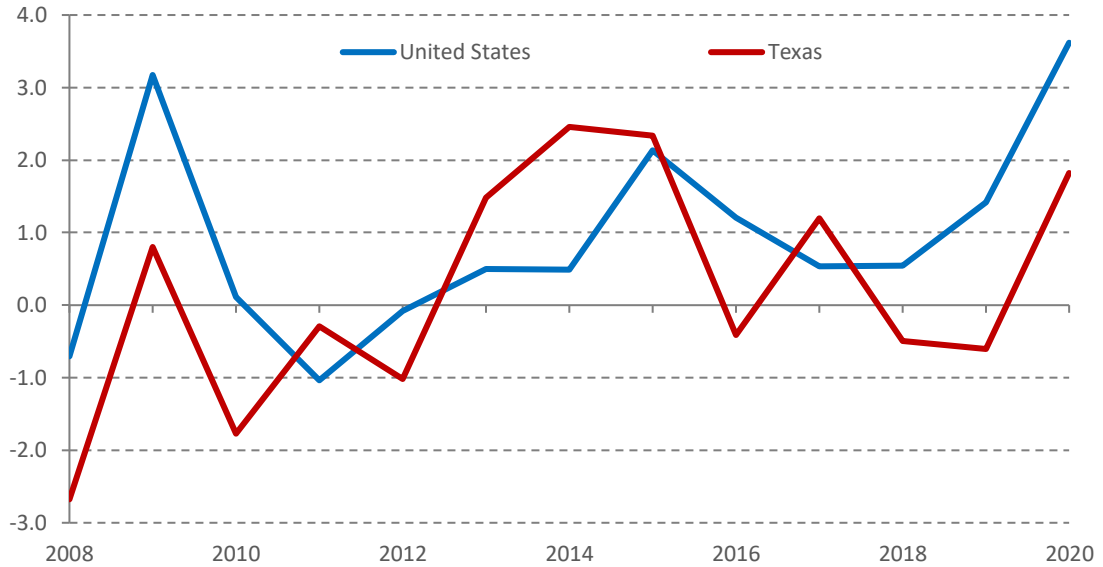
Note: Annual average. December 2020 is preliminary. For more information, see [Unemployment Rate](#).  
Source: Bureau of Labor Statistics

### Major Metros Unemployment Rate (Percent)



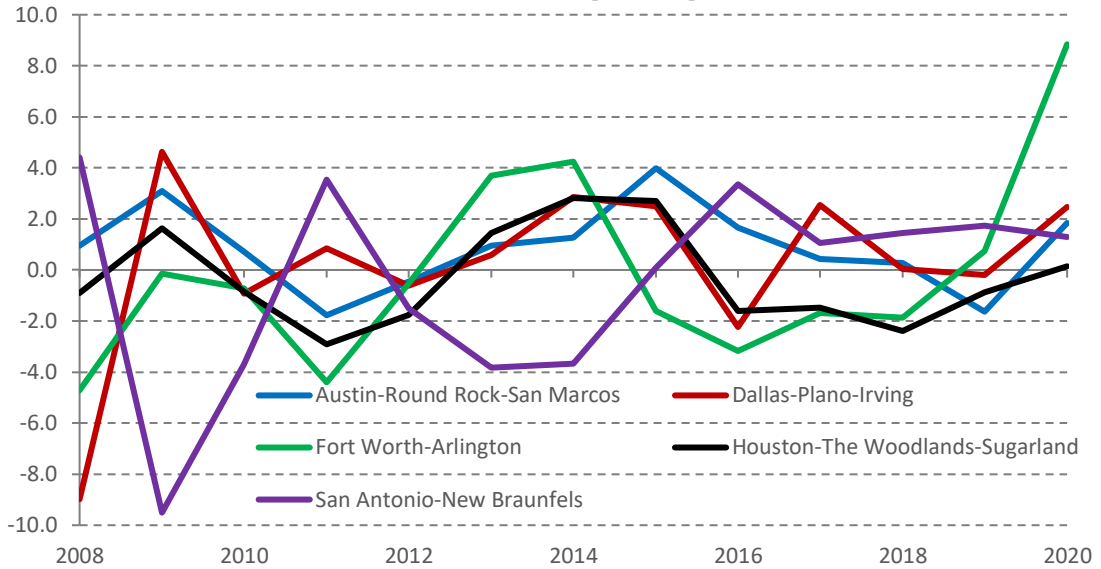
Note: Annual average. December 2020 is preliminary. For more information, see [Unemployment Rate](#).  
Sources: Bureau of Labor Statistics and Texas Real Estate Research Center at Texas A&M University

### Total Private Employee Hourly Earnings (Annual Percentage Change)



Notes: Inflation adjusted. Annual average. December 2020 is preliminary.  
For more information, see [Total Private Employee Hourly Earnings](#).  
Source: Bureau of Labor Statistics

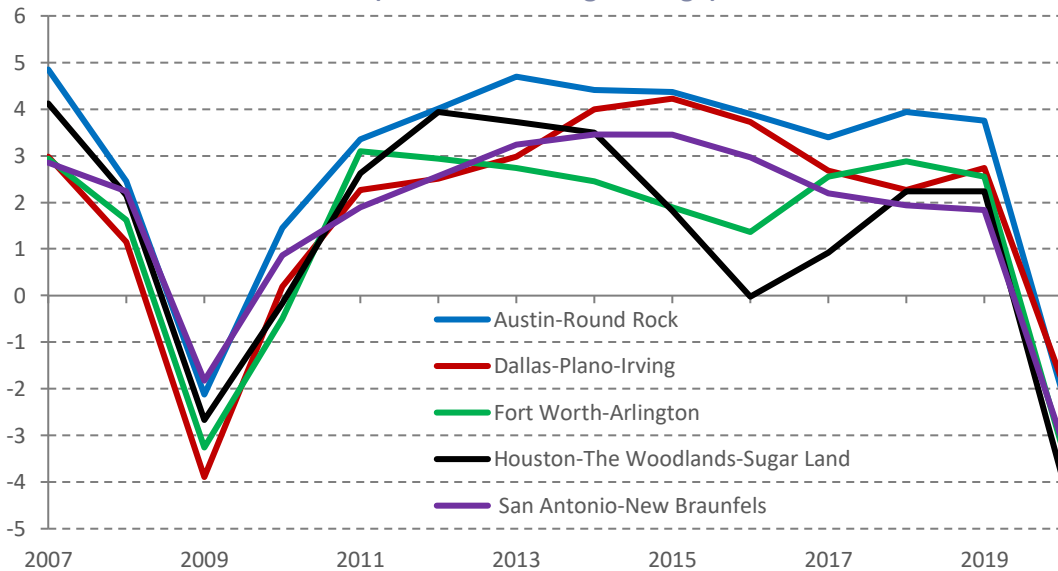
### Major Metros Total Private Employee Hourly Earnings (Annual Percentage Change)



