

Once-Robust Wage Growth Stops as Texas Economy Slows

By Amy Jordan and Emily Gutierrez

ABSTRACT: Average weekly wages in Texas have dropped below the national average for the first time in four years, part of a broader trend in energy states, where wages are flat to declining.

The energy bust has brought tougher times to Texas and other energy-producing states. The loss of high-wage jobs in energy and manufacturing has been indicative of labor market weakness and stagnating economic activity, causing some state wage measures to fall.¹

Average weekly wages slipped last year in energy states and continued sinking through the first quarter as wage growth accelerated nationally.

After the Great Recession, energy states had enjoyed increasing wages as oil prices recovered and the shale oil boom took hold. But with oil prices dropping 70 percent between June 2014 and February 2016, energy companies and their suppliers began to cut payrolls and staff.

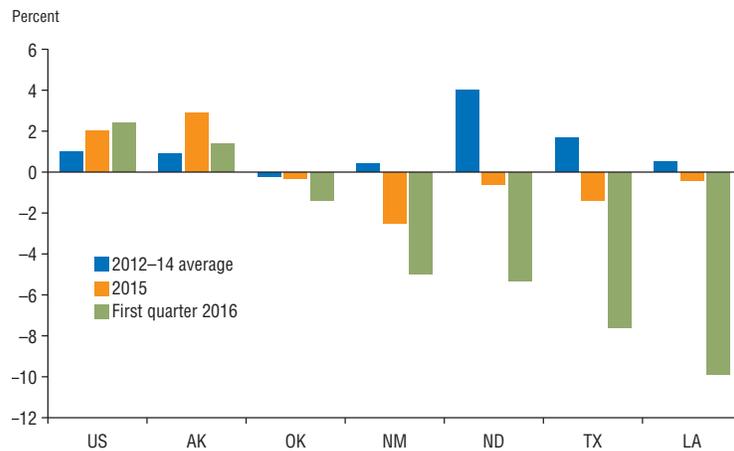
The impact soon spread to other sectors of the economy. Average weekly wages fell in Louisiana, New Mexico, North Dakota, Oklahoma and Texas in

2015 and through the beginning of this year (*Chart 1*). Wage growth continues in Alaska, though it's slower than the national rate.

Texas was second only to Louisiana in the depth of decline, with real (inflation-adjusted) average weekly wages down 7.6 percent in the first quarter. North Dakota, which had the second-fastest job growth rate among the states in 2014 but the fastest decline in 2015, followed Texas with the third-deepest drop in wages in the first quarter. New Mexico was fourth.

In Texas, where the economy continues to expand, albeit slowly, the declining average weekly wage appears to be driven by two factors: a change in the job mix and fewer hours worked. There is little evidence to suggest that wages are falling for a given group of workers, a phenomenon that occurred on a widespread basis during the recession (*see the box "Data Sources Offer Various Measures of Wages"*).

Chart 1 Weekly Wages Decline in Most Energy States



NOTE: Chart shows the change in real average weekly wages in 2015 dollars; 2012-14 bars represent average growth over the three years, 2015 bars represent growth for all of 2015, and first quarter 2016 bars represent annualized growth in the quarter.

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

Data Sources Offer Various Measures of Wages

Wage data come in various forms. The monthly payroll survey (Current Employment Statistics, or CES) from the Bureau of Labor Statistics (BLS) provides average weekly wages. Average earnings for Texas and the U.S. are calculated by multiplying average weekly hours estimates by average hourly earnings estimates.

The Quarterly Census of Employment and Wages (QCEW), also from the BLS, is the source of industry wage data. Though not as timely as the monthly survey data, it is far more comprehensive. QCEW wages are derived by dividing quarterly total wages by average employment during the quarter. That result is divided by 13 (the number of weeks in the quarter).

Wage data include nonwage cash payments such as bonuses and tips but exclude fringe benefits such as employer-paid insurance. The average wage is affected by hours worked and, hence, by the ratio of full-time to part-time workers, as well as the number of individuals in high-paying and low-paying occupations. For example, average weekly wages could decline if the number of employees earning below-average wages increases or the average number of hours worked decreases. These factors combined to depress Texas' weekly wages during the energy bust.

