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SPECIAL REPORT:
Changes in Oklahoma’s Labor Force Participation Help Explain Recent Job Gains

The Federal Reserve Bank of Dallas recently completed an analysis of changes in the U.S. labor force participation rate and how that might explain job creation even as the unemployment rate reached historically low levels. In that study, it was found, among other things, that an important factor in the leveling off of the labor force participation rate and continued job creation is a recent rebound in the prime-age (25 to 54 years) participation rate. Has Oklahoma’s labor market followed the trends observed nationally? This analysis investigates the answer to that question.

Oklahoma’s labor force participation rate—the number of people either employed or unemployed as a proportion of noninstitutionalized working age (16 years and older) population—declined after the Great Recession to a low of 61.0 percent in 2016. The labor force participation rate for Oklahoma held steady at 61.0 percent through 2017, although the statewide labor market has continued to add jobs despite the unemployment rate reaching historically low levels. One important factor driving continued job creation despite low labor force participation rates is a recent rebound in the prime-age (25 to 54 years) participation rate (see Chart 1, below).

If the prime-age participation rate had remained at its 2014 average (78.2 percent) through 2017, and the path of the unemployment rate was unaffected, Oklahoma’s economy would have added approximately 22,000 fewer jobs.
Considering which demographic groups in Oklahoma are driving the changes in the labor force participation rate, it was also found that educational groups, individuals claiming disability status and female participation are also behind its recent rise, though to differing degrees.

**Conclusion**
The labor force participation rate in Oklahoma has been declining since 2005, reaching a low of 61.0 percent in 2016 and leveling off there in 2017. At the same time, Oklahoma’s labor market continues to grow and the state’s economy continues to add jobs even as the unemployment rate has been reaching historic lows. Part of the reason for this can be attributed to a rebound in several special demographic components of the participation rate.

The prime-age (25 to 54 years) labor force participation rate in Oklahoma has increased from a low of 78.2 percent in 2014 to 78.9 percent in 2017, the highest rate since 2010. College-educated individuals had the least decline among all educational groups in labor force participation during and immediately after the Great Recession and also led the rebound of participation after the recession from 2014 to 2017. Other demographic components contributing to growth in Oklahoma’s labor force include disabled individuals, whose change in participation rate was well above those without disabilities between 2014 and 2017. Finally, Oklahoma’s female labor force participation rate has seen an overall increase from 67.9 percent in 2005 to 69.4 percent in 2017. During this time period the male labor force participation rate has contracted from 84.0 percent to 79.1 percent, as the gap between male and female participation rates has declined from 16.1 percentage points in 2005 to 9.7 percentage points in 2017.

These groups’ participation in Oklahoma’s labor force has allowed the statewide labor market to expand even as the overall participation rate in the state has declined.

**More Information**
A copy of the full report, ‘Changes in Oklahoma’s Labor Force Participation Help Explain Recent Job Gains’ along with detailed tables and charts is available on the OESC website at:

https://www.ok.gov/oesc/documents/Lmichgoklfpr.pdf
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**

U.S. economic growth accelerated in the 1st quarter of 2019, lifted by a narrower trade gap and growing inventories amid weaker consumer demand. Real gross domestic product (GDP) increased at an annual rate of 3.1 percent in the 1st quarter of 2019, according to the "third" estimate released by the Bureau of Economic Analysis (BEA). In the 4th quarter, real GDP increased 2.2 percent.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, was revised lower to a 0.9 percent rate, down from a previous estimate of 1.9 percent, the weakest in a year. Outlays on durable goods, such as automobiles, fell at an upwardly-revised rate of 2.4 percent, still the biggest drop in nearly a decade. Nondurable goods spending grew at a 2.3 percent pace in the 1st quarter. Spending on services slowed to a 1.0 percent rate. Personal consumption expenditures (PCE) contributed 0.62 percentage point to 1st quarter GDP, instead of 0.90 percentage point previously estimated.

