



# OKLAHOMA Economic Indicators

September 2016

# OKLAHOMA ECONOMIC INDICATORS

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## September 2016

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## SPECIAL REPORT:

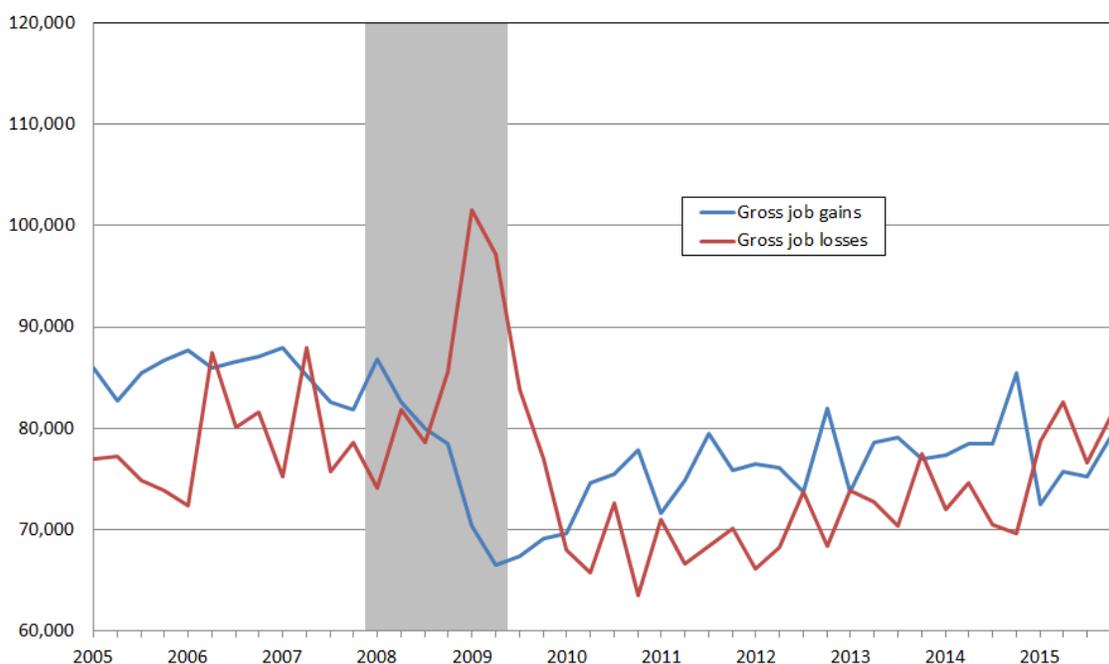
### OKLAHOMA BUSINESS EMPLOYMENT DYNAMICS: 4th Quarter 2015

#### Gross Job Gains and Gross Job Losses: 4th Quarter 2015

From September 2015 to December 2015, gross job gains in Oklahoma totaled 79,209, while gross job losses numbered 81,183, according to the Oklahoma Employment Security Commission, Economic Research and Analysis Division, and the U.S. Bureau of Labor Statistics, (see Chart 1, below and Table 1, page 7). Gross job losses exceeded gross job gains by 1,974, marking the fourth consecutive quarter of negative net change. During the previous quarter, gross job losses exceeded gross job gains by 1,370.

#### Chart 1

Private sector gross job gains and gross job losses in Oklahoma  
March 2005 - December 2015, seasonally adjusted



Source: U.S. Bureau of Labor Statistics

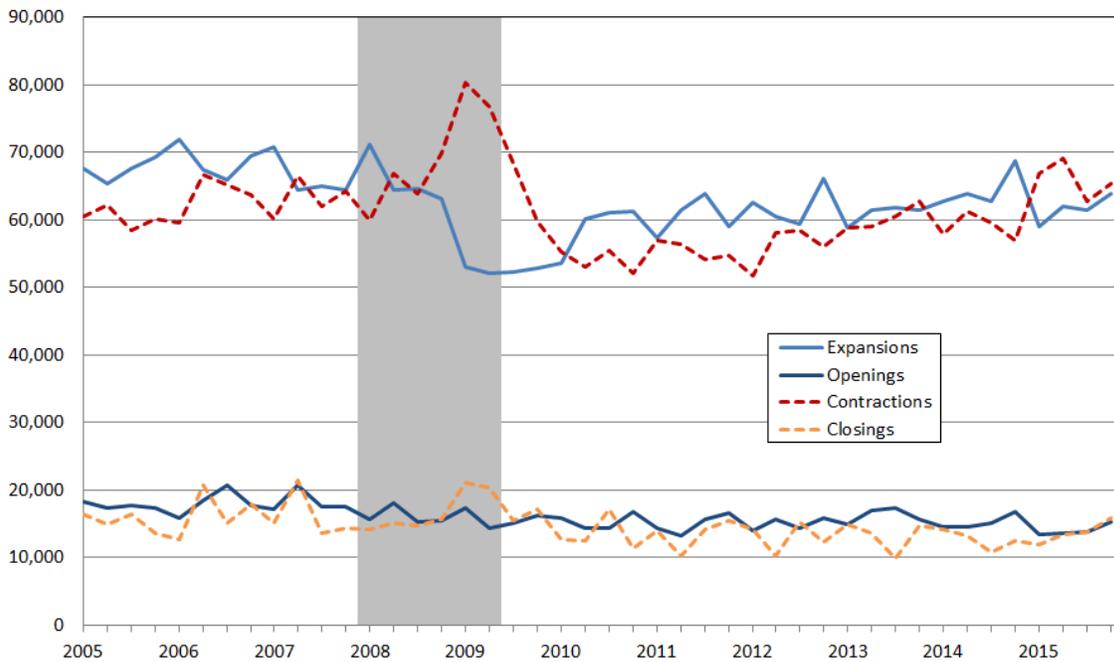
Note: Shaded area represents NBER defined recession period.

The change in the number of jobs over time is the net result of increases and decreases in employment that occur at all businesses in the economy. Business Employment Dynamics (BED) statistics track these changes in employment at private business establishments from the third month of one quarter to the third month of the next. Gross job gains are the sum of increases in employment from expansions at existing establishments and the addition of new jobs at opening establishments. Gross job losses are the result of contractions in employment at existing establishments and the loss of jobs at closing establishments. The difference between the number of gross job gains and the number of gross job losses is the net change in employment.

The number of gross job gains in Oklahoma increased by 3,971 from September 2015 to December 2015, (see Chart 1, above and Table 1, page 7). However, gross job losses also increased from the previous quarter by 4,575 for the three months ended December 2015. In the past ten years, job losses in the state peaked in 1st quarter 2009, at the end of the 'Great Recession', when 101,545 jobs were lost.

## Chart 2

Components of private sector gross job gains and losses in Oklahoma  
March 2005 - December 2015, seasonally adjusted



Source: U.S. Bureau of Labor Statistics  
Note: Shaded area represents NBER defined recession periods.

### Gross Job Gains and Losses: Openings vs. Closings and Expansions vs. Contractions

Contracting establishments in Oklahoma lost 65,348 jobs in the 4th quarter of 2015. This number represents 2,535 more jobs lost from the previous quarter. Expanding establishments gained 63,942 jobs, an increase of 2,554 jobs compared to the 3rd quarter of 2015, (see Chart 2, above).

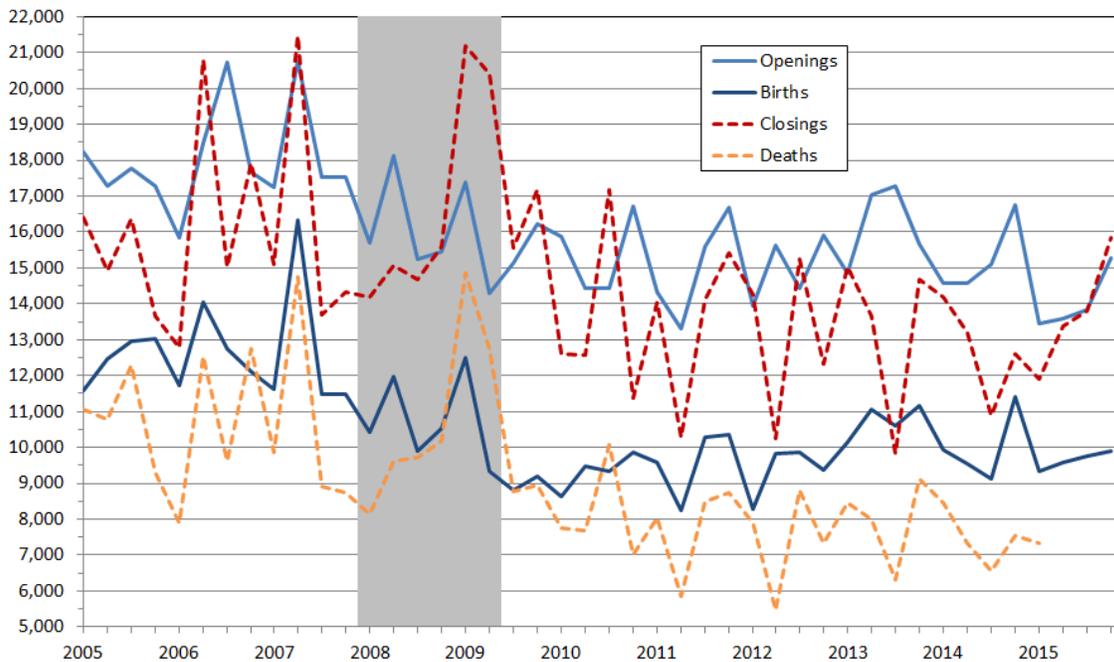
Closing establishments lost 15,835 jobs from September 2015 to December 2015. This represents 2,040 more jobs lost than the prior quarter. Opening establishments gained 15,267 jobs during the 4th quarter of 2015. This represents 1,417 more new jobs from private sector establishment openings than in 3rd quarter 2015.

In Oklahoma, the number of private sector establishment births, (a subset of the openings data), decreased by two to 2,330 in the 4th quarter of 2015. These new establishments accounted for 9,896 jobs or 141 more jobs than the previous quarter, (see Chart 3, next page).

Data for establishment deaths, (a subset of the closings data), are now available through the 1st quarter of 2015. From December 2014 to March 2015, 7,343 jobs were lost at 2,351 private sector establishments in Oklahoma. In the prior quarter, 7,557 jobs were lost at 2,076 private sector establishments.

### Chart 3

Employment from private sector openings, closings, births and deaths in Oklahoma  
March 2005 - December 2015, seasonally adjusted



Source: U.S. Bureau of Labor Statistics  
Note: Shaded area represents NBER defined recession periods.

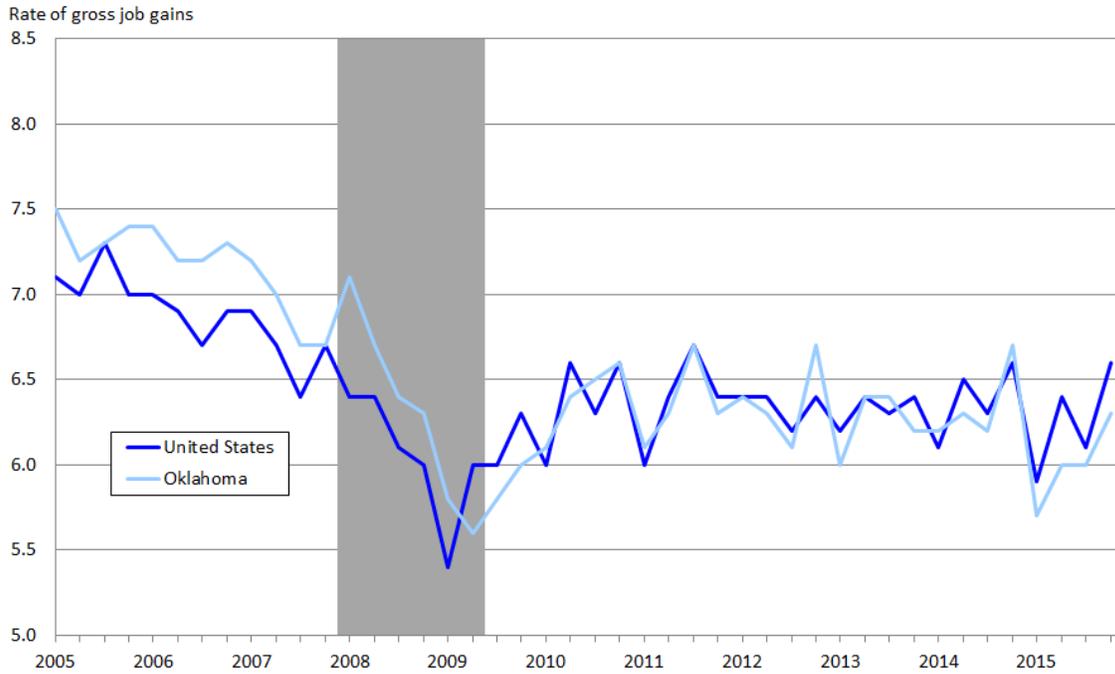
### Gross Job Gains and Gross Job Losses: Percent of Total Private Sector Employment

Gross job gains represented 6.3 percent of total private sector employment in Oklahoma for the quarter ending in December 2015 with expansions accounting for 5.1 percent of total private sector employment and openings contributing 1.2 percent. Nationally, gross job gains accounted for 6.6 percent of private employment in the 4th quarter of 2015. With few exceptions, Oklahoma's rates of gross job gains have generally tracked with the U.S. rates, (See Chart 4, page 5).

