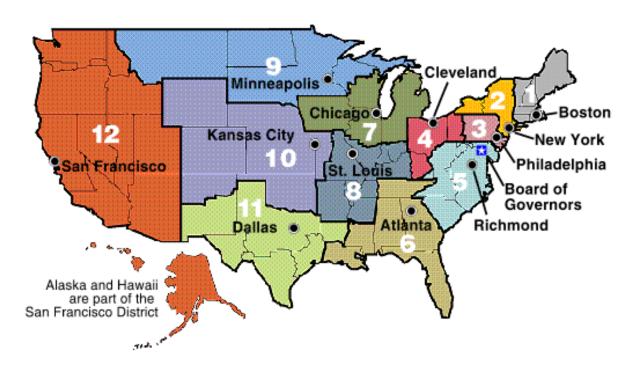


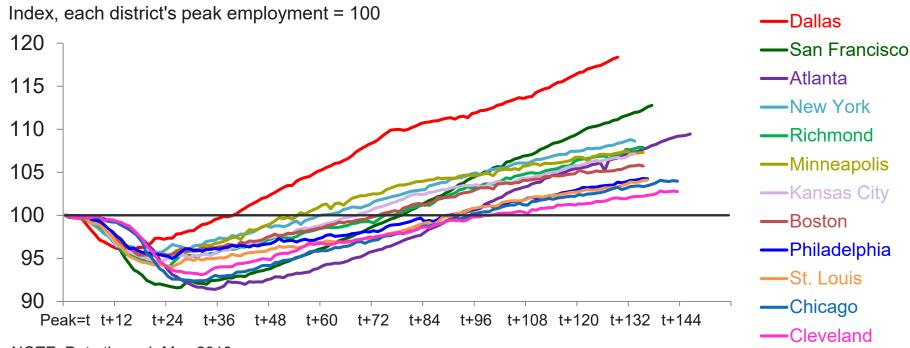
Regional Economy Strong but Facing Increasing Headwinds

Pia M. Orrenius, Vice President Federal Reserve Bank of Dallas 7/17/2019

Federal Reserve District map



10 years after Great Recession, long run regional growth trends reemerge



NOTE: Data through May 2019.

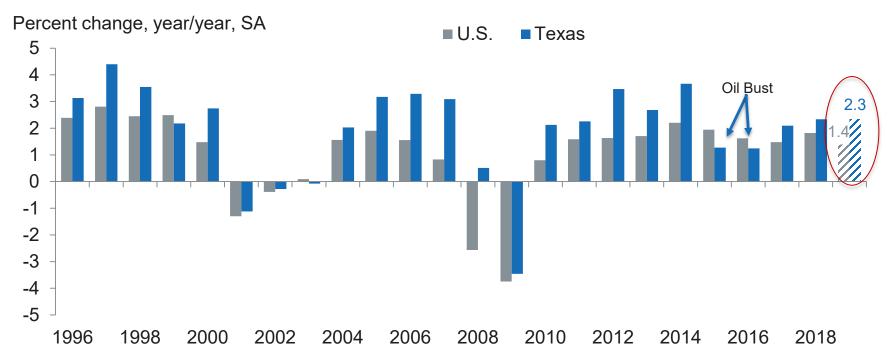
SOURCES: Bureau of Labor Statistics; FRB Dallas.

Roadmap

- Roller coaster regional economy
 - Good news
 - Upward revisions since start of year have brightened the outlook, led to rising employment forecast
 - Tight labor markets are pushing wages higher
 - Bad news
 - Hiring slowed by lack of applicants
 - Tariffs, implemented and threatened, are a headwind to growth and investment
 - Add to slowing global growth
 - Oil price volatility

