



# OKLAHOMA Economic Indicators

September 2015

# OKLAHOMA ECONOMIC INDICATORS

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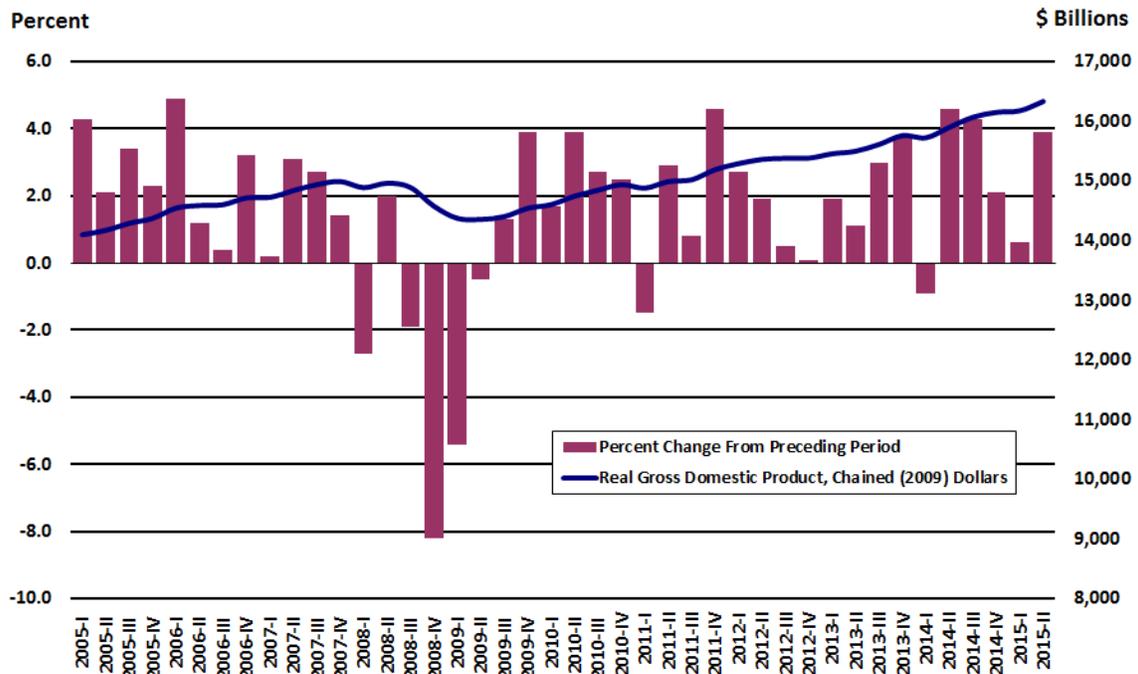
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## Real Gross Domestic Product and Quarterly Change

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 expanded more than previously estimated in the 2nd quarter, boosted by gains in consumer spending and construction. Real gross domestic product (GDP) increased at an annual rate of 3.9 percent in the 2nd quarter of 2015, according to the "third" estimate released by the Bureau of Economic Analysis (BEA). The 2nd quarter revision was 0.2 percentage points greater than the 'second' estimate of 3.7 percent. In the 1st quarter, real GDP increased 0.6 percent.

Consumer spending was revised upward, helped by cheap gasoline prices and relatively higher house prices boosting household wealth. Consumer spending was revised up to a 3.6 percent growth pace from the 3.1 percent rate reported in August. Spending on durable goods was revised down 0.2 to 8.0 percent while nondurable goods outlays were revised up 0.2 to 4.1 percent. Spending on services was revised 0.7 higher to 2.7 percent reflecting strength in travel.

Businesses also contributed to the quarter's growth as nonresidential fixed investment, driven by structures, was revised 0.9 higher to 4.1 percent. Also, a smaller accumulation of inventories than previously estimated had inventories contributing just 0.02 percentage point to growth rather than adding 0.22 percentage point.

Spending on residential construction in the 2nd quarter had a 1.5 percentage point upward revision, now at 9.3 percent, adding 0.30 percentage point to 2nd quarter GDP growth.

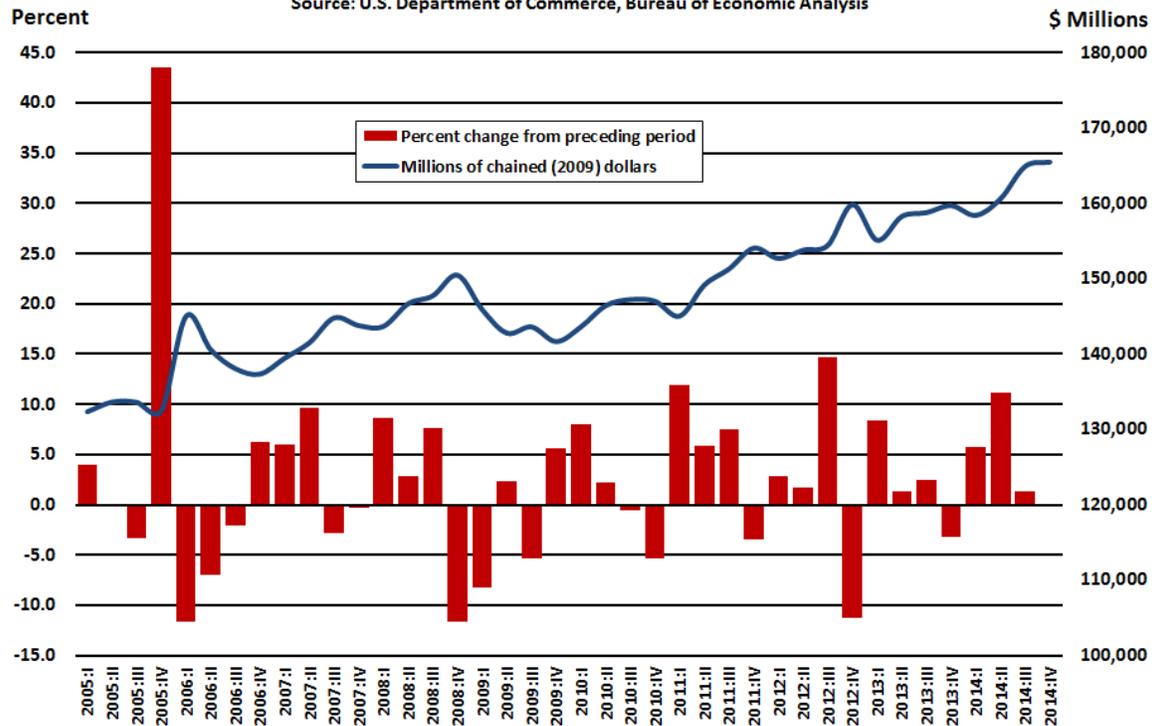
Exports rose 5.1 percent while imports edged up 3.0 percent, net exports added 0.18 percentage point to GDP growth in the April to July period.

Government expenditures contributed 0.5 percent, after contributing 0.0 percent in the 1st quarter. Real federal government consumption expenditures and gross investment was flat in the 2nd quarter. National defense spending grew 0.3 percent but was negated by a 0.5 decline in nondefense spending. Real state and local government consumption expenditures and gross investment increased at a 4.3 percent pace. Government consumption expenditures and gross investment added 0.46 percentage point from GDP growth in the 2nd quarter.