In the 4th quarter of 2015, Oklahoma's rate of gross job losses as a percent of total private sector employment was 6.5 percent, with contractions accounting for 5.2 percent and closings adding another 1.3 percent. That was higher than the national rate of 5.8 percent. Although the rate of gross job losses in Oklahoma mirrored the national rate from 1st quarter 2010 to 2nd quarter 2013, from the 3rd quarter 2013 forward it has shown more volatility and appears almost counter-cyclical to the national trend, (See Chart 5, page 5).

### Chart 4

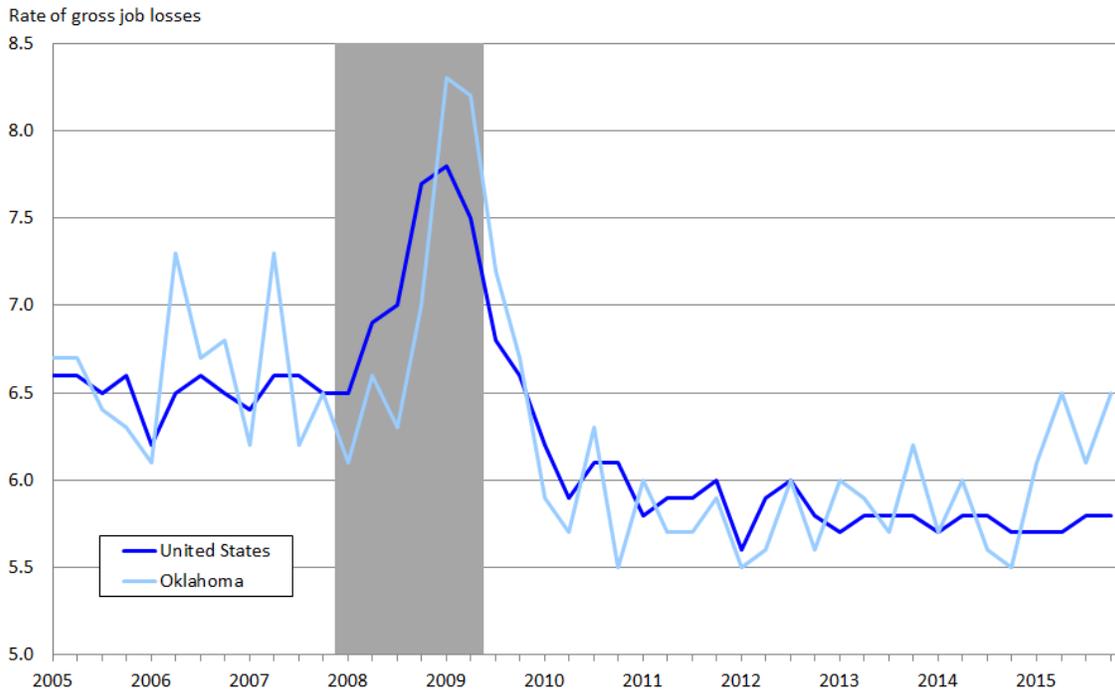
Private sector gross job gains as a percent of employment, United States and Oklahoma  
March 2005 - December 2015, seasonally adjusted



Source: U.S. Bureau of Labor Statistics  
Note: Shaded area represents NBER defined recession periods.

### Chart 5

Private sector gross job losses as a percent of employment, United States and Oklahoma  
March 2005 - December 2015, seasonally adjusted



Source: U.S. Bureau of Labor Statistics  
Note: Shaded area represents NBER defined recession periods.

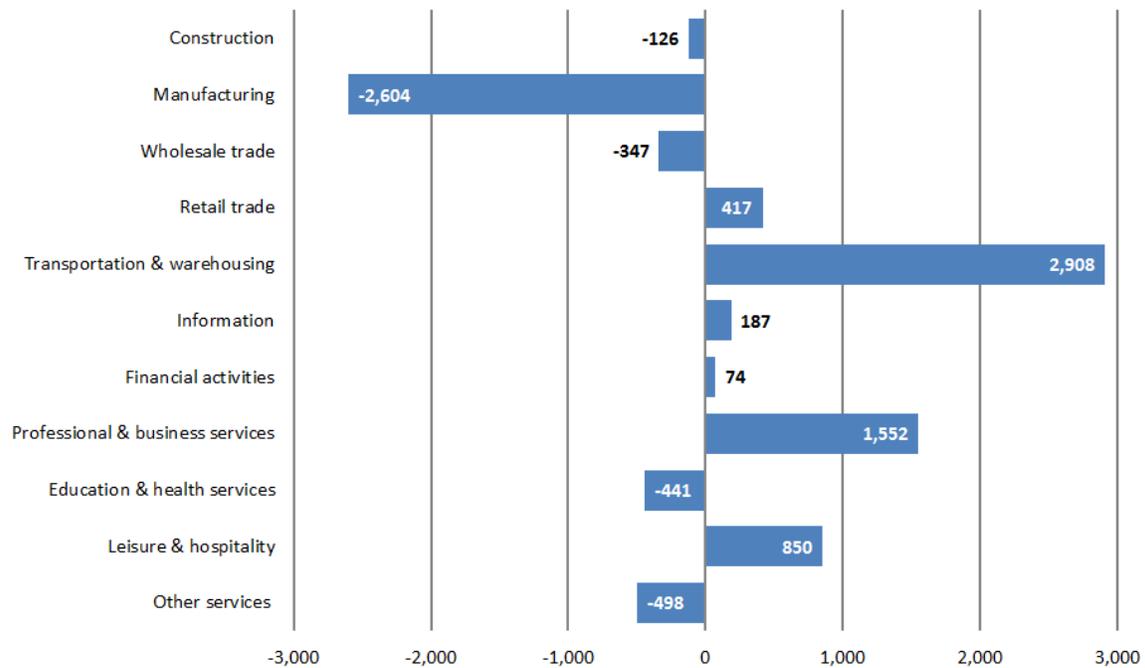
## Gross Job Gains and Gross Job Losses by Industry: 4th Quarter 2015

During the 4th quarter of 2015, gross job losses exceeded gross job gains in 5 of the 11 reported industry sectors in Oklahoma. Manufacturing, by far, saw the largest negative net change in jobs as gross job losses exceeded gross job gains by 2,604 jobs. While 3,793 jobs were created at opening and expanding manufacturing establishments, 6,397 jobs were lost at closing and contracting establishments for the three months ending in December 2015. Other services (except public administration) saw a gain of 2,316 jobs at opening and expanding establishments being offset by the loss of 2,814 jobs at closing and contracting establishments, resulting in a net job loss of 498 jobs.

Transportation and warehousing had the largest positive net change in jobs in the 4th quarter of 2015, as gross job gains exceeded gross job losses by 2,908 jobs. Professional and business services followed with a net gain of 1,552 jobs. (See Chart 6 below and Table 5, pages 13-16).

### Chart 6

Private sector net change in jobs by industry, Oklahoma  
December 2015, seasonally adjusted



Source: U.S. Department of Labor, Bureau of Labor Statistics

| <b>Table 1. Oklahoma: Three-month private sector gross job gains and losses, seasonally adjusted</b>           |                 |               |               |               |               |
|--|-----------------|---------------|---------------|---------------|---------------|
| Category   | 3 months ended  |               |               |               |               |
|  | Dec 2014        | March 2015    | June 2015     | Sep 2015      | Dec 2015      |
|  | Levels          |               |               |               |               |
| Gross job gains.....   | <b>85,458</b>   | <b>72,454</b> | <b>75,658</b> | <b>75,238</b> | <b>79,209</b> |
| Expanding establishments   | 68,712          | 58,992        | 62,072        | 61,388        | 63,942        |
| Opening establishments   | 16,746          | 13,462        | 13,586        | 13,850        | 15,267        |
| Gross job losses.....  | <b>69,618</b>   | <b>78,715</b> | <b>82,570</b> | <b>76,608</b> | <b>81,183</b> |
| Contracting establishments   | 57,031          | 66,818        | 69,190        | 62,813        | 65,348        |
| Closing establishments   | 12,587          | 11,897        | 13,380        | 13,795        | 15,835        |
| Net employment change <sup>1</sup>   | 15,840          | -6,261        | -6,912        | -1,370        | -1,974        |
|  | Rates (percent) |               |               |               |               |
| Gross job gains.....   | <b>6.7</b>      | <b>5.7</b>    | <b>6.0</b>    | <b>6.0</b>    | <b>6.3</b>    |
| Expanding establishments   | 5.4             | 4.6           | 4.9           | 4.9           | 5.1           |
| Opening establishments   | 1.3             | 1.1           | 1.1           | 1.1           | 1.2           |
| Gross job losses.....  | <b>5.5</b>      | <b>6.1</b>    | <b>6.5</b>    | <b>6.1</b>    | <b>6.5</b>    |
| Contracting establishments   | 4.5             | 5.2           | 5.4           | 5.0           | 5.2           |
| Closing establishments   | 1.0             | 0.9           | 1.1           | 1.1           | 1.3           |
| Net employment change <sup>1</sup>   | 1.2             | -0.4          | -0.5          | -0.1          | -0.2          |
| Source: U.S Bureau of Labor Statistics   |                 |               |               |               |               |
| <sup>1</sup> Net employment change is the difference between total gross job gains and total gross job losses. |                 |               |               |               |               |

### More Information

A copy of the full 4th quarter 2015 Oklahoma BED report along with technical notes and detailed tables is available on the OESC website at:

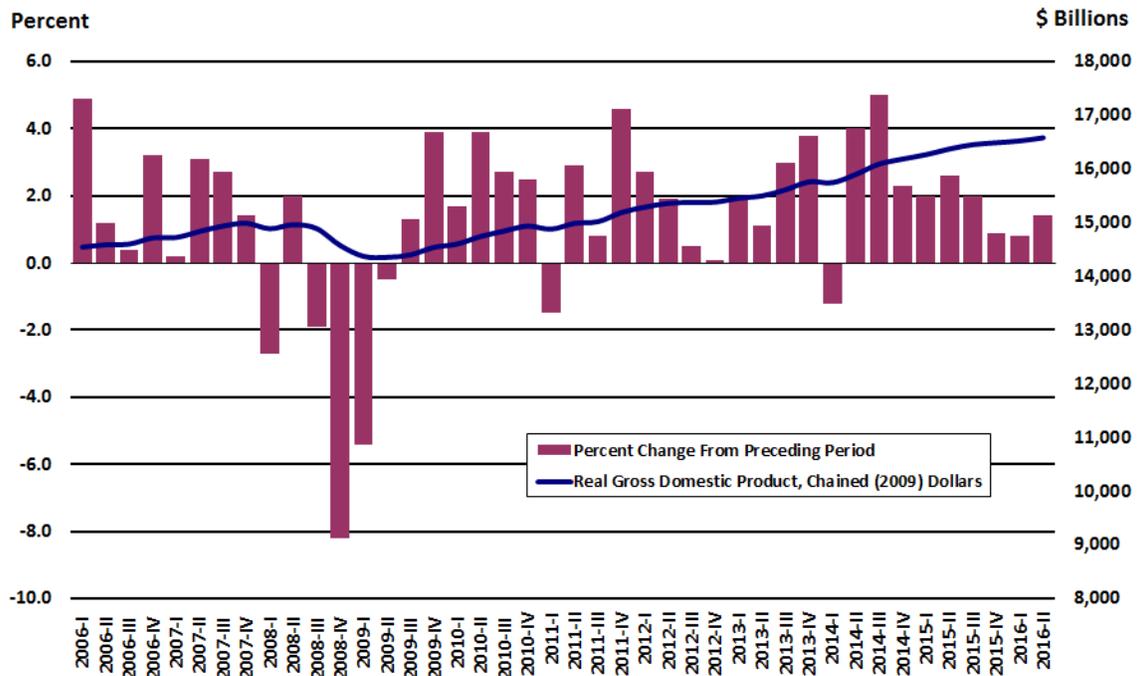
[https://www.ok.gov/oesc\\_web/documents/lmibedpub4q2015.pdf](https://www.ok.gov/oesc_web/documents/lmibedpub4q2015.pdf)

Additional information about the Business Employment Dynamics program is available online at:

<http://www.bls.gov/bdm>

## Real Gross Domestic Product and Quarterly Change

Source: U.S. Department of Commerce, Bureau of Economic Analysis



### Definition & Importance

Gross Domestic Product (GDP)—the output of goods and services produced by labor and property located in the United States—is the broadest measure of economic activity. It is also the measure that is most indicative of whether the economy is in recession. In the post-World War II period, there has been no recession in which GDP did not decrease in at least two quarters, (the exceptions being during the recessions of 1960-61 and 2001).

The Bureau of Economic Analysis (BEA), U.S. Department of Commerce releases GDP data on a quarterly basis, usually during the fourth week of the month. Data are for the prior quarter, so data released in April are for the 1st quarter. Each quarter's data are revised in each of the following two months after the initial release.

### Background

There are four major components to GDP:

1. *Personal consumption expenditures*: Individuals purchase durable goods (such as furniture and cars), nondurable goods (such as clothing and food) and services (such as banking, education and transportation).
2. *Investment*: Private housing purchases are classified as residential investment. Businesses invest in nonresidential structures, durable equipment and computer software. Inventories at all stages of production are counted as investment. Only inventory changes, not levels, are added to GDP.
3. *Net exports*: Equal the sum of exports less imports. Exports are the purchases by foreigners of goods and services produced in the United States. Imports represent domestic purchases of foreign-produced goods and services and are deducted from the calculation of GDP.
4. *Government*: Government purchases of goods and services are the compensation of government employees and purchases from businesses and abroad. Data show the portion attributed to consumption and investment. Government outlays for transfer payments or interest payments are not included in GDP.

