# TABLE OF CONTENTS

SPECIAL REPORT: Urban Oklahoma Health Industry and All Industry Employment and Earnings: A Trend Analysis Comparison of Change by Age and Gender, 2001 to 2017 ..... 2
U.S. Real Gross Domestic Product and Quarterly Change .......................................................... 5
Oklahoma's Real Gross Domestic Product and Quarterly Change ........................................ 7
Industry Share of Oklahoma’s Economy ................................................................................. 8
Metropolitan Area Contribution to State Real GDP ................................................................. 9
Leading Index for Oklahoma ................................................................................................. 10
U.S. and Oklahoma Unemployment Rates ............................................................................ 11
Oklahoma Initial Claims for Unemployment Insurance ......................................................... 12
U.S. and Oklahoma Nonfarm Payroll Employment ............................................................... 13
Oklahoma Employment Change by Industry ........................................................................ 14
U.S. and Oklahoma Manufacturing Employment .................................................................. 15
Purchasing Managers' Index (Manufacturing) ................................................................. 16
Oklahoma Active Rotary Rigs and Cushing, OK WTI Spot Price ........................................ 18
Oklahoma Active Rotary Rigs and Henry Hub Natural Gas Spot Price ................................ 20
U.S. Total Residential Building Permits .............................................................................. 22
Oklahoma Total Residential Building Permits ...................................................................... 23
U.S. and Oklahoma Real Personal Income ......................................................................... 24
Industry Contribution to Oklahoma Personal Income .......................................................... 25
U.S. Adjusted Retail Sales .................................................................................................... 26
Oklahoma Total Adjusted Retail Sales .................................................................................. 27
SPECIAL REPORT:  
Urban Oklahoma Health Industry and All Industry Employment and Earnings:  
A Trend Analysis Comparison of Change by Age and Gender, 2001 to 2017

Introduction
OESC’s LMI unit has finished a report on the urban Oklahoma health industry, the third in a series, covering two of Oklahoma’s urban areas, specifically a combination of the Oklahoma City and Tulsa Metropolitan Statistical Areas (MSAs). This study, which covers a 17-year interval beginning in 1st quarter 2001 through 4th quarter 2017, is a trend analysis of employment and earnings in ambulatory healthcare services (NAICS 621), hospitals (NAICS 622), and nursing and residential care facilities (NAICS 623) industries using data from the Longitudinal Employer-Household Dynamics (LEHD) program. Below, are some of the major findings and conclusions.

Major Findings for Employment and Employment Change
- Regardless of gender group, in 2017 urban Oklahoma employment in all industry, ambulatory health care services, hospitals and nursing and residential care facilities had the largest two employment age groups in the two middle age groups of 25 to 34 years old, and 35 to 44 years old. The one exception being the employment of males in ambulatory health care services with the second-largest employment age group in 45 to 54 years old.

- While the amounts of female and male employment in ‘all ages’ (14 to 99 years old) in urban Oklahoma all industries was relatively small in difference, the ‘all ages’ ratio of females to males in ambulatory health care services was 3.4 to 1, in hospitals the female to male ratio was over 3.5 to 1, and in nursing and residential care facilities female to male employment ratio was over 3.7 to 1.

- In urban Oklahoma, regardless of gender group, in the industry groups of ‘all industries’, and nursing and residential care facilities the two older age groups of 55 to 64 years old and 65 to 99 years old always had the two largest amounts of employment increases, over the 17 years of observation. The same is also true of hospital males. Both genders in the remaining two industry groups had the two highest amounts employment change in any two of the three age groups: 25 to 34 years old, 35 to 44 years old, or 55 to 64 years.

- In urban Oklahoma, when comparing ‘all ages’ (14 to 99 years old) and males and females, the employment change rate is higher for males than females in ambulatory health care services and in nursing and residential care facilities. Only in hospitals is the employment change rate of the genders relatively equal over the 17 years of observation.

- Likely, the most important employment finding in this analysis of urban Oklahoma is that both male and female employment in all four industry groups increased at the highest change rate in the age group 65 to 99 years old and the second-highest change rate in the 55 to 64 year old age group. In these same two oldest age groups, female employment increased at the higher change rate than males in all industry; while in the three health industry groups, male employment increased at the higher change rate, over the 17 years of observation.