## 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.

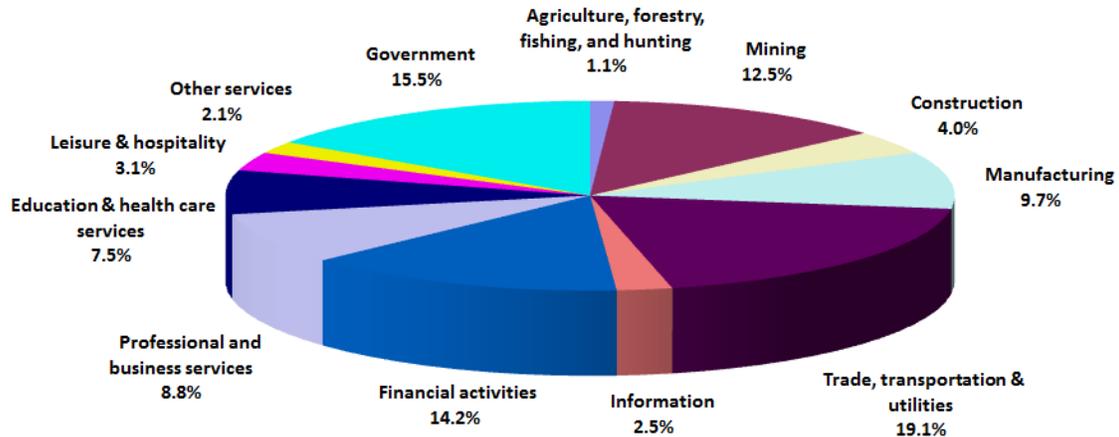
In 4th quarter 2014, Oklahoma’s real GDP was \$165.5 billion in constant 2009 dollars, up from \$164.9 billion in the 3rd quarter. The state’s 4th quarter real GDP increased by \$1.19 billion, or 1.3 percent, ranking Oklahoma 29th among all other states and the District of Columbia. Mining was the largest 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

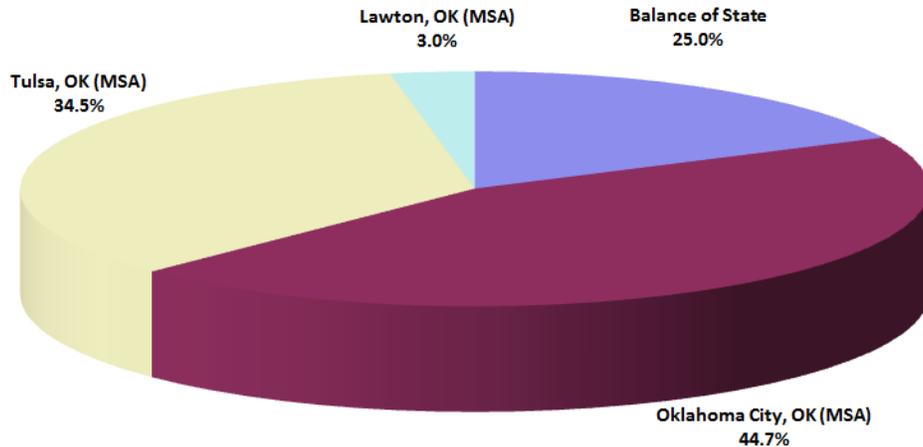
Oklahoma was among 48 states and the District of Columbia experiencing growth in real gross domestic product (GDP) in 2014, according to new statistics from the Bureau of Economic Analysis (BEA). U.S. real GDP grew 2.2 percent in 2014 after increasing 1.9 percent in 2013.

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.

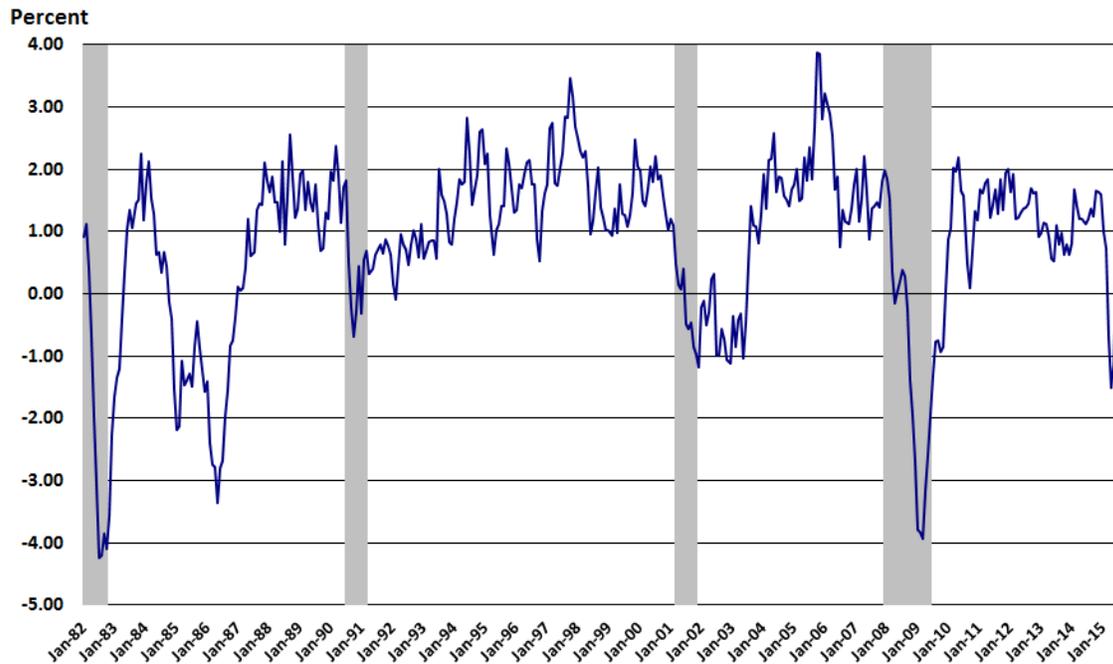
### Current Developments

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.

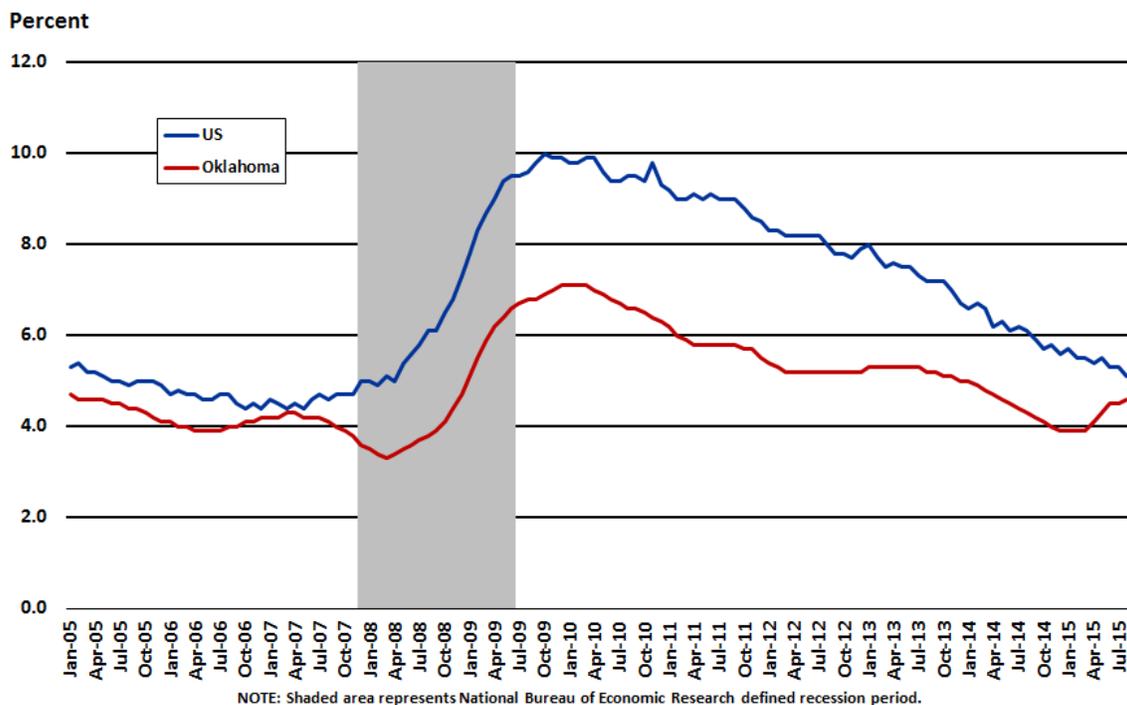
Oklahoma's leading index edged up 0.12 percent in August following a 0.68 reading in July, according to the latest figures from the Federal Reserve Bank of Philadelphia.