The four major categories of GDP—personal consumption expenditures, investment, net exports and government—all reveal important information about the economy and should be monitored separately. This allows one to determine the strengths and weaknesses of the economy.

### **Current Developments**

The pace of U.S. economic growth in the 2nd quarter was less sluggish than previously estimated, boosted by strong consumer spending gains, a smaller trade deficit and positive business investment. Real gross domestic product (GDP) increased at an annual rate of 1.4 percent in the 2nd quarter of 2016, according to the "third" estimate released by the Bureau of Economic Analysis (BEA). In the 1st quarter, real GDP increased 0.8 percent.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, grew at an annual rate of 4.3 percent, the second-strongest quarter for consumer spending growth since 2006. Spending on durable goods, such as automobiles, increased at a 9.8 percent rate while spending on nondurable goods, such as clothing, expanded a 5.7 percent pace. Spending on services, such as transportation grew 3.0 percent in the 2nd quarter. Personal consumption expenditures (PCE) added 2.88 percentage points to 2nd quarter GDP growth instead of 2.94 percentage points previously estimated.

Business investment turned positive (instead of negative) in the 2nd quarter, due to a smaller decline in structures investment along with an increase in intellectual property investment. Nonresidential fixed investment grew at a 1.0 percent rate instead of the -0.9 percent decline reported earlier. Nonresidential fixed investment added 0.11 percentage point to GDP growth in the 2nd quarter, rather than subtracting -0.11 percentage point as previously reported.

Business inventory investment fell for the first time in nearly five years in the 2nd quarter, shrinking by an annualized \$12.4 billion. The change in private inventories was a smaller drag on growth than previously estimated, pulling down 2nd quarter GDP 1.16 percentage points instead of 1.26 percent previously estimated.

Residential investment contracted following eight straight quarters of increases, plunging to an annual rate of -7.7 percent, reflecting weakness in both single-family and apartment construction. Residential fixed investment shaved 0.31 percentage point from 2nd quarter GDP growth. Before last quarter, residential investment had been a driver of economic growth since 2014

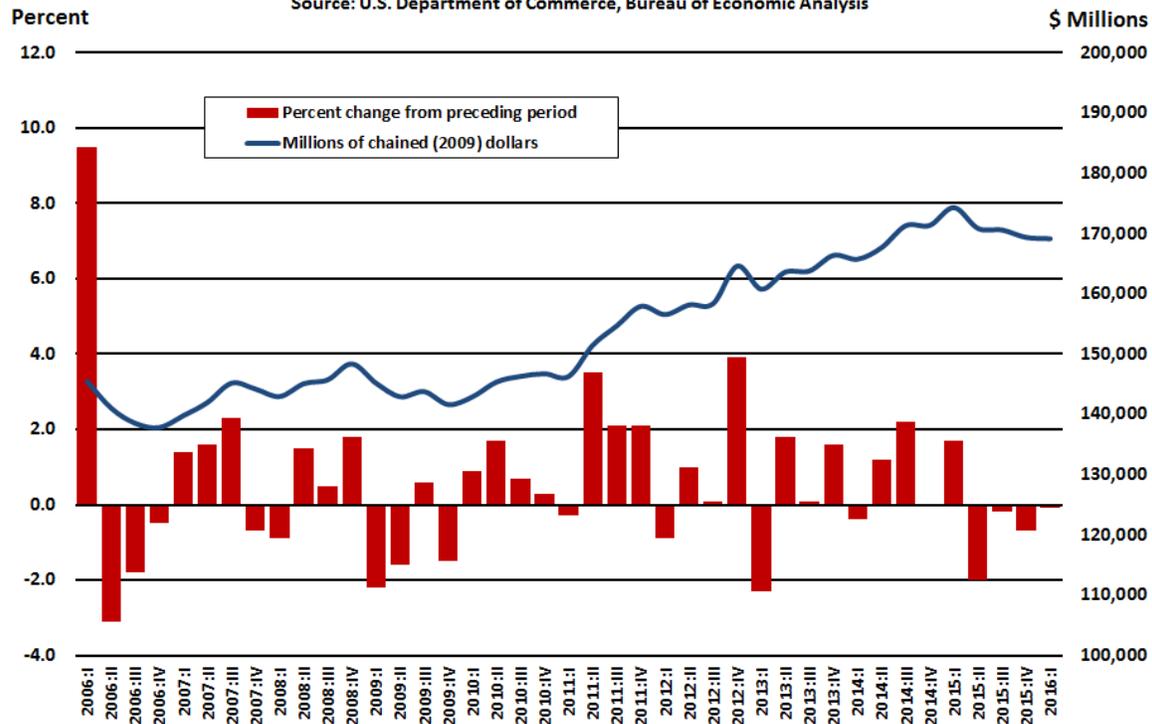
Growth in exports, which add to GDP, outpaced gains for imports, which subtract from GDP in the 2nd quarter, narrowing the trade gap. Exports grew at an annualized 1.8 percent rate (instead of 1.2 percent), while imports advanced 0.2 percent, rather than 0.3 percent. With those adjustments, trade contributed a slightly better 0.18 percentage point to overall growth in the 2nd quarter.

Government purchases also trimmed growth more than first thought in the 2nd quarter as federal, state and local governments pulled back on spending. Federal government expenditures decreased at an annualized 0.4 percent rate, held back by a 3.2 percent decline in national defense spending. Federal non-defense spending grew at a 3.8 percent rate. State and local government spending dropped 2.5 percent in the 2nd quarter. Government consumption expenditures subtracted 0.30 percentage points from GDP growth in the 2nd quarter instead of -0.27 percentage points as estimated earlier.

## Oklahoma Real Gross Domestic Product and Quarterly Change

1st Quarter 2006 - 1st Quarter 2016, Seasonally Adjusted Annual Rates

Source: U.S. Department of Commerce, Bureau of Economic Analysis



### Definition & Importance

The U.S. Bureau of Economic Analysis (BEA) recently released prototype statistics of quarterly gross domestic product (GDP) by state for 2005–2013. These new statistics provide a more complete picture of economic growth across states that can be used with other regional data to gain a better understanding of regional economies as they evolve from quarter to quarter. The new data provide a fuller description of the accelerations, decelerations, and turning points in economic growth at the state level, including key information about changes in the distribution of industrial infrastructure across states.

### Current Developments

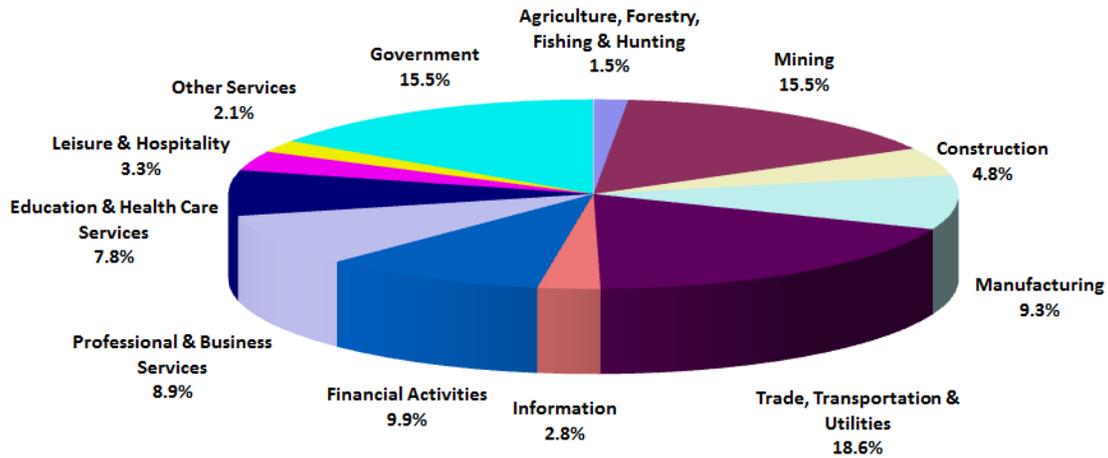
Growth of U.S. real GDP by state—a measure of nationwide growth calculated as the sum of GDP of all states and the District of Columbia—slowed to an annual rate of 1.2 percent in the 1st quarter of 2016 after increasing 1.7 percent in the preceding quarter. Real gross domestic product (GDP) increased in 37 states and the District of Columbia in the 1st quarter of 2016, according to the Bureau of Economic Analysis (BEA). Real GDP by state growth, at an annual rate ranged from 3.9 percent in Arkansas to -11.4 percent in North Dakota. Construction; health care and social assistance; and retail trade were the leading contributors to U.S. economic growth in the 1st quarter.

In the 1st quarter of 2016, Oklahoma’s real GDP contracted for the fourth consecutive quarter, slipping -0.5 percent and ranking the state 39th among all other states and the District of Columbia. Statewide GDP was at a level of \$176.8 billion (in constant 2009 dollars) in the 4th quarter, down \$2.48 billion from 3rd quarter’s level of \$179.3 billion.

It also appears that Oklahoma’s economy did not perform as well as previously thought. The state’s real GDP growth in 2nd quarter 2015 was slashed from -2.4 percent to -7.7 percent while 3rd quarter 2015 growth was revised downward from 1.0 percent to -0.6 percent.

## Industry Share of Oklahoma's Economy, 1st Quarter 2016 (by percentage of Gross Domestic Product)

Source: U.S. Department of Commerce, Bureau of Economic Analysis



Based on overall U.S. real GDP growth by state, construction grew 9.0 percent in the 1st quarter of 2016—the eighth consecutive quarter of growth for this industry. Construction contributed to growth in 47 states and the District of Columbia including Oklahoma where it added 0.7 percentage point to the state’s real GDP growth.

Health care and social assistance grew 3.8 percent in the 1st quarter. This industry contributed to growth in every state and the District of Columbia. In Oklahoma, health care and social assistance added 0.21 percentage point to GDP growth.

Retail trade grew 4.8 percent in the 1st quarter. This industry contributed to growth in 47 states and the District of Columbia and added 0.22 percentage point to real GDP in Oklahoma.

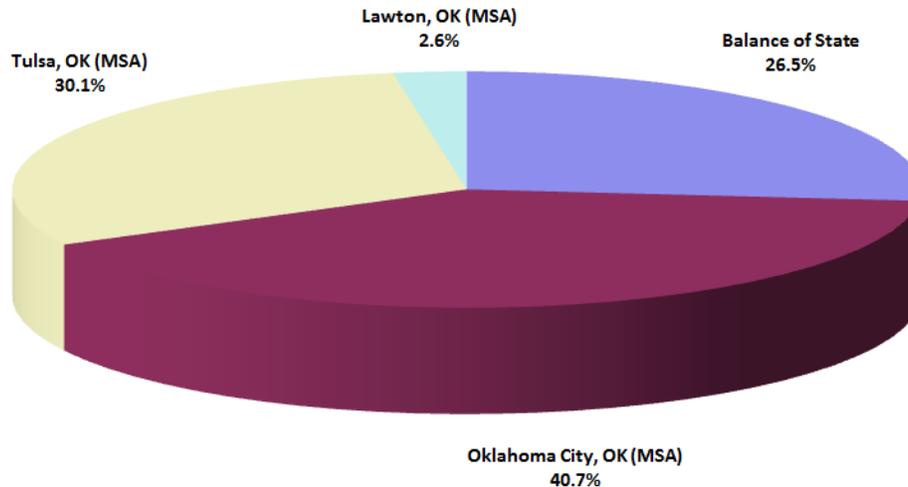
Although agriculture, forestry, fishing, and hunting was not a significant contributor to real GDP growth for the nation, it had an important impact on economic growth in several states including Oklahoma. This industry contributed 0.83 percentage points to real GDP growth in Oklahoma—the largest contributor to the state’s GDP growth in the 1st quarter.

Mining declined 11.1 percent for the nation in the 1st quarter. Mining subtracted 0.73 percentage point from real GDP growth in Oklahoma and was the largest drag on the state’s GDP growth in the 1st quarter

Transportation and warehousing declined 8.8 percent for the nation in the 1st quarter. This industry subtracted from real GDP growth in all states and the District of Columbia including Oklahoma where it subtracted 0.53 percentage point from real GDP growth.

## Metropolitan Area Contribution to State Real Gross Domestic Product 2015

Source: U.S. Department of Commerce, Bureau of Economic Analysis



### Definition & Importance

Metropolitan Statistical Areas (MSAs) are county-based definitions developed by the Office of Management and Budget for federal statistical purposes. A metropolitan area is defined as a geographic area consisting of a large population nucleus together with adjacent communities having a high degree of economic and social integration with the nucleus.

Nationally, metropolitan statistical areas represent approximately 90 percent of total GDP. In Oklahoma, the three MSAs of Oklahoma City, Tulsa and Lawton accounted for roughly 75 percent of total state GDP in 2010.

