Texas Industrial Building Booms as Economy, Population Grow

By Laila Assanie and Michael Weiss

ABSTRACT: A significant portion of Texas' recent construction activity has been industrial building, with Dallas–Fort Worth leading the nation and Houston among the top six markets. Burgeoning e-commerce, state population gains and an expanding export market have contributed to the growth spurt that has included increases in transportation and logistics employment.

The boom in Texas commercial real estate activity is plainly visible in the high-rises that create the skylines of the state's major metropolitan areas and in the sprawling office campuses dotting its thoroughfares. Another source of major activity is far less conspicuous, though it has powered another new wave of commercial construction and economic activity.

Demand for Texas industrial space, which includes warehouses, manufacturing plants and research and development facilities, has been robust during the ongoing expansion cycle.

Well over 235 million square feet of space was built and absorbed from 2010 to 2018 statewide, with Dallas–Fort Worth ranking No. 1 in the country in construction and in net absorption (net change in square footage of occupied space) during the period and Houston placing among the top six.[1,2]

Texas' underlying economic expansion has been solid for the most part since the end of the Great Recession, supporting healthy and broad-based gains in the commercial real estate sector—apartments, offices and industrial space. It was only during the most recent energy bust, in 2015–16, that employment growth in the state fell below its long-term average growth rate, primarily due to Houston's decline.

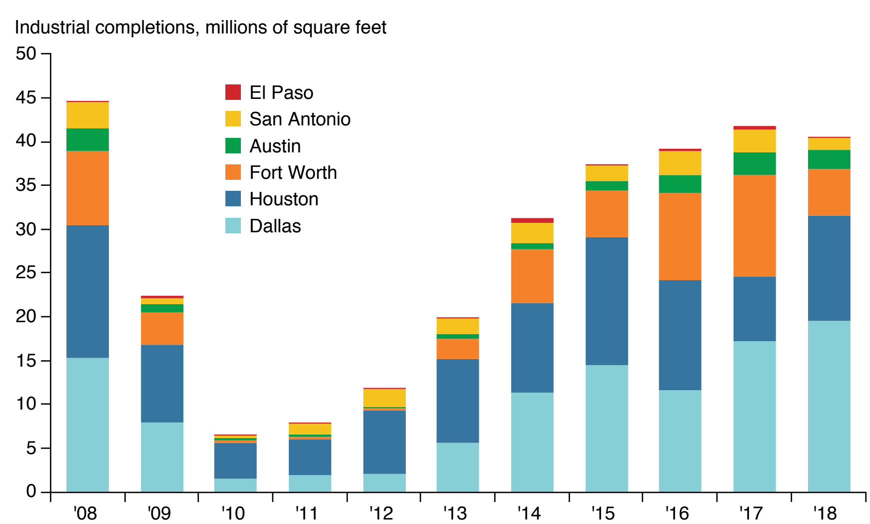
Commercial construction and real estate activity play a notable role in an area's economic growth, buoying output and employment growth. The state's commercial real estate sector will likely continue to expand this year, albeit at a slower pace.

Industrial Construction Gains

Consistent with Texas' "bigger is better" ethos, the thriving construction sector recorded $104.1 billion worth of total contract values (residential, nonresidential and nonbuilding) last year—an inflation-adjusted increase of 5.9 percent from 2017. The 2018 total was just shy of the previous peak in 2015, when $104.5 billion of new

CHART 1

DFW and Houston Major Players in the State's Industrial Market



SOURCE: CBRE Econometric Advisors.

projects broke ground.3 Last year's increase was driven by a pickup in residential (single-family and multifamily) and nonbuilding (roads, bridges, power plants, etc.) construction.

Texas has undergone a period of vast real estate development since 2010, partly because so many people have been drawn to the area. The state's population reached 28.7 million in 2018, adding 3.5 million residents since 2010—placing it No.1 among U.S. states in numeric increase. Texas' building boom has boosted construction employment, which rose 3.9 percent in 2018.

Industrial construction has expanded rapidly since 2010, making Texas the top-ranking state in the country in terms of square footage.[4] From 2010 to 2018, industrial space built in Texas' major metros was four times the square footage of new office space.

