



# OKLAHOMA Economic Indicators

November 2015

# OKLAHOMA ECONOMIC INDICATORS

Oklahoma Employment Security Commission  
Richard McPherson, Executive Director

Economic Research and Analysis Division  
Lynn Gray, Director & Chief Economist

*Prepared by*  
Monty Evans, Senior Economist

Will Rogers Memorial Office Building  
Labor Market Information Unit, 4th Floor N  
P.O. Box 52003  
Oklahoma City, OK 73152-2003  
Phone: (405) 557-5369  
Fax: (405) 525-0139  
Email: [lmi1@oesc.state.ok.us](mailto:lmi1@oesc.state.ok.us)

**November 2015**

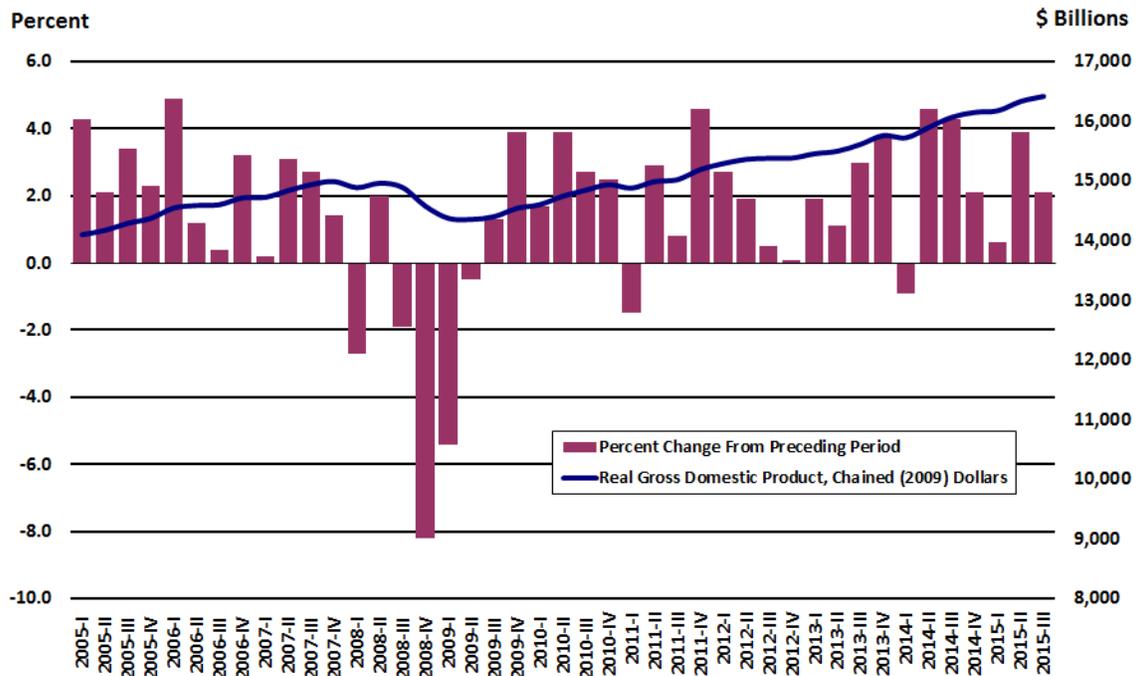
Equal Opportunity Employer/Program  
Auxiliary aids and services are available upon request for individuals with disabilities

# TABLE OF CONTENTS

U.S. Real Gross Domestic Product and Quarterly Change.....	2
Oklahoma’s Real Gross Domestic Product and Quarterly Change.....	4
Industry Share of Oklahoma’s Economy.....	5
Metropolitan Area Contribution to State Real GDP .....	6
Leading Index for Oklahoma.....	7
U.S. and Oklahoma Unemployment Rate.....	8
Oklahoma Initial Claims for Unemployment Insurance.....	9
U.S. and Oklahoma Nonfarm Payroll Employment .....	10
Oklahoma Employment Change by Industry.....	11
U.S. and Oklahoma Manufacturing Employment.....	12
Purchasing Managers’ Index (Manufacturing) .....	13
Oklahoma Active Rotary Rigs and Cushing, OK WTI Spot Price.....	15
Oklahoma Active Rotary Rigs and Henry Hub Natural Gas Spot Price.....	17
U.S. Total Residential Building Permits.....	19
Oklahoma Total Residential Building Permits.....	20
U.S. and Oklahoma Real Personal Income.....	21
Industry Contribution to Oklahoma Personal Income.....	22
U.S. Adjusted Retail Sales .....	23
Oklahoma Total Adjusted Retail Sales.....	24

## 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 U.S. economy grew at a more robust pace in the 3rd quarter than first thought, as upwardly revised inventory numbers provided a lift. Real gross domestic product (GDP) increased at an annual rate of 2.1 percent in the 3rd quarter of 2015, according to the "second" estimate released by the Bureau of Economic Analysis (BEA). In the 2nd quarter, real GDP increased 3.9 percent.

Although consumer spending was revised down a bit, its pace still remained strong. Personal consumption expenditures were revised down 0.2 percent to a 3.0 percent rate in the 3rd quarter. Sales of durable goods such as autos were revised down 0.2 percent to 6.5 percent while non-durable goods spending was revised upward 0.5 percent to 4.0 percent. Spending on services was revised down 0.4 percent to 2.2 percent. Personal consumption expenditures contributed 2.1 percent to overall 3rd quarter GDP growth, slightly lower than the previously estimated 2.2 percent.

In the 3rd quarter, businesses accumulated \$90.2 billion worth of inventories, instead of the \$56.8 billion reported previously. The change in private inventories subtracted only 0.59 percentage point from third-quarter GDP growth, rather than the 1.44 percentage points reported earlier.

Business investment was stronger than first estimated, growing 2.4 percent in the 3rd quarter. Equipment outlays, a good measure of capital spending, increased a robust 9.5 percent, instead of the 5.3 percent pace previously thought. Spending on structures such as mining exploration, wells and shafts tumbled 47.1 percent in the 3rd quarter.

Home construction surged more than previously estimated, rising 7.3 percent for an increase of 1.2 percent. Residential investment added 0.24 percentage points to overall growth in the July through September period, up 0.04 percentage point from the advance estimate.

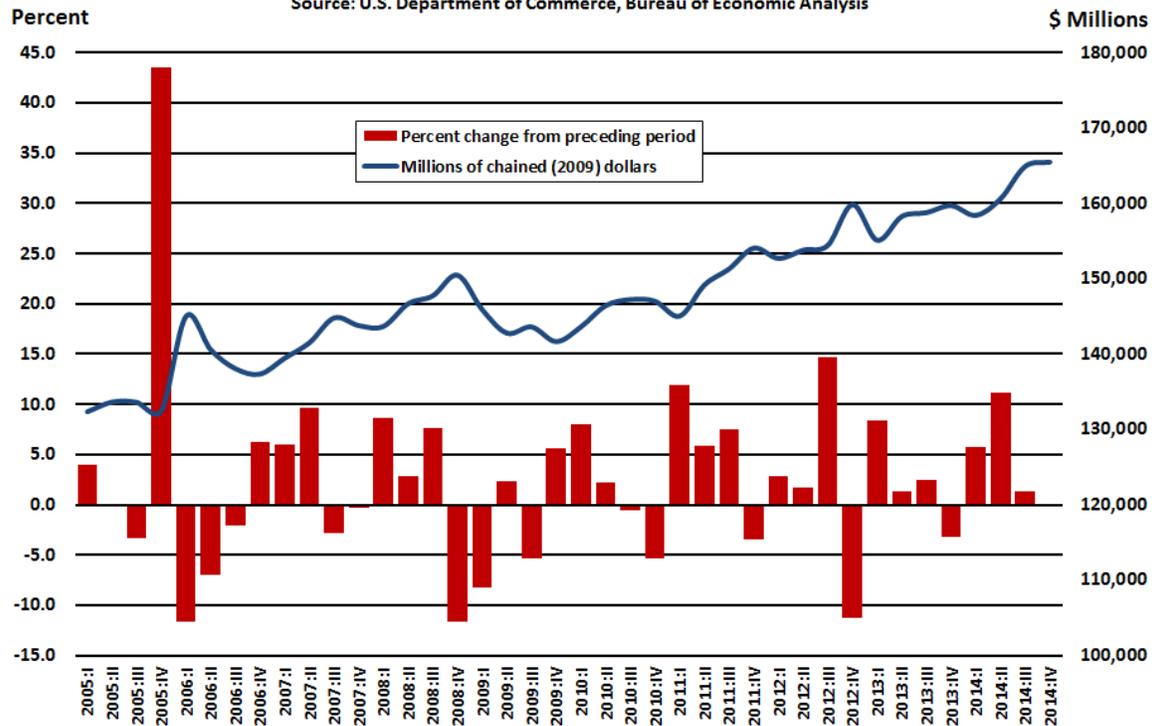
A wider trade deficit also held back growth in the 3rd quarter, as a strong dollar made exports more expensive for foreign consumers and imports cheaper for U.S. consumers. Exports increased just 0.9 percent (instead of the previously reported 1.9 percent), while imports rose 2.1 percent (rather than the 1.8 percent pace first thought). Net exports subtracted 0.2 percent from 3rd quarter GDP.