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 August 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

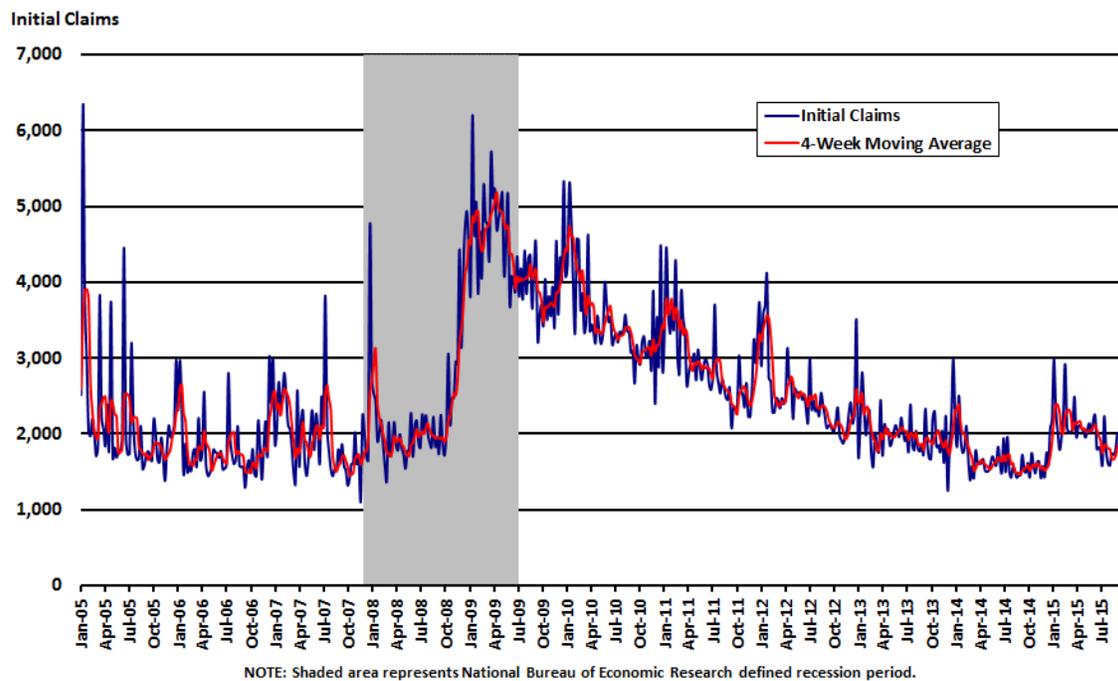
The U.S. unemployment rate held steady for the second month in a row in September as job growth continued to slow. In September, the unemployment rate held at 5.1 percent, according to the Bureau of Labor Statistics (BLS). The civilian labor force participation rate dropped down to a new 38-year low at 62.4 percent after three months in a row at 62.6 percent.

Oklahoma's unemployment rate increased to a seasonally adjusted 4.6 percent in August. Oklahoma's jobless rate was the 18th lowest unemployment rate among all states in August, tied with Indiana and Kansas. Over the year, the state's seasonally adjusted unemployment rate was 0.3 percentage point more than the August 2014 rate of 4.3 percent.

Unemployment rates rose in 45 of 77 Oklahoma counties over the month in August. Latimer County had the highest county unemployment rate at 8.7 percent. Cimarron County again posted the lowest county unemployment rate in August at 2.5 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 modestly in the last week of September. In the week ending September 26, the advance figure for seasonally adjusted initial claims was 277,000, an increase of 10,000 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 dropped 1,000 to 270,750 from the previous week's unrevised average of 271,750.

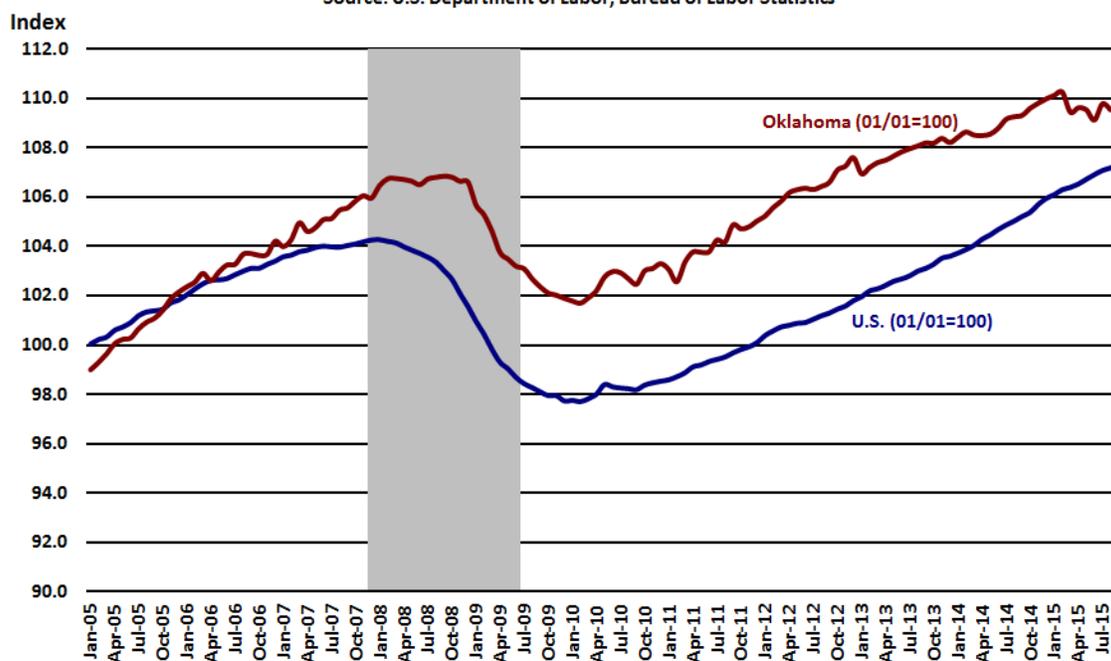
Statewide initial jobless claims changed little in September. For the file week ending September 19, initial claims for unemployment insurance benefits were at a level of 1,770, or 14 more claims than the previous week. For the same file week ending, the four-week moving average moved up to 1,881, or 2 less than the previous week. Over the month, initial claims edged down 9 from 1,779 for the file week ending August 22.

Over the year, statewide initial jobless claims have increased by 327 from 1,452 for the file week ended September 20, 2014, while the less volatile 4-week moving average was 329 more than the 1,490 for the same file week ending. Continued claims jumped by 6,212 over the year from 15,032 for the file week ended September 20, 2014.