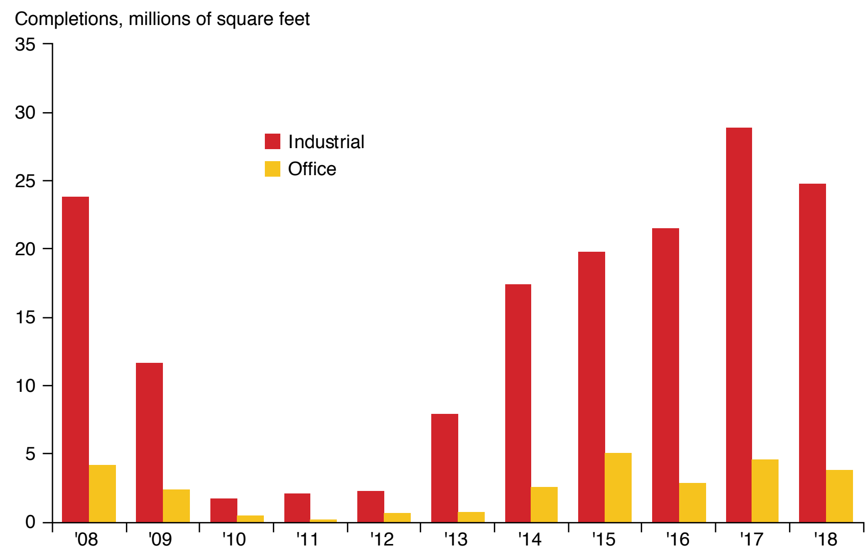
Most industrial building occurs within major metropolitan areas. Since 2014, Texas' five major metropolitan areas annually added more than 30 million square feet of industrial property—principally warehouses—with the total exceeding 40 million square feet in both 2017 and 2018 (*Chart 1*). By comparison, the largest amount added in any previous year (dating back to the late 1980s) was 45 million square feet in 2008, most of it greenlighted just before the Great Recession that began in December 2007.

The expansion has been most visible in DFW and Houston, where occupancy rates for warehouse space have hovered around 90 percent since 2013.

After a period of such rapid expansion, growth in industrial construction statewide is ebbing, albeit remaining elevated by historical averages. Inflation-adjusted construction contract values for warehouses dipped 3.8 percent in 2018 relative to 2017 and in the first four months of 2019 fell 13.2 percent compared with the same period in 2018.

Overall, nonresidential construction contract values (including warehouse construction) fell 11.6 percent last year from 2017 totals in Texas while declining 2.3 percent nationally.

CHART 2 DFW Industrial Space Completions Outpace Office



SOURCE: CBRE Econometric Advisors.

Widespread DFW Growth

DFW gained nearly 25 million square feet of industrial space in 2018, following an increase of 29 million square feet in 2017—the greatest addition of space in at least the past 30 years, the period for which consulting firm CBRE Econometric Advisors maintains data (*Chart 2*). Warehouse growth has been particularly impressive. Since 2010, a total of 117.7 million square feet have come on the market in DFW. The total is equivalent to almost 43 Empire State Buildings, the iconic 102-story New York City skyscraper, and is five-and-a-half times the square footage of office property added in DFW during the period.

The warehouse market boom has reached into southern and western portions of Dallas that investors previously largely overlooked. It has been aided by an expansive transportation and logistics sector, a byproduct of e-commerce regional expansion that has contributed to the recent addition of freight, cargo-handling and fulfillment operations for Amazon, FedEx and UPS. In 2018, DFW had 10 of the country's largest warehouse deals.[5]

Additionally, burgeoning air freight operations at Fort Worth Alliance Airport and Dallas–Fort Worth International Airport complement an extensive ground transport network. Construction of a regional air hub for Amazon Air—the first of its kind for the company and its logistics subsidiary—is underway at Alliance Airport and scheduled to become operational this year.[6] Meanwhile, total cargo (freight and mail) flowing through DFW Airport rose for the fifth straight year in 2018, up 2.7 percent.[7]

This is no surprise given DFW's position as a major U.S. trade and distribution center, thanks to its central location and infrastructure. Employment in the transportation and logistics sector makes up 4.3 percent of the metro area's total employment—a higher share than other major metros.[8] Moreover, healthy growth in the metroplex's employment and population base has fueled demand for consumer goods. DFW has added 1.1 million residents since 2010, ranking No. 1 among U.S. metros in numeric increase; Houston placed second.