### Current Developments

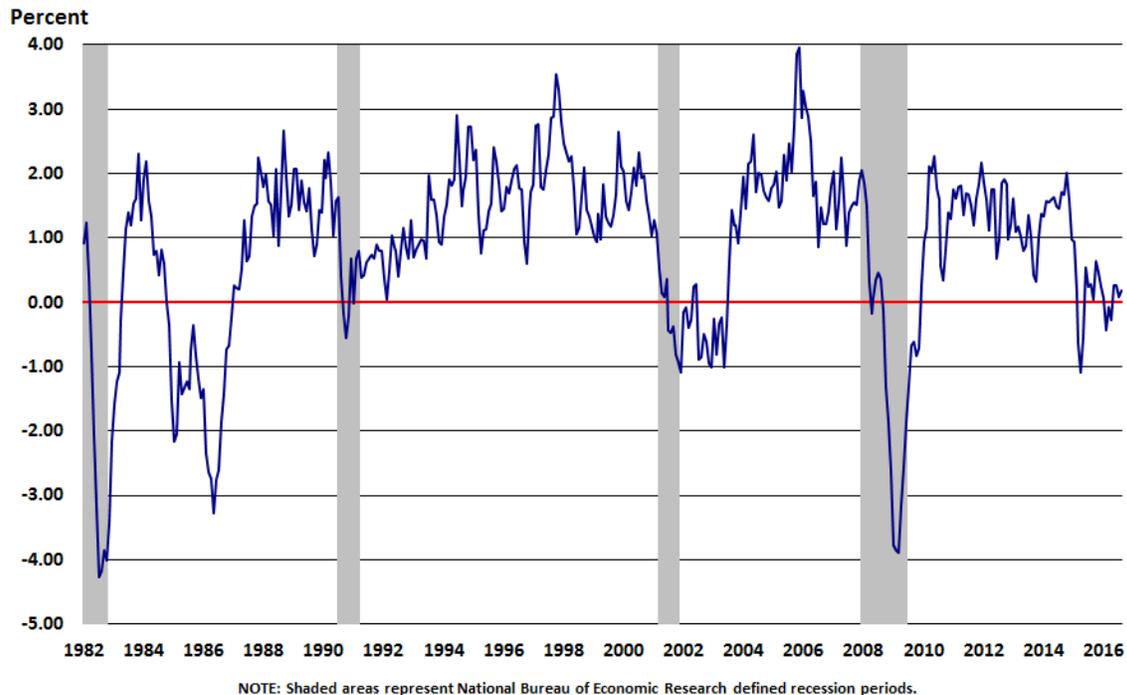
Real gross domestic product (GDP) increased in 292 metropolitan areas in 2015, led by growth in professional and business services; wholesale and retail trade; and finance, insurance, real estate, rental and leasing, according to the U.S. Bureau of Economic Analysis (BEA). Collectively, real GDP for U. S. metropolitan areas increased 2.5 percent in 2015 after increasing 2.3 percent in 2014.

Only one of three Oklahoma metropolitan areas outpaced the U.S. metropolitan area real GDP growth in 2015. Oklahoma City MSA's real GDP grew at a rate of 2.8 percent to \$69.7 billion and ranked 108th (out of 382 metro areas). Tulsa MSA grew at a 0.7 percent pace to \$51.6 billion and ranked 256th. Lawton MSA grew 0.6 percent to \$4.4 billion in 2015 and ranked 264th among U.S. metro areas.

Natural resources & mining drove Oklahoma City MSA's growth in 2015, adding 3.78 percentage points to real GDP. Trade (0.44 percentage point), non-durable goods manufacturing (0.36 percentage point), and construction (0.28 percentage point) helped contribute to Tulsa MSA's GDP growth. Professional and business services was the primary driver of Lawton MSA's growth, adding 1.00 percentage point).

## Leading Index for Oklahoma, 1982-2016

Source: Federal Reserve Bank of Philadelphia (retrieved from FRED, Federal Reserve Bank of St. Louis)



### Definition & Importance

The Federal Reserve Bank of Philadelphia produces leading indexes for each of the 50 states. The indexes are calculated monthly and are usually released a week after the release of the coincident indexes. The Bank issues a release each month describing the current and future economic situation of the 50 states with special coverage of the Third District: Pennsylvania, New Jersey, and Delaware.

The leading index for each state predicts the six-month growth rate of the state's coincident index. In addition to the coincident index, the models include other variables that lead the economy: state-level residential housing permits (1 to 4 units), state initial unemployment insurance claims, delivery times from the Institute for Supply Management (ISM) manufacturing survey, and the interest rate spread between the 10-year Treasury bond and the 3-month Treasury bill.

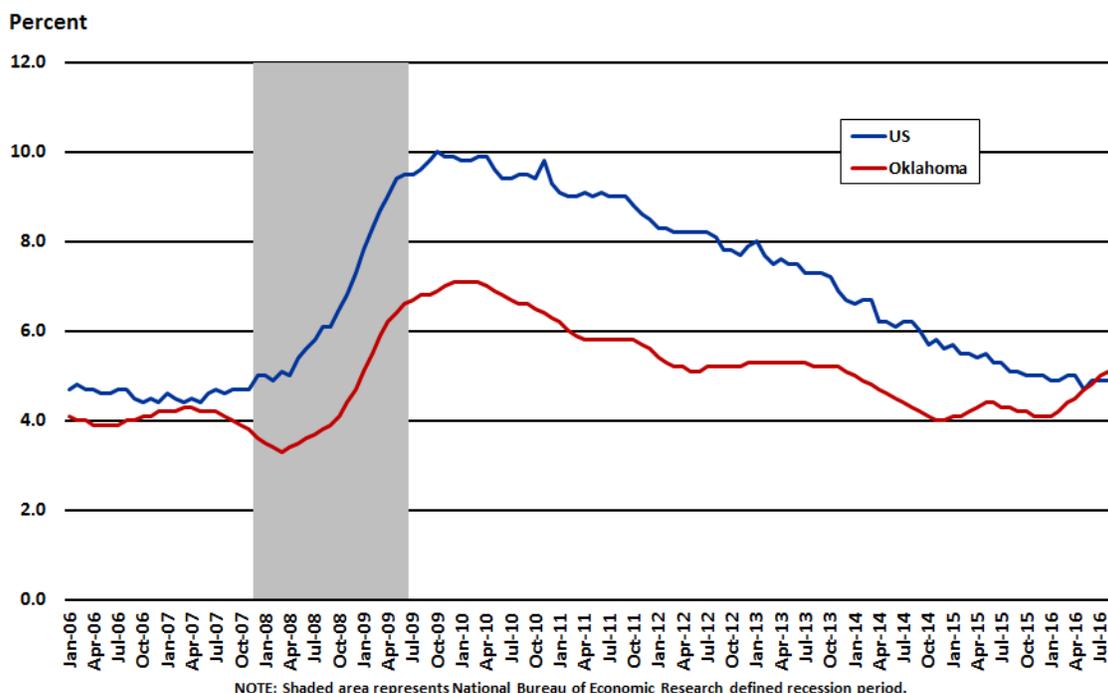
### Current Developments

Oklahoma's leading index, a six-month forecast of the state's coincident index, continued to remain in positive territory for the fourth consecutive month in August. After climbing to a revised 0.27 percent in May, (up from a previous 0.25 percent reading), and 0.27 percent in June (from the previous 0.26 percent estimate), and 0.09 in July (from the previous -0.20 estimate), Oklahoma's Leading Index registered 0.19 percent in August, according to the latest figures from the Federal Reserve Bank of Philadelphia. Overall, Oklahoma's leading index for August suggests contraction in the state's economy through the 1st quarter of 2017.

Prolonged declining commodity prices continued to depress Oklahoma's economy in the 1st quarter of 2016 as oil prices sunk to 15-year lows. Oklahoma's leading index began falling at the end of 2014, posting seven consecutive months of decline, and slipping into negative territory in March, April and May of 2015. After rebounding mid-year, Oklahoma's leading index began falling again in late 2015 for another six-month string of declines and plunged back into negative territory in February (-0.43 percent), March (-0.08 percent), and April (-0.27 percent).

## U.S. and Oklahoma Unemployment Rate (Seasonally Adjusted)

Source: U.S. Department of Labor, Bureau of Labor Statistics



### Definition & Importance

The Bureau of Labor Statistics Local Area Unemployment Statistics (LAUS) program produces monthly estimates of total employment and unemployment from a national survey of 60,000 households. The unemployment rate measures the percentage of people who are without work and is calculated by dividing the estimated number of unemployed people by the civilian labor force. The result expresses unemployment as a percentage of the labor force.

The unemployment rate is a lagging indicator of economic activity. During a recession many people leave the labor force entirely. As a result, the jobless rate may not increase as much as expected. This means that the jobless rate may continue to increase in the early stages of recovery because more people are returning to the labor force as they believe they will be able to find work. The civilian unemployment rate tends towards greater stability than payroll employment on a monthly basis and reveals the degree to which labor resources are utilized in the economy.

### Current Developments

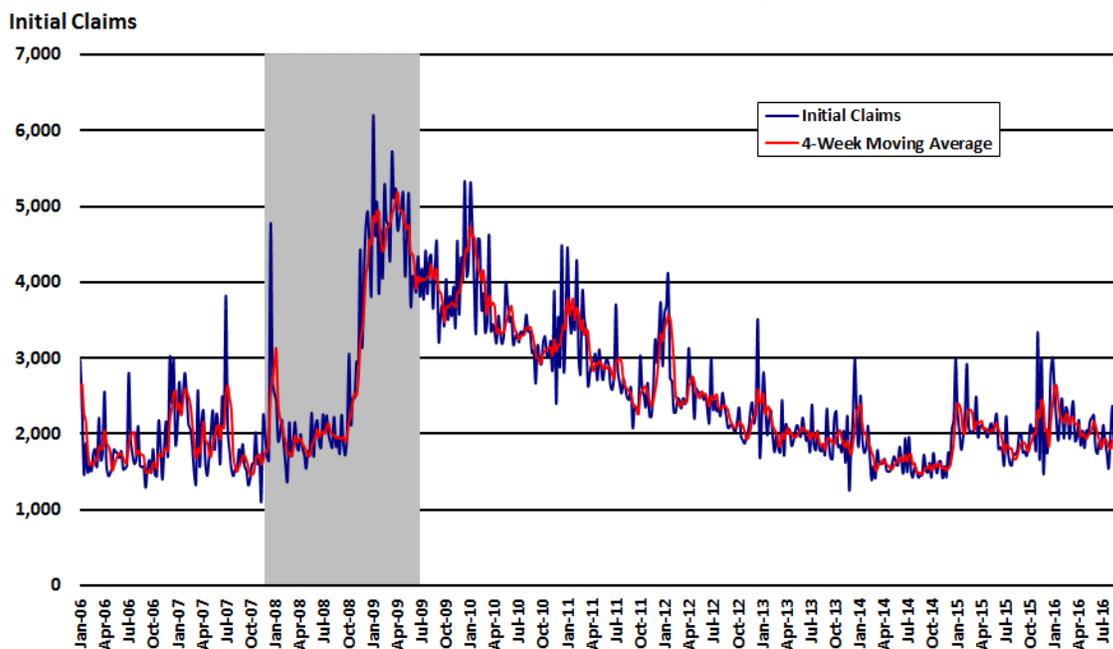
The U.S. unemployment rate edged up in September as more Americans looked for work but not all found jobs. The unemployment rate ticked up to 5.0 percent in September, according to the Bureau of Labor Statistics (BLS). The labor force participation rate—the share of working-age Americans who are employed or looking for work—moved up to 62.9 percent in September for a gain of 0.1 percentage point.

Oklahoma’s seasonally-adjusted unemployment rate rose for the seventh consecutive month in August climbing to 5.1 percent, a gain of 0.1 percentage point from the previous month. Over the year, the state’s seasonally-adjusted unemployment rate was 0.8 percentage point more than 4.3 percent reported in August 2015.

In August, Stephens County once again posted Oklahoma’s highest county unemployment rate at 10.3 percent followed by McIntosh County (9.4 percent) and Latimer County (9.2 percent). Cimarron County reported the lowest county unemployment rate at 2.7 percent.

## Oklahoma Initial Weekly Claims for Unemployment Insurance (Not Seasonally Adjusted)

Source: U.S. Department of Labor, Employment and Training Administration



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

Initial unemployment claims are compiled weekly by the U.S. Department of Labor, Employment and Training Administration and show the number of individuals who filed for unemployment insurance benefits for the first time. This particular variable is useful because it gives a timely assessment of the overall economy.

Initial claims are a leading indicator because they point to changes in labor market conditions. An increasing trend signals that layoffs are occurring. Conversely, a decreasing trend suggests an improving labor market. The four-week moving average of initial claims smooths out weekly volatility and gives a better perspective on the underlying trend.

### Current Developments

U.S. unemployment claims fell to the lowest level since April while the four-week moving average dropped to a 43-year low in the last week of September. In the week ending October 1, the advance figure for seasonally adjusted initial claims was 249,000, a decrease of 5,000 from the previous week's unrevised level of 254,000, according to figures released by the U.S. Labor Department (DOL). The less volatile 4-week moving average was at a level of 253,500, a decrease of 2,500 from the previous week's unrevised average of 256,000—the lowest level for this average since December 8, 1973 when it was 252,250.