## 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.

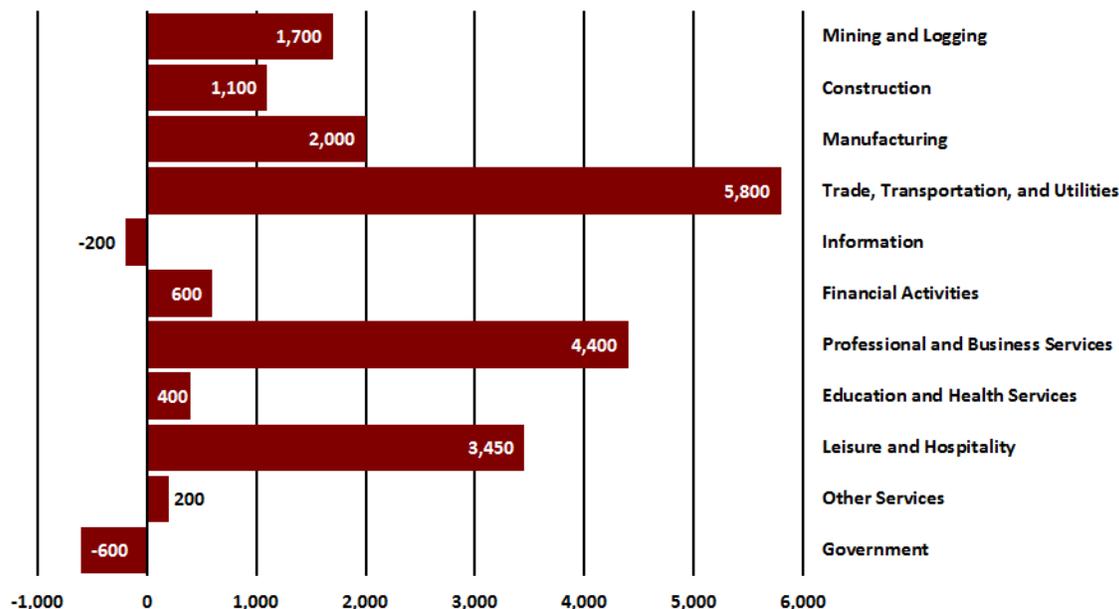
### Current Developments

The U.S. economy added fewer-than-expected jobs in September. Total nonfarm payroll employment increased by 142,000 in September, compared with an average monthly of 260,000 in 2014, according to the Bureau of Labor Statistics (BLS). Job gains for August, initially recorded at 173,000, were revised lower to 136,000 while the July count was also revised lower to 223,000 from the initially estimated 245,000 jobs. In September, job gains occurred in health care and information, while employment in mining continued to decline.

Oklahoma's seasonally adjusted total nonfarm employment shed 3,600 jobs (-0.2 percent) in August. Seven of Oklahoma's 11 supersectors posted job losses in August, with educational & health services (-2,200 jobs) registering the largest losses. Professional & business services had the largest over-the-month increase (+1,400 jobs). Over the year, statewide total nonfarm employment gained 4,300 jobs (+0.3 percent). Mining & logging (-13,500 jobs); manufacturing (-8,000 jobs); and information (-100 jobs) were the only statewide supersectors losing jobs over the year. Construction (+4,900 jobs) claimed the largest over-the-year job gain.

## 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).

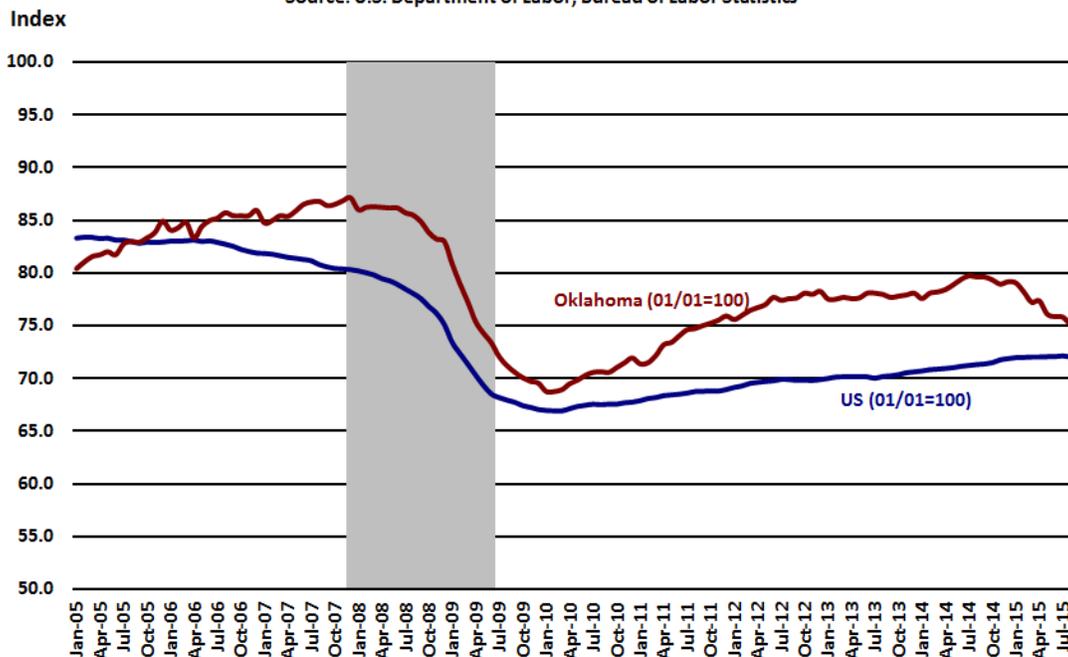
In 2014, nine out of Oklahoma's 11 statewide supersectors recorded job growth. The broad trade, transportation & utilities sector led all other supersectors adding a non-seasonally adjusted 5,800 jobs with the bulk of hiring occurring in retail trade. Professional & business services employment added 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. manufacturing employment continued at a sluggish pace in September as weak foreign markets and a strong dollar weighed on the industry. In September, manufacturing employment declined by 9,000 after dropping 18,000 in August, according to the Bureau of Labor Statistics (BLS). Employment for both durable and nondurable goods was lower in September, down 5,000 and 4,000, respectively. Some of the larger declines included primary metals (-4,500), machinery (-3,500), computer and electronic products (-2,800), miscellaneous durable goods (-2,300), chemicals (-1,200), plastics and rubber products (-1,200).

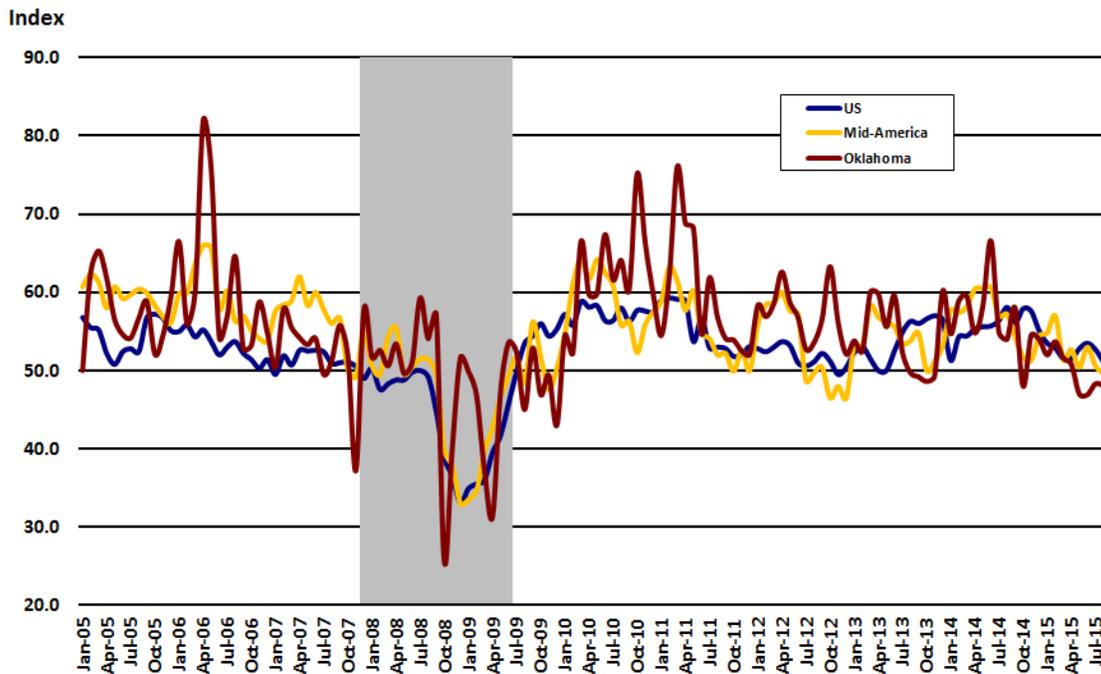
Oklahoma manufacturing employment dropped for the fourth month in a row in August, shedding a non-seasonally adjusted 1,300 jobs (-1.0 percent). Durable goods manufacturing again accounted for the majority of the job losses in August.