Current Performance

2019 Texas job growth above nation's and above trend

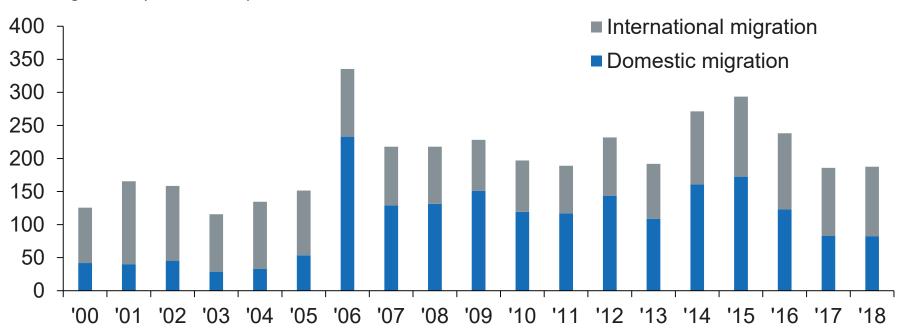


NOTES: Latest data for U.S. refers to June 2019/Dec. 2018, and Texas refers to May 2019/Dec. 2018 annualized growth rate. Long-run trend growth is 1.1 percent for the U.S. and 2.1 percent for Texas.

SOURCES: Bureau of Labor Statistics, Texas Workforce Commission; FRB Dallas.

Large net in-migration allows Texas to grow faster

Net migration (thousands)



NOTE: Data are for July of the previous year to July of the year indicated.

SOURCE: U.S. Census Bureau.

But tight labor markets a constraint; Texas and U.S. unemployment rates at record lows

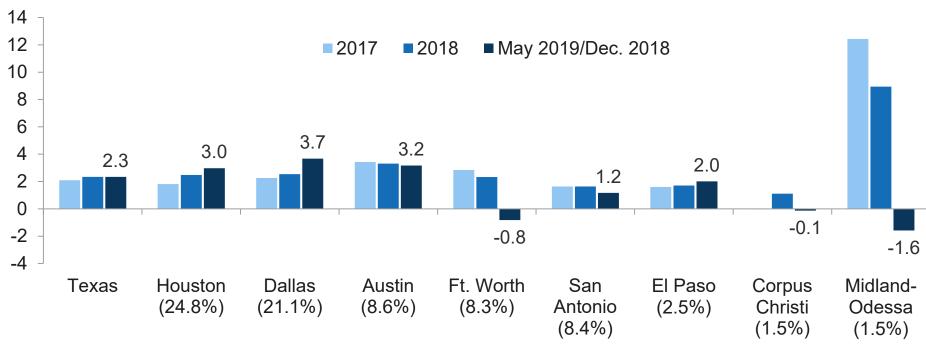


NOTE: Data for U.S. through June 2019 and through May 2019 for Texas.

SOURCE: Bureau of Labor Statistics.

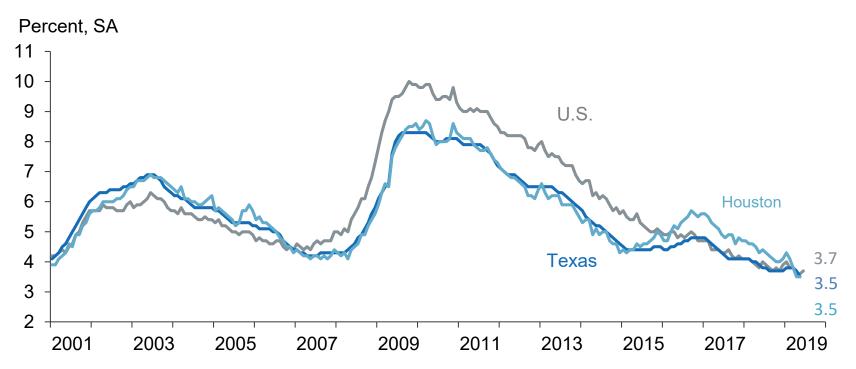
Employment slipping in smaller energy and mfg metros in 2019 so far

Percent change in employment, Dec./Dec., SAAR



NOTE: Numbers in parentheses refer to the share of Texas employment in the most recent month. SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Dallas Fed.