The pace of government spending slowed to 1.7 percent in the 3rd quarter, down from 2.6 percent in the 2nd quarter. Much of that increase came from state and local governments, where spending rose 2.6 percent. At the federal level, spending was almost flat, rising 0.1 percent, reflecting a 1.5 percent drop in federal defense spending offset by a 2.6 percent increase in nondefense federal spending.

## Oklahoma Real Gross Domestic Product and Quarterly Change

1st Quarter 2005 - 4th Quarter 2014, Seasonally Adjusted

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

U.S. real GDP by state increased 2.2 percent in 2014. Growth in real GDP accelerated in the 2nd and 3rd quarter of the year after declining at an annual rate of 2.4 percent in the 1st quarter. After climbing to a high of 5.5 percent in the 3rd quarter, growth in real GDP decelerated to 2.0 percent in the 4th quarter. Real GDP increased in all eight BEA regions. However, in the first quarter of 2014 GDP declined in five of the eight regions. The Plains region declined the most primarily due to a decline in agriculture, forestry, fishing, and hunting.

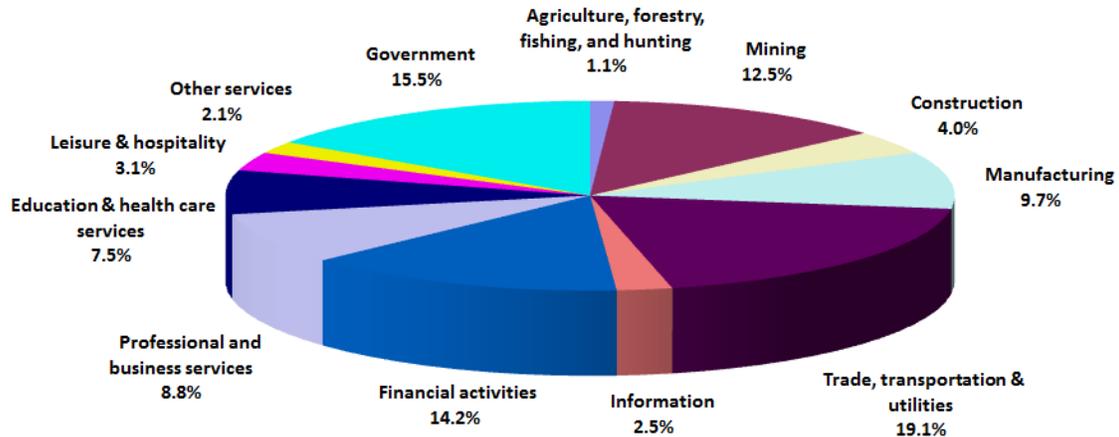
In 4th quarter 2014, Oklahoma's real GDP was \$165.5 billion in constant 2009 dollars, up from \$164.9 billion in the 3rd quarter. The state's 4th quarter real GDP increased by \$1.19 billion, or 1.3 percent, ranking Oklahoma 29th among all other states and the District of Columbia. Mining was the largest contributor to Oklahoma's GDP growth in the 4th quarter, adding 2.30 percent while utilities provided the largest drag, subtracting 2.61 percent.

For all of 2014, Oklahoma's real GDP was at a level of \$162.4 billion in constant 2009 dollars, growing at a rate of 2.8 percent from 2013 and placing Oklahoma as the tenth-highest annual GDP growth rate among all other states and the District of Columbia.

## 2014 Industry Share of Oklahoma's Economy

(by percentage of Gross Domestic Product)

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



### Definition & Importance

Oklahoma's economy typically follows a similar trend to that of the nation. State GDP data lags behind national data and is only available annually. As a result, it is not a good indicator of current economic conditions and does not fully reflect the recent changes in Oklahoma's economic climate. However, it is still valuable to understand the state's growth trend compared to the nation and what industries are the largest contributors to Oklahoma's economy.

### Current Developments

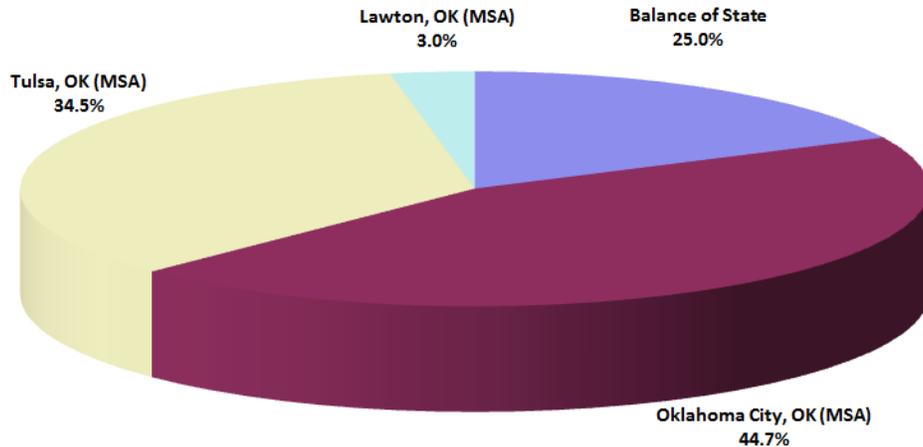
Oklahoma was among 48 states and the District of Columbia experiencing growth in real gross domestic product (GDP) in 2014, according to new statistics from the Bureau of Economic Analysis (BEA). U.S. real GDP grew 2.2 percent in 2014 after increasing 1.9 percent in 2013.

In 2014, Oklahoma's real GDP was at a level of \$162.4 billion, a 2.8 percent gain from the revised \$158.0 billion in 2013. Oklahoma's real GDP growth rate was the 10th highest among all states and the District of Columbia in 2014. Oklahoma's 2013 advance GDP estimate was revised downward from 4.2 percent to 1.8 percent while the state's 2012 GDP was further revised upward from 3.0 percent to 3.5 percent. The Southwest region, which includes Oklahoma, was the fastest growing BEA region in 2014 growing at 4.3 percent, and led by Texas with a 5.2 percent increase.

Although mining was not a significant contributor to real GDP growth for the U.S. economy, it did play a key role in Oklahoma. Mining contributed 1.45 percentage points to statewide real GDP growth in 2014. Other industries adding to 2014 GDP growth in Oklahoma were utilities (0.57 percentage point); non-durable goods manufacturing (0.25 percentage point); wholesale trade (0.22 percentage point); retail trade (0.14 percentage point); and finance & insurance (0.11 percent). Subtracting from Oklahoma GDP growth were real estate, rental & leasing (-0.36 percentage point); construction (-0.22 percentage point); and government (-0.06 percentage point).

## Metropolitan Area Contribution to State Real Gross Domestic Product 2014

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.

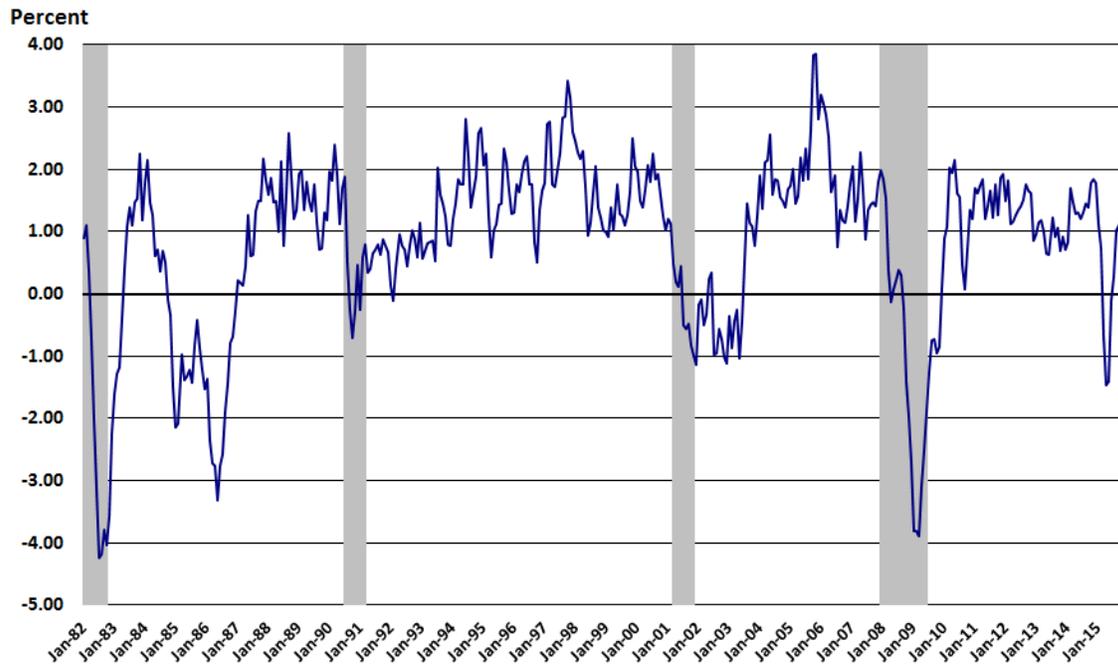
### Current Developments

Real GDP increased in 282 of the nation's 381 metropolitan areas in 2014, led by growth in several industry groups: professional and business services, wholesale and retail trade, and the group of finance, insurance, real estate, rental, and leasing, according to the U.S. Bureau of Economic Analysis (BEA). Natural resources and mining remained a strong contributor to growth in several metropolitan areas. Collectively, real GDP for U. S. metropolitan areas increased 2.3 percent in 2014 after increasing 1.9 percent in 2013.