Notes: Inflation adjusted. Annual average. December 2020 is preliminary. For more information, see [Total Private Employee Hourly Earnings](#).

Source: Bureau of Labor Statistics

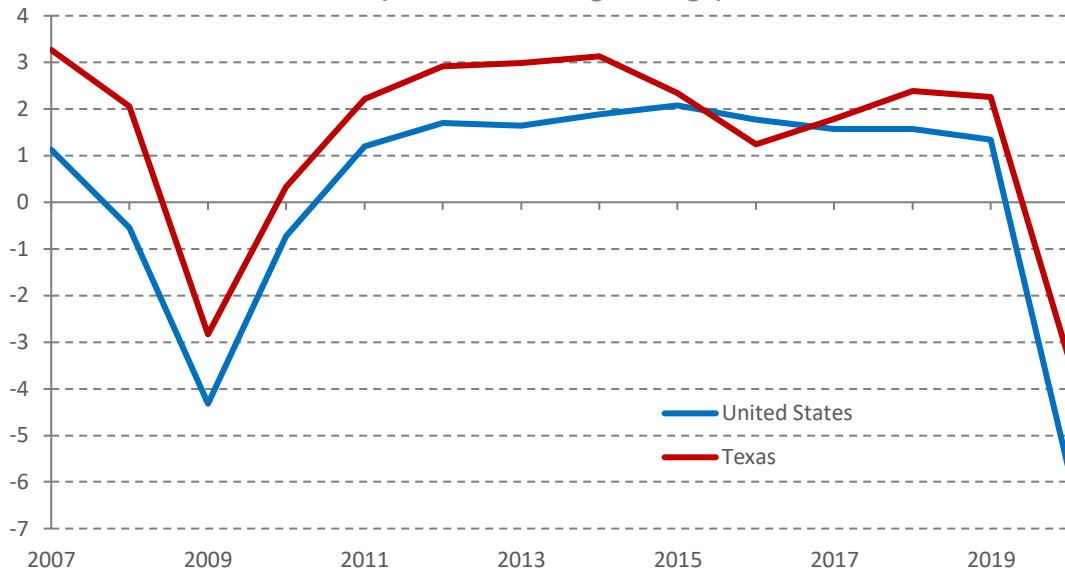
### Major Metros Employment Growth Rate (Annual Percentage Change)



Note: Annual average. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).

Source: Bureau of Labor Statistics

### Employment Growth Rate (Annual Percentage Change)

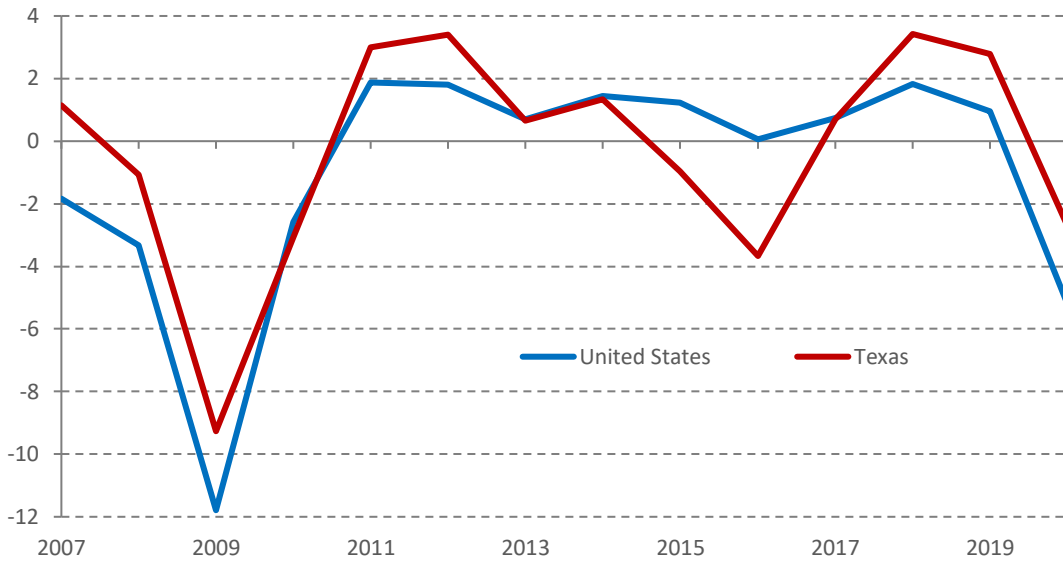


Note: Annual average. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).  
Source: Bureau of Labor Statistics