Businesses spending in the 1st quarter was stronger than previously estimated, rising 3.0 percent rather than 1.0 percent reported earlier. Spending on equipment declined to an unrevised 1.0 percent rate, the slowest pace since the 1st quarter of 2016. However, investment in structures was revised sharply upward to 4.3 percent, from the previous 1.7 percent estimate and outlays on intellectual property products, such as computer software, jumped 12.0 percent. Nonresidential fixed investment contributed 0.61 percentage point to 1st quarter GDP growth, revised upward from the 0.31 percentage point previously reported.

Growth in business inventories was revised down to a $122.8 billion rate in the first quarter from the previously estimated $125.5 billion pace. Part of the inventory accumulation was because of weak demand. Inventories contributed 0.55 percentage point to 1st quarter GDP, rather than the 0.60 percentage point reported earlier.

Investment in homebuilding contracted for a fifth straight quarter. Residential construction fell at an upwardly-revised 2.0 percent rate in the 1st quarter, rather than the 3.5 percent drop reported last month. Residential investment subtracted 0.08 percentage point from GDP growth in the 1st quarter.

The trade deficit narrowed in the 1st quarter, as exports jumped 5.4 percent while imports declined 1.9 percent. The smaller trade gap added 0.94 percentage point to GDP in the January to March period.

Government investment rebounded to an upwardly-revised 2.8 percent rate in the 1st quarter, boosted by spending at state and local governments. Domestic spending by the federal government declined 5.8 percent in the 1st quarter, offset by a 4.0 percent rise in national defense spending. State and local government outlays rose to an upwardly-revised 4.6 percent pace. Government consumption expenditures and investment added 0.48 percentage point to 1st quarter GDP growth.
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 gross domestic product (GDP) by state—a measure of nationwide growth calculated as the sum of GDP of all states and the District of Columbia—increased in 49 states and the District of Columbia in the 4th quarter of 2018, according to the Bureau of Economic Analysis (BEA). The percent change in real GDP in the 4th quarter ranged from 6.6 percent in Texas to 0.0 percent in Delaware.

Overall growth in real GDP by state decelerated to a 2.2 percent pace in the 4th quarter from a 3.4 percent rate in the 3rd quarter of 2018. Wholesale trade, mining, and information services were the leading contributors to the increase in real GDP nationally in the 4th quarter, according to the BEA.

Oklahoma’s real GDP accelerated in the 4th quarter of 2018, after falling in the previous quarter. Statewide real GDP grew at a 5.5 percent pace in the 4th quarter, ranking Oklahoma 3rd among all other states and the District of Columbia. Statewide GDP was at a level of $195.7 billion (in constant 2012 dollars) in the 4th quarter, up $2.6 billion from the 3rd quarter level of $193.1 billion.
Nationally, wholesale trade, mining, and information services increased 9.1 percent, 38.0 percent, and 8.9 percent, respectively. Wholesale trade and information services contributed to growth in all 50 states, while mining contributed to growth in 49 states, according to the BEA.

Wholesale trade increased 9.1 percent in the 4th quarter of 2018. This industry was the leading contributor to growth in South Dakota and Arkansas. In Oklahoma, wholesale trade was the second-leading contributor to 4th quarter GDP growth adding 0.61 percentage point.

Mining increased a remarkable 38.0 percent nationally. Along with Texas, this industry was the leading contributor to the increase in real GDP in Wyoming, Oklahoma, Alaska, and New Mexico—the second through fifth fastest growing states. In Oklahoma, mining added 4.28 percentage points to 4th quarter GDP growth.

Information services increased 8.9 percent nationally. This industry was the leading contributor to growth in Washington—the ninth fastest growing state. However, in Oklahoma, information barely contributed to 3rd quarter GDP, adding only 0.08 percentage point.

Finance and insurance declined 0.47 percent nationally, and subtracted from GDP growth in all 50 states and the District of Columbia in the 4th quarter of 2018. Finance and insurance subtracted 0.25 percentage point from Oklahoma’s GDP growth in the 4th quarter.
**Definition & Importance**

Metropolitan Statistical Areas (MSA) 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.