Two of three Oklahoma metropolitan areas outpaced the U.S. metropolitan area real GDP growth in 2014. Tulsa MSA's real GDP grew at a rate of 3.7 percent to \$49.5 billion and ranked 51st (out of 381 metro areas). Oklahoma City MSA grew by 2.6 percent to \$64.5 billion and ranked 99th. Lawton MSA contracted 1.5 percent to \$4.4 billion in 2014 and ranked 344th among U.S. metro areas.

## Leading Index for Oklahoma, 1982-2015

Source: Federal Reserve Bank of Philadelphia



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

### 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

Declining oil and natural gas prices have weighed on Oklahoma's economy since the beginning of 2015. Oklahoma's leading index began falling at the end of 2014 and saw six consecutive months of decline, slipping into negative territory in March, April and May.

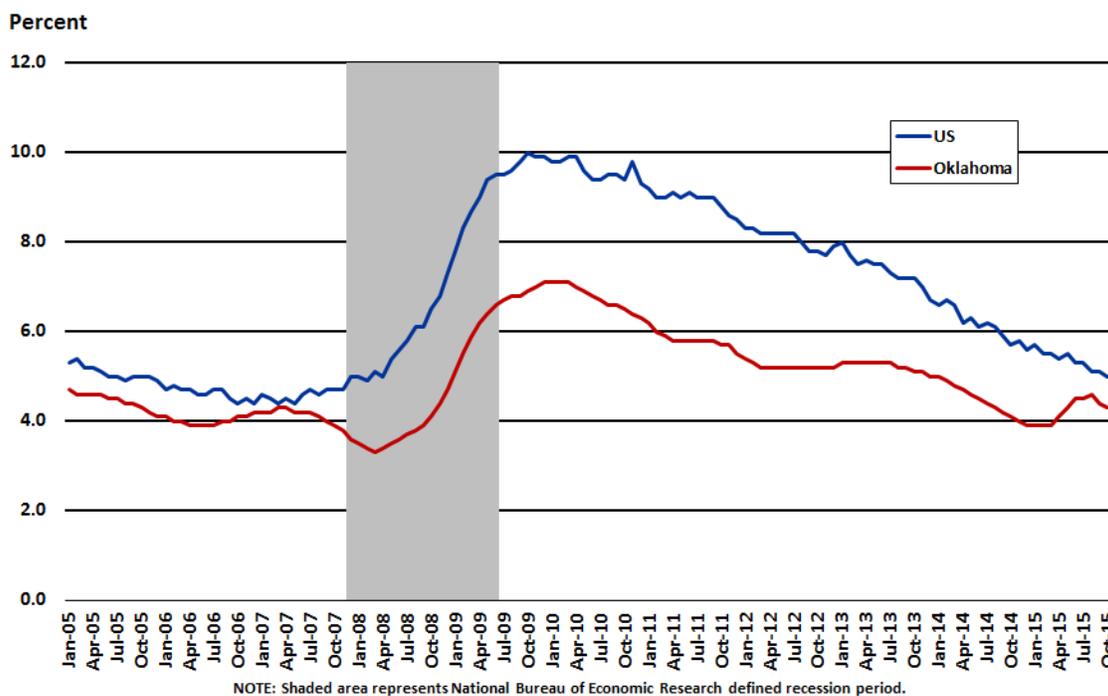
Oklahoma's leading index slipped in September after advancing for three consecutive months. The leading index for Oklahoma dropped to 0.77 percent in October following a 1.11 percent increase in September, according to the latest figures from the Federal Reserve Bank of Philadelphia.

During the first half of 2015, energy sector layoffs translated into elevated initial claims for unemployment insurance while home builders statewide pulled back on applications for residential construction. It appears that initial claims have finally stabilized and October residential permitting remained at a healthy level.

Nevertheless, it looks like the Oklahoma economy experienced a recession during the first half of 2015.

## 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

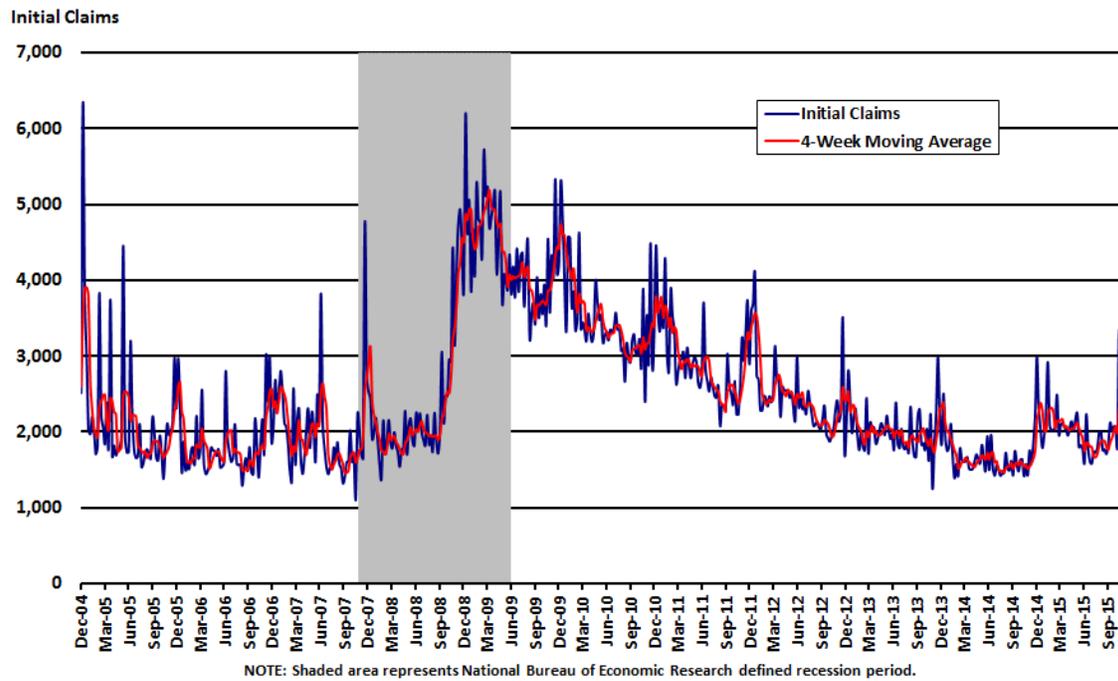
The unemployment rate held at a 7-1/2-year low in November as more Americans began looking for jobs and most found them. In November, the unemployment rate held at 5.0 percent, according to the Bureau of Labor Statistics (BLS). The civilian labor force participation rate rose to 62.5 percent in November, from a near 38-year low of 62.4 percent in the previous month.

Oklahoma's seasonally adjusted unemployment rate declined 0.1 percent in October to 4.3 percent. Oklahoma's jobless rate was the 16th lowest rate among all states in October, tied with Maine and Wisconsin. Over the year, the state's seasonally adjusted unemployment rate was 0.2 percentage point more than the October 2014 rate of 4.1 percent.

Unemployment rates rose in 29 of 77 Oklahoma counties, fell in 28 counties, and 20 counties reported no change over the month in October. McIntosh and Latimer counties had the highest jobless rates at 7.8 percent while Cimarron County had the lowest rate at 2.0 percent.

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

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



### 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

The number of Americans filing new applications for jobless benefits rose slightly in the last week of October. In the week ending October 24, the advance figure for seasonally adjusted initial claims was 260,000, an increase of 1,000 from the previous week's unrevised level of 267,000, according to figures released by the U.S. Labor Department (DOL). The less volatile 4-week moving average fell 4,000 to 259,250—the lowest reading since December 1973.