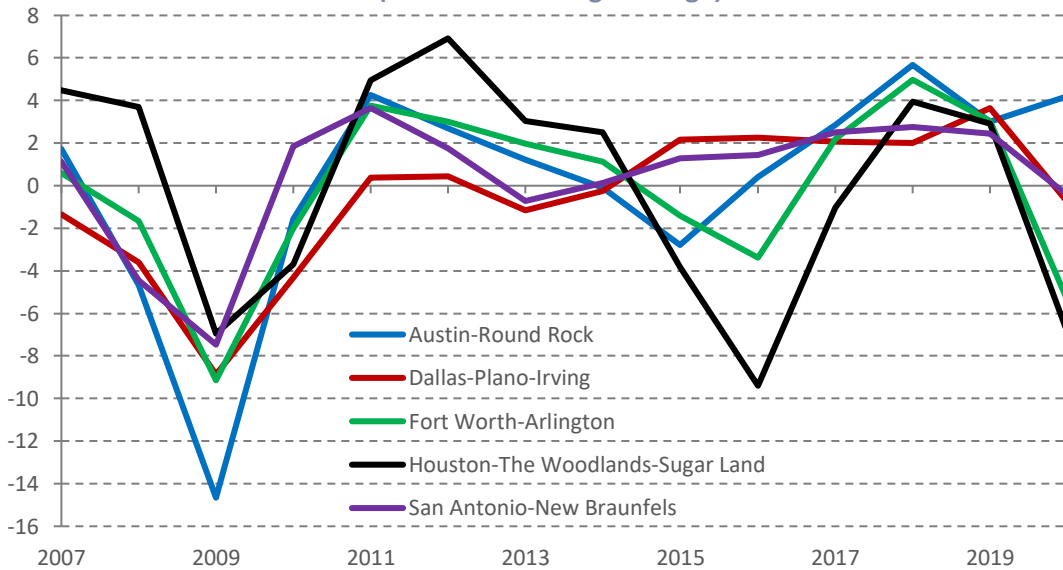
# Manufacturing

### Manufacturing Employment (Annual Percentage Change)



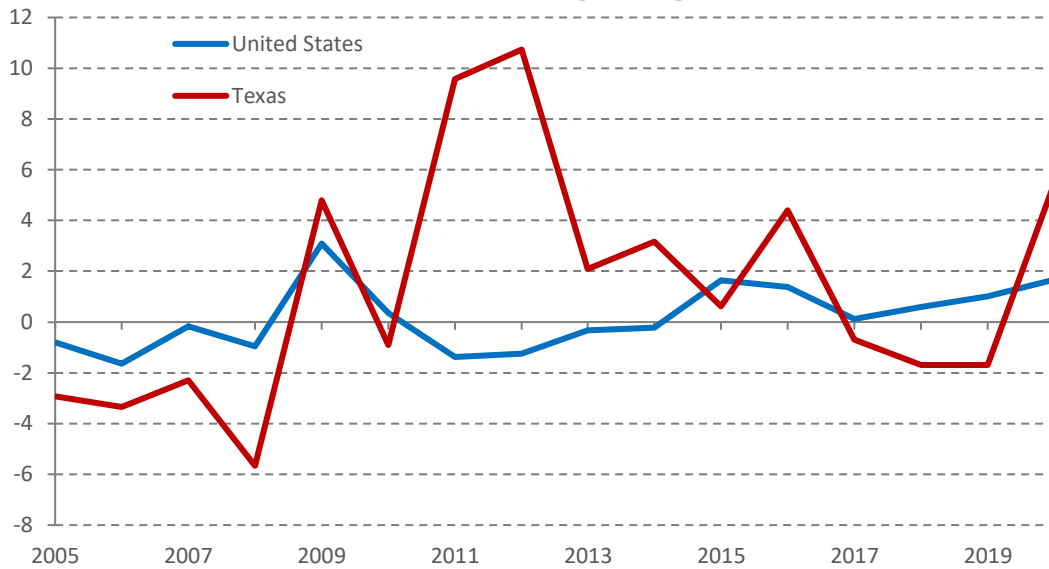
Note: Annual. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).  
Source: Bureau of Labor Statistics

### Major Metros Manufacturing Employment (Annual Percentage Change)



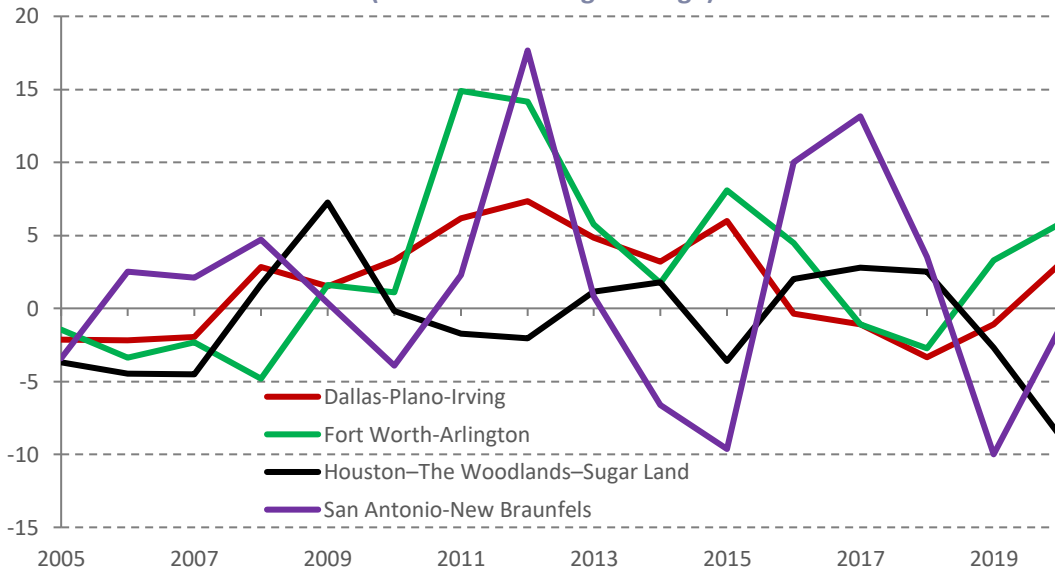
Note: Annual. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).  
Source: Bureau of Labor Statistics