Over the year, Oklahoma non-seasonally adjusted manufacturing employment has lost 8,000 jobs (-5.7 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



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

### 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

The September ISM index fell to its lowest reading since May of 2013, pointing to trouble for the factory sector. The September PMI® registered 50.2 percent, a decrease of 0.9 percentage point from the August reading of 51.1 percent, according to the latest Manufacturing ISM Report On Business®. It was the third straight drop. Of the 18 manufacturing industries, only seven reported growth in September.

In September, new orders, at 50.1, were at their lowest point since August 2012. Backlog orders, at a very low 41.5, are in their fourth month of contraction.. Export orders, at 46.5, are also in their fourth month of contraction and were a key factor behind the general weakness.

Production, at 51.8, continues to hold up better than orders but not by much and probably not for long given the weakness in orders. Input prices are in deep contraction at 38.0, the weakest reading since early in the year when oil prices broke down.

The Mid-America Business Conditions Index for August, 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, declined to 47.7 from August's 49.6, according to the Creighton Economic Forecasting Group. The regional index, much like the national reading, is pointing to weak and potentially negative growth through the 4th quarter of 2015 for the overall economy.

"The strong U.S. dollar and global economic weakness are having a negative impact on manufacturers and businesses linked to manufacturing in the region. Additionally, weak crop prices and energy prices have negatively affected the regional economy," said Ernie Goss, Ph.D., director of Creighton University's Economic Forecasting Group.

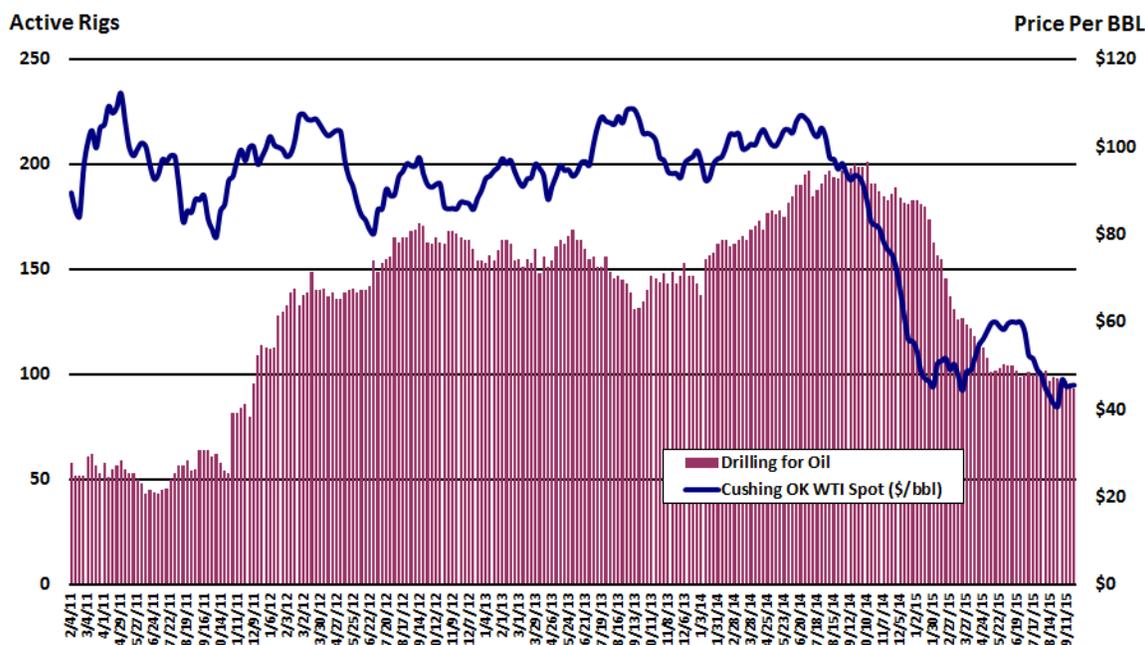
The September Business Conditions Index for Oklahoma slumped below growth neutral for a fifth straight month. The index from a monthly survey of supply managers in the state, dipped to a weak 46.2 from 48.1 in August. Components of the September survey of supply managers were new orders at 45.5, production or sales at 48.0, delivery lead time at 51.2, inventories at 43.9, and employment at 42.4.

"Low oil prices are now negatively influencing economic activity outside of energy. Durable and nondurable goods manufacturers are detailing slowdowns in economic activity. I expect the state's overall economy to lose another 4,000 jobs in the final quarter of this year," said Goss.

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

February 2011 to September 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**

In the most recent *Short-Term Energy Outlook*, the U.S. Energy Information Administration (EIA) expects the domestic benchmark West Texas Intermediate (WTI) prices to average \$4/barrel less than the forecast North Sea Brent crude price at \$54/barrel for 2015. For 2016, the EIA forecasts Brent crude to average \$59/barrel and WTI \$5/barrel lower at \$54/barrel.

The EIA also estimates that total U.S. crude oil production declined by 120,000 barrels per day (b/d) in September compared with August. Crude oil production is forecast to decrease through mid-2016 before growth resumes late in 2016. Projected U.S. crude oil production averages 9.2 million b/d in 2015 and 8.9 million b/d in 2016

Oklahoma's crude production has been falling since March of this year with July marking the fourth consecutive month of declining production levels. Statewide crude production in July was at 10,504,000 barrels, 171,000 barrels, (or -1.6 percent), less than June's level of 10,675,000 barrels. For the first half of 2015, Oklahoma's crude production was 65,045,000 barrels, 2,026,000 barrels or 3.2 percent more than the 63,019,000 barrels produced in the first six months of 2014.

Domestic crude oil prices settled in the mid-\$40/barrel range in September. West Texas Intermediate (WTI-Cushing) spot prices began the month at \$45.38/barrel and finished the month at \$45.06/barrel. Since peak prices in June 2014, WTI-Cushing prices have fallen almost 60 percent.