GDP by metropolitan area is the sub-state counterpart of the Nation's gross domestic product (GDP), the BEA's featured and most comprehensive measure of U.S. economic activity. GDP by metropolitan area is derived as the sum of the GDP originating in all the industries in the metropolitan area. Nationally, metropolitan statistical areas represent approximately 90 percent of total GDP. In Oklahoma, the four MSAs of Oklahoma City, Tulsa, Lawton and Enid accounted for 74.3 percent of total state GDP in 2017.

**Current Developments**

Real gross domestic product (GDP) increased in 312 out of 383 metropolitan areas in 2017, according to the U.S. Bureau of Economic Analysis (BEA). The percent change in real GDP by metropolitan area ranged from 12.1 percent in Odessa, TX to -7.8 percent in Enid, OK. Real GDP for U.S. metropolitan areas increased 2.1 percent in 2017, led by growth in professional and business services; wholesale and retail trade; and finance, insurance, real estate, rental, and leasing.

In 2017, three of Oklahoma’s four metropolitan areas experienced negative growth. Natural resources and mining subtracted from growth in Enid MSA (-7.8 percent), ranking it last among the 383 metro areas in 2017. Tulsa MSA’s GDP contracted 1.1 percent (ranked 353rd), pulled down by natural resources and mining and construction. Lawton MSA declined 0.1 percent to $5.2 billion in 2017 and ranked 318th among U.S. metro areas. Oklahoma City MSA grew 2.3 percent to $74.9 billion and ranked 142nd, lifted by natural resources and mining and professional and business services.
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

The Federal Reserve Bank of Philadelphia has released the leading indexes for the 50 states for May 2019. Forty-nine state coincident indexes, including Oklahoma’s, are projected to grow over the next six months and one is expected to contract. For comparison purposes, the Philadelphia Fed has also developed a similar leading index for its U.S. coincident index, which is projected to grow 1.3 percent over the next six months.

After revisions, Oklahoma’s leading index, a six-month forecast of the state’s coincident index, had been declining since June 2018 but now appears to be turning around. The state’s leading index was 2.07 percent in May. The April index was revised down to 1.43 percent (from 1.64 percent), following a downwardly-revised 0.59 percent reading in March, according to the latest figures from the Federal Reserve Bank of Philadelphia.

Overall, Oklahoma’s leading index for May suggests expansion in the state’s economy into the 4th quarter of 2019.
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 rose in June but remained near its five-decade low, as more people entered the labor force. The unemployment rate moved up one-tenth of a percentage point to 3.7 percent in June, according to the Bureau of Labor Statistics (BLS). The labor force participation rate—the share of working-age Americans who are employed or looking for work—moved up to 62.9 percent in June.

Oklahoma’s seasonally adjusted unemployment rate moved down 0.1 percentage point to 3.2 percent in May. Over the year, Oklahoma’s seasonally adjusted unemployment rate has declined by 0.3 percentage point compared to May 2018.

In May, Latimer County posted Oklahoma’s highest county unemployment rate of 5.2 percent, while Cimarron County and Dewey County tied for the lowest county unemployment rate at 1.6 percent. Unemployment rates in May were lower than a year earlier in 73 counties, higher in two counties and unchanged in two counties.
**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 applications for state unemployment benefits dropped in the last week of June, pointing to a still strong labor market. In the week ending June 29, the advance figure for seasonally adjusted initial claims was 221,000, a decrease of 8,000 from the previous week’s revised level of 229,000, according to the Department of Labor (DOL). The less volatile 4-week moving average was 222,250, an increase of 500 from the previous week’s revised average of 221,750.

The level of initial and continued claims for jobless benefits in Oklahoma trended down again in June. For the file week ending June 22, 2019, non-seasonally adjusted initial claims for unemployment insurance benefits were at a level of 1,691, down 129 from the previous week’s level of 1,820 and 31 less than the May 25th level of 1,722. For the same file week ending, the less volatile four-week moving average was at a level of 1,897, down eight (8) from the previous week’s average of 1,905.