### Manufacturing Employee Hourly Earnings (Annual Percentage Change)



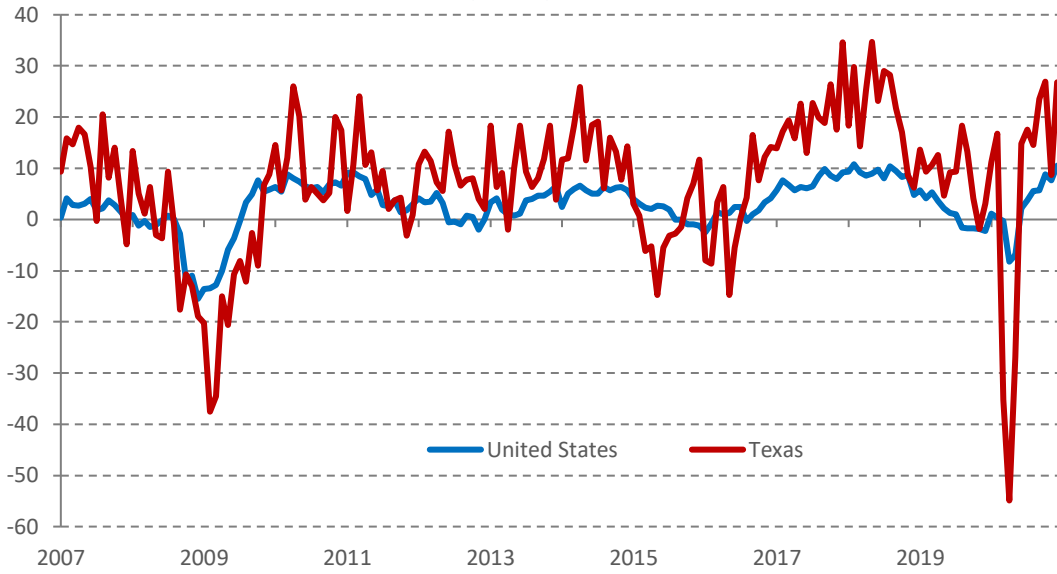
Notes: Inflation adjusted. Annual Average. December 2020 is preliminary. For more information, see [Total Private Employee Hourly Earnings](#).  
Source: Bureau of Labor Statistics

### Major Metros Manufacturing Employee Hourly Earnings (Annual Percentage Change)



Notes: Inflation adjusted. Annual average. December 2020 is preliminary. For more information, see [Total Private Employee Hourly Earnings](#).  
Source: Bureau of Labor Statistics

### Manufacturing Outlook Survey (Index)

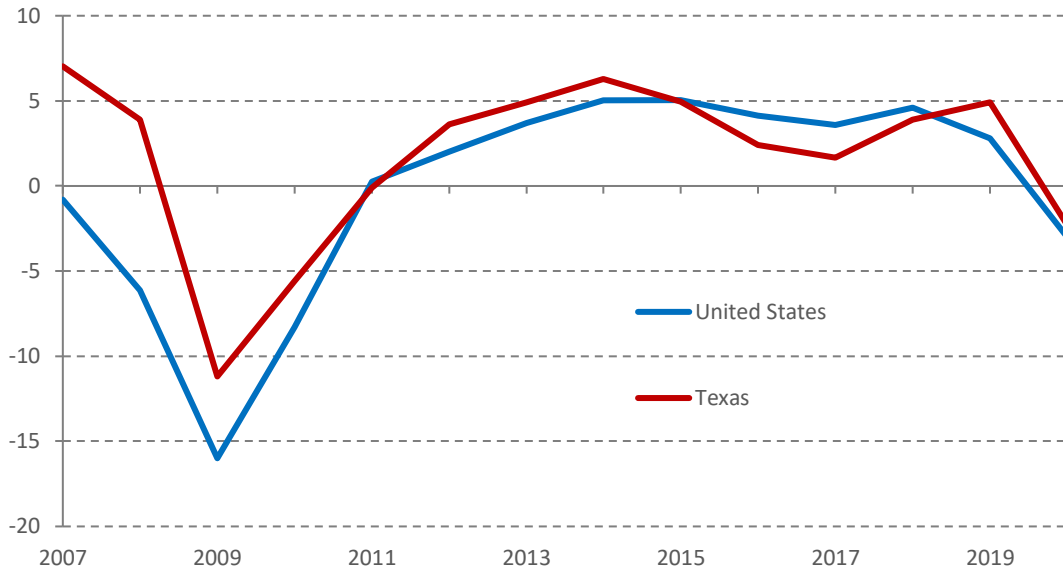


Note: Seasonally adjusted. For more information, see [Manufacturing Outlook Survey](#). United States index is adjusted -50 to be on scale with Texas index  
Sources: Federal Reserve Bank of Dallas and Institute for Supply Management



