Lower Oil Prices, Tight Labor Markets to Restrain Texas Growth in 2019

By Keith R. Phillips and Judy Teng

ABSTRACT: Texas' economy should expand in 2019, though at a slower rate than in the prior year. A decline in oil prices in late 2018, tight labor markets and the possibility of restrictive U.S. trade and tariff policies weigh on the outlook for the state.

Expected slowing in the energy, manufacturing and construction sectors along with continued tight labor markets will likely result in a deceleration of Texas job growth this year.

Leading indicators suggest a 2019 increase of between 1 percent and 2 percent, following an estimated 2.3 percent expansion in 2018.[1] Labor markets are anticipated to remain very tight, with the unemployment rate hovering around the historically low levels reached at year-end 2018.

The Texas economy began to slow in fourth quarter 2018, and leading indicators and business outlooks weakened following strong growth earlier in the year, as indicated in the Federal Reserve Bank of Dallas business surveys. Oil prices peaked in early October, and in late January, they slipped to near the minimum price that producers need for new drilling to begin.

Outlooks from survey respondents improved at the start of 2019, though uncertainty surrounding future trade policy and tariffs remained elevated. Meanwhile, firms throughout the state scrambled to hire qualified workers.

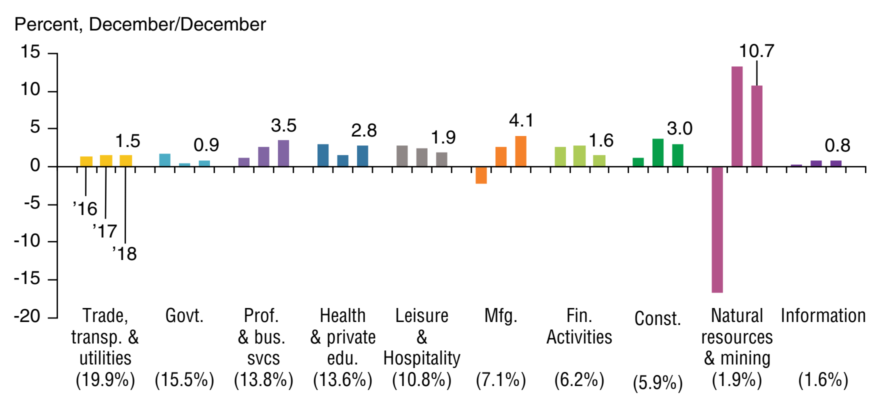
Goods Producers Shine

While job growth was broad based across industries in 2018, goods-producing sectors performed particularly well (*Chart 1*). Construction-sector employment continued its upward trend, expanding a strong 3.0 percent, or 22,000 new jobs.

Job growth in mining (principally oil and gas) slowed slightly from 2017 but remained the strongest sector for a second consecutive year. Manufacturing jobs rose 4.1 percent—the best rate of growth since 2011 and the third highest since 1984.

Residential construction was robust through most of 2018. But three indicators of homebuilding activity weakened late in the year. The five-month moving average of single-family housing construction permits in the state steadily increased through September but fell

CHART 1 Texas 2018 Job Growth Broad Based Across Industries



NOTE: Numbers in parentheses show share of total state nonfarm employment accounted for by each sector. Job growth data are current as of March 1, 2019.

SOURCES: Bureau of Labor Statistics; adjustments by the Federal Reserve Bank of Dallas.

slightly through November, the latest month for which data are available. Multifamily permits and overall home starts also rose through most of the year before declining sharply in September and October. Starts rebounded slightly, while multifamily permits continued to decline in November.

Historically high rainfall across the state in September and October sharply curtailed construction starts.

Rising mortgage rates and tariffs on imported building materials likely also played a role in residential softness.

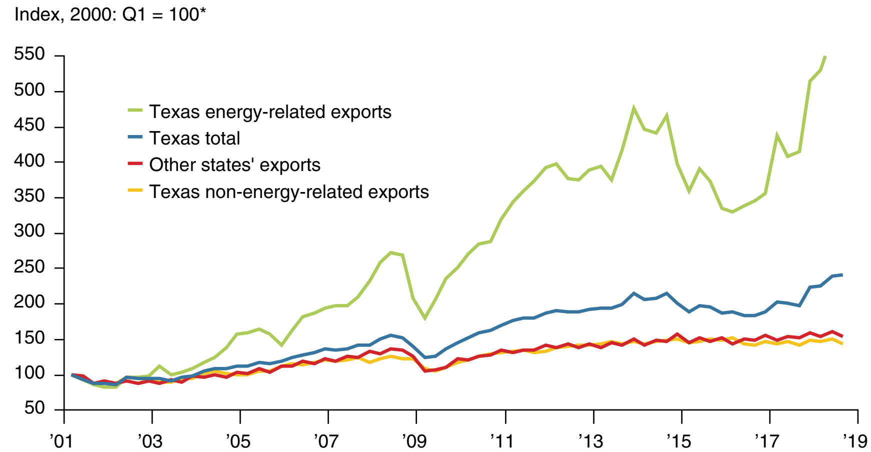
Heightened home-price appreciation over the past six years has reduced housing affordability across the state's large metro areas. The percentage of homes sold that a family earning the median income could afford dropped in the 2012–18 period, from 73 percent to 55 percent in Austin; from 72 percent to 46 percent in Dallas; from 71 percent to 58 percent in Houston; and from 73 percent to 55 percent in San Antonio, according to the National Association of Home Builders-Wells Fargo Housing Opportunity Index.