Houston's tight labor market also a constraint

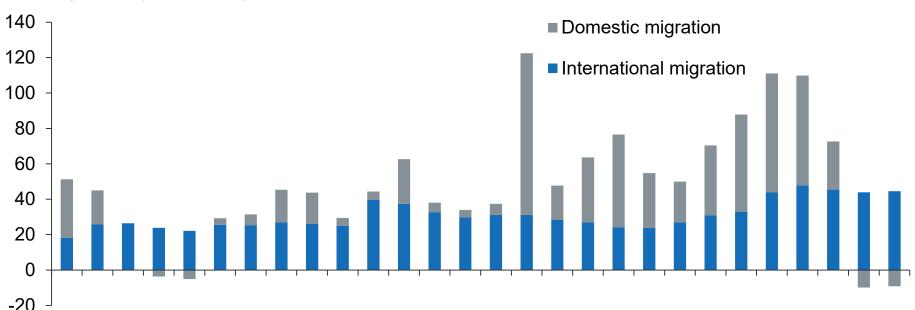


NOTE: Data through June 2019 for U.S. and through May 2019 for Texas.

SOURCE: Bureau of Labor Statistics.

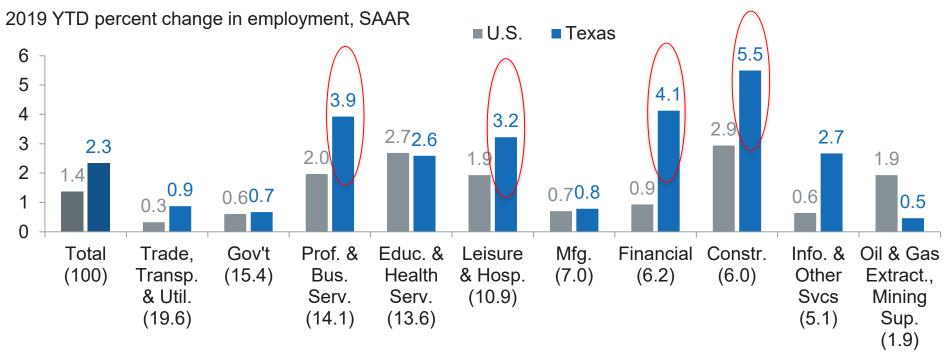
Net domestic out-migration may limit Houston's growth





'91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 NOTE: Data are for July of the previous year to July of the year indicated. SOURCE: U.S. Census Bureau.

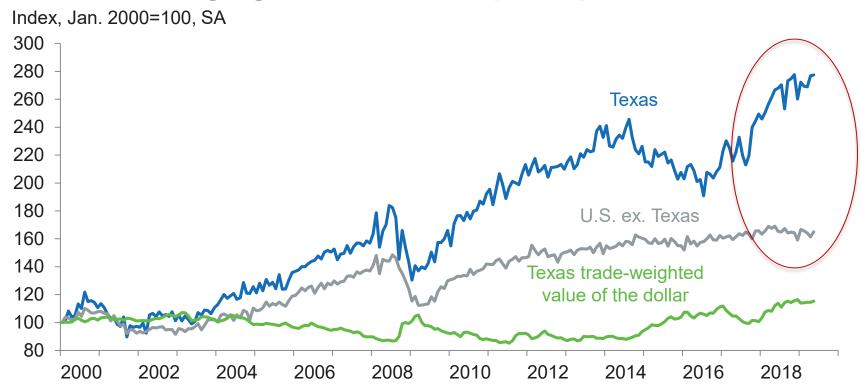
Service sector, construction leading the charge in 2019



NOTES: Texas data refer to May 2019/Dec. 2018 and U.S. to June 2019/Dec. 2018 annualized growth. Numbers in parentheses are share of Texas employment for May.