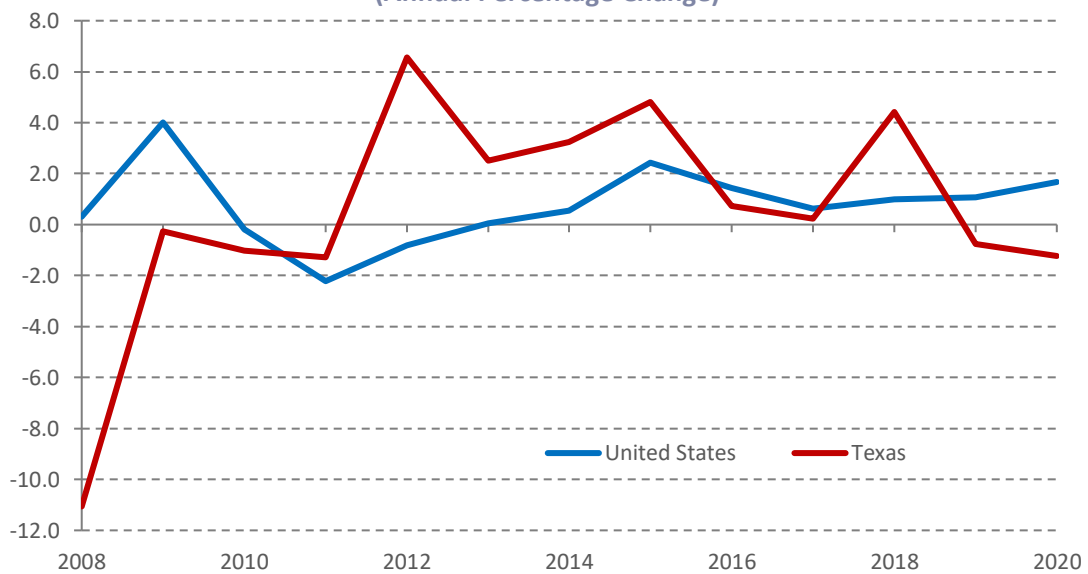
# Construction

### Construction Employment (Annual Percentage Change)



Note: Annual. December 2020 is preliminary. For more information, see [Employment Growth Rate](#).  
Source: Bureau of Labor Statistics

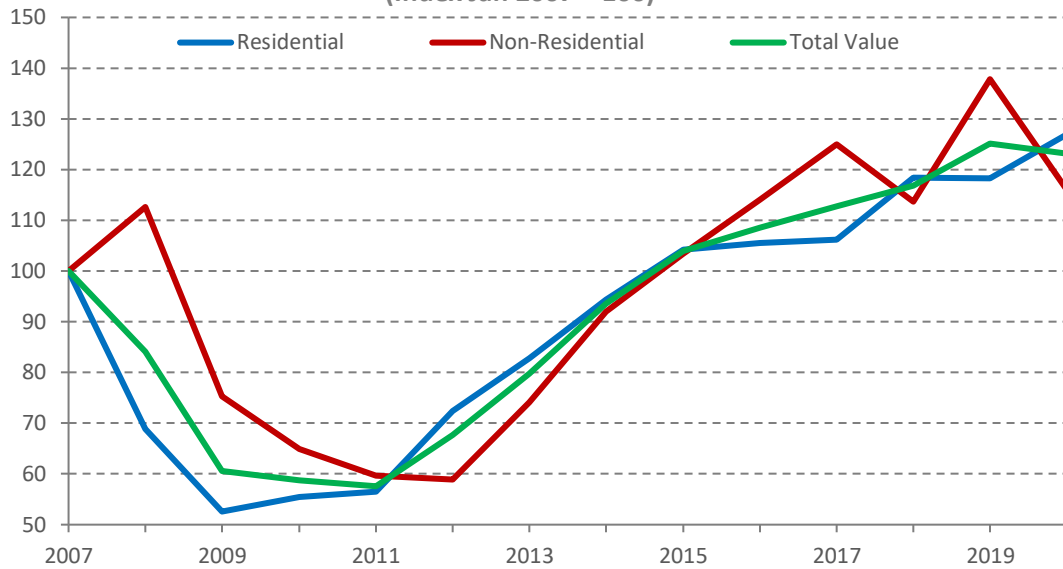
### Construction Employee Hourly Earnings (Annual Percentage Change)



Notes: Inflation adjusted. Annual average. December 2020 is preliminary. For more information, see [Total Private Employee Hourly Earnings](#).  
Source: Bureau of Labor Statistics