CES data are based on a smaller sample of firms than the QCEW and lack detailed industry-level information. CES data come from a survey of roughly one-third of all nonfarm payroll employees; wages for Texas and the U.S. are for the total private sector and exclude government workers. QCEW data capture a large share of the workforce—covering 96 percent of all civilian workers, including civilian government employees.¹

Note

¹Texas and U.S. earnings from the CES did not exhibit statistically significant seasonality when tested. Seasonality was tested using the X-12-ARIMA monthly seasonal adjustment method from the Census Bureau. The CES data were instead smoothed using a three-month moving average. The QCEW data do exhibit seasonality and were seasonally adjusted. Earnings from both sources have been deflated to real values using the CPI-W, the Consumer Price Index for urban wage earners and clerical workers from the Bureau of Labor Statistics.

Rather, since the beginning of 2015, hourly wages stopped increasing. Hours worked decreased 1.9 percent in 2015, a trend that continued into first quarter 2016, depressing weekly earnings. This is indicative of weaker labor demand and slower economic activity since the oil bust.

Texas Wages Trail U.S.

Texas average weekly wages fell below the national average at the start of the year (*Chart 2*). The U.S. and Texas generally follow the same trend, with earnings falling in economic downturns and rising in expansions. Texas wages are more volatile, however, reflecting three factors: the outsized

influence of energy and its tendency for boom and bust, the state's flexible labor markets and smaller state sample sizes.

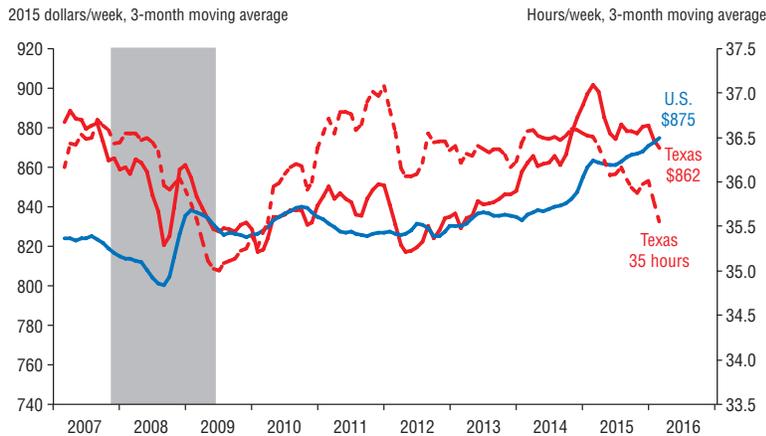
Texas weekly wages fell 1.4 percent over the first three months of the year to \$861 in March, down 5.7 percent from their \$913 peak in February 2015. Wages nationally were \$875 in March. It was the first time since early 2012 that Texas had trailed the U.S. in earnings—the state had exceeded the nation by 2 percent dating back to 2007, and its wages were almost 4 percent higher during the 2007–09 recession.²

Services Offer Stability, Diversity

Texas job creation has been confined to the service sector since the oil

► *Texas job creation has been confined to the service sector since the oil price collapse. The goods sector lost a net 29,000 jobs this year through March.*

Chart 2 | Texas' Weekly Wages Fall Below National Average



NOTE: Shaded bar represents U.S. recession.
 SOURCES: Bureau of Labor Statistics; adjustments by the Federal Reserve Bank of Dallas.