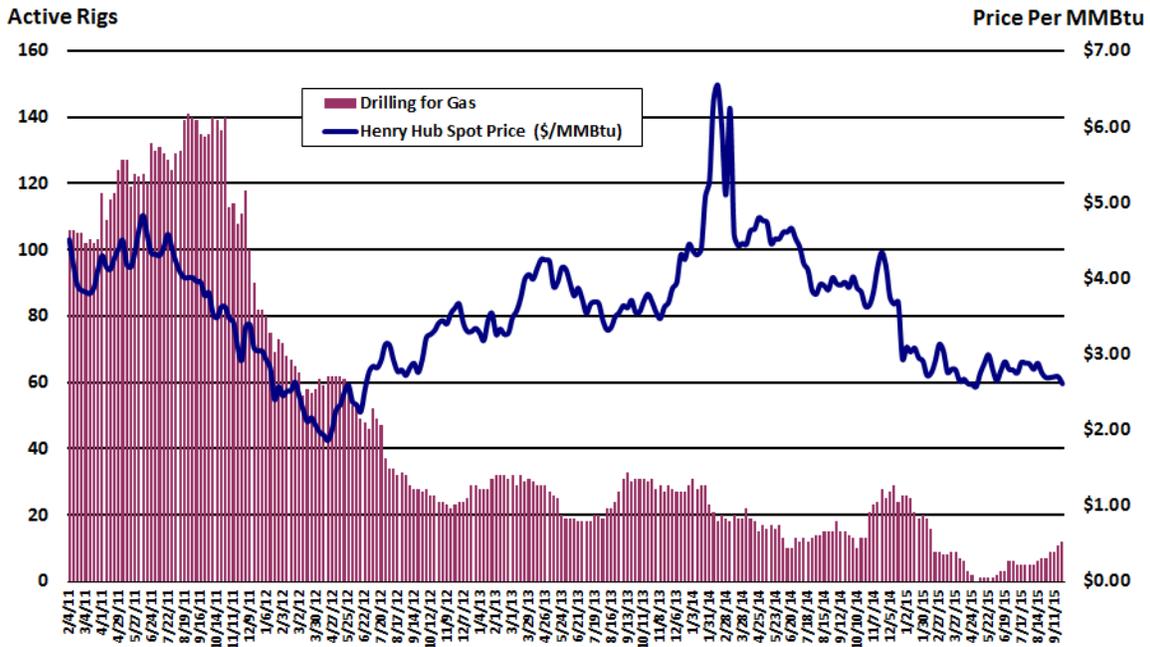
Oklahoma's active rig count moved down to 105 for the week ending September 25 with 93 rigs being oil-directed. Over the year, Oklahoma's rig count was off 108 from 213 rigs operating September 28, 2014.

The overall count of rigs searching for oil and natural gas in the U.S. fell by 4 to 838 in the week ending September 25, according to data from oilfield service company Baker Hughes. Oil-directed rigs accounted for 76.4 percent of drilling activity while natural gas-directed accounted for 23.5 percent.

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

February 2011 to September 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**

According to the most recent *Short-Term Energy Outlook* from the U.S. Energy Information Administration (EIA), natural gas working inventories were 3,538 billion cubic feet (Bcf) on September 25. This level was 15 percent higher than a year ago and 4 percent higher than the previous five-year average (2010-14) for this week. EIA projects inventories will close the injection season at the end of October at 3,956 Bcf, which would be the highest end-of-October level on record.

July natural gas gross withdrawals in Oklahoma were at a level of 214,914 MMcf, 3,412 MMcf (or 1.6 percent) greater than July's production level of 211,502 MMcf and the second-highest level of production since 1991 (the highest being in March 2015). For the first half of 2015, Oklahoma natural gas gross withdrawals totaled 1,242,055 MMcf compared to 1,117,149 MMcf for the first six months of 2014, that's 124,906 MMcf, or 11.2 percent, more than the first half 2014.

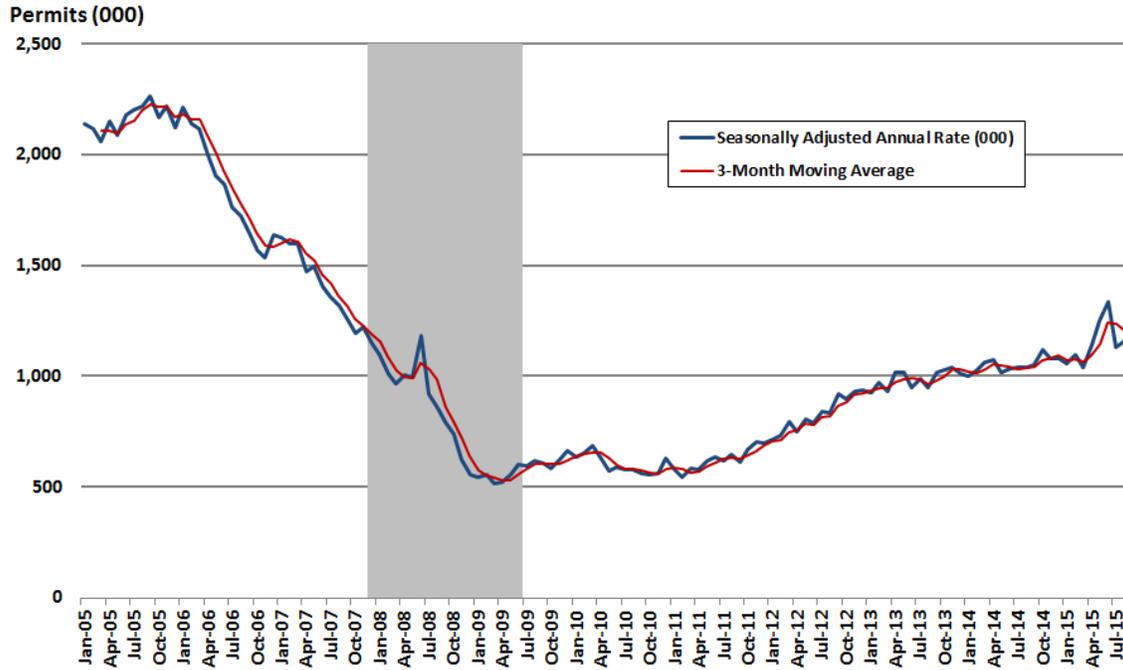
Natural gas prices tumbled in September as the Henry Hub spot price began the month at \$2.70 per million British thermal units (MMBtu) and then finished the month at \$2.47/MMBtu for an 8.5 percent decline.

Oklahoma's natural gas-directed drilling rig count gained some ground in September averaged about 10 active rigs up from the August average of six. Over the year, Oklahoma's natural gas-directed rotary rig count was down two rigs from 14 reported the week ended September 26, 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

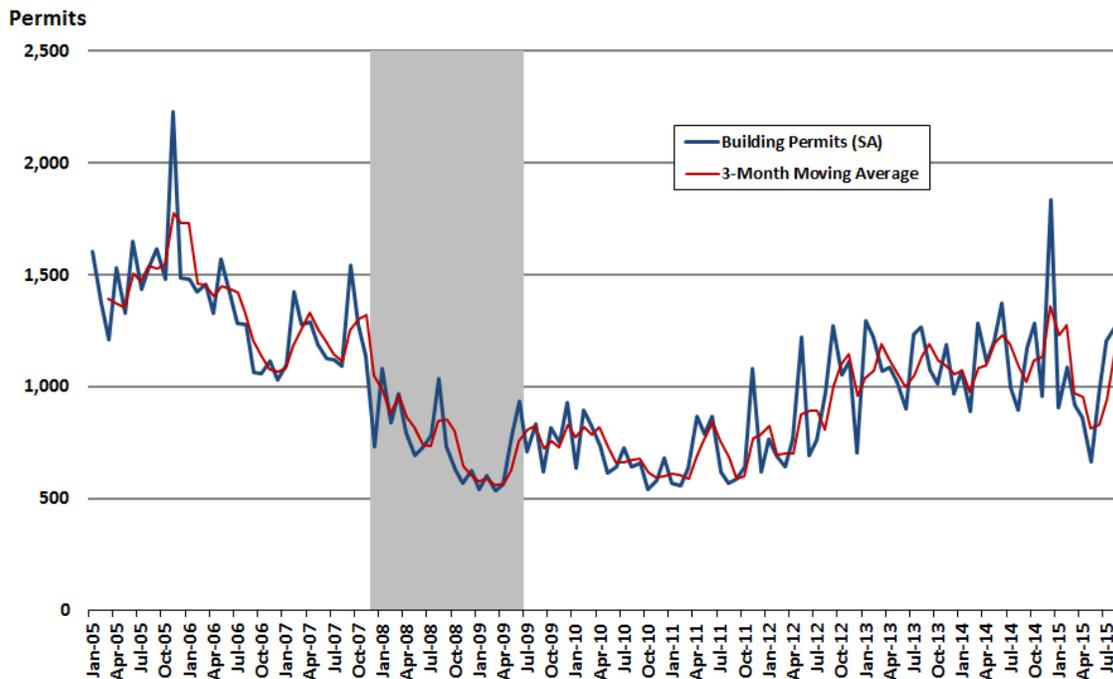
U.S. home builders filed more construction permits in September, a sign that consumers are returning to the market. Privately-owned housing units authorized by building permits in August were at a seasonally adjusted annual rate of 1,170,000, 3.5 percent above the revised July rate of 1,130,000 and 12.5 percent above the August 2014 estimate of 1,040,000, according to the U.S. Census Bureau and the Department of Housing and Urban Development. Multifamily permits rose 4.7 percent to a rate of 471,000 while single-family permits increased 2.8 percent to 699,000. Regionally, the Midwest, South and West posted respective permit gains of 2.9 percent, 2.4 percent and 9.6 percent. The Northeast fell 4.4 percent.