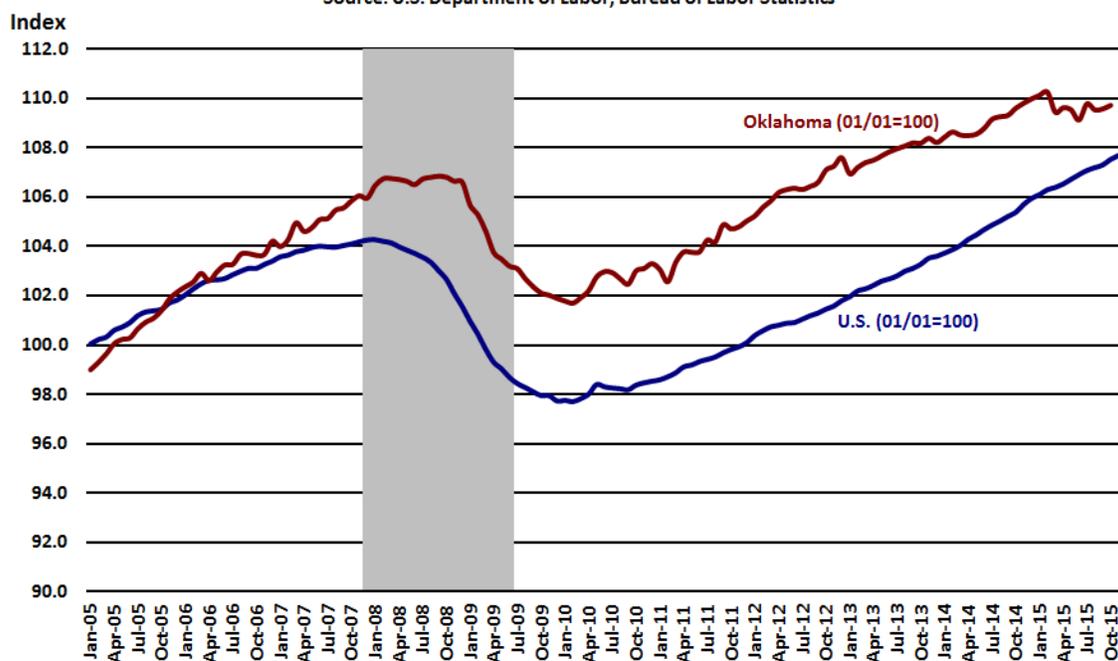
Initial claims for jobless benefits in Oklahoma jumped in the last week of November. For the file week ending November 21, initial claims for unemployment insurance benefits were at a level of 3,001, or 1,342 more claims than the previous week. For the same file week ending, the less volatile four-week moving average moved up 233 to 2,451. Continued claims fell 829 to a level of 21,140 for the same file week ending. Over the month, initial claims climbed 931 from 2,070 for the file week ending October 24.

Over the year, statewide initial jobless claims have increased 1,573 from 1,428 for the file week ended November 22, 2014, while the less volatile 4-week moving average was 936 more than the 1,515 for the same file week ending. Continued claims jumped by 6,340 over the year from 14,800 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.

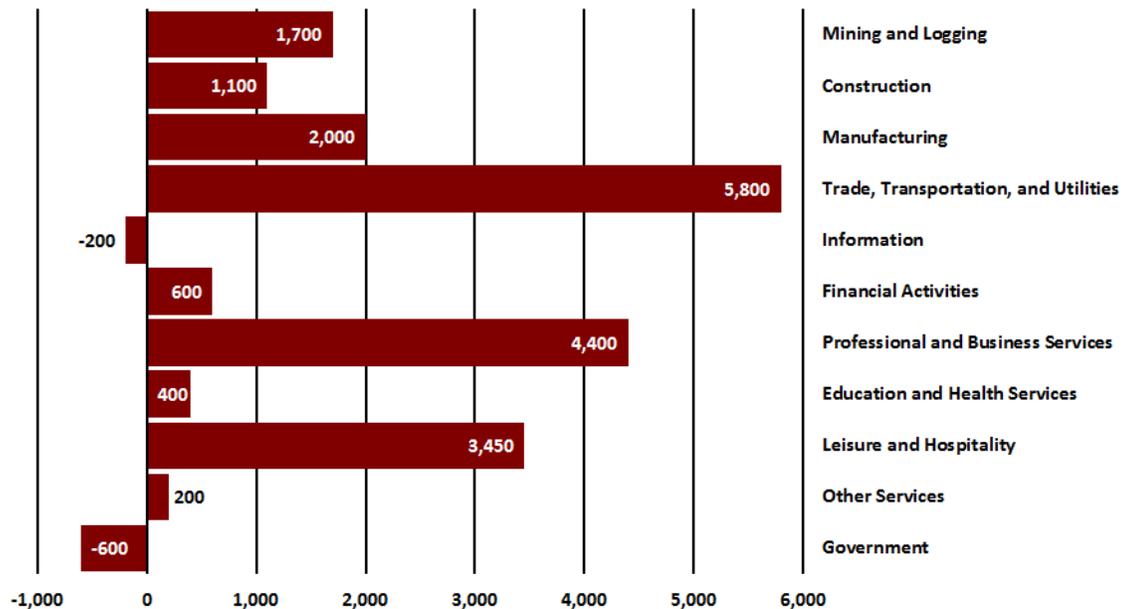
### Current Developments

U.S. employers hired at a healthy rate in November, led by big gains in construction and retail. Total nonfarm payroll employment rose by 211,000 in November, according to the Bureau of Labor Statistics (BLS). In November, job growth occurred in construction (46,000 jobs); retail (31,000 jobs); professional and technical services (28,000 jobs); and health care (24,000 jobs). Employment in mining continued to decline in November, shedding 11,000 jobs.

Oklahoma's seasonally adjusted nonfarm employment increased by 2,200 jobs (+0.1 percent) in October. Five of Oklahoma's 11 supersectors added jobs in October, as trade, transportation & utilities (+3,900 jobs) posted the largest monthly gain followed by financial activities (+800 jobs). Manufacturing reported the largest over-the-month loss (-1,700 jobs). Over the year, statewide total nonfarm employment gained 1,800 jobs (+0.1 percent). Industries showing large declines in jobs over the year were mining & logging (-11,600 jobs) and manufacturing (-8,900 jobs). Trade, transportation, and utilities (+5,200 jobs) and leisure and hospitality (+5,100 jobs) claimed the largest job gains over the year.

## Oklahoma Employment Change by Industry, 2013-2014 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

Nonfarm employment growth eased a bit in 2014, adding a non-seasonally adjusted 18,900 jobs for a 1.2 percent growth rate, (compared to 2013, with 21,000 jobs added and a 1.3 percent growth rate).

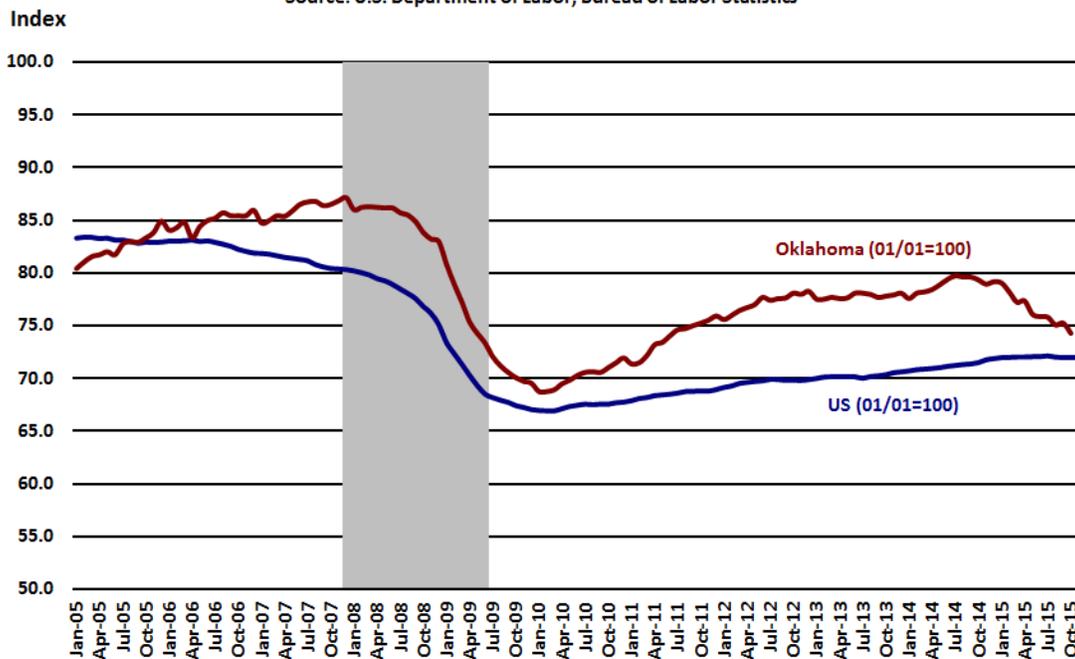
In 2014, nine out of Oklahoma's 11 statewide supersectors recorded job growth. The broad trade, transportation & utilities sector led all other supersectors adding a non-seasonally adjusted 5,800 jobs with the bulk of hiring occurring in retail trade. Professional & business services employment added 4,400 jobs with almost all of the growth coming from administrative & support and waste management & remediation services. Leisure & hospitality added 3,450 employees with most of the growth in accommodation & food services. Manufacturing employment grew by 2,100 driven by job gains in durable goods manufacturing. Mining & logging added 1,700 jobs led by support activities for mining. Construction added 1,100 jobs with nearly all the job growth in specialty trade contractors.