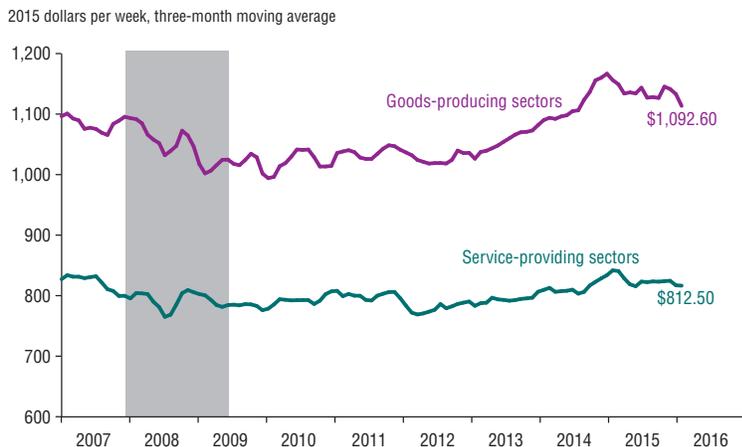
price collapse. The goods sector, which includes manufacturing, construction, oil and gas extraction and energy support services, lost a net 29,000 jobs this year through March after shedding 98,000 positions in 2015. Meanwhile, the private service sector added 54,000 jobs in first quarter 2016 on top of 226,000 in 2015.

Industries that produce goods are more exposed to the business cycle, with more rapid and dramatic employment change, than those providing services. While the service sector may be

the job-creation engine in Texas now, its jobs on average pay considerably less than positions in the goods sector (Chart 3). In March, workers averaged \$813 per week in service industries and \$1,093 in goods industries.

Because the demand for services is more stable, wages tend over time to be half as volatile as those in goods industries. During the 2012–14 shale oil boom, average weekly wages increased 12.2 percent in the goods sector but remained relatively unchanged in the service sector. During the Great Reces-

Chart 3 | Wages Decline in Goods Sector, Hold Steady in Services



NOTE: Shaded bar represents U.S. recession.
 SOURCES: Bureau of Labor Statistics; adjustments by the Federal Reserve Bank of Dallas.

sion, however, wages fell 9.6 percent in the goods sector but only 5.4 percent in services.

Goods sector wages tumbled 5.1 percent during the first three months of 2016 as hours worked fell 5.9 percent. In services, wages were stable and hours worked declined only slightly.

Changing Jobs Composition

While employment in Texas has grown, gains have been in lower-paying industries, and the state has lost higher-paying jobs (Chart 4). Energy has been the top-paying industry; weekly wages averaged \$2,361 in third quarter 2015.³ The industry lost more than 72,000 jobs in 2015—a 23.9 percent reduction—and employment slipped further through first quarter 2016 at an annualized 22.6 percent rate. Energy sector wages declined 3.0 percent year over year in third quarter 2015.

Manufacturing employment decreased 4.5 percent in 2015 and fell an annualized 3.1 percent in first quarter 2016; weekly wages averaged \$1,369 in third quarter 2015, higher than all major service-providing industries except financial activities and information.

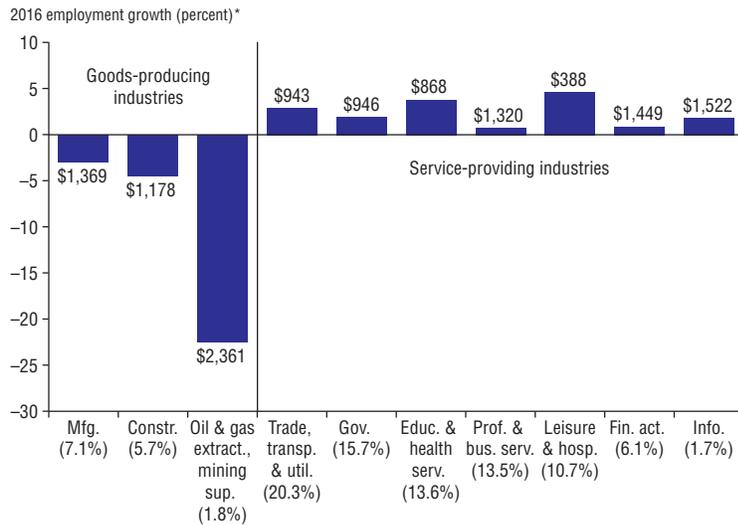
Jobs in lower-paying service fields have been offsetting those lost in high-paying goods areas. It bears noting that while these service sector jobs pay less, they have more desirable nonpay characteristics, such as fewer physical demands and more comfortable working environments, than jobs in energy or manufacturing.