The manufacturing sector enjoyed a historically strong year in 2018, though production growth slowed sharply near year-end. According to Dallas Fed Texas Business Outlook Survey (TBOS) contacts, tariffs implemented during the year and ongoing uncertainty regarding future tariffs weakened manufacturing growth in the last four months of the year.

Of company executives responding to the Texas Manufacturing Outlook Survey (TMOS) in September, 35 percent said tariffs had negatively affected their firms, while 5 percent cited a positive net impact. Survey contacts also noted that weakening global demand, a stronger dollar and tight labor markets also played a role in the slowing.

While oil prices fell in fourth quarter 2018, the state's oil and gas industry also expanded strongly during the year. The average monthly rig count increased by 19 percent, as West Texas Intermediate oil prices rose from an average of $51 per barrel in 2017 to $65 per barrel in 2018.

CHART 2 Global Demand Propels Texas Energy-Related Exports



*Seasonally adjusted, real dollars.
SOURCE: Federal Reserve Bank of Dallas.

Oil production increased from 3.5 million barrels per day in 2017 to more than 4.4 million barrels per day last year—the highest level since the Energy Information Administration data series began in 1981. Texas oil output made up 41 percent of the nearly 12 million barrels per day produced in the U.S. (as of latest-available figures, for November), the highest U.S. output since 1970.

Strong global demand aided energy production and energy-related manufacturing (*Chart 2*). Despite a strong increase in the Texas value of the dollar in 2018, which made Texas exports relatively more expensive for foreign buyers, exports climbed throughout the year.

Petroleum products, chemicals and oil and gas production have been key sources of the strength of Texas exports, with oil exports playing a key role since a federal ban on them ended in December 2015. Oil exports increased 37.4 percent for the first three quarters of 2018, while non-energy-related exports increased just 2.0 percent.

Appreciation of the dollar relative to the currencies of Texas' export partners affects oil exports less than non-energy related exports. Since oil is priced in dollars around the world, dollar appreciation raises the cost of oil outside the U.S., reducing world consumption, but it does not specifically affect the price of Texas oil relative to oil from other countries. Moreover, since oil is a major input in refining and petrochemicals, appreciation of the dollar raises the relative costs of production outside of the U.S. and offsets much of the relative cost increases of Texas refined products and petrochemicals.

Broad Regional Job Growth

Job growth was broad based across the large metropolitan statistical areas—with growth picking up notably in regions with higher concentrations of goods-producing sectors—consistent with the analysis by industry (*Chart 3*).

For example, activity accelerated in Houston as a center of energy and energy-related manufacturing, and in Fort Worth, with a high concentration in manufacturing. Dallas and San Antonio, which grew rapidly in 2015 and 2016 (despite the energy downturn), slowed over the past two years, indicating the effects of labor market constraints.

Austin was an exception. Despite strong growth over the previous three years and with an unemployment rate that averaged 2.9 percent in 2018, job gains continued at a healthy pace last year. Historically, Austin has had the highest net domestic in-migration rate of large Texas metros, which has provided labor for additional growth. In 2018, the Austin labor force expanded 3.3 percent—the strongest performance among large metros—aided by young workers drawn to its tech presence and popular culture environment.

Labor Availability Constraints

Texas job growth was slower than expected last year, reflecting a lack of available workers. The 2.3 percent increase in jobs in 2018, up from 2.1 percent in 2017, was weaker than last year's forecast of 2.9 to 3.9 percent.[2] Historically tight labor markets suppressed job growth.

The Texas unemployment rate fell to 3.7 percent in the final three months of 2018, the lowest since the data series began in 1976. A total of 66 percent of business contacts responding to the TBOS special questions in November noted they had difficulty hiring qualified workers (*Chart 4*).