For the same file week ending June 22, 2019, continued claims for unemployment insurance benefits were at a level of 14,364, dropping 186 from the previous week’s level of 14,550.
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. job growth rebounded at a strong pace in June, as government employment rose by the most in 10 months. Total nonfarm payroll employment increased by 224,000 in June, according to the Bureau of Labor Statistics (BLS). In June, Notable job gains occurred in professional and business services (+51,000 jobs), in health care (+35,000 jobs), and in transportation and warehousing (+24,000 jobs). The government sector was a major source of hiring, adding 33,000 jobs in June.

Oklahoma’s nonfarm employment dropped a seasonally-adjusted 1,700 jobs (-0.1 percent) in May, to a level of 1,694,100 while the April estimate was revised downward to 1,695,800. Five of Oklahoma’s 11 supersectors added jobs over the month as other services (+900 jobs) posted the largest monthly gain followed by trade, transportation, & utilities and government (+500 jobs each). Leisure and hospitality (-1,800 jobs) reported the largest over-the-month job losses.

Over the year, trade, transportation & utilities (+5,200 jobs) claimed the largest job gain followed by construction (+5,100 jobs).
Definition & Importance
Employment growth by industry identifies the types of jobs being created in the state. Conversely, industries with a declining employment trend indicate those which are becoming less important in the state’s economy. There may also be industries which behave more cyclically, growing during expansion and decreasing in times of economic slowdown or contraction. These changes are crucial in that they help to recognize the types of jobs being lost by individuals. Anticipating what will happen in recovery helps identify whether those jobs will return or what types of new jobs will be created. Consequently, key information for planning re-employment, retraining, and other workforce and economic development programs is contained within these data. For this analysis, we are using CES non-seasonally adjusted annual averages to compare year-over-year employment changes.

Current Developments
Oklahoma’s annual average employment growth turned in solid gains in 2018, boosted by increases in mining & logging, leisure & hospitality, and professional & business services. Total nonfarm employment gained a non-seasonally adjusted 24,900 jobs for a 1.5 percent growth rate. For comparison, in 2017, 9,000 jobs were gained for a 0.5 percent increase.

In 2018, nine out of 11 statewide supersectors recorded job gains. Mining & logging led all other supersectors adding 5,000 jobs (10.4 percent). Leisure & hospitality added 4,400 jobs (2.6 percent), while professional & business services gained 4,200 jobs (2.3 percent). Manufacturing employment grew by 3,900 jobs (2.9 percent). Construction and other services added 2,800 jobs for 2.9 percent and 4.1 percent gains respectively. The broad trade, transportation and utilities supersector added a non-seasonally adjusted 2,400 jobs (0.8 percent). Education and health services grew by 1,000 jobs (0.4 percent) and financial activities added 300 jobs (0.4 percent) over the year.

The largest annual average over-the-year job losses were seen in government which shed a non-seasonally adjusted 1,400 jobs (-0.4 percent), followed by information dropping 600 jobs (-2.9 percent).
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 growth regained momentum in June, following four months of little change. In June, manufacturing added 17,000 jobs, according to the Bureau of Labor Statistics (BLS). So far this year, job growth in the industry has averaged 8,000 per month, compared with an average of 22,000 per month in 2018.

Oklahoma manufacturing employment shed a seasonally-adjusted 500 jobs (-0.4 percent) over the month in June, with most the job losses occurring in durable goods manufacturing.

Over the year, statewide manufacturing employment contracted by a seasonally-adjusted 2,000 jobs (-1.5 percent). Most of the job losses also occurred in durable goods manufacturing. Non-durable goods manufacturing shed a seasonally-adjusted 200 jobs over the year.
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, which accounts for about 12 percent of the U.S. economy. 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 grew at a slowest pace in more than two years in June, as new orders tumbled and exports barely increased. The June PMI® registered 51.7 percent, a decrease of 0.4 percentage point from the May reading of 52.1 percent, according to the latest ISM Manufacturing Report On Business®. Twelve of the 18 manufacturing industries reported growth in June, including: furniture & related products; printing & related support activities; textile mills; nonmetallic mineral products; and food, beverage & tobacco products.