The National Association of Home Builders/Wells Fargo builder sentiment index reached 62 in September. The last time the reading was higher was October 2005 at 68.

## 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

Oklahoma residential permitting activity continued to climb in August as apartment permitting once again helped boost the total. Total residential building permitting for August was at a seasonally-adjusted level of 1,266, or 5.1 percent above the July level of 1,204 and 40.1 percent above the July 2014 estimate of 897 units, according to figures from the Federal Reserve Bank of St. Louis.

Single-family permitting accounted for 66.0 percent of total residential permitting activity in August while multi-family permitting added 34.0 percent. Applications for single-family homes were at a seasonally adjusted level of 836, or 3.9 percent below July's level of 870 permits.

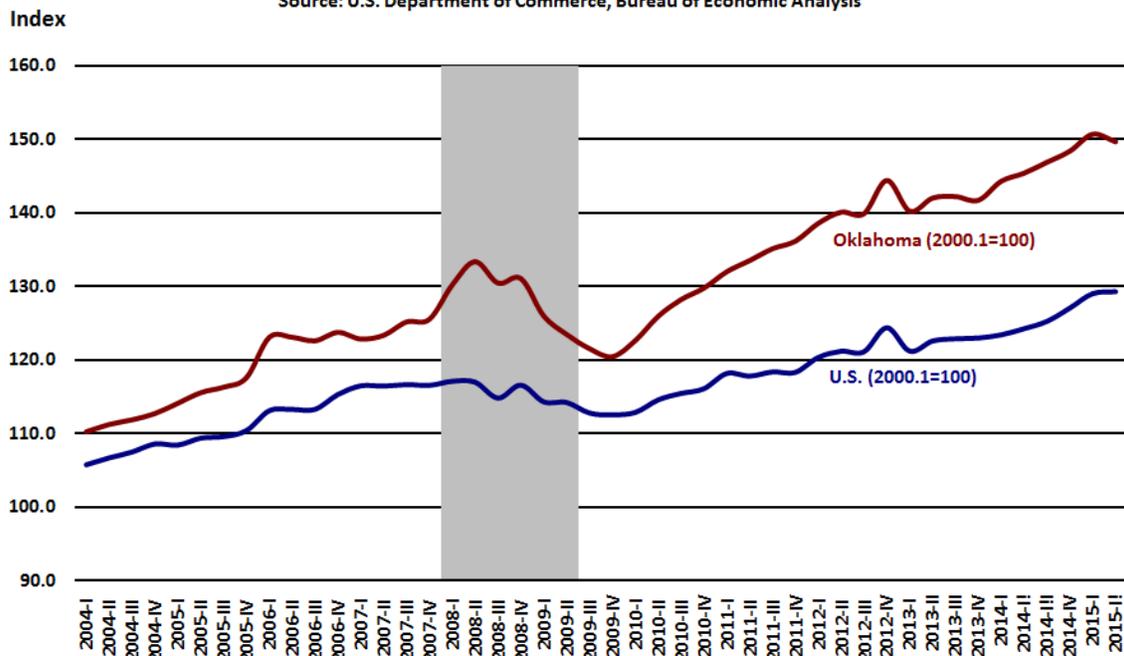
Over the year, total residential permitting was 369 permits, or 41.1 percent, more than August 2014. Single-family permits were down two permits or -0.2 percent less than a year ago, while the more volatile multi-family permitting was 371 more than the August 2014 level of 59 permits.

It appears that statewide residential permitting has gotten off to a slow start in 2015. Year to date, total unadjusted residential building permitting was at a level of 7,877 for the first eight months of 2015, compared to 8,827 during the same period of 2014—approximately 10.8 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

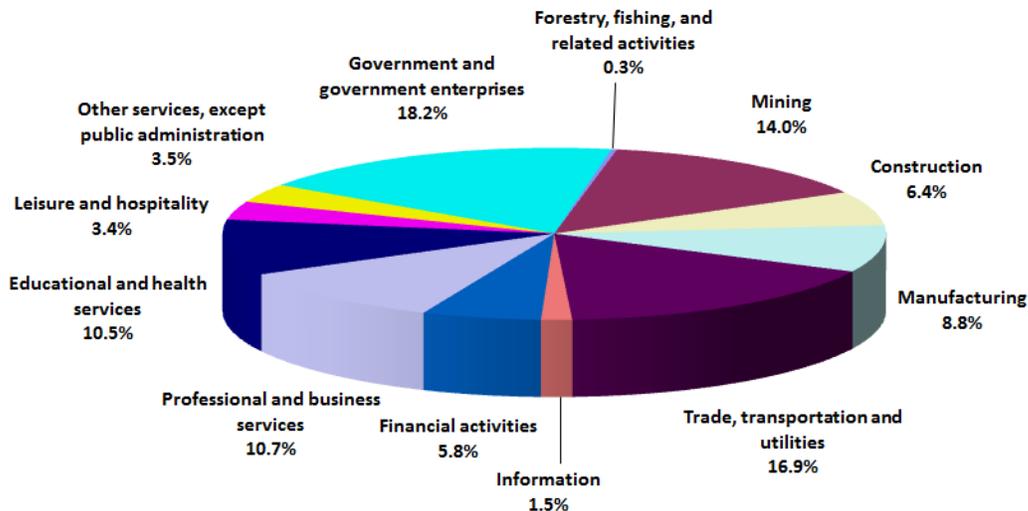
Personal income and consumer spending both rose in August as softening economic confidence has yet to meaningfully curb Americans' shopping. Personal income \$52.5 billion, or 0.3 percent, and disposable personal income (DPI) increased \$47.1 billion, or 0.4 percent, in August, according to the Bureau of Economic Analysis (BEA). Personal consumption expenditures (PCE) increased \$54.9 billion, or 0.4 percent. In July, personal income increased \$69.6 billion, or 0.5 percent, DPI increased \$63.9 billion, or 0.5 percent, and PCE increased \$45.7 billion, or 0.4 percent, based on revised estimates.

Spending on durable goods, including automobiles, increased 1.2 percent, and July's change was revised up to 1.3 percent. Nondurable goods purchases rose 0.6 percent in August. Spending on services was up 0.3 percent after a 0.1 percent rise in July. Inflation was flat in August, the PCE price index registering no change and up only 0.1 percent for the core inflation rate.