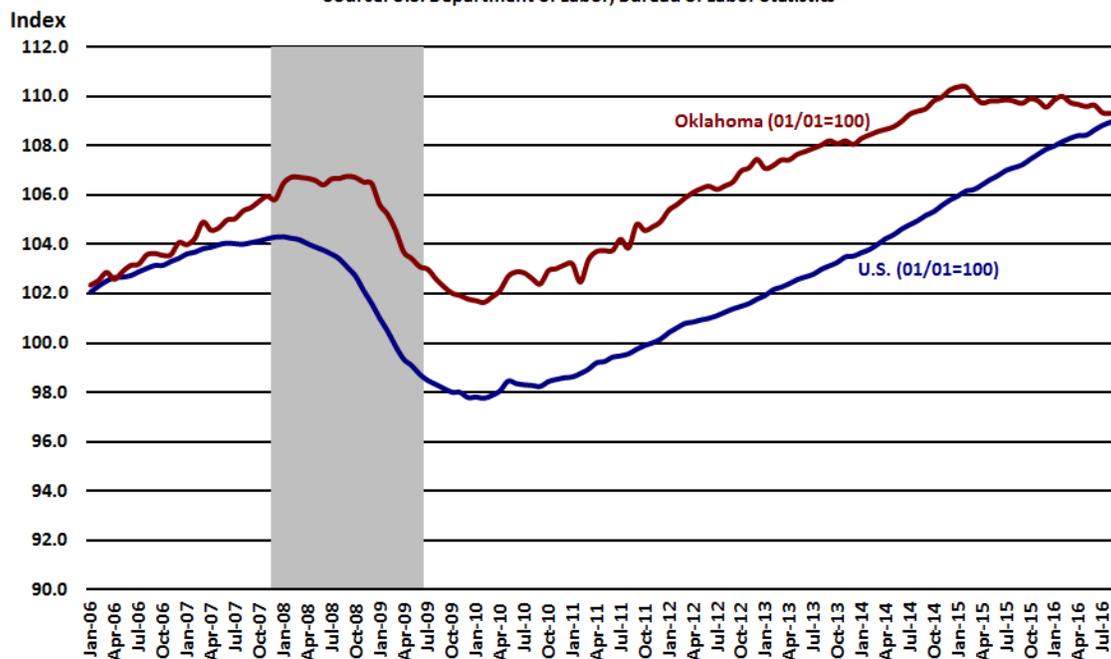
Oklahoma initial jobless claims dropped to the lowest level since July and continued claims fell to a year-and-a-half low in September. For the file week ending September 24, initial claims for unemployment insurance benefits were at a level of 1,536, down 35 from the previous week and -150 over the month. For the same file week ending, the less volatile four-week moving average declined 38 to 1,767. For the same file week ending on September 24, continued claims dropped 1,564 to a level of 19,640 while the continued claims four-week moving average fell 610 to 20,879.

Over the year, statewide initial jobless claims were 175 less than the September 26, 2015 level of 1,711 while continued claims were 1,178 less than 20,819 for the same file week ending.

## U.S. and Oklahoma Nonfarm Payroll Employment (Seasonally Adjusted)

Index: January 2001=100

Source: U.S. Department of Labor, Bureau of Labor Statistics



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

Nonfarm payroll employment data is produced by the Current Employment Statistics (CES) program of the Bureau of Labor Statistics (BLS). The CES Survey is a monthly survey of approximately 140,000 nonfarm businesses and government agencies representing approximately 440,000 individual worksites. The CES program has provided estimates of employment, hours, and earnings data by industry for the nation as a whole, all States, and most major metropolitan areas since 1939. In order to account for the size disparity between of U.S. and Oklahoma employment levels, we have indexed the data with January 2001 as the start value.

Payroll employment is one of the most current and reliable indicators of economic conditions and recessionary trends. Increases in nonfarm payrolls translate into earnings that workers will spend on goods and services in the economy. The greater the increases in employment, the faster the total economic growth.

### Current Developments

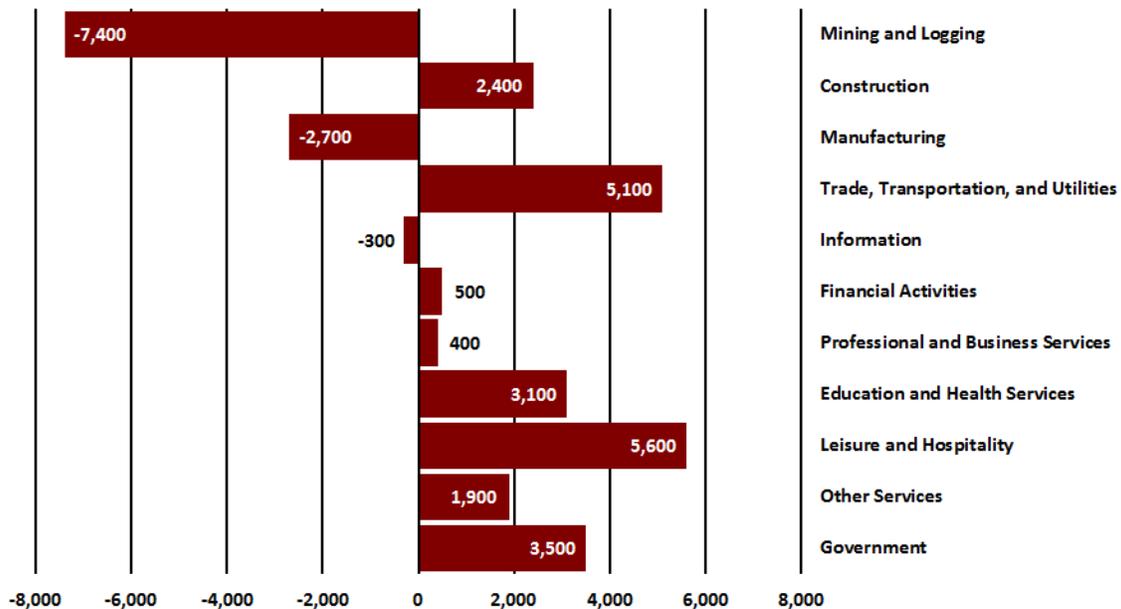
U.S. employers continued to hire in September, although at a slower pace. Total nonfarm payroll employment rose by 156,000 in September, according to the Bureau of Labor Statistics (BLS). The change in total nonfarm payroll employment for July was revised down from 275,000 to 252,000 (-23,000), and the change for August was revised up from 151,000 to 167,000 (+16,000).

Oklahoma nonfarm payrolls edged down a seasonally-adjusted 400 jobs (0.0 percent) in August while July's job gains were revised upward 1,500 to 1,659,700. Seven of Oklahoma's 11 supersectors added jobs over the month as professional & business services (800 jobs) posted the largest monthly job gain in August. Leisure & hospitality reported the largest over-the-month loss (-1,400 jobs) followed by construction (-1,100 jobs).

Over the year, statewide total nonfarm employment lost 7,500 jobs (-0.5 percent) led by manufacturing (-10,600 jobs) and mining & logging (-9,100 jobs). Leisure & hospitality (6,400 jobs) once again claimed the largest job gain over the year.

## Oklahoma Employment Change by Industry, 2014-2015 Annual Averages (Not Seasonally Adjusted)

Source: Current Employment Statistics (CES), U.S. Department of Labor, Bureau of Labor Statistics



### Definition & Importance

Employment growth by industry identifies the types of jobs being created in the state. Conversely, industries with a declining employment trend indicate those which are becoming less important in the state's economy. There may also be industries which behave more cyclically, growing during expansion and decreasing in times of economic slowdown or contraction. These changes are crucial in that they help to recognize the types of jobs being lost by individuals. Anticipating what will happen in recovery helps identify whether those jobs will return or what types of new jobs will be created. Consequently, key information for planning re-employment, retraining, and other workforce and economic development programs is contained within these data. For this analysis, we are using CES non-seasonally adjusted annual averages to compare year-over-year employment changes.

### Current Developments

Oklahoma annual average employment growth slowed further in 2015, as mounting energy sector layoffs weighed on overall job growth. Total nonfarm employment added a non-seasonally adjusted 12,100 jobs for a 0.7 percent growth rate, (compared to 2014, when 21,300 jobs were added at a 1.3 percent growth rate).

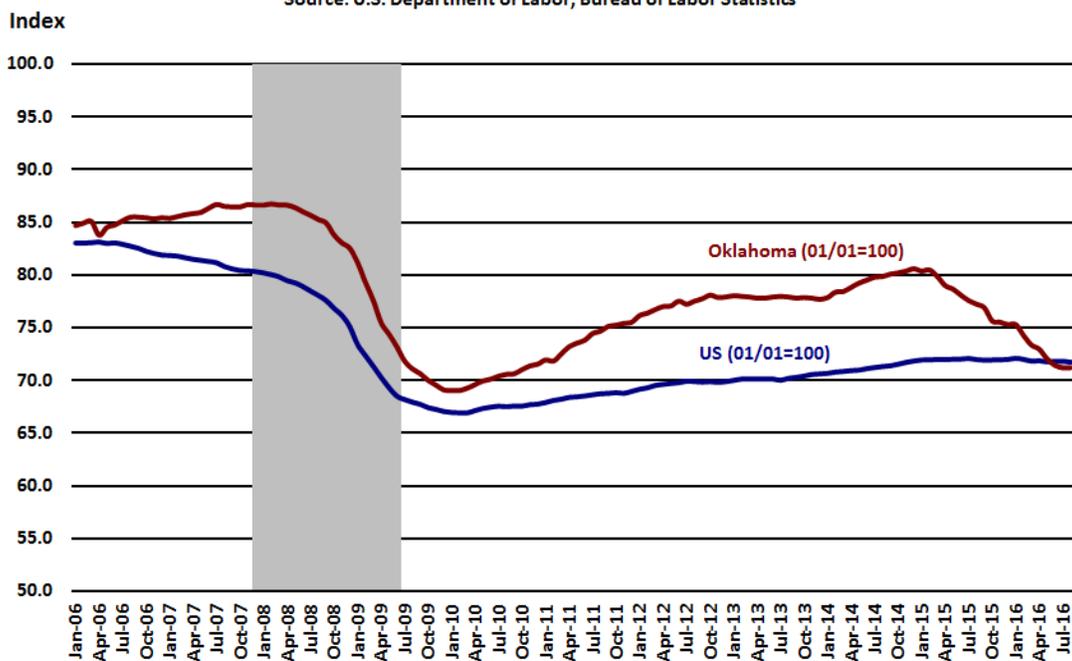
In 2015, eight out of Oklahoma's 11 statewide supersectors recorded job growth. Leisure & hospitality led all other supersectors adding 5,600 jobs with the greater part of hiring occurring in food services and drinking places. The broad trade, transportation & utilities sector added 5,100 jobs with the largest part of growth coming from retail trade. Government added 3,500 employees with most of the growth in local government. Construction added 2,400 jobs with nearly all the job growth in specialty trade contractors.

The largest annual average over-the-year job losses were seen in mining & logging which dropped a non-seasonally adjusted 7,400 jobs (-12.0 percent). Manufacturing employment lost 2,700 jobs mostly in durable goods manufacturing. Information shed 300 jobs in 2015.

## U.S. and Oklahoma Manufacturing Employment (Seasonally Adjusted)

Index: January 2001 = 100

Source: U.S. Department of Labor, Bureau of Labor Statistics



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

Manufacturing employment data is also produced by the Bureau of Labor Statistics' Current Employment Statistics (CES) program. Manufacturing and production are still important parts of both the U.S. and Oklahoma economies. During the 2007-09 recession, employment in manufacturing declined sharply. Although manufacturing plunged in 2008 and early 2009 along with the rest of the economy, it is on the rebound today while other key economic sectors, such as construction, still suffer. In Oklahoma, manufacturing accounts for one of the largest shares of private output and employment in the state. In addition, many manufacturing jobs are among the highest paying jobs in the state. In order to account for the size disparity between the U.S. and Oklahoma employment levels, we have indexed the data with January 2001 as the starting value.

### Current Developments

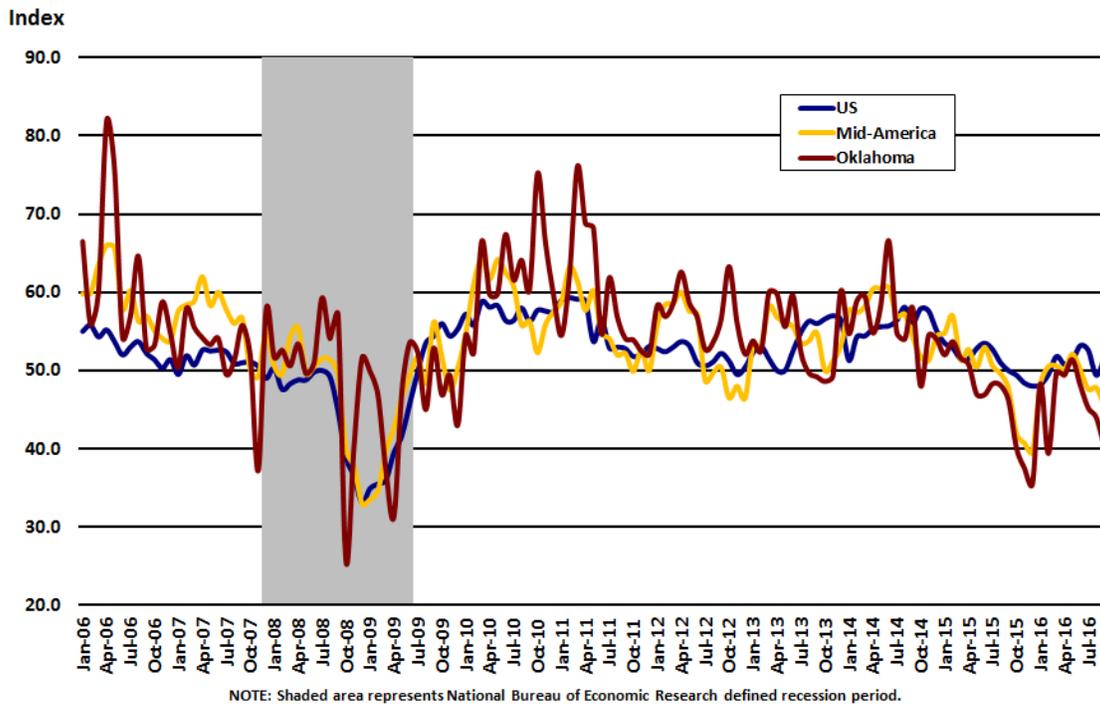
Manufacturers shed jobs for a second month in a row in September. Manufacturing employment lost 13,000 jobs in September, according to the Bureau of Labor Statistics (BLS). Durable goods manufacturing dropped 11,000 jobs in September while non-durable goods manufacturing shed 2,000 jobs.