Foreign investors have taken particular notice of the growth in DFW, ranking the metro No. 2 nationally behind Los Angeles in terms of foreign industrial acquisition activity in 2018, CBRE found.[9] Buyers spent $14.4 billion in the U.S., $849 million of that in DFW, with investors from Canada, China and Singapore accounting for most of the purchases from outside the country. Foreign investment made up 21 percent of total U.S. investment in this sector last year.

Trade, Logistics in Houston

E-commerce-related distribution, last-mile fulfillment facilities and demand from big-box retailers have similarly expanded throughout Houston. There were 63 warehouses under construction in Houston in late 2018, according to data from Avison Young, a commercial real estate firm.[10] Houston is also a gateway for commercial and industrial goods passing through the Port of Houston—ranking No. 6 in the nation in container shipping in 2018, adding a significant global trade aspect to area activity.[11]

The energy sector, rebounding from the 2015–16 slump, has played an increasing role, spurring growth of warehouse facilities to ship and handle energy-related cargo as well as for the manufacture of energy equipment and goods, including chemicals.

Houston recorded its second-largest five-year spurt of new industrial construction in the period ended last year—nearly 57 million square feet completed, of which 48 million square feet was warehouse space.[12]

Overall, industrial construction and demand paused during the 2015–16 energy bust (*Chart 3*). After adding under 1 million square feet of manufacturing facilities in 2014–15, the area regrouped from the slowdown, gaining 4.7 million square feet in 2016. After another slow year with little new inventory in 2017—coinciding with Hurricane Harvey devastation, though industrial properties were largely unaffected—a total of 1.1 million square feet of manufacturing space entered the market in 2018.

Moreover, petrochemical plant growth in Texas has been vibrant during the expansion and helped support southeast Texas activity. One recently completed large project is ExxonMobil's ethane cracker in Baytown.[13]

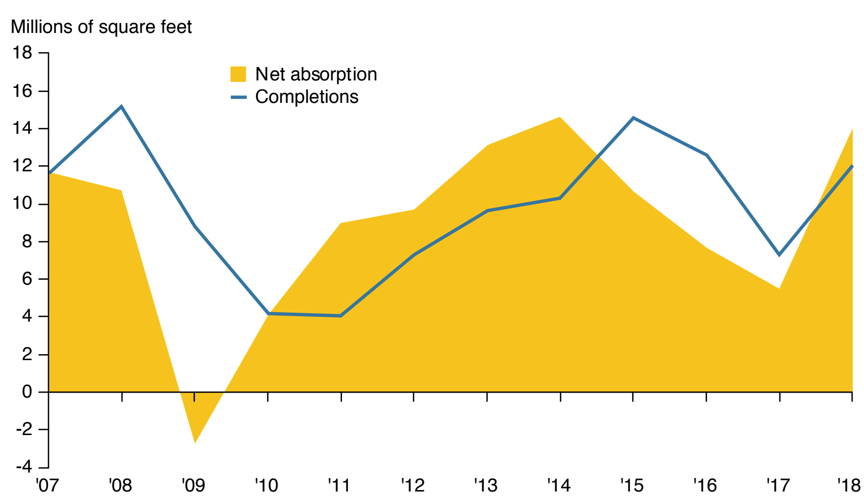
Statewide Trade Expansion

San Antonio recorded heightened activity in the five years ended in 2018. Industrial space grew by 10.8 million square feet—about 87 percent for warehouses and the rest for manufacturing and research and development facilities.