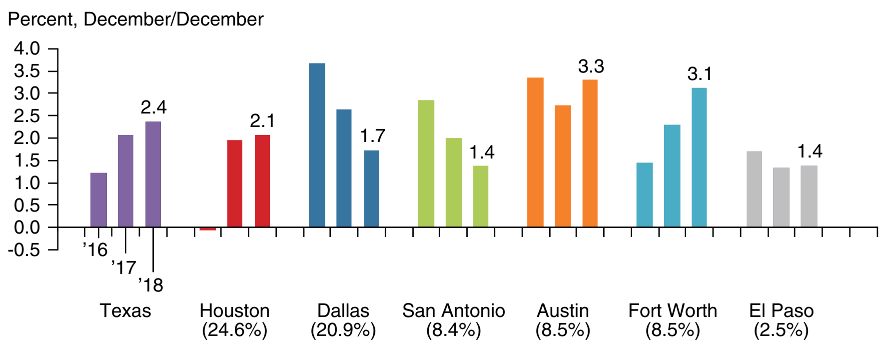
While the number of businesses reporting trouble finding qualified workers has been elevated the past two years, at year-end 2018, a record share of firms responded that they increased wages and benefits to recruit and retain employees. More notably, a sharply higher number noted difficulty hiring due to a lack of applicants.

Migration to the state alleviates tight labor markets and speeds up job growth.[3] Statewide, however, after a surge in net migration since 2005, a slight slowing occurred in 2015–16 with the oil bust.

The sharp decline in the energy sector likely resulted in fewer energy workers coming to the state and more energy workers leaving. As the Texas economy recovered in 2017–18, migration remained slightly suppressed, as a strong national economy provided opportunities elsewhere, and many labor markets tightened.

Thus, with most of the country growing at above-average rates, Texas, nonetheless, experienced the largest numerical population gain among the states in 2017–18.

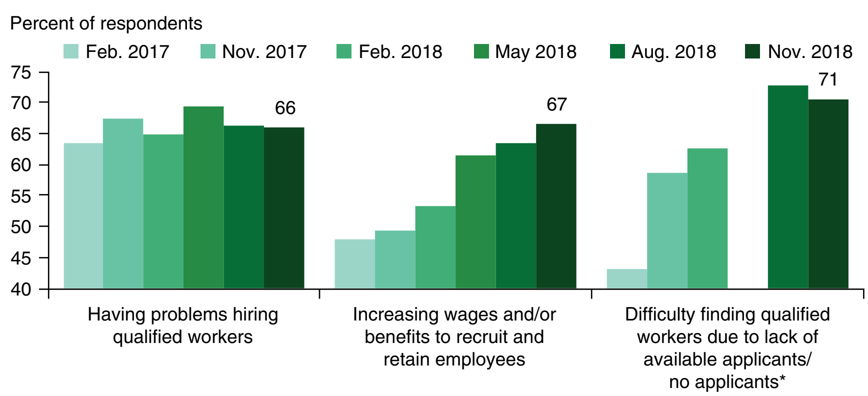
CHART 3 Texas Job Growth Broad Based Across Metros Since 2017



NOTE: Numbers in parentheses show share of total state nonfarm employment accounted for by each metro. Data are current as of March 1, 2019.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

CHART 4 Texas Firms Experiencing Shortage of Workers



*Percent of respondents is taken as a percent of those who answered "Yes" to the question: "Are you having problems finding qualified workers when hiring?"

SOURCE: Federal Reserve Bank of Dallas Texas Business Outlook Surveys.

Delayed Oil Price Impacts

The Texas rig count was generally flat in the fourth quarter, and employment in the mining sector increased at an annualized rate of 14.2 percent, despite fourth-quarter oil price weakness.

Past data suggest that the impact of softer prices has yet to be felt. The Texas rig count moves closely with the oil price, with a three-month lag. This is likely because oil and gas companies usually wait to ensure a change in price is not short term, generally have six-month drilling contracts with oilfield service companies and cannot immediately change drilling plans.

This past relationship suggests that the rig count would begin declining by mid-January 2019. Weekly data show that the Texas rig count peaked in the week that ended Jan. 4, at 534 rigs and two months later had declined by 31 rigs.

The impact of oil price changes on drilling activity can also change based on technological developments and supplies of drilling equipment and labor that can affect the cost of drilling. These can affect the breakeven price—the level below which a firm loses money drilling a new well.

Based on the Dallas Fed's Energy Survey for first quarter 2018, the breakeven oil price for new drilling in the Permian Basin in West Texas ranged from \$20 to \$75 per barrel, with an average of about \$50 per barrel. For those drillers with breakeven prices above \$55 per barrel, new drilling activity in 2019 is anticipated to be greatly reduced unless prices remain above early first-quarter levels.

2019 Economic Outlook

One way to gauge the Texas outlook is through the Dallas Fed energy, manufacturing and service sector surveys. Respondents to the fourth-quarter Dallas Fed energy survey reported a deteriorating outlook for the first time since first quarter 2016. While more firms said they were increasing planned capital expenditures than said they would lower them, the difference was small—the narrowest since second quarter 2016 when the sector was coming out of the last slump.