The savings rate was solid at 4.6 percent and has been edging lower from 4.9 percent in April, a sign of consumer confidence as Americans are now willing to spend while saving less.

## 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.

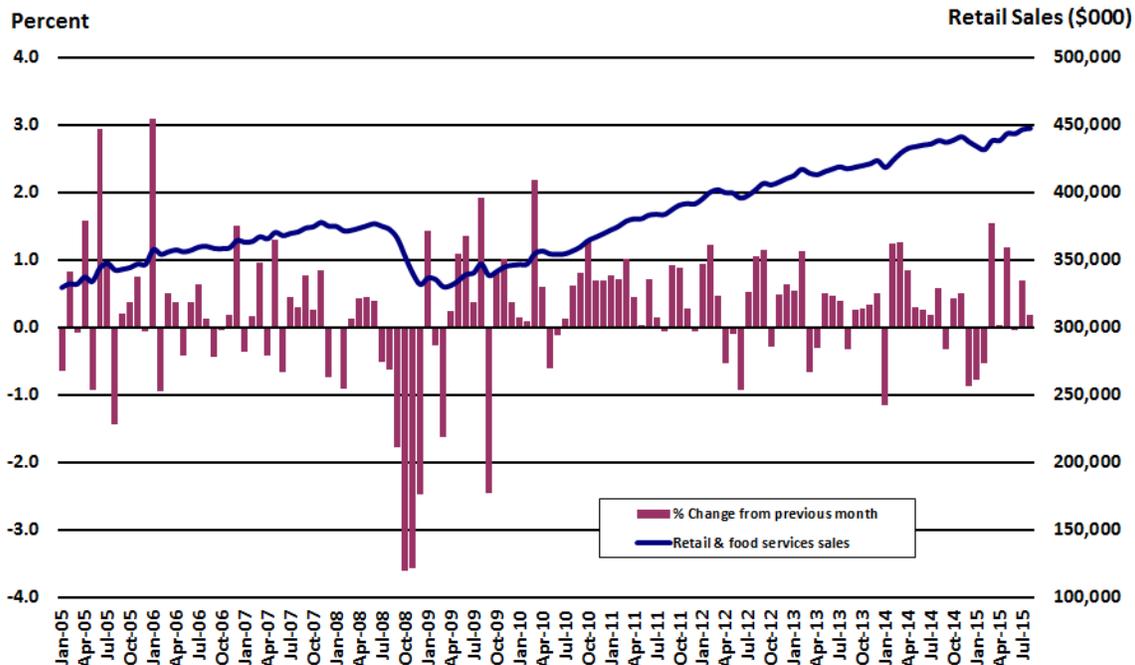
Job losses from the oil and gas industry finally caught up with the statewide economy as Oklahoma was the only state to record no growth in personal income in the 2nd quarter of 2015. Personal income growth was flat in the 2nd quarter, following a revised 0.8 percent pace in the 1st quarter, ranking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

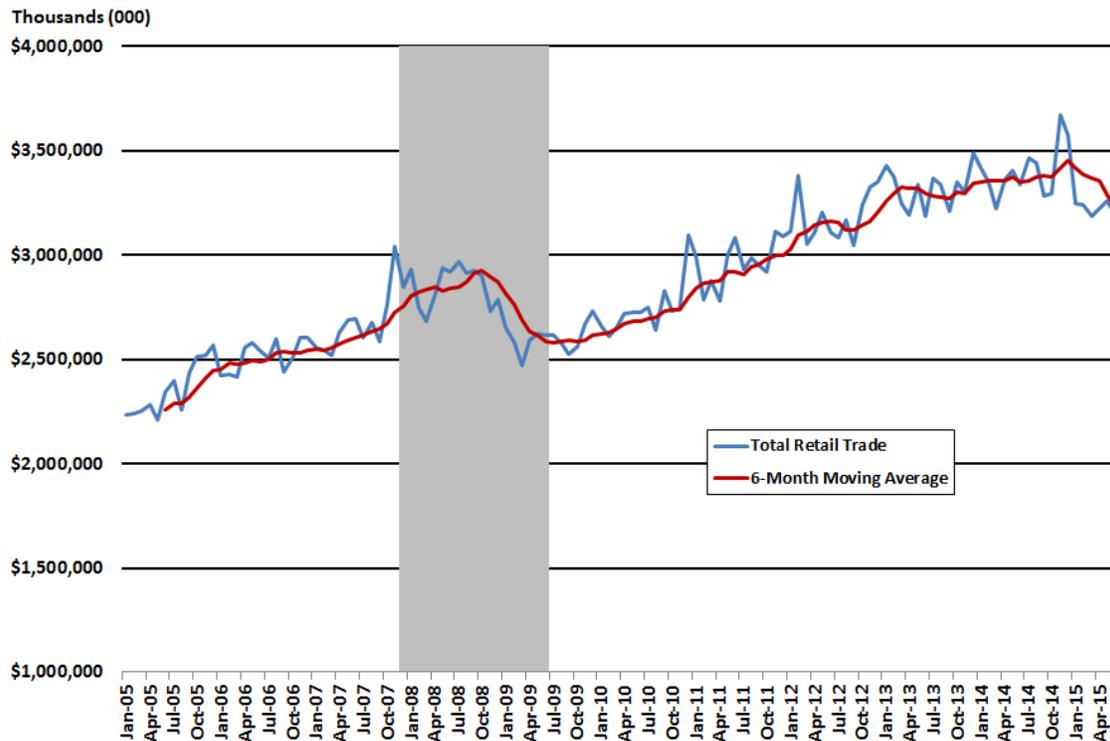
American consumers boosted their spending in August as households spent far less on gasoline and more on new cars and trucks. Advance estimates of U.S. retail and food services sales for August, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were \$447.7 billion, an increase of 0.2 percent from the previous month, and up 2.2 percent above August 2014, according to the U.S. Census Bureau. The June 2015 to July 2015 percent change was revised from 0.6 percent to 0.7 percent.

Sales at auto dealers rose 0.7 percent on top of July's 1.4 percent gain. Restaurants, another component tied to discretionary health, rose a very strong 0.7 percent to extend a run of gains. Lower pump prices dragged sales at gas stations down 1.8 percent. Excluding autos and gasoline, retail sales rose a solid 0.3 percent in August.

The less volatile "core" sales, which strip out automobiles, gasoline, building materials and food services increased 0.1 percent from July, and 1.3 percent over the year. Sales improved in August at grocers (+0.7 percent), clothiers (+0.4 percent), sporting goods stores (+0.3 percent), electronics outlets (+0.2 percent) and online retailers (+0.2 percent).

## Oklahoma Total Adjusted Retail Trade

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



### 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 fell in June with broad-based losses occurring in both durable and nondurable sales. Total adjusted retail sales for June were at a level of \$3.19 billion, or 1.9 percent lower than the May level of \$3.26 billion. For the first six months of 2015, total adjusted retail trade was at a level of \$19.35 billion, or 3.7 percent lower than \$20.09 billion for the first half of 2014.

Total durable goods sales fell 1.1 percent in June led by big declines in miscellaneous durable goods (2.2 percent) and auto accessories & repair (-1.9 percent). Other declining durable goods categories were furniture (-1.9 percent); electronics & music stores (-0.6 percent); lumber & hardware (-0.2 percent); and used merchandise (-0.8 percent).

Nondurable goods spending sank 2.2 percent in June led by a drop in estimated gasoline sales (-13.4 percent) due to lower pump prices. Other declining categories were miscellaneous non-durable goods sales (-1.3 percent); apparel (-0.7 percent); and general merchandise stores (-0.6 percent). Advancing for June were drugstore sales (1.2 percent); eating & drinking (0.5 percent); food (0.2 percent); and liquor (0.1 percent).