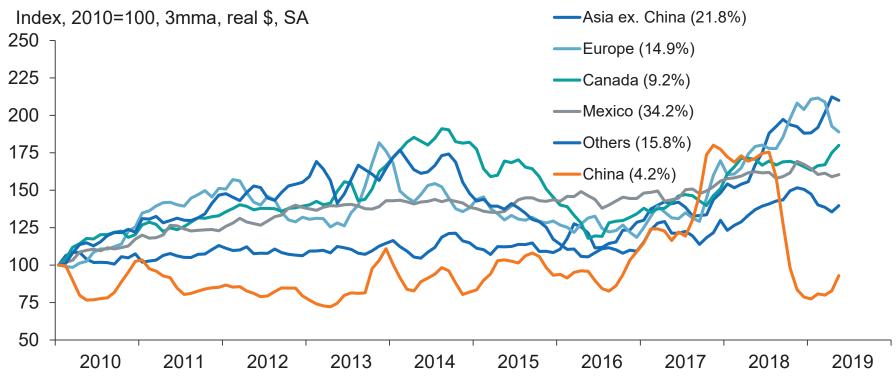
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by FRB Dallas.

After surging, have Texas exports peaked for now?



NOTES: Data through May 2019. Exports data in real dollars. SOURCES: U.S. Census Bureau; Bureau of Labor Statistics.

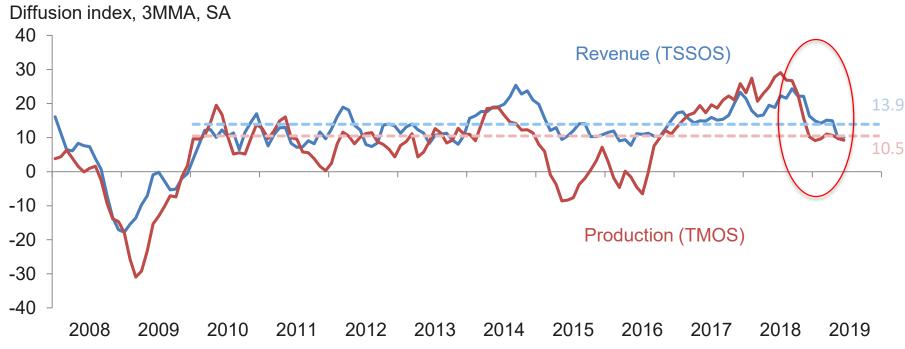
Texas exports to China plunge after tariffs imposed



NOTE: Numbers in parentheses are share of May 2019 Texas exports.

SOURCES: U.S. Census Bureau; Bureau of Labor Statistics.

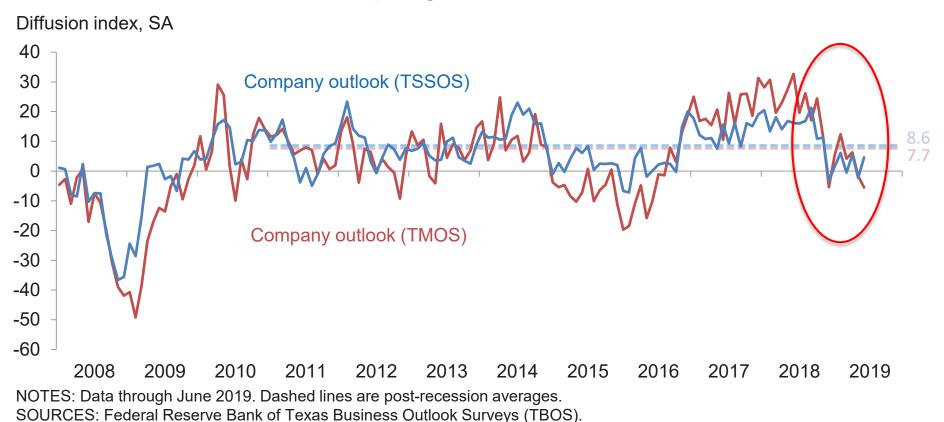
Texas Business Outlook indexes dropped end of last year, paused, then edged down further



NOTE: Data through June 2019. Dashed lines are post-recession averages.