Over-the-year declines were seen in government (-400) and information (-200).

## 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

U.S. factory hiring changed little in November, as a strong U.S. dollar is weighing on U.S. exports and cutting factory output. Manufacturing employment fell by 1,000 in November, according to the Bureau of Labor Statistics (BLS). Both the manufacturing workweek and factory overtime were unchanged in November, at 40.7 hours and 3.2 hours, respectively.

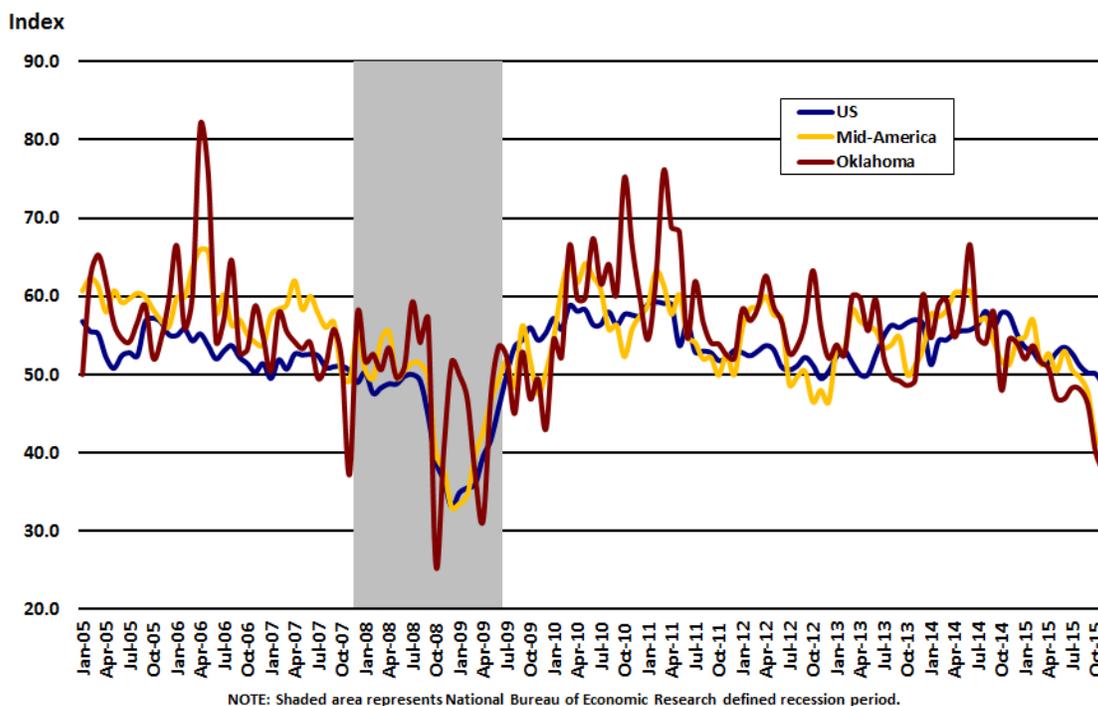
Manufacturing reported the largest over-the-month job loss among Oklahoma's 11 supersectors in October, shedding a non-seasonally adjusted 1,700 jobs (-1.3 percent). Two-thirds of October's manufacturing job losses came from durable goods manufacturing.

Over the year, Oklahoma non-seasonally adjusted manufacturing employment has lost 8,900 jobs (-6.4 percent) with nearly all of the job losses coming from durable goods manufacturing.

*\*As of January 2013, due to employment stability in the Manufacturing and Information supersectors, the BLS has determined that they do not need to be adjusted for seasonal factors at this time.*

## 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 contracted in November for the first time in three years as a strong dollar and deep spending cuts by energy firms continued to weigh on the sector. The November PMI® registered 48.6 percent, the weakest reading since June 2009 when the recession ended, and a decrease of 1.5 percentage points from the October reading of 50.1 percent, according to the latest Manufacturing ISM Report On Business®. Of the 18 manufacturing industries, only five reported growth in November while 10 industries reported contraction.

November's decline included a significant dip for new orders which were down 4.0 points to 48.9, the lowest reading since August 2012. At 43.0, backlog orders are in a six-month streak of contraction. With orders down, ISM's sample cut back on production, down nearly four points to 49.2, and cut back on inventories, down 3.5 points to 43.0. Employment firmed but remains soft at 51.3.

The Mid-America Business Conditions Index for November, a leading economic indicator for a nine-state region stretching from North Dakota to Arkansas, slumped for the month. The Business Conditions Index, which ranges between 0 and 100, sank to 40.7 from October's 41.9, according to the Creighton Economic Forecasting Group. The regional index, much like the national reading, is impacted by a reduction in manufacturing activity, especially for producers linked to international markets.

"Since our survey oversamples manufacturing firms, it is not surprising that our overall index has weakened significantly for states and industries heavily dependent on agriculture and energy which are being hammered by a strong U.S. dollar," said Ernie Goss, Ph.D., director of Creighton University's Economic Forecasting Group.

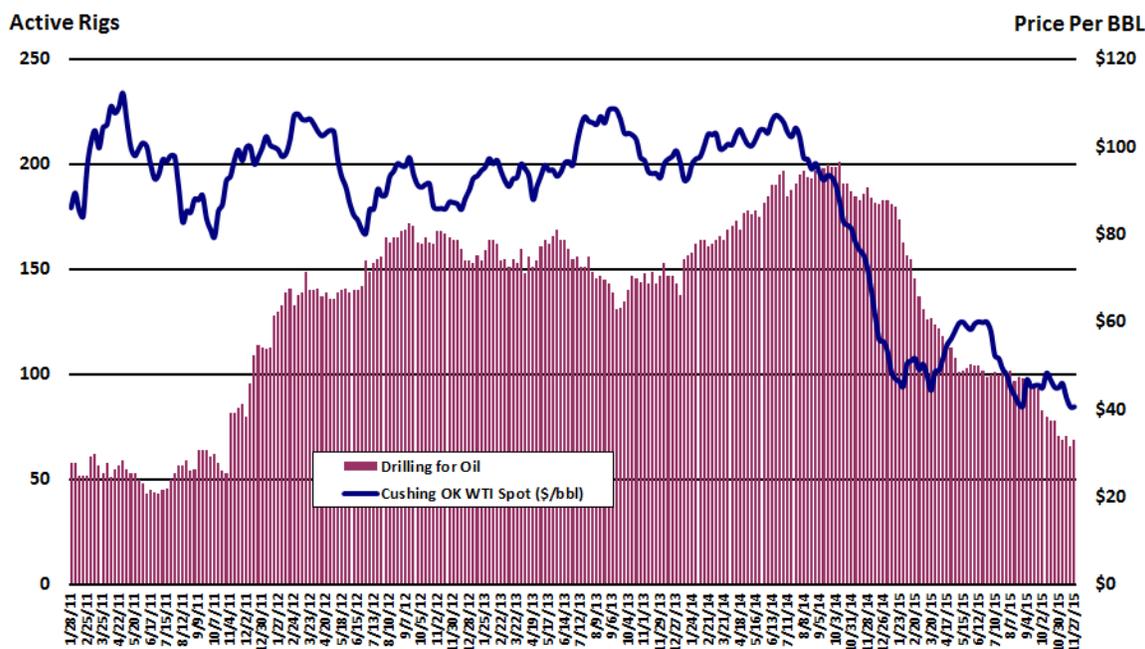
The November Business Conditions Index for Oklahoma slumped below growth neutral for a seventh straight month. The index from a monthly survey of supply managers in the state fell to 37.5 from 40.1 in October, according to the Creighton Economic Forecasting Group. Components of the November survey of supply managers were new orders at 33.2, production or sales at 37.0, delivery lead time at 43.2, inventories at 39.8, and employment at 42.3.

"U.S. Bureau of Labor Statistics data show that over the last 12 months, Oklahoma has lost 9,000 manufacturing jobs. Our surveys of supply managers indicate these losses will continue into the first quarter of 2016 as lower energy prices weigh on Oklahoma's economy and manufacturing," said Goss.

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

January 2011 to November 2015

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**

Commercial crude oil inventories in Cushing, Oklahoma and the U.S. Gulf Coast totaled a record-high 309.4 million barrels as of the week ending November 27, according to the U.S. Energy Information Administration (EIA). Based on the recently released storage capacity and line fill data in the September *Petroleum Supply Monthly*, EIA estimates 70.2 percent utilization of working crude oil storage capacity in Cushing and the Gulf Coast on a combined basis, only slightly below the record utilization level of 71.2 percent set the week ending April 24 this year.