Oklahoma factory employment was flat in August, (0.0 percent) at a seasonally-adjusted 125,200 jobs, after posting six consecutive months of job losses. Manufacturing employment for July was revised downward to 125,100 (from 125,200). Non-durable goods gained 300 jobs in August but those gains were offset by losses in durable goods manufacturing.

Over the year, statewide manufacturing employment dropped a seasonally-adjusted 10,600 jobs (-7.8 percent) with nearly all of the job losses coming from durable goods manufacturing. Fabricated metal product manufacturing lost a non-seasonally adjusted 4,300 jobs over the year while machinery manufacturing fell by 3,900 jobs. Non-durable goods manufacturing employment lost a seasonally-adjusted 100 jobs (-0.3 percent).

## Purchasing Managers' Index (Manufacturing)

Sources: ISM Manufacturing Report On Business® and Business Conditions Index for Mid-America, Creighton University



### Definition & Importance

Economists consider the Institute for Supply Management's Purchasing Managers' Index (PMI™) a key economic indicator. The Institute for Supply Management (ISM) surveys more than 300 manufacturing firms on employment, production, new orders, supplier deliveries, and inventories. The ISM manufacturing index is constructed so that any level at 50 or above signifies growth in the manufacturing sector. A level above 43 or so, but below 50, indicates that the U.S. economy is still growing even though the manufacturing sector is contracting. Any level below 43 indicates that the economy is in recession.

For the region, since 1994, the Creighton Economic Forecasting Group at Creighton University has conducted a monthly survey of supply managers in nine states (including Arkansas, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma and South Dakota), to produce leading economic indicators for the Mid-America economy using the same methodology as the national survey by the ISM.

### Current Developments

U.S. factory activity bounced back in September, coming off of its first decline after a five-month stretch of growth. The September PMI® registered 51.5 percent, an increase of 2.1 percentage points from the August reading of 49.4 percent, according to the latest Manufacturing ISM Report On Business®. Manufacturing expanded in September following one month of contraction in August, with nine of the 18 industries reporting an increase in new orders in September and 10 of the 18 industries reporting an increase in production.

The Employment Index registered 49.7 percent, an increase of 1.4 percentage points from the August reading of 48.3 percent. A gauge of new orders rose 6 points to a very solid 55.1. Production improved in September, up 1.4 points to 52.8. Export orders were steady at 52.0. September inventories remained in contraction mode despite a 0.5 percent increase to 49.5, and prices were flat at 53.0.

For a third straight month, the Creighton University Mid-America Business Conditions Index, a leading economic indicator for a nine-state region stretching from North Dakota to Arkansas, was below growth neutral 50.0. The September Business Conditions Index, which ranges between 0 and 100, fell to 45.5 from August's 47.8 and July's 47.6, according to the Creighton Economic Forecasting Group. Like the national survey of supply managers, the regional survey is indicating that the manufacturing sector is experiencing negative growth.

"Weakness among manufacturers linked to agriculture and energy continue to weigh on regional economic conditions. Due to the heavy dependence of the region on these two sectors, I will expect to see the regional economy to continue to underperform the national economy. Over the past 12 months, for example, the region has experienced nonfarm job growth of 1.1 percent compared to 1.7 percent for the U.S. This gap is likely to continue for the remainder of 2016," said Ernie Goss, Ph.D., director of Creighton University's Economic Forecasting Group.

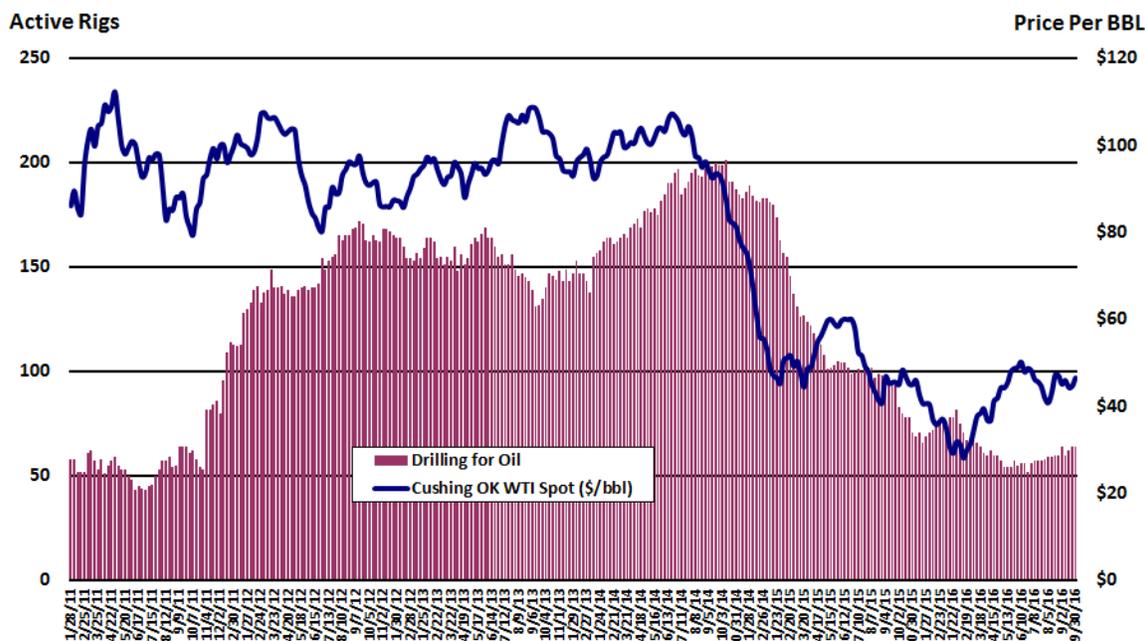
After moving above growth neutral for May, Oklahoma's Business Conditions Index has been below 50.0 for four consecutive months. The September index sank to a regional low of 40.3 from 44.0 in August, also a regional low. Components of the overall September index from a survey of supply managers in the state were new orders at 40.5, production or sales at 44.3, delivery lead time at 35.9, inventories at 35.8, and employment at 45.1.

"Both durable goods producers and nondurable goods manufacturers in the state continue to lose jobs. If OPEC is successful in pushing per barrel oil prices in the range of \$55 to \$60, Oklahoma manufacturers will see improving economic conditions," reported Goss.

## Oklahoma Active Rotary Rigs & Cushing, OK WTI Spot Price

January 2011 to September 2016

SOURCES: U.S. Department of Energy, Energy Information Administration and Baker Hughes Rig Counts



### Definition & Importance

Crude oil is an important commodity in the global market. Prices fluctuate depending on supply and demand conditions in the world. Since oil is such an important part of the economy, it can also help determine the direction of inflation. In the U.S. consumer prices have moderated whenever oil prices have fallen, but have accelerated when oil prices have risen. The U.S. Energy Information Administration (EIA) provides weekly information on petroleum inventories in the U.S., whether produced here or abroad.

The Baker Hughes rig count is an important indicator for the energy industry and Oklahoma. When drilling rigs are active they consume products and services produced by the oil service industry. The active rig count acts as a leading indicator of demand for products used in drilling, completing, producing and processing hydrocarbons.

West Texas Intermediate (WTI-Cushing) is a light crude oil produced in Texas and southern Oklahoma which serves as a reference or "marker" for pricing a number of other crude streams and which is traded in the domestic spot market at Cushing, Oklahoma.

### Background

Oklahoma produces a substantial amount of oil, with annual production typically accounting for more than 3 percent of total U.S. production in recent years. Crude oil wells and gathering pipeline systems are concentrated in central Oklahoma. Two of the 100 largest oil fields in the United States are found in Oklahoma.

The city of Cushing, in central Oklahoma, is a major crude oil trading hub connecting Gulf Coast producers to Midwest refining markets. In addition to Oklahoma crude oil, the Cushing hub receives supply from several major pipelines that originate in Texas. Traditionally, the Cushing Hub has pushed Gulf Coast and Mid-Continent crude oil supply north to Midwest refining markets. However, production from those regions is in decline, and an underused crude oil pipeline system has been reversed to deliver rapidly expanding heavy crude oil supply produced in Alberta, Canada to Cushing, where it can access Gulf Coast refining markets. For this reason,

Cushing is the designated delivery point for the New York Mercantile Exchange (NYMEX) crude oil futures contracts. Crude oil supplies from Cushing that are not delivered to the Midwest are fed to Oklahoma's five refineries, which have a combined distillation capacity of over 500 thousand barrels per day—roughly 3 percent of the total U.S. refining capacity.

### **Current Developments**

The September 2016 *Short-Term Energy Outlook*, released by the U.S. Energy Information Administration (EIA) expects Brent crude oil prices to average \$43/barrel in 2016 and \$52/barrel in 2017. West Texas Intermediate (WTI) crude oil prices are forecast to average \$1/barrel less than Brent in 2016 and 2017. However, the EIS notes that the current values of futures and options contracts suggest high uncertainty in the price outlook.

The EIA reported that U.S. crude oil production averaged 9.4 million barrels per day (b/d) in 2015. Production is forecast to average 8.8 million b/d in 2016 and 8.5 million b/d in 2017. Production levels in 2017 for this forecast are 0.2 million b/d higher than in the August *Short-Term Energy Outlook*. The upward revisions to production largely reflect an assumption of higher drilling activity, rig efficiency, and well-level productivity than assumed in previous forecasts.

Monthly statewide crude oil production levels have been gradually declining over the past year but still remain at historically high levels. Oklahoma's crude production in July was at a level of 12,717,000 barrels, or 194,000 barrels (1.5 percent) more than June's revised production level of 12,523,000 barrels. Oklahoma's crude production for the first seven months of 2016 was 90,209,000 barrels, 4,840,000 (5.1 percent) less than the 95,049,000 barrels produced during the first seven months of 2015.

West Texas Intermediate (WTI-Cushing) spot prices began September at \$43.17/barrel and finished at \$47.72/barrel. Over the year, WTI-Cushing domestic crude prices were up \$2.66/barrel, (5.9 percent) from \$45.06/barrel on September 30, 2015.

The number of rigs exploring for oil and natural gas in the U.S increased by 11 to 522 for the week ended Friday, September 30, according to oil field services company Baker Hughes. That compares to a year ago, when 838 rigs were active. The U.S. rig count peaked at 4,530 in 1981 and reached an all-time low of 404 in May.

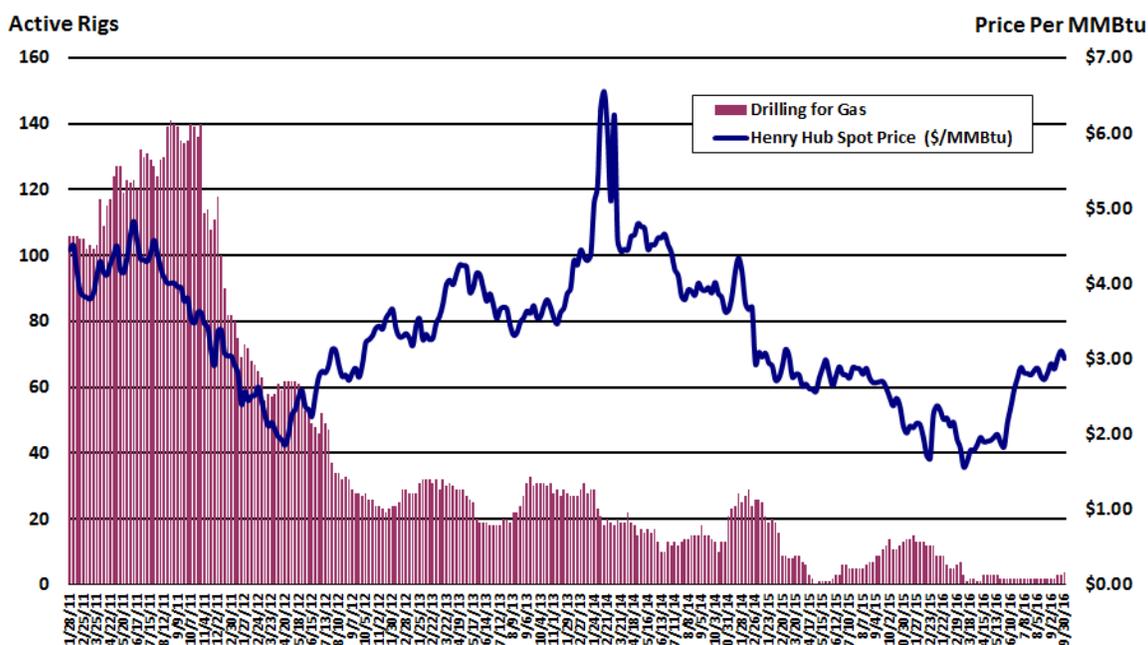
The number of U.S. oil-directed drilling rigs increased by seven to 425 for the week ending September 30, following five consecutive weeks of increases.

Baker Hughes reported Oklahoma's active rig count for the week was at 68 for the week ending September 30, 2016. Oil-directed rigs accounted for approximately 94 percent of total rig activity (64 active rigs). Compared to last year, Oklahoma had 105 active rigs operating September 25, 2015.

# Oklahoma Active Rotary Rigs & Henry Hub Natural Gas Spot Price

January 2011 to September 2016

Sources: U.S. Department of Energy, Energy Information Administration and Baker Hughes Rig Counts



## Definition & Importance

The U.S. Energy Information Administration (EIA) provides weekly information on natural gas stocks in underground storage for the U.S., and three regions of the country. The level of inventories helps determine prices for natural gas products. Natural gas product prices are determined by supply and demand—like any other good or service. During periods of strong economic growth, one would expect demand to be robust. If inventories are low, this will lead to increases in natural gas prices. If inventories are high and rising in a period of strong demand, prices may not need to increase at all, or as much. However, during a period of sluggish economic activity, demand for natural gas may not be as strong. If inventories are rising, this may push down oil prices.