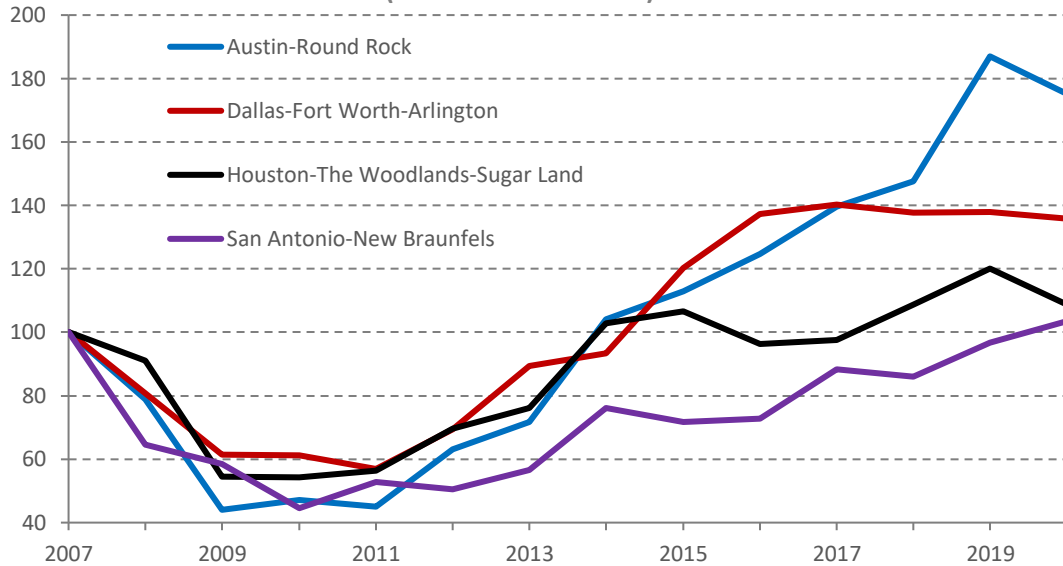


**Texas Construction Values**  
(Index Jan 2007 = 100)



Note: Real value. Annual Sum.  
Source: Dodge Analytics

**Major Metros Total Construction Values**  
(Index Jan 2007 = 100)

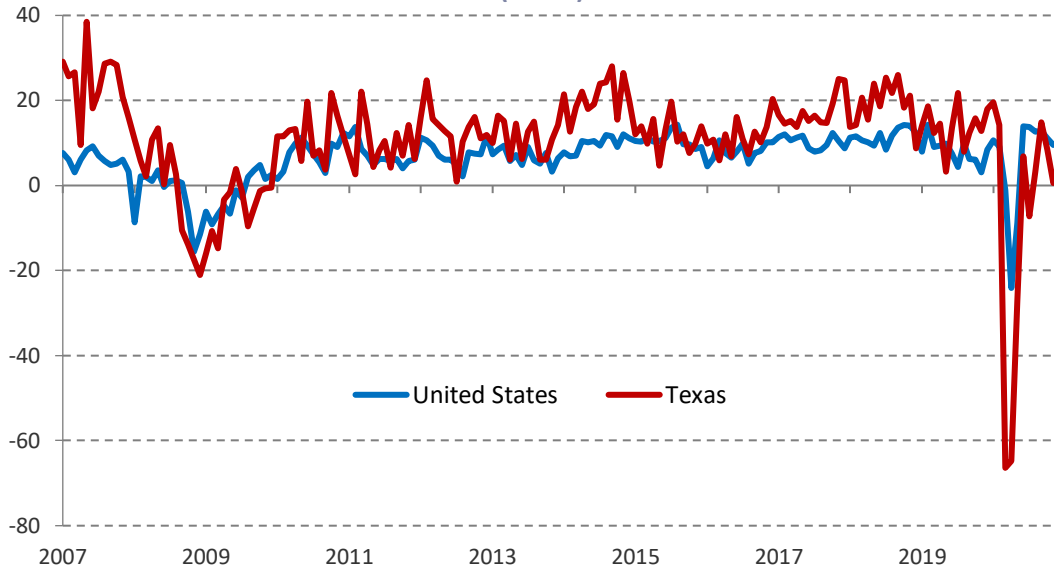


Note: Real values. Annual sum.  
Source: Dodge Analytics



# Services

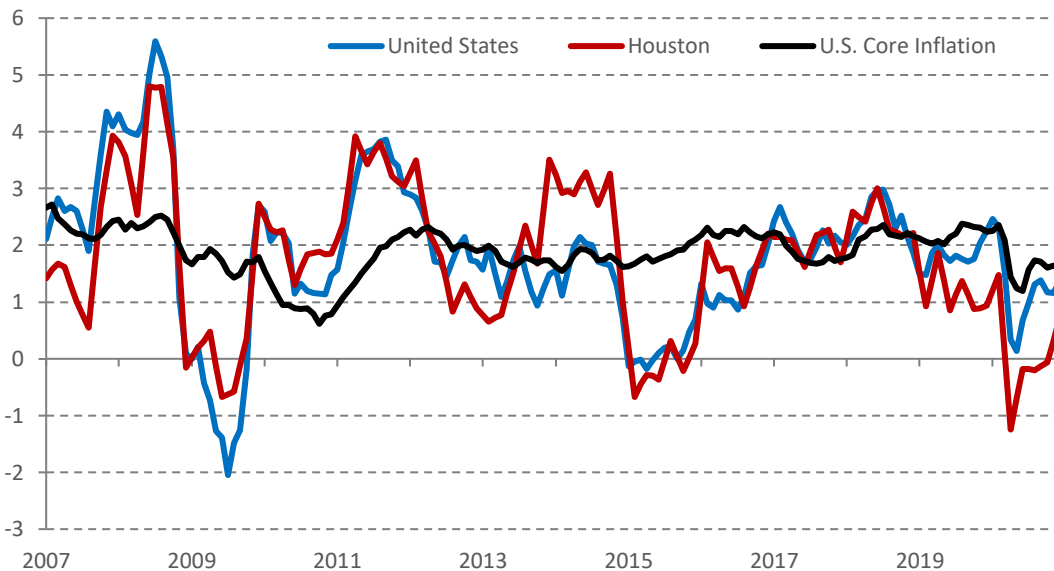
### Services Sector Outlook Survey (Index)



Note: Seasonally adjusted. For more information, see [Services Sector Outlook Survey](#). United States index is adjusted -50 to be on scale with Texas index.

Sources: Federal Reserve Bank of Dallas and Institute for Supply Management

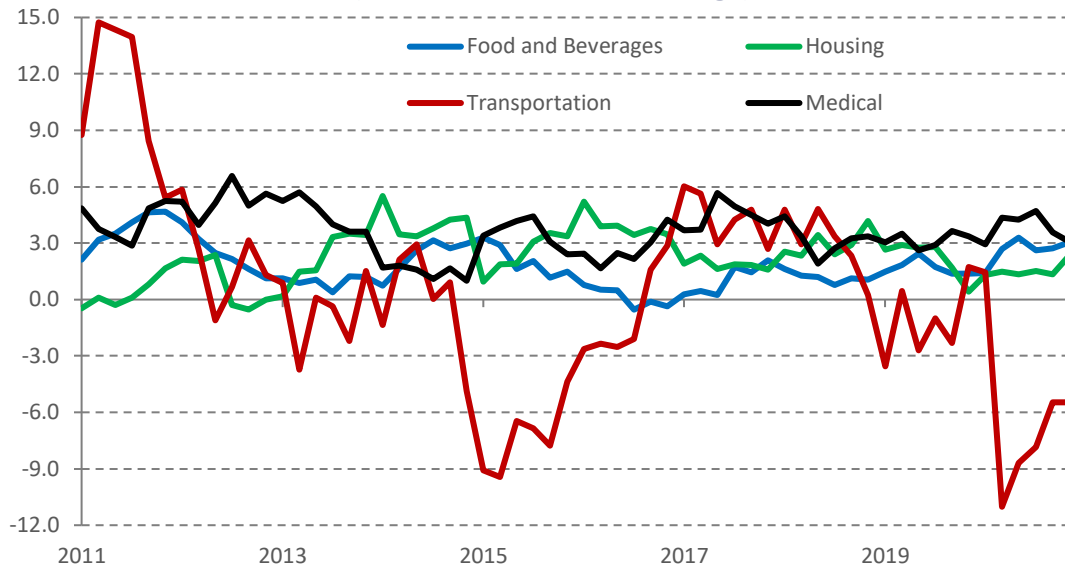
### CPI Inflation Rates (Year-over-Year Percentage Change)



Note: Seasonally adjusted. For more information, see [CPI Inflation Rates](#).