Major Findings for Earnings and Earnings Change
- In urban Oklahoma, in 2017 the two highest earnings in the four industry groups was most commonly found in the age groups of 45 to 54 years old and 55 to 64 years old. This finding is true for both males and females in all industry and in nursing and residential care facilities. This was true for males in ambulatory health care services and also true for females in hospitals.
When comparing the 2017 annual average monthly earnings for urban Oklahoma male to female ‘all ages’ (14 to 99 years old) for the four industry groups, males had significantly higher earnings than did their female counterparts. The exception being in nursing and residential care facilities. This latter exception exhibits much more male to female equalitarian earnings than in the other three industry groups.

Comparing 2017 annual average monthly earnings of both genders in urban Oklahoma ‘all ages’ (14 to 99 years old) in all four industry groups to their rural Oklahoma counterparts revealed that urban earnings are typically higher than their rural Oklahoma earnings. The largest difference occurring in male earnings in urban ambulatory health care services, which were more than twice the earnings of rural males in this industry.

Observing the 17-year interval earnings amount change in males and females in the four industry groups in urban Oklahoma determined that the two age groups with the largest earnings amount change were the oldest two of the eight age groups, 55 to 64 years old and 65 to 99 years old. The one exception is hospital males with the second-largest earnings amount change in the 35 to 44 year old age group.

Viewing urban Oklahoma earnings change rates for females determined that the two oldest of the eight age groups in all four industry groups always had the two highest earnings change rates, over the 17 years of observation.

Examining urban Oklahoma earnings change rates for males in the three health industry groups over the 17-year interval determined that although males in hospitals and nursing and residential care facilities experienced the highest male earnings rate change in the oldest of the eight age groups, males in none of the three health industry groups had their second-highest earnings rate change in the three older of the eight age groups. Additionally, males in ambulatory health care services displayed both the first- and second-largest age group earnings change rates in the four youngest of the eight age groups.

Females in urban Oklahoma in all four industry groups, almost always had higher age group earnings change rates than their male counterparts, over the 17 years of observation. Not true as often in our prior report on rural Oklahoma health groups.

Conclusions
The analysis and findings allow three conclusions:

- Urban Oklahoma female health industry employment outnumbering male employment will likely continue for some time into the future, as indicated by their current larger than male ratios in all three health industry groups, and male employment change rate higher than female in two health industry groups, and only slightly less than females in the third health industry group.
- Females’ traditionally lower earnings levels than males have the probability of reaching earnings parity at varying rates in each of the three health industry groups, as indicated by the huge and lower difference in earnings. For example, rapid earnings change rates for females in ambulatory health care services, the relative moderate difference in earnings but relative low earnings change rates for females in hospitals, and the relative little difference in earnings and relative moderate earnings change rates for females in nursing and residential care facilities.
• Urban Oklahoma health industry staffing, which has historically been problematic and presently still is the case, likely will increasingly be so in the future, as indicated by both gender’s employment more rapidly increasing in the older two age groups along with the 17-year decrease in some of the four younger age groups. Although the two older age groups’ employment is growing more rapidly in the urban than in the rural area, the latter is also more often plagued with decreasing employment in the younger four of the eight age groups.

More Information
A copy of the full report, ‘Urban Oklahoma Health Industry and All Industry Employment and Earnings: A Trend Analysis Comparison of Change by Age and Gender, 2001 to 2017’ along with detailed tables and charts is available on the OESC website at:

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 slowed in the 2nd quarter of 2019, as rebounding consumer demand was offset by a wider trade gap and lower business investment. Real gross domestic product (GDP) increased at an annual rate of 2.1 percent in the 2nd quarter of 2019, according to the "advance" estimate released by the Bureau of Economic Analysis (BEA). In the 1st quarter, real GDP increased 3.1 percent.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, accelerated to a 4.3 percent rate, following a weak 1.1 percent gain in the 1st quarter. Outlays on durable goods, such as automobiles, jumped to a 12.4 percent rate, the biggest increase in five years. Nondurable goods spending climbed a 6.0 percent pace in the 2nd quarter. Spending on services rose to a 2.5 percent rate, following a 1.0 percent gain in the 1st quarter. Personal consumption expenditures (PCE) added 2.85 percentage point to 2nd quarter GDP, after a weak 0.78 percentage point contribution in the previous quarter.

Businesses capital spending, which had been strong for the past two years, saw the first decline in three years in the 2nd quarter, slumping 0.6 percent. Spending on structures plunged 10.6 percent, the biggest drop since the 1st quarter of 2016. Investment in equipment rose 0.7 percent, while outlays on intellectual property products, such as computer software, increased 4.7 percent. Nonresidential fixed investment subtracted 0.08 percentage point from 2nd quarter GDP growth, after adding 0.6 percentage point in the previous quarter.