Overall, Texas companies reported a sharp weakening of business conditions at the end of 2018, according to the TBOS. However, outlooks improved in January and February.

The Dallas Fed forecasting model, which uses recent momentum in job growth and movements in the Dallas Fed's Texas Leading Index (TLI), predicts job growth between 1 and 2 percent in 2019. Changes in the TLI, which consists of eight economic indicators that tend to change directions prior to movements in the overall economy, have reflected growth expectations in TBOS and the Energy Survey. The leading index declined sharply in fourth quarter 2018, though it rebounded in January.

For the three months that ended in January, the TLI declined, suggesting weaker growth this year. Four of the index's eight components weighed negatively on the index, led by falling oil prices (*Chart 5*). The rebound in the energy sector over the past two years has been an important source of strength in the Texas economy, and the oil price decline may cause the sector to slow sharply, although a collapse is not expected.[4]

The increase in the Texas value of the dollar, which weights the real exchange rates of the dollar with foreign currencies based on the countries to which Texas exports, will likely continue to damp non-energy-related Texas exports. As the dollar rises in value, the cost of goods produced in Texas increases relative to the same goods produced in other countries, depressing international demand for products produced in the state.

Broad leading indicators of the labor market also weakened. The help-wanted index declined slightly, suggesting that firms may be curtailing plans to hire new workers. Initial claims for unemployment insurance rose, a sign that more workers leaving jobs may expect not to immediately find new employment.

The U.S. leading index was unchanged, amid heightened uncertainty in the national economy toward the end of 2018. Continued growth in the U.S. economy is vital for growth in Texas.

Mildly positive changes in the average weekly hours worked in manufacturing, permits to drill oil and gas wells, and the Texas stock index slightly offset the negative signals. Significant stock market gains in January counterbalanced much of the impact of a sharp year-end sell-off. Still, the very slight gain overall suggests that future, discounted corporate profits are expected to grow more slowly in 2019 than last year; this is due in part to uncertainty about economic growth attributable to a weakening of the global economy and lingering tariff and trade concerns.

Main Risks to Outlook

Many potential issues may change the trajectory of the economy in 2019. Unexpected declines in world oil demand or increases in world supply can drive crude oil prices below breakeven prices for more companies, further curtailing drilling activity.

Labor markets are historically tight in both Texas and the U.S. With a relatively unchanged labor force participation rate over the past three years in Texas and slower labor force growth, tight job markets are expected to continue restraining employment growth.

Also, international trade policy negotiations this year present a high degree of uncertainty for many industries. Since Texas is the nation's No. 1 exporting state, a significant trade disruption would likely reduce growth more than is currently projected.

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Notes

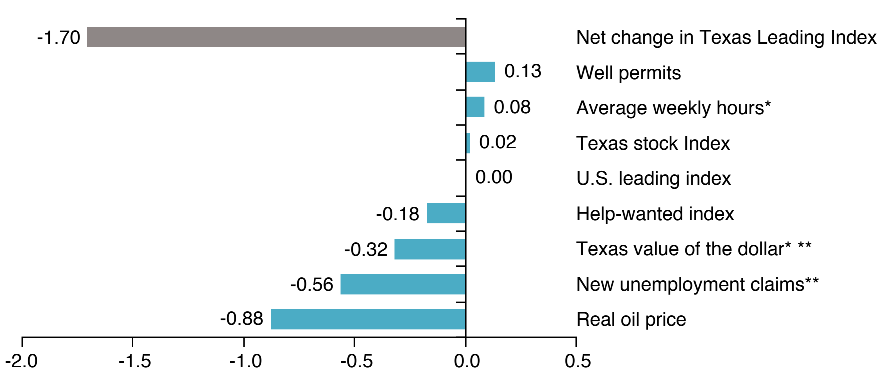
[1] The job growth numbers reported are based on early-benchmarked employment data produced by the Dallas Fed. See, "DataBasics, Early Benchmarking," Federal Reserve Bank of Dallas.

[2] See "Texas Economy Starts 2018 Firing on All Cylinders" by Keith Phillips and Christopher Slijk, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2018.

[3] See "Gone to Texas: Migration Vital to Growth in the Lone Star State" by Pia Orrenius, Alexander T. Abraham and Stephanie Gullo, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2018.

[4] For more analysis on the Texas energy outlook, see "Dallas Fed Energy Survey Suggests Oil Price Drop Won't Cause Sector Collapse in 2019," by Michael D. Plante and Kunal Patel, *Dallas Fed Economics*, Feb. 14, 2019.

CHART 5 Negative Contributions Dominate, Send Index Lower
(Net contributions to change in Texas Leading Index)



*This component has been estimated by the Federal Reserve Bank of Dallas for the latest month.
**These components are inverted in the Texas Leading Index.
NOTE: Three-month percent change through January, seasonally adjusted.
SOURCE: Federal Reserve Bank of Dallas.