Source: Bureau of Labor Statistics

### CPI Inflation Rates (Houston Components) (Year-over-Year Percent Change)



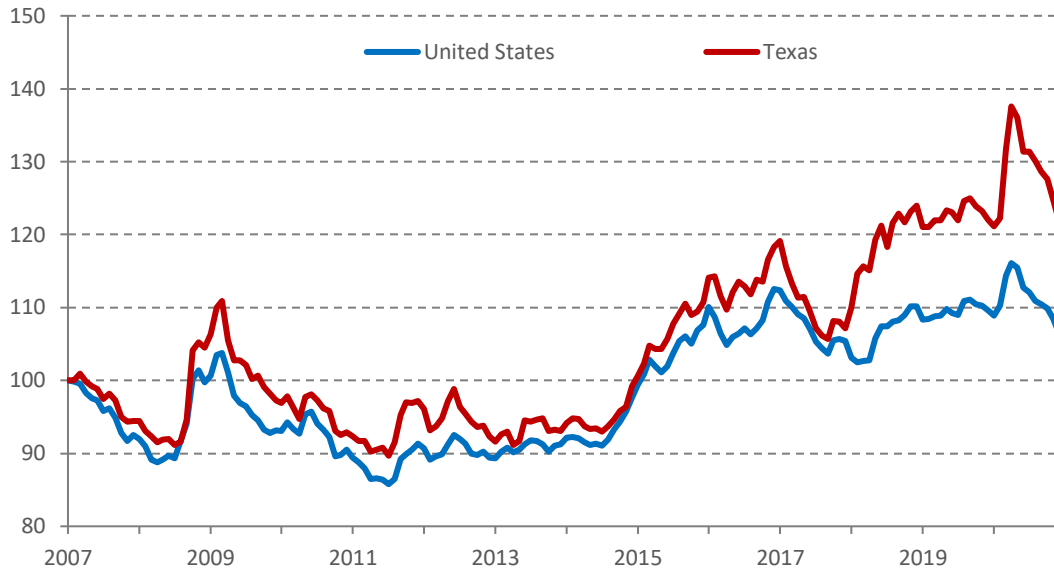
Note: The Houston CPI is composed of the following major groups: Food and Beverages, Housing, Apparel, Transportation, Medical Care, Recreation, Education and Communication, and Other Goods and Services. The four major components are included in the graph above.

Source: Bureau of Labor Statistics



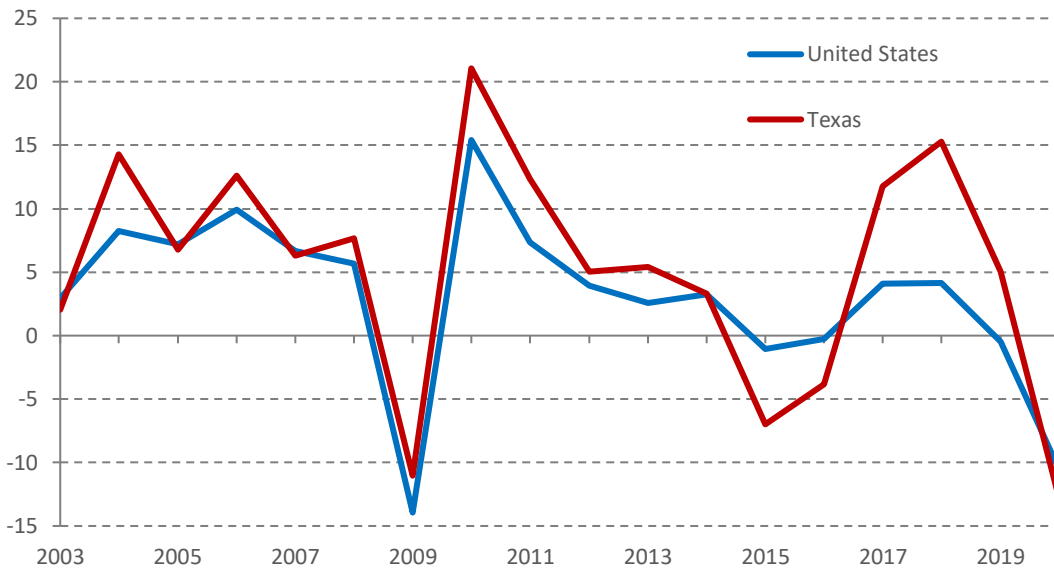
# Trade

### Real Trade Weighted Value of U.S. Dollar (Index Jan 2007 = 100)



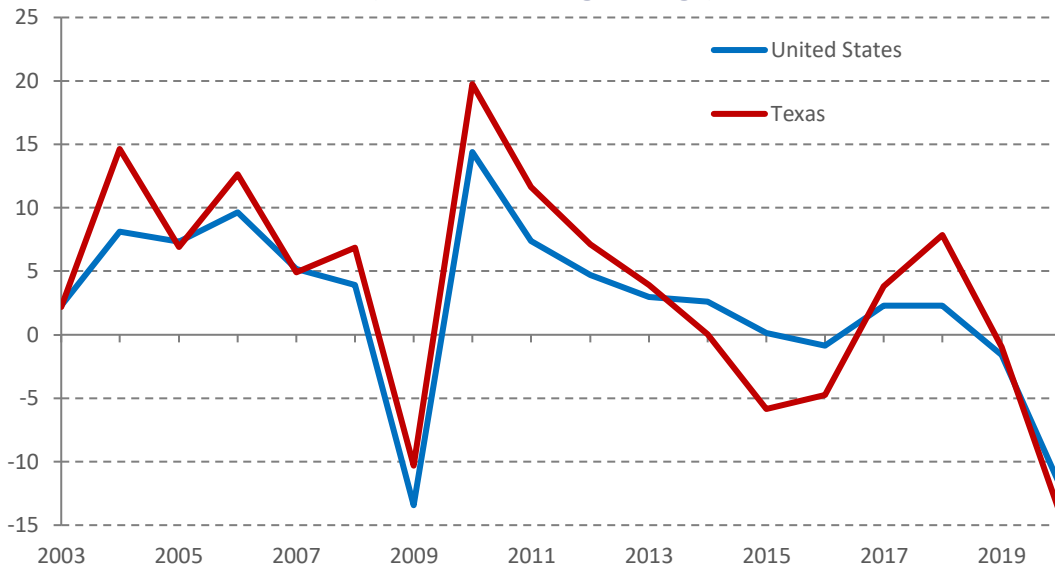
Note: For more information, see [Real Trade Weighted Value of U.S. Dollar](#).  
Sources: Federal Reserve Bank of Dallas and Federal Reserve Bank of St. Louis