Earnings capture just part of the situation and relying on pay as a primary metric may overstate the negative impact of its decline. Nonpay compensation offsets about half of the decline in pay, according to research from the Federal Reserve Bank of Chicago.⁴

Some workers from the energy and manufacturing industries have found lower-pay, higher-nonpay service sector employment. Typical was a food services industry contact in the Federal Reserve Bank of Dallas' Texas Service Sector Outlook Survey, who said, "Because of the drop in oil-related jobs, our business has been able to find sufficient employees to meet our needs."

Chart 4

Texas Loses Higher-Paying Jobs, Gains Lower-Paying Ones



*Through March 2016, annualized.

NOTES: Shown are nominal average weekly wages in third quarter 2015. Sectors are arranged by share of total Texas nonfarm employment (see percentages in parentheses) in each industry grouping.

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

The leisure and hospitality industry, accounting for the strongest job growth, rose 4.7 percent in 2015 and an annualized 4.7 percent in first quarter 2016. Wages in this segment—traditionally encompassing the lowest-paid workers—averaged \$388 per week in third quarter 2015. Pay has trended higher, increasing 3.9 percent year over year in third quarter 2015—the largest such increase among major service-providing industries.

Demand for leisure and hospitality services rose, in part as consumers directed savings from lower gasoline prices to restaurants and entertainment. Within the leisure and hospitality industry, arts and entertainment wages rose the most, up 7.3 percent year over year to \$642 per week in third quarter 2015. Still, pay within leisure and hospitality remains the lowest among major industries in the state.

Flexible Labor Markets

Wages are more flexible in Texas than elsewhere—they fall more readily in bad times and rise faster in good times. Less labor market regulation, lower minimum wages and relatively little union representation have helped preserve market responsiveness to

economic conditions.

One measure of labor market slack is characterized by the Phillips curve. The economic relationship holds that unemployment and wages move inversely—for example, as unemployment recedes to successively lower levels, pay rises at an increasing rate. Research on the Phillips curve supports the notion that the curve depicting the relationship is steeper in Texas than the nation, meaning wages here react more dramatically to movement in the unemployment rate.⁵

Despite labor shifts, there has been no substantial increase in the state unemployment rate even amid drastically slower economic growth. The Texas unemployment rate, at 4.3 percent in March, compared favorably to the national rate of 5 percent. Overall, state rates from the Bureau of Labor Statistics exhibit little volatility because of data smoothing that tends to suppress volatility.⁶ Thus, it's likely that reported unemployment in Texas will rise. Heightened wage flexibility in Texas helps explain the swift response of wages to slowing economic activity.

Just as wage flexibility allowed pay to be more responsive to the

downside in the wake of the energy bust, it should allow pay to rebound more quickly in Texas when economic activity picks up. This flexibility has also meant that unemployment hasn't become as widespread in the state. In the meantime, the service sector will continue to provide stability.

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Notes

¹ See "Texas Economy Remains Resilient, but Low Oil Prices Loom as Future Risk," by Keith R. Phillips and Christopher Slijk, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2016.

² The decline in Texas' average weekly wage in early 2012 was largely a result of declining average service sector wages.

³ Wages by industry are more lagged than for overall goods and services and are only available through third quarter 2015.

⁴ See "What Does the Changing Sectoral Composition of the Economy Mean for Workers?" by Isaac Sorkin, Federal Reserve Bank of Chicago, *Chicago Fed Letter*, no. 358, 2016.

⁵ See "Wage Flexibility in Texas May Ease Impact of Tighter Monetary Policy," by Anil Kumar, Federal Reserve Bank of Dallas, *Southwest Economy*, Third Quarter, 2015, and "A Closer Look at the Phillips Curve Using State Level Data," by Anil Kumar and Pia Orrenius, Federal Reserve Bank of Dallas Working Paper no. 1409, May 2014.

⁶ See "Spurious Seasonal Patterns and Excess Smoothness in the BLS Local Area Unemployment Statistics," by Keith R. Phillips and Jianguo Wang, Federal Reserve Bank of Dallas Working Paper no. 1305, September 2013.