ISM’s measure for new orders slid 2.7 percentage points 50 percent in June, the lowest reading since December 2015, indicating that new orders remained unchanged after increasing for 41 consecutive months. The Inventories Index dipped to 49.1 percent, a decrease of 1.8 percentage points. The ISM index for production rose to 54.1 percent in June, a 2.8 percentage point increase from the previous month and the employment gauge increased 0.8 percentage points to 54.5 percent.
The Creighton University Mid-America Business Conditions Index, a leading economic indicator for a nine-state region stretching from North Dakota to Arkansas, rose to a solid reading signaling positive growth for the region over the next three to six months, according to the latest monthly survey results. The Business Conditions Index, which ranges between 0 and 100, rose to 55.4 in June from May’s 54.3.

“Weak farm income, produced partially by tariffs and flooding, pulled regional growth below that of the nation. Even so, based on our manufacturing survey over the past several months, I expect overall growth to remain solidly positive,” said Ernie Goss, Ph.D., director of Creighton University’s Economic Forecasting Group and the Jack A. MacAllister Chair in Regional Economics in the Heider College of Business.

Oklahoma’s Business Conditions Index moved above growth-neutral 50.0 in June, after declining for two months in a row. The overall index from a monthly survey of supply managers for June rose to 54.9 from 48.9 in May. Components of the overall June index were new orders at 53.0, production or sales at 52.8, delivery lead time at 55.1 inventories at 55.3, and employment at 58.4.

"Except for June, recent surveys indicate that both durable- and nondurable-goods producers in the state experienced business pullbacks in economic activity," said Goss.
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. Excluding federal offshore areas, Oklahoma was the nation's 6th-largest crude oil producing state in 2017 (at 165,920,000 barrels). 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. As of January 2018, those refineries had a combined distillation capacity of more than 522,000 barrels per day—roughly 3.0 percent of the total U.S. refining capacity.

**Current Developments**

U.S. crude oil production and lease condensate reached another milestone in April 2019, totaling 12.2 million barrels per day (b/d), according to the U.S. Energy Information Administration’s (EIA) latest *Petroleum Supply Monthly*. April 2019 marks the first time that monthly U.S. crude oil production levels surpassed 12 million b/d, and this milestone comes less than a year after U.S. crude oil production surpassed 11 million b/d in August 2018. The EIA noted that Texas and the Federal Offshore Gulf of Mexico (GOM), the two largest crude oil production areas in the United States, both reached record levels of production in April at 4.97 million b/d and 1.98 million b/d, respectively.

Oklahoma also reached a record production level of 617,000 b/d in April. Oklahoma field production of crude oil in April was at a level of 18,505,000 barrels (bbl), 374,000 bbl (2.1 percent) more than the downwardly-revised March production level of 18,131,000 bbl.

WTI-Cushing spot crude prices averaged $54.66 per barrel (b) in June, down $6.17/b (-10.1 percent) from the May average of $60.83/b and $8.96/b below the June average of last year.

The number of rigs drilling for oil and natural gas in the U.S. was flat for the week ending June 28, 2019, remaining at a total count to 967 rigs, according to Houston oilfield services company Baker Hughes Inc. Of that total, 793 rigs (82.0 percent) drilled for oil and 173 (17.9 percent) explored for natural gas. Compared to a year ago, the nation’s rig count was 80 less than the 1,047 rigs reported on June 29, 2018.

Oklahoma’s active rig count was at a more than two-year low in June, as the number of statewide rigs continues to decline. For the week ending June 28, 2019, the statewide active rig count added two (2) to 102 rigs, according to Baker Hughes. It was the lowest weekly rig count since 101 rigs were active for the week ended March 10, 2017. Oil-directed rigs accounted for 98 active rigs (96 percent) of total rig activity. Over the year, Oklahoma’s rig count was down 38 (-27.1 percent) from 140 rigs reported on June 29, 2018.
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 nation, ranking 4th among all states in U.S. gross production in 2017, (excluding offshore production), and accounting for 8.6 percent of U.S. gross production. 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**

Statewide natural gas production eased a bit in April after the second-highest production level was recorded in March. Oklahoma natural gas gross withdrawals were at a level of 261,982 million cubic feet (MMcf) in April, down 2,217 MMcf (-0.8 percent) less than March’s downwardly-revised level of 264,199 MMcf. In 2018, statewide natural gas production set a record level of 2,946,115 MMcf, or 432,218 MMcf (17.2 percent) more than 2,513,897 MMcf produced in 2017.