### Exports (All Commodities) (Annual Percentage Change)



Note: Inflation adjusted with Bureau of Labor Statistics export indices. Annual sum. For more information, see [Exports](#).  
Sources: International Trade Administration, Foreign Trade Division and U.S. Census Bureau

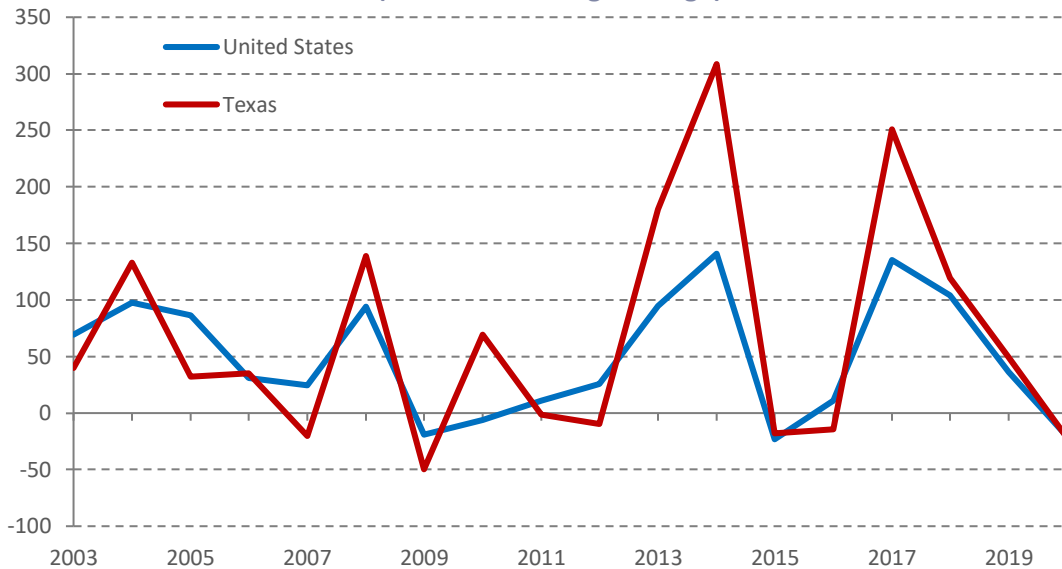
### Manufacturing Exports (Annual Percentage Change)



Note: Inflation adjusted with Bureau of Labor Statistics export indices. Annual sum. For more information, see [Manufacturing Exports](#).

Sources: International Trade Administration, Foreign Trade Division and U.S. Census Bureau

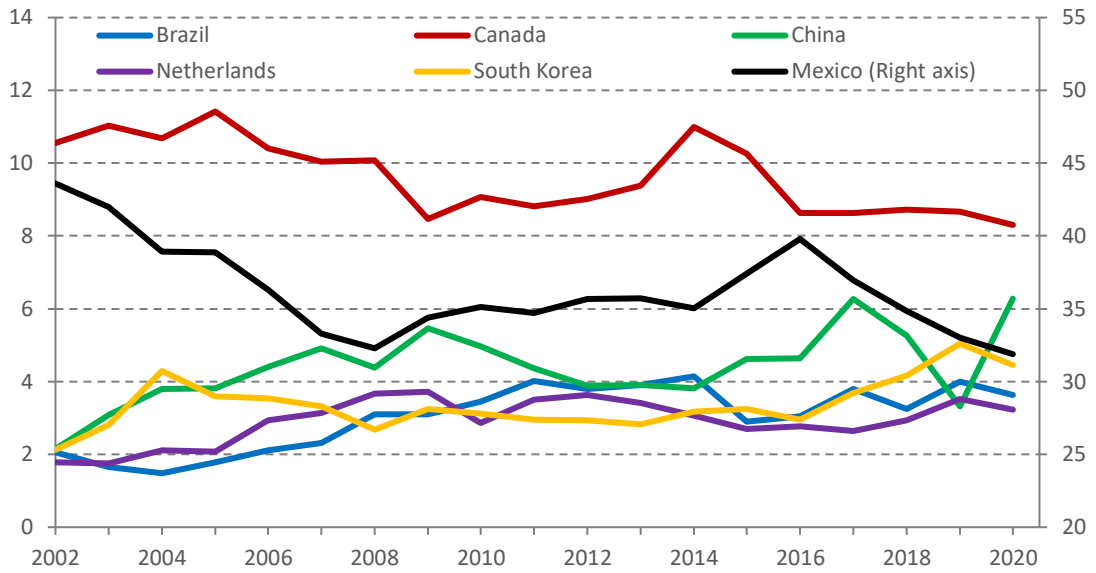
### Crude Oil Exports (Annual Percentage Change)



Note: Inflation adjusted and detrended with Bureau of Labor Statistics export indices. Annual sum. For more information, see [Crude Oil Exports](#).

Sources: International Trade Administration, Foreign Trade Division and U.S. Census Bureau

### Texas Exports by Country (Percent of World Total)



Note: Annual sum. For more information, see [Exports](#).

Sources: International Trade Administration, Foreign Trade Division and U.S. Census Bureau



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