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

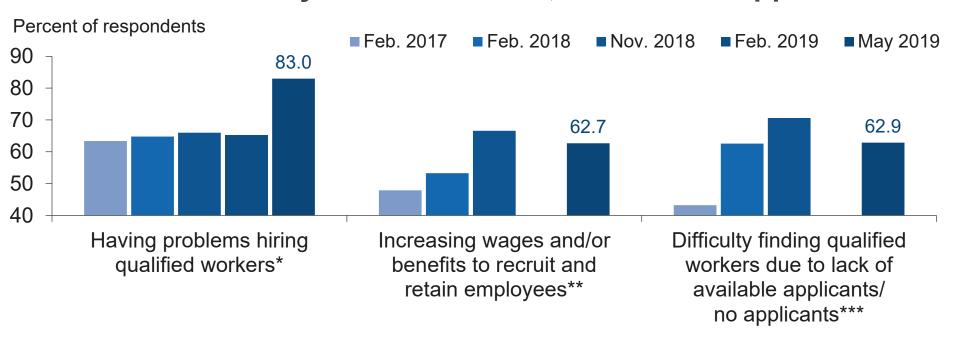
And TBOS company outlook has deteriorated



Federal Reserve Bank of Dallas

Headwinds

Texas firms say it's hard to hire; cite lack of applicants



^{*}Starting in May 2019, "having problems hiring qualified workers" is only posed to respondents who indicated they were hiring.

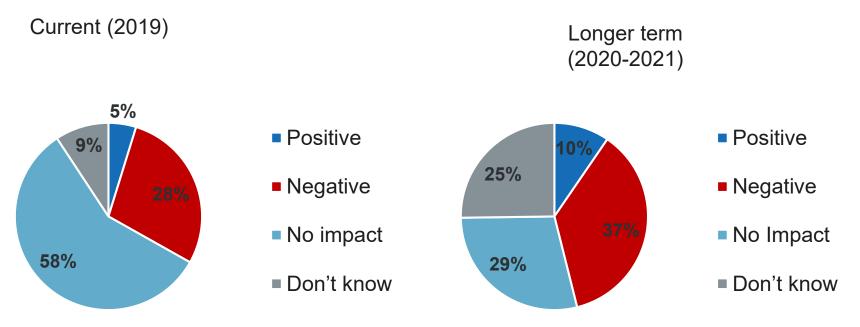
**Starting in Nov. 2018, "increasing wages" appears as a separate answer choice from "increasing benefits" and the combined series is calculated based on affirmative responses to either.

^{***}Only posed to respondents who answered "Yes" to the question: "Are you having problems finding qualified workers when hiring?" SOURCE: FRB Dallas Texas Business Outlook Survey.

What our survey contacts are telling us about tight labor markets...

- "We see very strong demand in the field right now. Contractors say they are booked a year out. Somebody mistakenly told people to all go to college 40 years ago, and now we are desperately short of tradesmen."
- "Growth is robust and would be even stronger without current supply chain and labor constraints, but we aren't complaining."
- "Now we need to find and develop new middle-tier employees to fill positions to support our customers. This is the toughest problem we have ever faced."

Texas firms report they are far more likely to be harmed than helped by tariffs



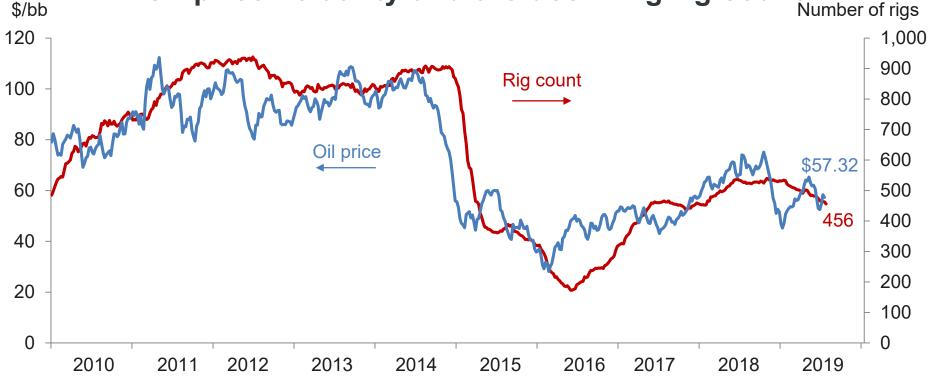
NOTES: Data collected June 11-19 and 363 business executives responded to the surveys.