The Henry Hub natural gas spot price averaged $2.40/million British thermal units (MMBtu) in June, down 24 cents/MMBtu (-9.1 percent) from May’s average of $2.64/MMBtu, according to the EIA. With seasonally mild temperatures in some regions of the country, low prices are occurring despite relatively low natural gas inventories and increasing demand for U.S. natural gas export. The Henry Hub spot price will average $2.77/MMBtu in 2019 and in 2020, 12 percent lower than the 2018 average of $3.15/MMBtu, according to EIA forecasts. Natural gas spot prices are expected to remain relatively low through 2019 because of continued record growth in U.S. natural gas production.

According to oilfield services company Baker Hughes, for the week ending Friday, June 28, the U.S. natural gas rig count was at 173 rigs, four (4) less than the previous week and 14 less than a year ago.

Oklahoma’s natural gas-directed drilling rig count was down to four (4) units for the week ending June 28, 2019, unchanged from the previous week. Over the year, the number of statewide rotary rigs exploring for natural gas was down six (6) from 10 reported for the week ended June 29, 2018.
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. housing permits, an indicator of future home building activity, rose for a second straight month in May. Privately-owned housing units authorized by building permits in May were at a seasonally adjusted annual rate of 1,294,000, 0.3 percent above the revised April rate of 1,290,000, but 0.5 percent below the May 2018 rate of 1,301,000, according to the U.S. Census Bureau.

Single-family permits were at a rate of 815,000 in May, 3.7 percent above the revised April figure of 786,000 and down 3.3 percent from a year ago. In May, permits for the construction of apartments slipped 3.7 percent to a pace of 442,000.

The National Association of Home Builders/Wells Fargo Housing Market Index eased to a still strong reading of 64 in June, after posting a seven-month high of 66 in May.
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
Statewide residential permitting slumped for a second consecutive month in May. Total residential permitting fell to a seasonally-adjusted level of 837 in May, down 28 permits (-3.2 percent) from the downwardly-revised April level of 865, and 88 permits (-9.5 percent) less than the May 2018 estimate of 924 permits, according to figures from the U.S. Census Bureau and the Federal Reserve Bank of St. Louis.

In May, permits for single-family homes were at a seasonally-adjusted level of 828, up 69 permits (9.1 percent) from the upwardly-revised level of 759 permits in April. Multi-family permitting sunk to a seasonally-adjusted level of 8 units in May, down 97 permits (-92.0 percent). Single-family permitting accounted for 99.0 percent of total residential permitting activity in May while the more volatile multi-family permitting accounted for only 1.0 percent.

Year to date, statewide residential permitting was at a level of 4,776 through the first five months of 2019, which is 310 (6.9 percent) more compared to 4,467 permits issued during the first five months of the previous year.
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

U.S. household income and spending grew at a moderate pace in May amid modestly rising inflation. Personal income increased $88.6 billion (0.5 percent) in May according to estimates by the Bureau of Economic Analysis (BEA). Disposable personal income (DPI) increased $72.6 billion (0.5 percent) and personal consumption expenditures (PCE) increased $59.7 billion (0.4 percent). April’s PCE change was revised upward to 0.6 percent from the previous 0.3 percent estimate.

In May, outlays on durable goods such as motor vehicles surged 1.7 percent after falling 0.1 percent in the previous month. Purchases of nondurable goods such as food and clothing slumped 0.1 percent while outlays on services, such as utilities and doctor visits rose 0.4 percent.

Core inflation, excluding the volatile food and energy components, as measured by the PCE price index climbed 0.2 percent to 1.6 percent in May after a similar gain in April.