A total of 1.4 million square feet of industrial space entered El Paso's market during the five years ended in 2018, the highest five-year increase since 2008. The gain coincided with resurgent maquiladora manufacturing and a resulting 47 percent increase in the number of full truck containers crossing into the U.S. from Mexico at the El Paso and nearby Santa Teresa, New Mexico, ports of entry during the period, according to U.S. Transportation Department data.[14]

El Paso's latest (2014–18) industrial completions are significantly below the high recorded in the five-year period ended in 2000, when U.S.–Mexico transborder shipping was expanding rapidly in the wake of the 1994 implementation of the North American Free Trade Agreement.

CHART 3 Industrial Demand in Houston Rebounds Following 2015–16 Energy Bust



SOURCE: CBRE Econometric Advisors.

Transportation, Warehousing Jobs

Employment in the transportation and warehousing sector has mirrored the large space increases, particularly in DFW. Employment in Texas expanded 2.1 percent annually in the five years ended in 2018, while payrolls in transportation and warehousing rose more rapidly, 4.3 percent, led by growth in warehousing and storage employment.

The Dallas, Plano and Irving metropolitan division added 39,025 jobs in the transportation, warehousing and utilities sector (a 7.9 percent annual increase) in 2014–18, while in Fort Worth–Arlington, sector payrolls grew by 20,482 jobs (5.5 percent) (*Chart 4*). The five-year gains in DFW eclipse increases in any preceding five-year period at least as far back as the mid-1990s. Sector payrolls grew rapidly in Austin—an 8.2 percent annualized rate—during the five-year period. Houston's transportation, warehousing and utilities employment expanded by 17,922 jobs in 2014–18, a 2.6 percent annualized increase.

Industrial Vacancies Tight

Demand for industrial space has taken off with growth in third-party logistics and in e-commerce, as firms seek warehouse space close to their customers. Nationwide, e-commerce and logistics companies accounted for 61 of the 100 largest warehouse deals (leases and sales) by square footage in 2018, and DFW had the third-largest volume of transactions by square footage, according to CBRE Research.[15]

Third-party logistics firms (transportation/distribution) made up nearly a third of industrial leasing by square footage from first quarter 2013 to first quarter 2019 in the Texas and Oklahoma region, which CBRE Research combines into a single unit. Accounting for much of the remainder of leasing were wholesale, 13 percent; materials manufacturing, 11 percent; food and beverage, 10 percent; and e-commerce, 9 percent.

Strong leasing demand has pushed overall industrial availability rates into the single digits in Austin, DFW, Houston and San Antonio since early 2016.[16]

Continued Growth in 2019

The outlook for Texas' industrial markets is mostly positive for the year. The state's broad economic expansion persists, and job growth is forecast at over 2 percent.[17]

Overall, investors expect to be more conservative in their commercial real estate acquisitions this year as high asset prices, financial market volatility, and global and trade uncertainty damp expectations, according to CBRE's 2019 Americas Investor Intentions Survey.[18] Still, industrial and logistics remains the most favored property sector for investment.

Industrial construction in the five major metros is elevated, exceeding 47 million square feet as of first quarter 2019.[19] Given that vacancy rates are close to multiyear lows in most major metros and Texas exports remain close to all-time highs, the industrial market appears to be on a solid footing. Uncertainty surrounding U.S. trade policy is a wild card, but its impact on the industrial sector thus far appears to be limited at least in the near term.