Growth in business inventories slowed to a $71.7 billion rate in the 2nd quarter, down from the $116.0 billion pace in the 1st quarter. The change in private inventories subtracted 0.86 percentage point from 2nd quarter GDP.

Investment in homebuilding contracted again in the 2nd quarter and has fallen in eight of the last ten quarters. Residential construction fell at a 1.5 percent rate in the 2nd quarter. Residential investment subtracted 0.06 percentage point from GDP growth in the 2nd quarter.

The trade deficit widened in the 2nd quarter, as exports fell 5.2 percent while imports rose 0.1 percent. The larger trade gap subtracted 0.65 percentage point to GDP in the April to June period after adding 0.73 percentage point in the 1st quarter.

Government investment climbed to a 5.0 percent rate in the 2nd quarter, boosted by federal nondefense spending. Federal government spending jumped 7.9 percent in the 2nd quarter, as nondefense spending soared 15.9 percent and national defense spending rose 2.8 percent. State and local government outlays grew 3.2 percent. Government consumption expenditures and investment added 0.85 percentage point to 2nd quarter GDP growth.

The BEA also reported that the economy grew more slowly in 2018 than it had previously estimated. Although growth in the 1st quarter of 2018 was revised up to a 2.5 percent annualized rate (from 2.2 percent), 2nd quarter growth was cut to a 3.5 percent pace (from a 4.2 percent rate). Growth in the 3rd quarter was slashed to a 2.9 percent rate (from a 3.4 percent rate). GDP growth for the 4th quarter was lowered to a 1.1 percent pace (from a 2.2 percent rate).
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 all 50 states and the District of Columbia in the 1st quarter of 2019, according to the Bureau of Economic Analysis (BEA). The percent change in real GDP in the 1st quarter ranged from 5.2 percent in West Virginia to 1.2 percent in Hawaii.

Overall growth in real GDP by state accelerated to a 3.1 percent pace in the 1st quarter from a 2.2 percent rate in the 4th quarter of 2018. Finance and insurance, retail trade, and health care and social assistance were the leading contributors to the increase in real GDP nationally in the 1st quarter, according to the BEA.

Oklahoma’s real GDP decelerated in the 1st quarter of 2018, after climbing 5.5 percent in the previous quarter. Statewide real GDP grew at a 3.9 percent pace in the 1st quarter, ranking Oklahoma 9th among all other states and the District of Columbia. Statewide GDP was at a level of $197.5 billion (in constant 2012 dollars) in the 1st quarter, up $1.8 billion from the 4th quarter level of $195.7 billion.
Finance and insurance (9.5 percent); retail trade (11.9 percent); and health care and social assistance (6.2 percent) were the leading contributors to the increase in real GDP nationally and contributed to growth in all 50 states and the District of Columbia in the 1st quarter of 2019.

In Oklahoma, finance and insurance (0.44 percentage point); retail trade (0.66 percentage point); and health care and social assistance (0.34 percentage point) all contributed to state GDP growth in the 1st quarter.

Mining for the nation increased 26.5 percent, after increasing 38.0 percent in the 4th quarter. This industry was the leading contributor to growth in several states, including the three fastest growing states of West Virginia, Texas, and New Mexico. In Oklahoma, mining was by far the leading contributor to 1st quarter growth, adding 3.08 percentage points.

The government sector decreased 1.1 percent nationally and slowed growth in most states, especially in the District of Columbia. The decrease was partly due to the partial federal government shutdown in January 2019. In Oklahoma, government subtracted 0.16 percentage point from 1st quarter growth.
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.

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.
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.

The Federal Reserve Bank of Philadelphia has released the leading indexes for the 50 states for June 2019. Forty-eight state coincident indexes, including Oklahoma’s, are projected to grow over the next six months and two are 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 1.2 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 1.46 percent in June. The May index was revised down to 1.93 percent (from 2.07 percent), following a downwardly-revised 1.28 percent reading in April, according to the latest figures from the Federal Reserve Bank of Philadelphia.

Overall, Oklahoma’s leading index for June 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 held steady in July, remaining at a nearly 50-year low. The unemployment rate held at 3.7 percent in July, 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 63.0 percent in July.

Oklahoma’s seasonally adjusted unemployment rate held steady at 3.2 percent in June. Over the year, Oklahoma’s seasonally adjusted unemployment rate was down by 0.1 percentage point compared to June 2018.