The personal saving rate, personal saving as a percentage of disposable personal income, held steady at 6.1 percent of after-tax income in May.
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 increased 3.4 percent at an annual rate in the 1st quarter of 2019, a deceleration from the 4.1 percent increase in the 4th quarter of 2018, according to estimates by the Bureau of Economic Analysis (BEA). Personal income increased in all states except South Dakota. The percent change in personal income across all states ranged from 5.6 percent in West Virginia to -0.6 percent in South Dakota.

Oklahoma’s personal income grew at a 3.0 percent rate in the 1st quarter of 2019, to a level of $186.1 billion, ranking the state 37th among all states. For the 4th quarter of 2018, Oklahoma’s personal income was revised slightly upward to $184.7 billion (5.0 percent) from the previous estimate of $184.6 billion.

For the nation, earnings increased 2.8 percent in the 1st quarter of 2019, after increasing 3.2 percent in the 4th quarter of 2018 and was the leading contributor to personal income growth in most states. Oklahoma’s net earnings grew 1.2 percent, contributing 0.7 percentage point to personal income growth in the 1st quarter of 2019.

In Oklahoma, mining, quarrying, and oil and gas extraction earnings (0.47 percentage point), was the leading contributor to 1st quarter earnings growth. Earnings in health care and social assistance (0.39 percentage point), and retail trade (0.23 percentage point) were also contributors to 1st quarter earnings growth. Transportation and warehousing (-0.37 percentage point), durable goods manufacturing and farm earnings (-0.27 percentage point) subtracted from 1st quarter earnings growth.
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
U.S. retail spending jumped in May, and with the previous month’s upwardly revised figure, sales have now increased for three months in a row. Advance estimates of U.S. retail and food services sales for May 2019, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were $519.0 billion, an increase of 0.5 percent from the previous month, and 3.2 percent above May 2018, according to the U.S. Census Bureau. The March 2019 to April 2019 percent change was revised from -0.2 percent to +0.3 percent.

Sales rose 0.7 percent at auto dealers after slipping 0.5 percent in April. Sales at gasoline stations were up 0.3 percent. Excluding the volatile auto and gas categories, sales increased 0.5 percent in May.

Internet sales jumped 1.4 percent in May. Sales at restaurants and bars rose 0.7 percent, a positive sign because such spending is more discretionary than purchases at grocery stores or gas stations. Sporting goods and hobby store sales increased a strong 1.1 percent in May.

The less volatile “core” or retail-control group sales which are used to calculate gross domestic product, and strips out automobiles, gasoline, building materials, and food services sales advanced 0.5 percent in May after an upwardly revised 0.4 percent rise in April. Solid gains in core retail sales over the past two months indicate consumer spending has picked up in the 2nd quarter after slowing sharply during the 1st quarter.
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 smooth out monthly volatility, we have used a six-month moving average.

Current Developments
Statewide retail spending jumped in May, however much of the gain was due to higher pump prices. Total adjusted retail trade for May was at a level of $3.56 billion, a 4.3 percent increase from the upwardly revised April level of $3.42 billion. Over the year, total adjusted retail sales was 1.9 percent more than the May 2018 level of $3.49 billion. Excluding estimated gasoline sales, total retail sales for May only grew 0.10 percent over the month.

Total durable goods sales slipped 0.3 percent in May as sales in all categories declined. Sales at electronics & music stores dropped 1.2 percent, while lumber & hardware declined 0.2 percent. Other declining categories were miscellaneous durable goods (-0.3 percent); furniture (-0.3 percent); used merchandise (-0.5 percent); and auto accessories & repair (-0.03 percent).

Nondurable goods purchases rose 5.7 percent in May as higher prices at the pump pushed the volatile estimated gasoline sales up 38.0 percent over the month. Other advancing nondurable goods categories in May were general merchandise stores (0.6 percent); food stores (0.4 percent); drug stores (0.4 percent); miscellaneous non-durable goods (0.3 percent); and eating & drinking places (0.2 percent). Declining nondurable categories in May were liquor stores (-5.2 percent) and apparel (-0.8 percent).