U.S. crude oil proved reserves increased in 2014 for the sixth year in a row with a net addition of 3.4 billion barrels of proved oil reserves (a 9 percent increase), according to *U.S. Crude Oil and Natural Gas Proved Reserves, 2014*, released by the EIA.

Statewide crude oil production fell in November, marking a second month of decline. Oklahoma's crude production in September was at 9,490,000 barrels, a 5.9 percent decline from August's level of 10,081,000 barrels. For the first nine months of 2015, Oklahoma's crude production was 93,138,000 barrels, 566,000 barrels or 0.6 percent less than the 93,704,000 barrels produced during the first nine months of 2014.

Domestic crude oil prices remained weak in November as higher OPEC output and a stronger dollar weighed on demand for commodities priced in the currency. West Texas Intermediate (WTI-Cushing) spot prices began the month at \$46.12/barrel and finished the month at \$40.43/barrel. Since peak prices in June 2014, WTI-Cushing prices have fallen more than 60 percent.

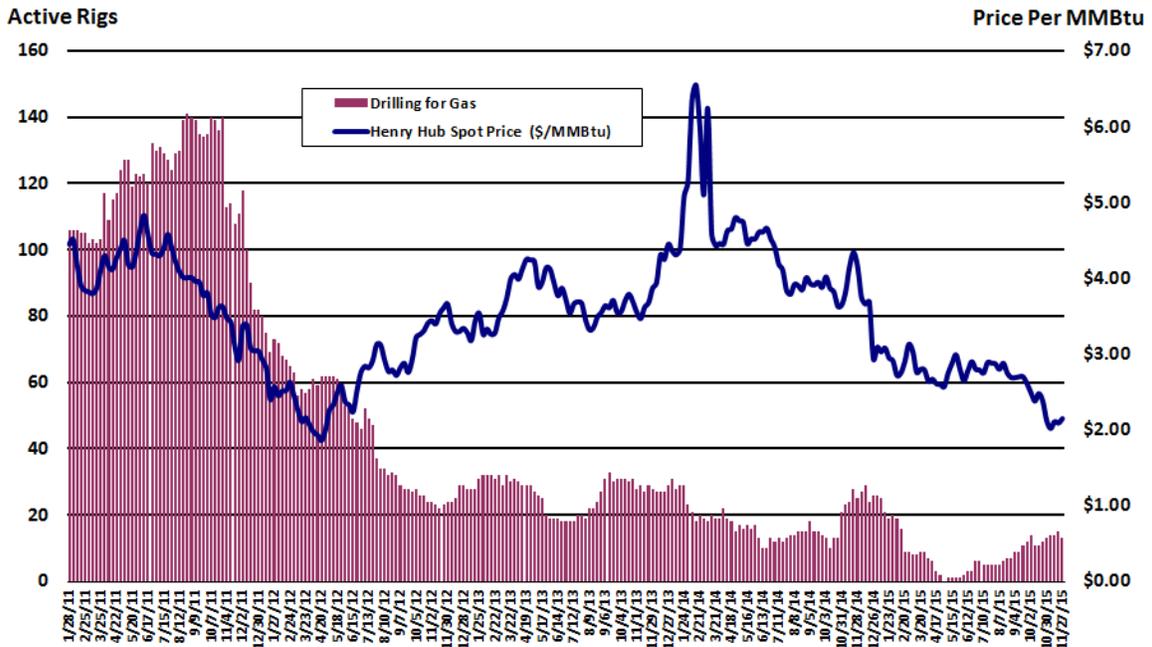
Oklahoma drilling activity sank to its lowest level in more than 13 years in November. The statewide active rig count moved down to 82 for the week ending November 27 with 69 rigs being oil-directed. Over the year, Oklahoma's rig count was off 132 from 214 rigs operating November 28, 2014.

The overall count of rigs searching for oil and natural gas in the U.S. fell by 13 to 744 for the week ending November 25, according to data from oilfield service company Baker Hughes. Oil-directed rigs accounted for 74.6 percent of drilling activity while natural gas-directed accounted for 25.4 percent.

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

January 2011 to November 2015

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**

Proved reserves of U.S. total natural gas increased 34.8 trillion cubic feet (Tcf) to 388.8 Tcf in 2014, according to the U.S. Energy Information Administration (EIA). This increase (9.8 percent) boosts the national total of proved natural gas reserves to a record-high level for the second consecutive year. In 2014, West Virginia surpassed Wyoming and Colorado to become the fourth-largest state for natural gas proved reserves (behind Texas, Pennsylvania, and Oklahoma).

In September, domestic dry natural gas production was the highest for the month since the EIA began reporting dry natural gas production data in 1997. Preliminary dry natural gas production for September 2015 was 2,288 billion cubic feet (Bcf), or 76.3 Bcf/day. This level was a 4.2 Bcf/day (5.8 percent) increase from production of 72.1 Bcf/day in September 2014.

September natural gas gross withdrawals in Oklahoma were at a level of 208,904 MMcf, down slightly from August's production level of 216,219 MMcf (the second-highest level of production since 1991, July 2015 being the highest). For the first nine months of 2015, Oklahoma natural gas gross withdrawals totaled 1,888,332 MMcf compared to 1,708,851 MMcf for the first nine months of 2014, that's 179,481 MMcf, or 10.5 percent, more than 2014 year to date.

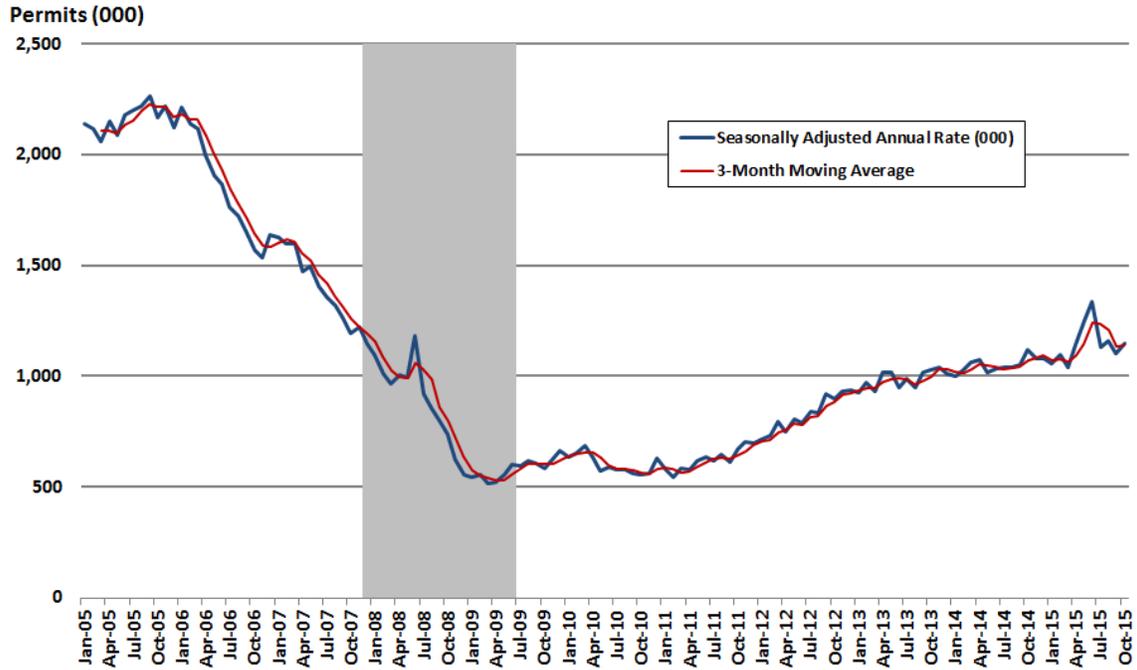
A larger-than-expected increase in natural gas supplies caused prices to slide in early November. The Henry Hub spot price began the month at \$1.92 per million British thermal units (MMBtu) and finished the month at \$2.11/MMBtu.

Oklahoma's natural gas-directed drilling rig count moved down in November shedding one rig over the month to a level of 13 active rigs. Over the year, Oklahoma's natural gas-directed rotary rig count was down 12 rigs from 25 reported the week ended November 28, 2014.