The Henry Hub in Erath, Louisiana is a key benchmark location for natural gas pricing throughout the United States. The Henry Hub is the largest centralized point for natural gas spot and futures trading in the United States. The New York Mercantile Exchange (NYMEX) uses the Henry Hub as the point of delivery for its natural gas futures contract. Henry Hub “spot gas” represents natural gas sales contracted for *next day* delivery and title transfer at the Henry Hub. The settlement prices at the Henry Hub are used as benchmarks for the entire North American natural gas market. Approximately 49 percent of U.S. wellhead production either occurs near the Henry Hub or passes close to the Henry Hub as it moves to downstream consumption markets.

## Background

Oklahoma is one of the top natural gas producers in the United States with production typically accounting for almost one-tenth of the U.S. total. More than a dozen of the 100 largest natural gas fields in the country are found in Oklahoma and proven reserves of conventional natural gas have been increasing in recent years.

Most natural gas in Oklahoma is consumed by the electricity generation and industrial sectors. About three-fifths of Oklahoma households use natural gas as their primary energy source for home heating. Nevertheless, only about one-third of Oklahoma’s natural gas output is

consumed within the state. The remaining supply is sent via pipeline to neighboring states, the majority to Kansas, including the natural gas trading hubs in Texas and Kansas.

### **Current Developments**

According to the September 2016 *Short-Term Energy Outlook*, the U.S. Energy Information Administration (EIA) noted that natural gas working inventories were 3,401 billion cubic feet (Bcf) on August 26. That level was 8 percent higher than last year during the same week, and 11 percent higher than the previous five-year (2011-15) average for that week. The EIA projects that natural gas inventories will be 4,042 Bcf at the end of October 2016, which would be the highest end-of-October level on record.

Natural gas production in Oklahoma increased in July. Statewide natural gas gross production in July was at a level of 210,663 MMcf, a gain of 8,004 MMcf (3.9 percent) from the revised June production level of 202,659 MMcf. For the first seven months of 2016, Oklahoma natural gas gross withdrawals were at a level of 1,458,501 MMcf, 4,708 MMcf (0.3 percent) less than 1,463,209 MMcf produced in the first seven months of 2016.

Warmer weather this summer has helped drive up the price of natural gas as power plants consume more gas as people turn on their air conditioners. Natural gas spot prices began to rise at the end of May and continued to climb through the summer months to in September. Henry Hub spot prices began the month of September at \$2.95/MMBtu and climbed as high as \$3.19/MMBtu before settling \$2.84/MMBtu at the month's end.

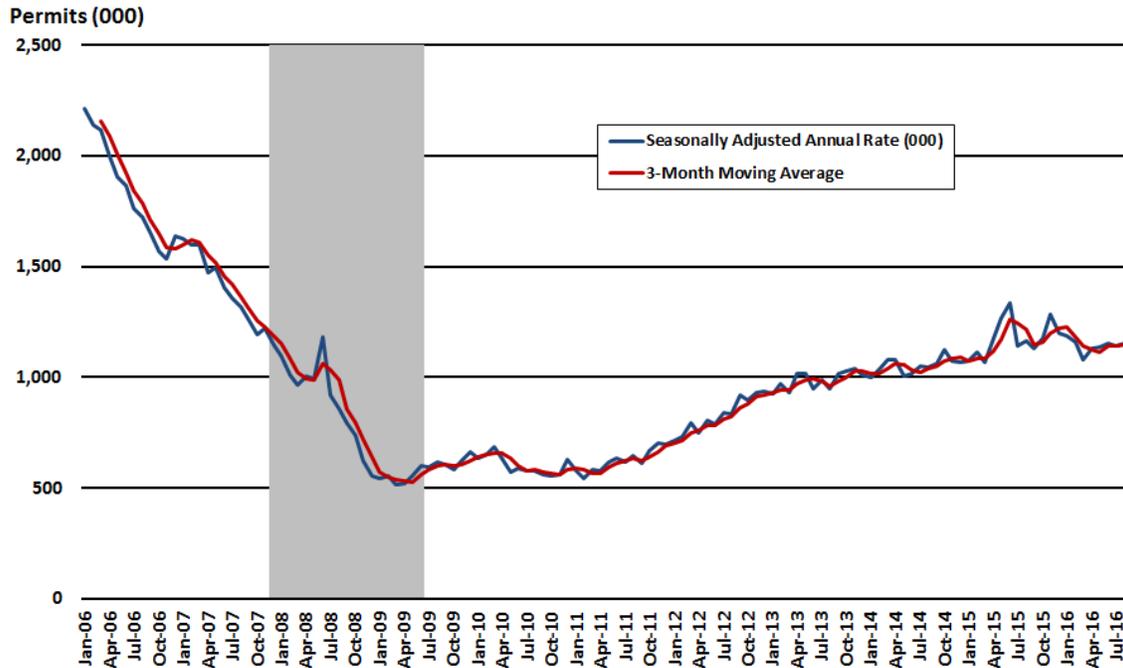
In the U.S. there were 96 active rigs searching for natural gas as of September 30, 2016, up four units from the previous week but down 101 rigs over the year, according to oil services company Baker Hughes Inc.

Oklahoma's natural gas-directed drilling rig count finished the month up one at a level of four active rigs and up two active rigs from the previous month. Over the year, the number of statewide rotary rigs exploring for natural gas was down eight rigs from 12 reported for the week ended September 25, 2015.

## U.S. New Private Housing Units Authorized by Building Permit, 2006-2016

### Seasonally Adjusted

Source: U.S. Census Bureau and Department of Housing and Urban Development



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

The U.S. Census Bureau and the Department of Housing and Urban Development jointly provide monthly national and regional data on the number of new housing units authorized by building permits; authorized, but not started; started; under construction; and completed. The data are for new, privately-owned housing units (single and multifamily), excluding "HUD-code" manufactured homes. Because permits precede construction, they are considered a leading indicator for the residential construction industry and the overall economy. Most of the construction begins the same month the permit is issued. The remainder usually begins construction during the following three months; therefore we also use a three-month moving average.

While home construction represents a small portion of the housing market, it has an outside impact on the economy. Each home built creates an average of three jobs for a year and about \$90,000 in taxes, according to the National Association of Home Builders. Overall, homebuilding fell to its lowest levels in 50 years in 2009, when builders began work on just 554,000 homes.

### Current Developments

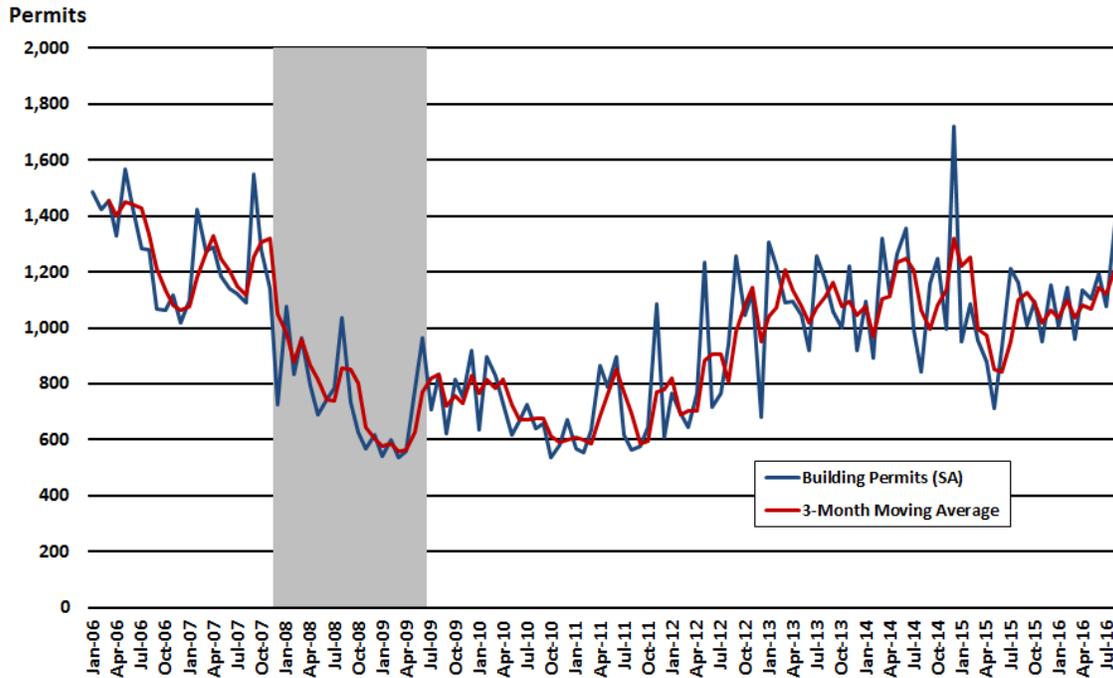
Despite slumping housing permits in August, permit growth for single-family homes, a key indicator of housing demand, rose at a very solid rate. Privately-owned housing units authorized by building permits in August were at a seasonally adjusted annual rate of 1,139,000, 0.4 percent below the revised July rate of 1,144,000 and 2.3 percent below the August 2015 estimate of 1,166,000, according to the U.S. Census Bureau and the Department of Housing and Urban Development.

Permits for single-family homes climbed 3.7 percent in August to a 737,000-unit rate. However, multi-family permits slipped 7.2 percent to a 402,000-unit pace on fewer applications for apartment projects.

# Oklahoma New Private Housing Units Authorized by Building Permit, 2006-2016

## Seasonally Adjusted

Sources: U.S. Census Bureau and Department of Housing and Urban Development, Federal Reserve Bank of St. Louis



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

The data services of the Federal Reserve Bank of St. Louis produces series that are seasonally adjusted including monthly state level data on the number of new housing units authorized by building permits. These adjustments are made using the X-12 Procedure of SAS to remove the seasonal component of the series so that non-seasonal trends can be analyzed. This procedure is based on the U.S. Bureau of the Census X-12-ARIMA Seasonal Adjustment Program.

### Current Developments

A surge in applications to build apartments helped push statewide residential permitting in August to its highest level in ten years. Total residential building permitting for August was at a seasonally adjusted level of 1,373, 27.7 percent (298 permits) more than July's upwardly revised level of 1,075 and 18.2 percent (211 permits) more the July 2015 estimate of 1,162 units, according to figures from the Federal Reserve Bank of St. Louis.

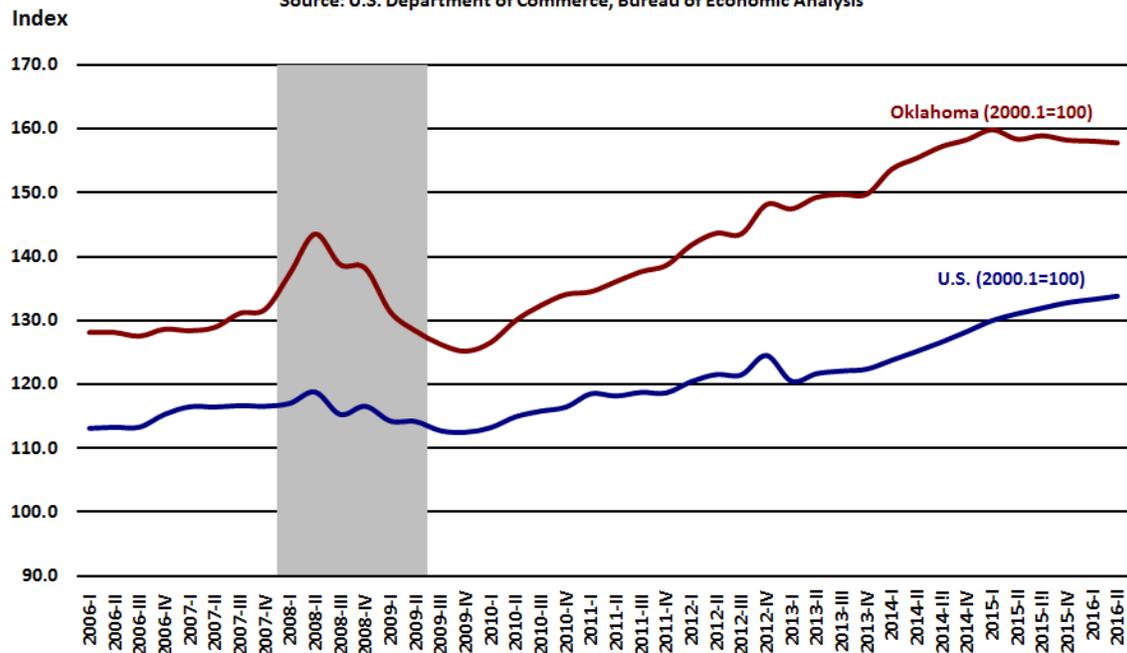
Single-family permitting accounted for approximately 52.8 percent of total residential permitting activity in August while multi-family permitting accounted for 42.6 percent. Applications for single-family homes were at a non-seasonally adjusted level of 852, increasing 19.7 percent from July's level of 712 permits. The more volatile multi-family permitting was at a non-seasonally adjusted level of 687 in August, up 351 units, from July.

Over the year, the number of single family permits was 2.7 percent less than the August 2015 non-seasonally adjusted level of 876 permits. Apartment permitting activity was 56.5 percent more than the August 2015 non-seasonally adjusted level of 439 permits.

## U.S. and Oklahoma Real Personal Income

Index: 1st Quarter 2000 = 100

Source: U.S. Department of Commerce, Bureau of Economic Analysis



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

Personal income is a broad measure of economic activity and one for which relatively current data are available. Personal income includes earnings, property income such as dividends, interest, and rent and transfer payments, such as retirement, unemployment insurance, and various other benefit payments. It is a measure of income that is available for spending and is seen as an indicator of the economic well-being of the residents of a state. Earnings and wages make up the largest portion of personal income.