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

What our survey contacts are telling us about tariffs...

- "Uncertainty has increased due to the tariff war"; "There are many unknowns due to tariffs"
- "Possible increases in tariffs related to China will negatively impact our agriculture customers"
- "China tariffs are already causing significant price increases"
- "The additional import tariffs really hurt our business, but we fully support getting a fair trade deal with China"
- "The trade war with China is starting to affect long-term plans for many customers. There are a number of companies starting to plan for a slowdown."

Energy activity slowing too?
Oil price volatility and the declining rig count



NOTE: Data are weekly; rig count through the week ending July 12, 2019 and oil price through the week ending July 5, 2019. SOURCES: EIA; Baker Hughes.

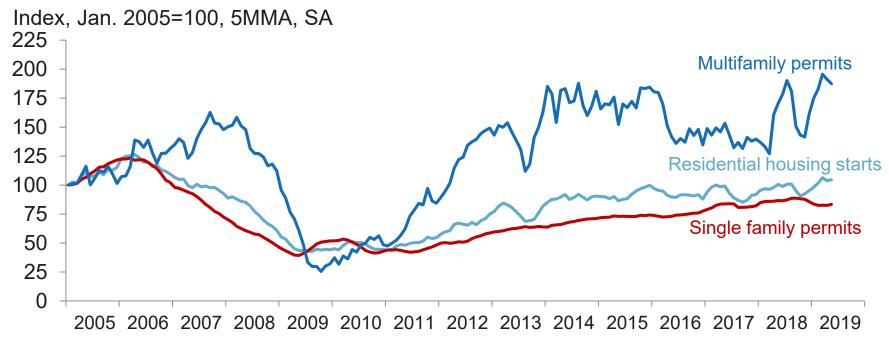
Energy survey suggests business activity, other measures are flat to down in Q2



NOTE: Price forecast is average year-end forecast of WTI oil price among respondents.

SOURCE: Federal Reserve Bank of Dallas Energy Survey.

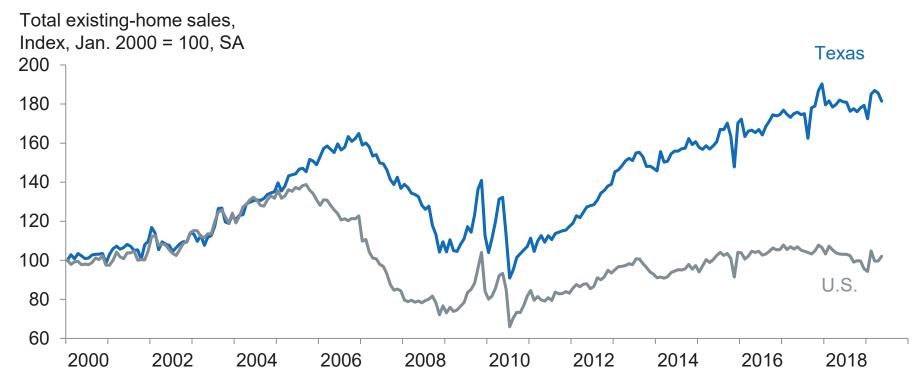
Texas residential construction activity reversed course, rising on more apartments



NOTE: Data through May 2019.

SOURCES: U.S. Census Bureau; Bank of Tokyo-Mitsubishi UFJ.

Texas home sales reversed course, rising in 2019



NOTE: Last data point is May 2019.

SOURCES: Real Estate Center at Texas A&M; Multiple Listing Service; adjustments by Federal Reserve Bank of Dallas.

Regional economy outlook

- Growth this year started slow but gained strength
- 2019 employment forecast at end of June was about 1 percentage point higher than in January (2.3 percent)
- But we are seeing slowing in our surveys, exports & energy
- Risks to the outlook are tilted to the downside
 - Continued supply side constraints
 - Labor markets
 - Tariffs and policy uncertainty
 - Global slowing
 - Oil price declines

Thank you!