## U.S. New Private Housing Units Authorized by Building Permit, 2005-2015

### 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 outsize 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

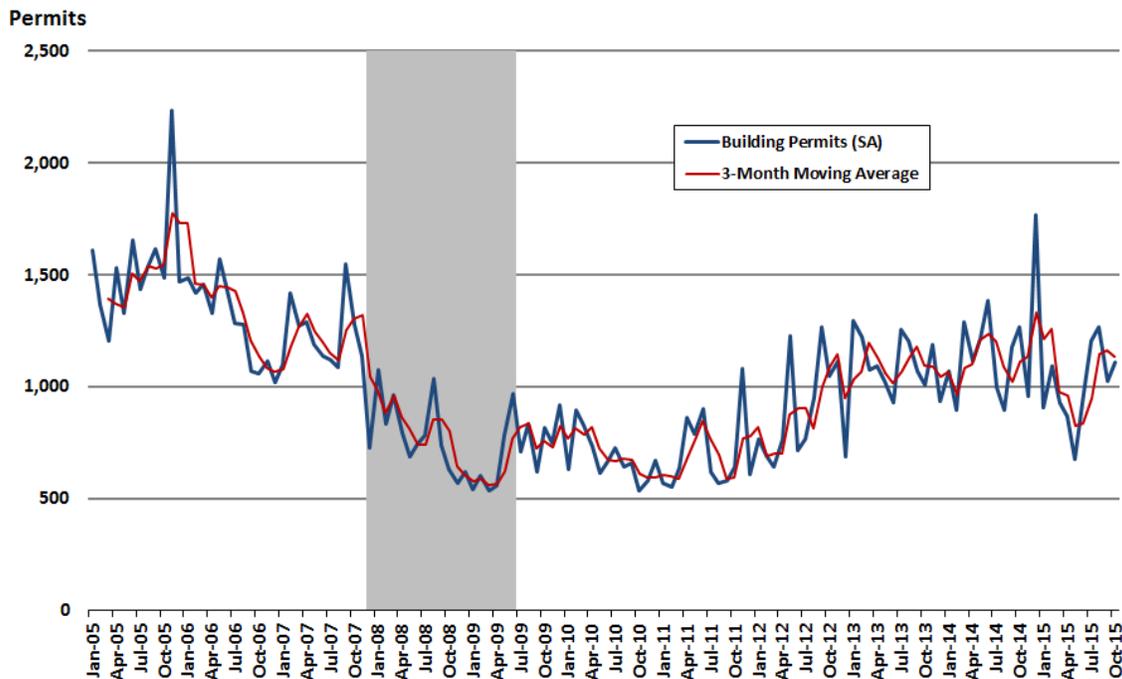
Building permits surged in October, lifted by apartment construction and confirming that the housing market remains on solid ground. Privately-owned housing units authorized by building permits in October were at a seasonally adjusted annual rate of 1,150,000, or 4.1 percent above the revised September rate of 1,105,000 and 2.7 percent above the October 2014 estimate of 1,120,000, according to the U.S. Census Bureau and the Department of Housing and Urban Development. Single-family building permits rose 2.4 percent to their highest level since December 2007. Single-family permits in the South also hit their highest level since December 2007. Multi-family building permits increased 6.8 percent in October.

Meanwhile, the National Association of Home Builders/Wells Fargo builder sentiment index slipped in November to 62, down three points from a revised reading of 65 in October.

## Oklahoma New Private Housing Units Authorized by Building Permit, 2005-2015

### 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

State homebuilders requested more new authorizations for residential construction in October as apartment activity heated up. Total residential building permitting for October was at a seasonally-adjusted level of 1,111, or 8.2 percent more than the September level of 1,027 but -12.2 percent below the October 2014 estimate of 1,266 units, according to figures from the Federal Reserve Bank of St. Louis.

Single-family permitting accounted for 77.3 percent of total residential permitting activity in October while multi-family permitting accounted for 22.7 percent. Applications for single-family homes were at a seasonally adjusted level of 859, or -1.4 percent less than September's level of 871 permits. The more volatile multi-family permitting was at a level of 252 in October, or 61.5 percent more than September.

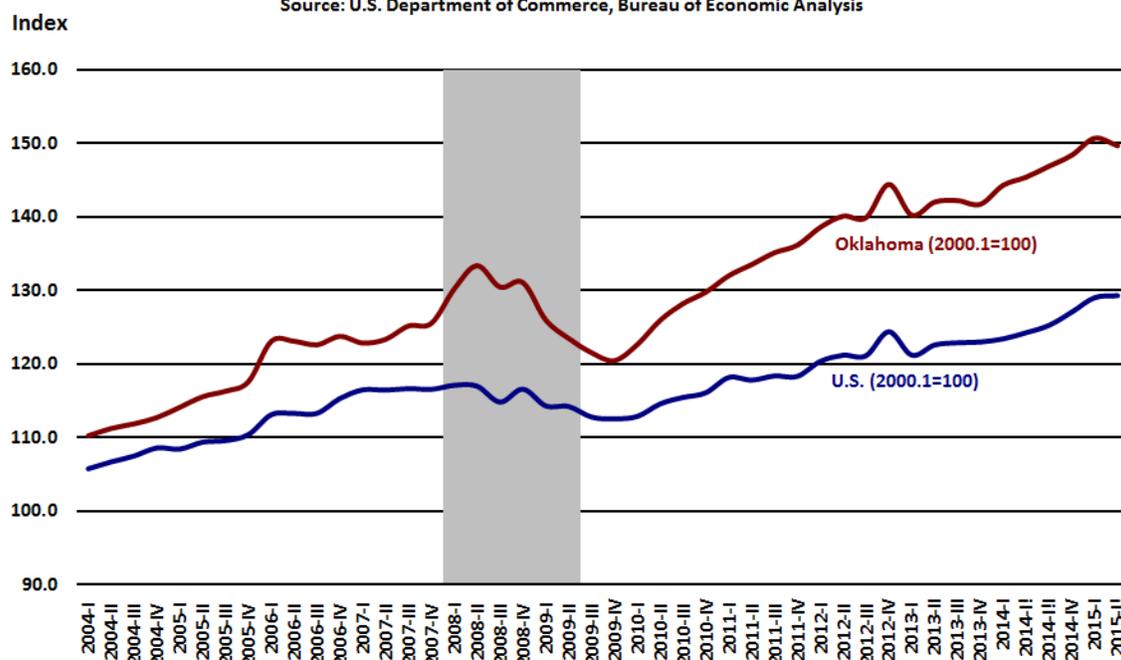
Over the year, single-family permits were 26 permits or 2.9 percent less than a year ago, while multi-family permitting was 129, (or -33.9 percent), less than the October 2014 level of 381 permits.

Statewide residential permitting in 2015 continues to lag the previous year. Year to date, total residential building permitting was at a seasonally-adjusted level of 10,056 for the first ten months of 2015, compared to 11,307 during the same period in 2014—approximately 11.1 less than 2014.

## 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 posted a strong gain in October but spending barely grew as households increased savings to their highest level in nearly three years. Personal income increased \$68.1 billion, or 0.4 percent, and disposable personal income (DPI) increased \$56.8 billion, or 0.4 percent, in October, according to the Bureau of Economic Analysis. Personal consumption expenditures (PCE) increased \$15.2 billion, or 0.1 percent. In September, personal income increased \$27.4 billion, or 0.2 percent, DPI increased \$27.0 billion, or 0.2 percent, and PCE increased \$9.5 billion, or 0.1 percent, based on revised estimates.

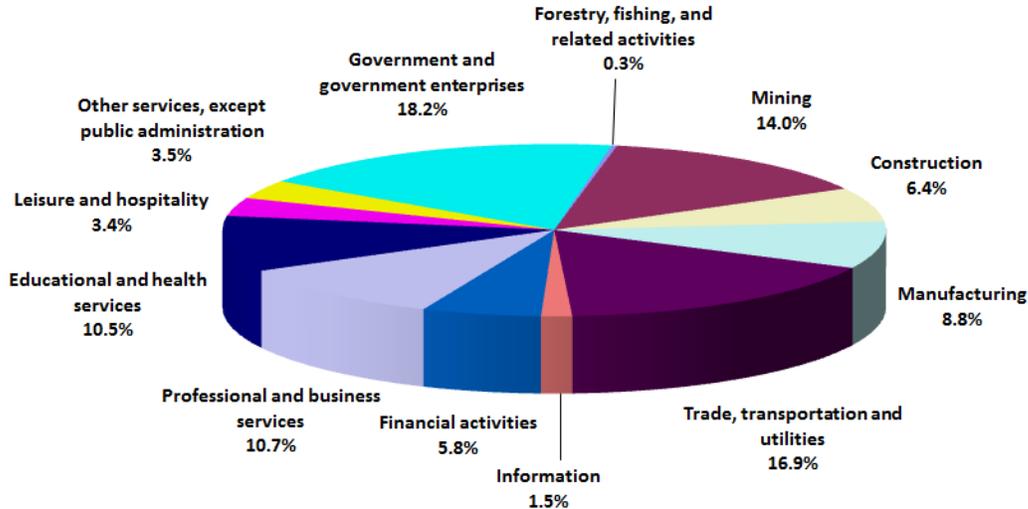
In October, spending on durable goods was flat following a 0.5 percent rise in September. Spending on nondurable goods edged up 0.1 percent following a big 1.1 percent drop the previous month, reflecting falling pump prices. Spending on services rose 0.1 percent after larger gains of 0.4 percent in August and September.

The growth in income and the small increase in spending caused the saving rate to rise to 5.6 percent of after-tax income in October, up from 5.3 percent in September and the highest level since December 2012.