To show the vastly different levels of total personal income for the U.S. and Oklahoma on the same chart, these data have been converted to index numbers. This chart shows a comparison of Oklahoma and U.S. growth in real personal income with 1st quarter 2000 as the base year.

### Current Developments

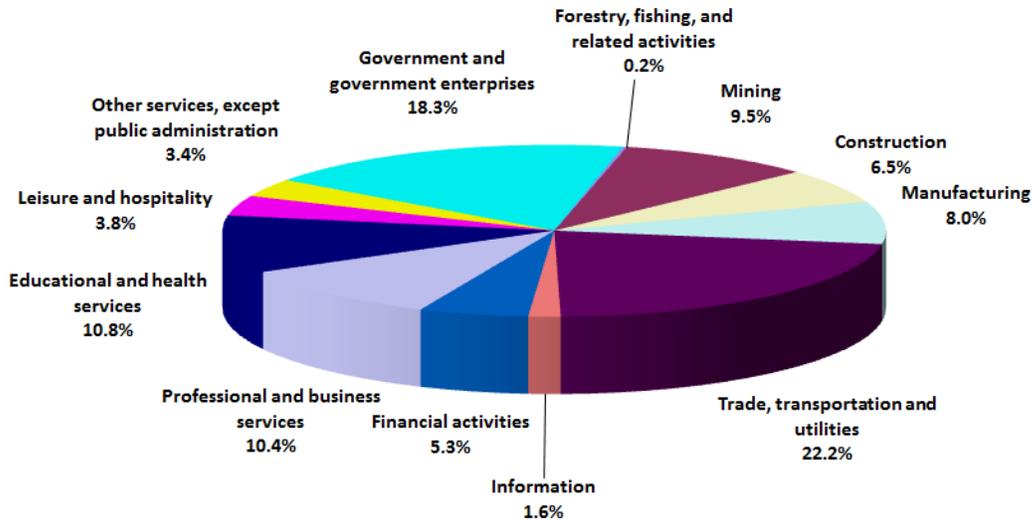
Personal income growth slowed in August as wages and salary gains were smaller following four strong months of gains. Personal income increased \$39.3 billion, or 0.2 percent, in August according to estimates by the Bureau of Economic Analysis (BEA). Disposable personal income (DPI) increased \$31.9 billion (0.2 percent) and personal consumption expenditures (PCE) increased \$6.2 billion (less than 0.1 percent). Real DPI increased 0.1 percent in August and Real PCE decreased 0.1 percent. The PCE price index increased 0.1 percent. Excluding food and energy, the PCE price index increased 0.2 percent.

Purchases of durable goods, such as autos and appliances, declined 1.3 percent in August following a 2.3 percent surge in July. Spending on nondurable goods fell 0.3 percent in August, in part reflecting low fuel prices. Household outlays on services rose 0.1 percent in August.

Americans saved a bit more in August as the personal saving rate rose to 5.7 percent, up from 5.6 percent in July, but below levels seen at the start of 2016.

## Oklahoma Nonfarm Contribution to Earnings Second Quarter 2016

Source: U.S. Department of Commerce, Bureau of Economic Analysis



### Definition & Importance

Quarterly estimates of state personal income are seasonally adjusted at annual rates by the Bureau of Economic Analysis (BEA). Quarterly personal income estimates are revised on a regular schedule to reflect more complete information than the data that were available when the estimates were initially prepared and to incorporate updated seasonal factors.

### Current Developments

State personal income growth accelerated to 1.0 percent on average in the 2nd quarter of 2016 from 0.3 percent in the 1st quarter, according to estimates by the U.S. Bureau of Economic Analysis (BEA). Personal income grew in every state in the 2nd quarter with growth rates ranging from 0.4 percent in Alaska to 1.4 percent in Utah.

Oklahoma's personal income grew at a 0.5 percent rate, to a level of \$178.9 billion, ranking the state 48th among all states and the District of Columbia in the 2nd quarter of 2016.

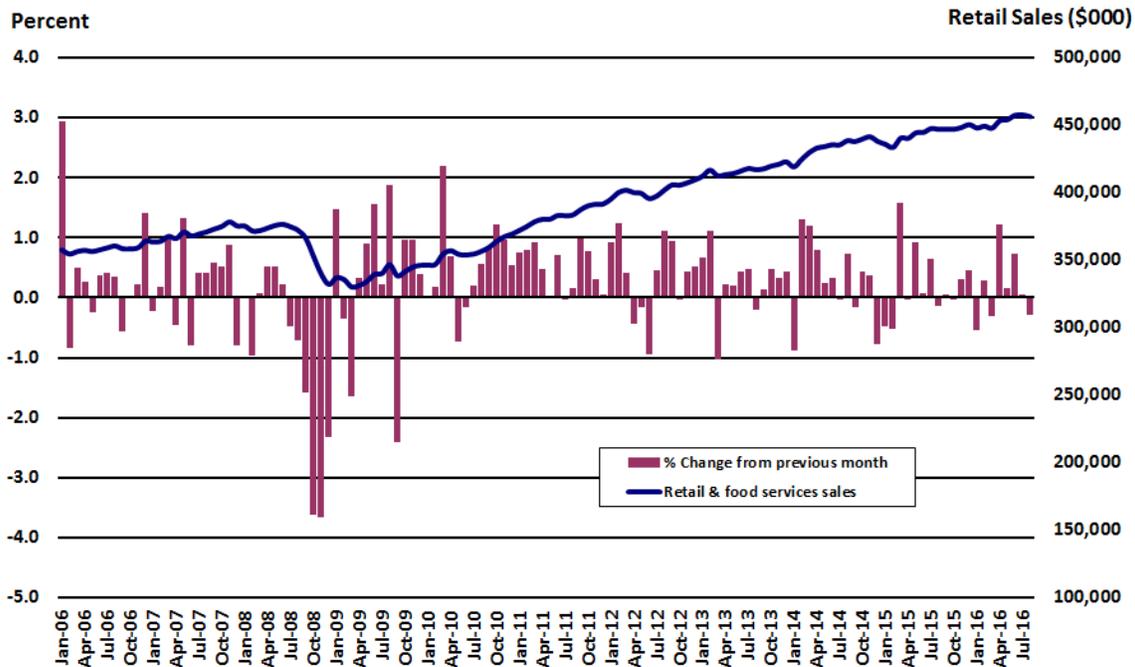
Overall, earnings increased 1.1 percent in the 2nd quarter of 2016 and was the leading contributor to growth in personal income in most states including Oklahoma where net earnings grew 0.4 percent and contributed 0.3 percentage point to personal income growth.

In Oklahoma, growth in construction earnings was the leading contributor to earnings growth in the 2nd quarter of 2016, adding 0.12 percentage point to personal income growth. Growth in transportation & warehousing earnings contributed 0.10 percentage point to personal income growth while health care and social assistance added 0.09 percentage point in the 2nd quarter of 2016.

Mining earnings fell 2.2 percent nationally in the 2nd quarter, the seventh consecutive quarterly decline, and was a leading contributor to below average earnings and personal income growth in four of the five slowest-growing states: Alaska, Wyoming, Oklahoma, and North Dakota. In Oklahoma, mining earnings declined 2.66 percent and subtracted 0.18 percentage point from 2nd quarter income growth. Since peaking in the 3rd quarter of 2014, mining earnings have declined 25.6 percent nationally and 26.5 percent in Oklahoma.

## U.S. Retail Sales (Adjusted for Seasonal, Holiday, and Trading-Day Differences)

Source: U.S. Census Bureau, Advance Monthly Sales for Retail and Food Services



### Definition & Importance

Retail sales measure the total receipts at stores that sell merchandise and related services to final consumers. Sales are by retail and food services stores. Data are collected from the Monthly Retail Trade Survey conducted by the U.S. Bureau of the Census. Essentially, retail sales cover the durables and nondurables portions of consumer spending. Consumer spending accounts for roughly two-thirds of the U.S. GDP and is therefore essential to Oklahoma's economy. Retail sales account for around one-half of consumer spending and economic recovery calls for consumption growth.

### Current Developments

After strong spending gains in the 2nd quarter, American consumers appear to have pulled back on their purchases so far in the 3rd quarter. Advance estimates of U.S. retail and food services sales for August, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were \$456.3 billion, a decrease of 0.3 percent from the previous month, and 1.9 percent above August 2015, according to the U.S. Census Bureau. Total sales for the June 2016 through August 2016 period were up 2.4 percent from the same period a year ago. The June 2016 to July 2016 percent change was revised up from virtually unchanged to 0.1 percent.

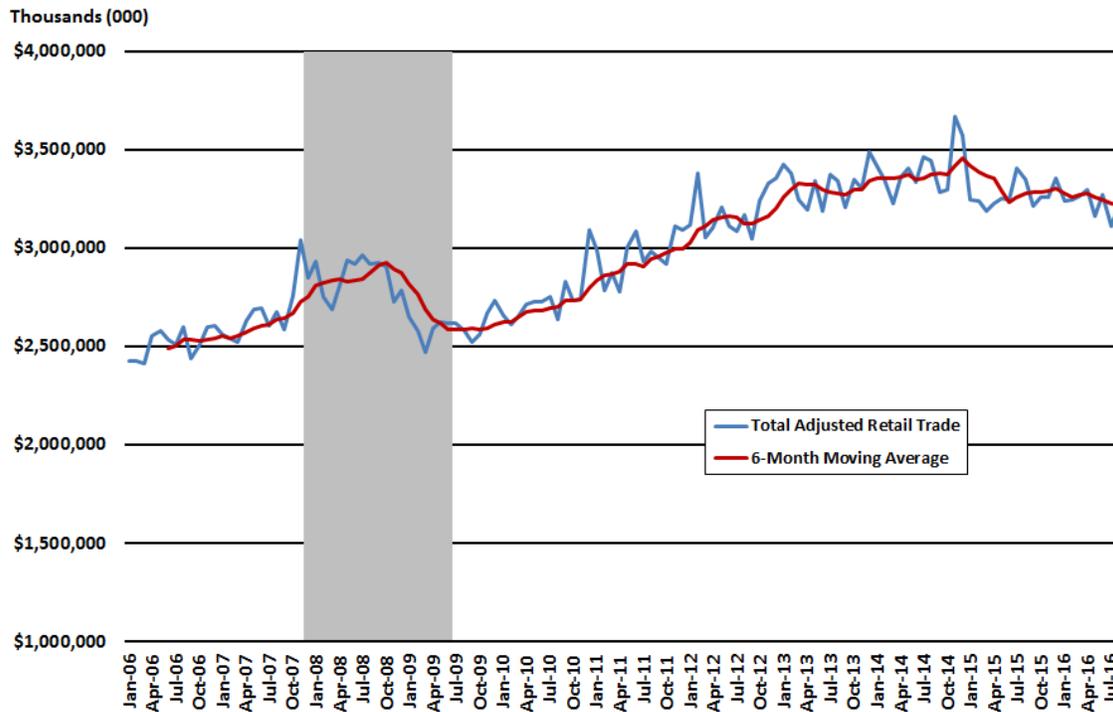
Purchases at auto dealers dropped 0.9 percent in August after rising 1.7 percent in July. Service station sales fell 0.8 percent as pump prices were slightly lower on average in August. Excluding automobiles, sales slipped 0.1 percent while excluding both autos and gasoline, sales also fell 0.1 percent for a second straight decline.

The less volatile "core" sales used to calculate gross domestic product, and strips out automobiles, gasoline, building materials and food services declined 0.1 percent last month after a similar drop in July.

Not all categories declined in August. Clothing store sales, boosted by back-to-school shopping, rose 0.7 percent. Spending at restaurants (0.9 percent) and grocery stores (0.4 percent) also improved.

## Oklahoma Total Adjusted Retail Trade, 2006-2016

Source: Center for Economic & Management Research (CEMR), University of Oklahoma



NOTE: Shaded area represents National Bureau of Economic Research defined recession period.

### Definition & Importance

The Center for Economic and Management Research (CEMR) Price College of Business, at the University of Oklahoma produces the Oklahoma Monthly Retail Sales Series containing monthly estimates of retail sales for Oklahoma, the Oklahoma City, Tulsa and Lawton Metropolitan Statistical Areas and 48 selected cities in Oklahoma. The series is based on sales tax collection data provided by the Business Tax Division, Oklahoma Tax Commission (OTC). In order to take out monthly volatility, we have used a six-month moving average.

### Current Developments

Retail sales in Oklahoma rose in August boosted by higher estimated gasoline station receipts. Total adjusted retail sales for August were at a level of \$3.22 billion, a 3.5 percent gain from July's level of \$3.11 billion. Over the year, total adjusted retail sales fell 4.0 percent.

Total durable goods sales slipped -0.4 percent in August led by declining miscellaneous durable goods (-6.0 percent); computer, electronics & music store sales (-3.7 percent); used merchandise (0.9 percent); and furniture (-0.6 percent). Durable goods categories with over-the-month gains included lumber, building materials & hardware (2.6 percent) and auto accessories & repair (0.8 percent).

Nondurable goods spending increased 5.1 percent in August, as estimated gasoline sales jumped 54.2 percent from July. Other advancing non-durable goods categories for the month were eating & drinking places (0.9 percent); food (0.2 percent); and miscellaneous non-durables (0.6 percent). Declining non-durable categories in August were apparel (-4.3 percent); drugstore sales (-3.5 percent); liquor (-3.0 percent); and general merchandise stores (-1.9 percent).