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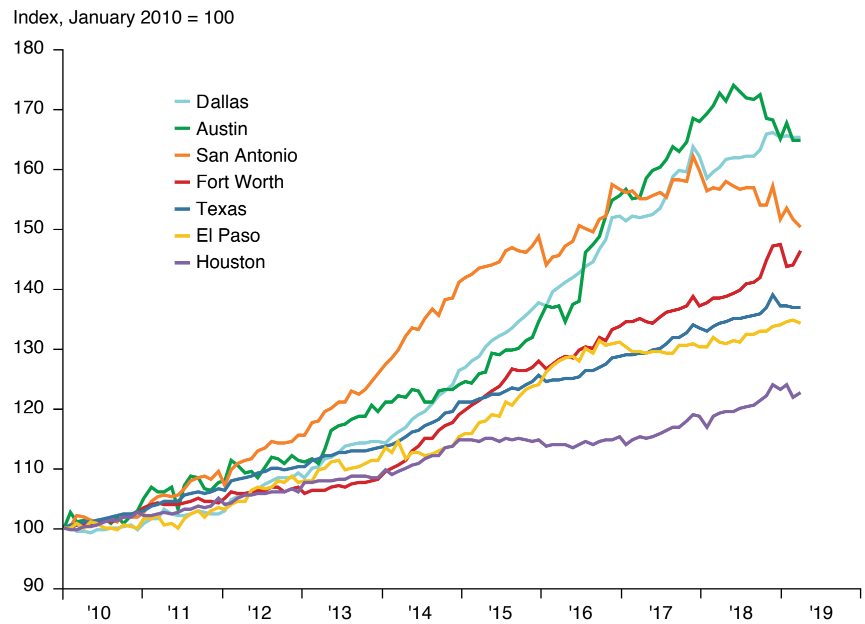
CHART 4 Transportation, Warehousing and Utilities Employment Expands at Rapid Clip in North and Central Texas



NOTE: Data are through March 2019.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by the Federal Reserve Bank of Dallas.

Notes

[1] Data for Texas include Austin, Dallas, El Paso, Fort Worth, Houston and San Antonio. Data are as of first quarter 2019 from CBRE Econometric Advisors, which differs from the CBRE Research data series.

[2] Net absorption is the net change in occupied space in square feet during a given time period. It is measured by the square feet of completions less the change in available square footage.

[3] Data are from Dodge Analytics.

[4] State totals are calculated by adding the square footage of annual completions in 63 of the largest U.S. industrial markets at the metropolitan statistical area level.

[5] "Dealmakers: E-Commerce & Logistics Firms Dominate Largest Warehouse Deals in 2018," U.S. MarketFlash, CBRE Research, Feb. 20, 2019, www.cbre.us/research-and-reports/dealmakers-e-commerce-logistics-firms-dominate-largest-warehouse-deals-in-2018.

[6] "Amazon Taps Fort Worth's Alliance Airport for Regional Hub, Hundreds of Jobs," by Bill Hethcock, *Dallas Business Journal*, Dec. 11, 2018, www.bizjournals.com/dallas/news/2018/12/11/amazon-taps-fort-worths-alliance-airport-for.html.

[7] Data are from DFW International Airport's website, www.dfwairport.com/stats/.

[8] "At the Heart of Texas: Cities' Industry Clusters Drive Growth," Special Report, Federal Reserve Bank of Dallas, December 2018.

[9] "Foreign Investors Pump $14.4 Billion into U.S. Industrial Real Estate," U.S. MarketFlash, CBRE Research, April 17, 2019, www.cbre.us/research-and-reports/foreign-investors-pump-14-point-4-billion-into-industrial-real-estate.

[10] "63 Warehouses Under Construction in Houston; More on the Way as Industrial Market Heats Up," RealtyNewsReport.com, Oct. 29, 2018, http://realtynewsreport.com/2018/10/29/63-warehouses-under-construction-in-houston-more-on-the-way-as-industrial-market-heats-up/.

[11] Data are from Port of Houston, www.porthouston.com/about-us/statistics/.

[12] Data from CBRE Econometric Advisors go back to the late 1980s.

[13] "ExxonMobil Starts Up New Ethane Cracker in Baytown, Texas," ExxonMobil news release, July 26, 2018, https://news.exxonmobil.com/press-release/exxonmobil-starts-new-ethane-cracker-baytown-texas.

[14] Data are from the U.S. Department of Transportation, Bureau of Transportation Statistics, https://data.transportation.gov/Research-and-Statistics/Border-Crossing-Entry-Data/keg4-3bc2.

[15] See note 5.

[16] Industrial availability rate data are from CBRE Econometric Advisors.

[17] Dallas Fed Texas Employment Forecast, see www.dallasfed.org/research/forecast.

[18] "Americas Investor Intentions Survey 2019," CBRE, www.cbre.us/research-and-reports/Americas-Investor-Intentions-Survey-2019.

[19] Data are from CBRE Research as of first quarter 2019.