## Oklahoma Nonfarm Contribution to Earnings

Second Quarter 2015

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 grew 0.9 percent on average in the 2nd quarter of 2015, after growing 0.8 percent in the 1st quarter, according to estimates by the U.S. Bureau of Economic Analysis (BEA). Personal income grew in every state except Oklahoma in the 2nd quarter. In the 1st quarter, personal income grew in 34 states. Second-quarter personal income growth rates ranged from zero in Oklahoma to 1.5 percent in the state of Washington.

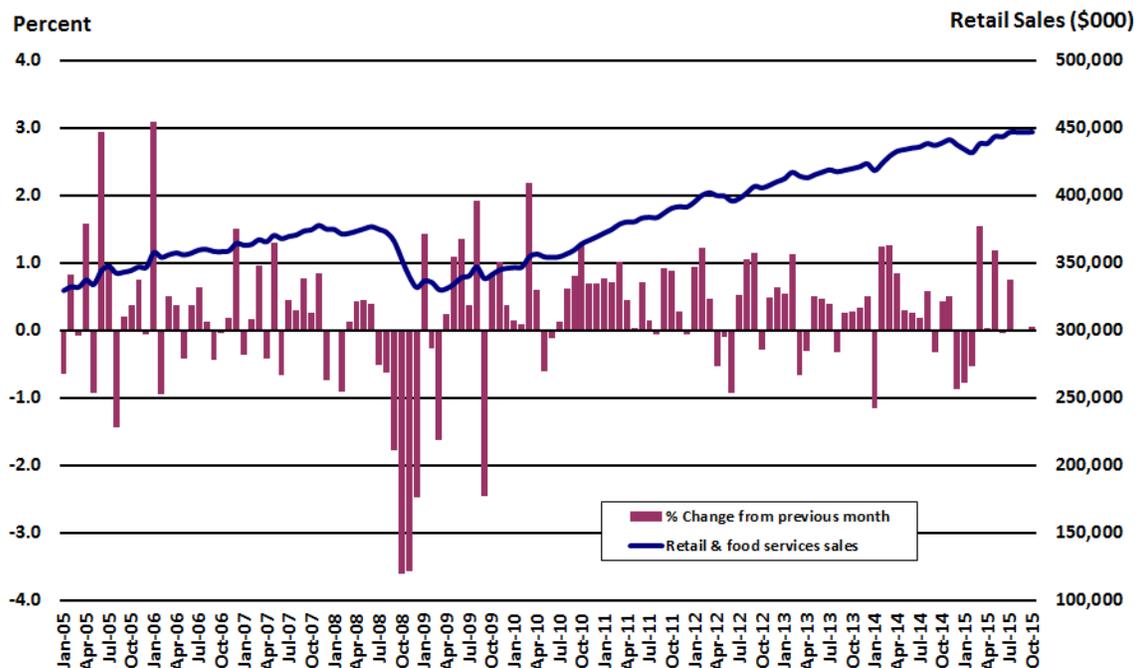
Job losses from the oil and gas industry finally caught up with the statewide economy as Oklahoma was the only state to record no growth in personal income in the 2nd quarter of 2015. Personal income growth was flat in the 2nd quarter, following a revised 0.8 percent pace in the 1st quarter, ranking the state 50th in the nation. Total state personal income was at a level of \$ 173.3 billion in the 2nd quarter.

The drop in oil prices has hurt top oil-producing states, including Oklahoma, in the form of slower growth in personal income and employment. Earnings in mining (which includes oil and gas extraction) fell 4.9 percent in the 2nd quarter. Mining earnings also fell 4.5 percent in Wyoming, 4.1 percent in Louisiana, 5.5 percent in North Dakota, and 3.6 percent in Texas.

Oklahoma's earnings growth was negative in the 2nd quarter, declining \$645.0 million for a growth rate of -0.5 percent. Mining was the largest detractor to earnings growth, subtracting 0.50 percentage point. Durable goods manufacturing subtracted another 0.10 percentage point. Construction was the largest contributor to 1st quarter earnings growth, adding 0.06 percentage point.

## 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

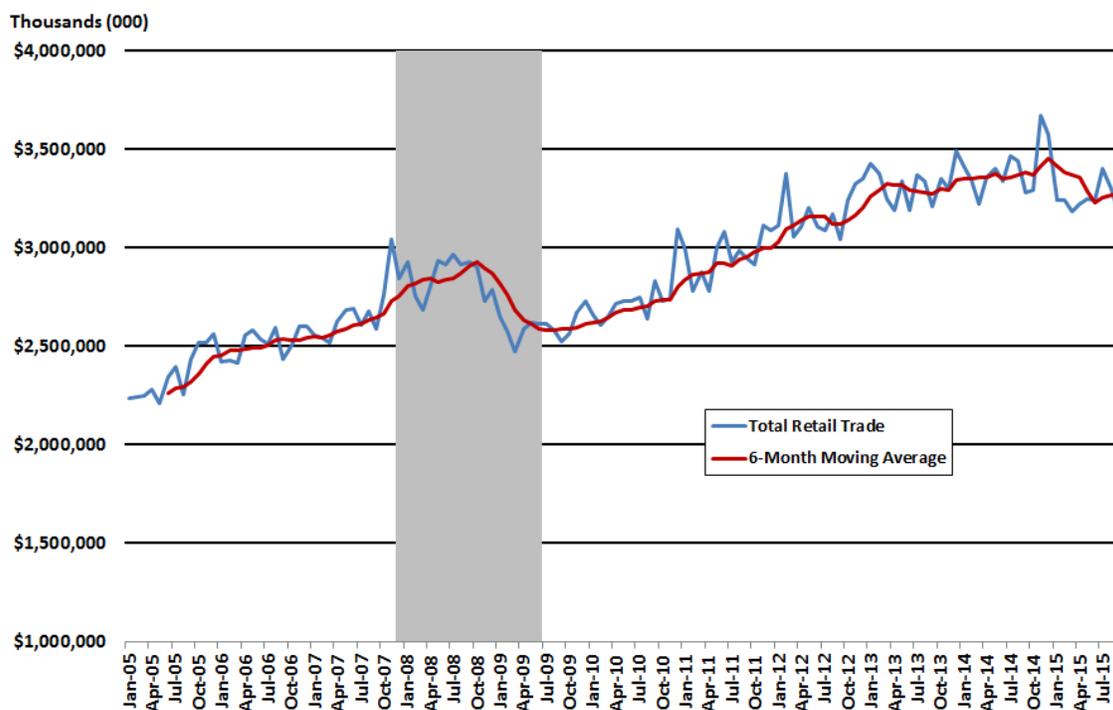
Retail sales slowed in October as lower pump prices along with tame inflation rates have muted the extent of consumer spending. Advance estimates of U.S. retail and food services sales for October, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were \$447.3 billion, an increase of 0.1 percent from the previous month, and 1.7 percent above October 2014, according to the U.S. Census Bureau. Total sales for the August 2015 through October 2015 period were up 2.0 percent from the same period a year ago. The August 2015 to September 2015 percent change was revised from +0.1 percent to virtually unchanged.

Spending at auto dealers fell 0.5 percent in October, although sales have climbed 6.7 percent from a year ago. Gas station sales slid 0.9 percent in October and have tumbled 20.1 percent over the past 12 months. Excluding volatile autos and gasoline, sales increased 0.3 percent in October.

The less volatile "core" sales, which strip out automobiles, gasoline, building materials and food services rose 0.2 percent after a 0.1 percent gain in September. Online purchases climbed 1.4 percent in October. Sales also rose 0.4 percent at furniture stores, 0.7 percent at health and personal care stores, and 0.4 percent at sporting goods outlets.

## Oklahoma Total Adjusted Retail Trade, 2005-2015

Source: Center for Economic & Management Research, 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

Oklahoma total adjusted retail trade continued to fall in September with broad-based losses occurring in both durable and nondurable sales. Total adjusted retail sales for September were at a level of \$3.17 billion, 1.9 percent lower than the August level of \$3.30 billion. For the first 11 months of 2015, total adjusted retail trade was at a level of \$29.28 billion, 3.3 percent lower than \$30.29 billion for the same period in 2014.

Total durable goods sales fell 0.1 percent in September led by big declines in miscellaneous durable goods (-6.7 percent) and electronics & music store sales (-5.3 percent). Other declining durable goods categories were used merchandise (-1.7 percent); and furniture (-0.4 percent). Over-the-month gains were seen in lumber & hardware (3.8 percent) and auto accessories & repair (1.1 percent).

Nondurable goods spending sank 5.2 percent in September led by another big drop in estimated gasoline sales (-25.8 percent) due to lower pump prices. The average price of gasoline in the state stood at \$2.06 per gallon in September, the lowest it's been since 2004, according to AAA. Other declining categories were general merchandise stores (-2.3 percent); apparel (-5.2 percent); drugstore store sales (-3.0 percent); liquor (-2.4 percent); and miscellaneous non-durable goods (-2.0 percent). Advancing were eating & drinking (1.5 percent) and food sales (0.1 percent).