In June, Latimer County and McIntosh County posted Oklahoma’s highest county unemployment rate of 6.2 percent, while Alfalfa County had the lowest county unemployment rate at 1.9 percent. Unemployment rates in June were lower than a year earlier in 70 counties, higher in five counties and unchanged in two counties.
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 increased in the last week of July, consistent with tightening labor market conditions. In the week ending July 27, the advance figure for seasonally adjusted initial claims was 215,000, an increase of 8,000 from the previous week's revised level, according to the Department of Labor (DOL). The less volatile 4-week moving average was 211,500, a decrease of 1,750 from the previous week's revised average of 213,250.

The level of initial and continued claims for jobless benefits in Oklahoma moved up in July. For the file week ending July 20, 2019, non-seasonally adjusted initial claims for unemployment insurance benefits were at a level of 1,838, down 162 from the previous week’s level of 2,000 but 147 more than the June 22nd level of 1,691. For the same file week ending, the less volatile four-week moving average was at a level of 1,918, up 37 from the previous week's average of 1,881.

For the same file week ending July 20, 2019, continued claims for unemployment insurance benefits were at a level of 15,232, one less than the previous week’s level of 15,233.
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 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 slowed in July but still remained at a solid pace, extending a decade-long expansion. Total nonfarm payroll employment increased by 164,000 in July, according to the Bureau of Labor Statistics (BLS). In July, notable job gains occurred in professional and technical services (+31,000 jobs), health care (+30,000 jobs), social assistance (+20,000 jobs), and financial activities (+18,000 jobs).

Oklahoma’s nonfarm employment added a seasonally-adjusted 2,400 jobs (0.1 percent) in June, to a level of 1,697,500 while the May estimate was revised upward to 1,695,100. Six of Oklahoma’s 11 supersectors added jobs over the month as professional & business services (+1,400 jobs) posted the largest monthly gain followed by government (+1,300 jobs). Trade, transportation & utilities (-1,400 jobs) reported the largest over-the-month job losses.

Over the year, construction (+4,900 jobs) claimed the largest job gain followed by trade, transportation & utilities (+3,600 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 gained some momentum in July, but hiring in this sector has slowed this year. In July, manufacturing added 16,000 jobs, according to the Bureau of Labor Statistics (BLS). So far this year, job growth in the industry has averaged 6,000 per month, compared with an average of 22,000 per month in 2018.

Oklahoma manufacturing employment declined for the third straight month in June, shedding a seasonally-adjusted 300 jobs (-0.2 percent) over the month. All the job losses in June occurred in durable goods manufacturing.

Over the year, statewide manufacturing employment contracted by a seasonally-adjusted 2,900 jobs (-2.1 percent). Most of the job losses also occurred in durable goods manufacturing. Non-durable goods manufacturing shed a seasonally-adjusted 300 jobs over the year.
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, 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. manufacturing activity slowed to a near three-year low in July, for the fourth consecutive monthly decline. The July PMI® registered 51.2 percent, a decrease of 0.5 percentage point from the June reading of 51.7 percent, according to the latest ISM Manufacturing Report On Business®. Nine of the 18 manufacturing industries reported growth in July, including: wood products; printing & related support activities; furniture & related products; food, beverage & tobacco products; and plastics & rubber products.

ISM’s measure for new orders received by factories rebounded 0.8 percentage points to 50.8 percent in July from a 50.0 reading in June. ISM’s gauge of factory employment dipped to 51.7 from a reading of 54.5 the previous month while the Inventories Index rose slightly to 49.5 percent, an increase of 0.4 percentage point from the June reading of 49.1 percent. ISM’s measure of production fell 3.3 percentage points to a reading of 50.8 percent from the previous month’s reading of 54.1 percent.
The Creighton University Mid-America Business Conditions Index, a leading economic indicator for a nine-state region stretching from North Dakota to Arkansas, dropped to a still solid reading signaling positive but slower 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, dropped to 52.0 in July, from a reading of 55.4 in June.

“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 remained above growth-neutral 50.0 in July. The overall index from a monthly survey of supply managers for July dropped to 52.8 last month from June’s 54.9. Index components were new orders at 53.2, production or sales at 52.1, delivery lead time at 54.3, inventories at 47.7 and employment at 56.8.
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
The U.S. Energy Information Administration (EIA) reported that U.S. crude oil production in each of the first five months of 2019 showed increases over their 2018 levels, with April 2019 establishing a new monthly record. Production grew the most in the Permian region and the U.S. Federal Gulf of Mexico (GOM). The EIA initially expected the decline in crude oil prices between October and December 2018 to slow U.S. crude oil production growth for the first half of 2019. However, several factors have contributed to increases in the U.S. production forecast. First, crude oil prices began rising in early 2019, partially offsetting the price drop seen at the end of 2018. In addition, crude oil prices in Midland, Texas (which reflect crude oil prices in the Permian region), rose faster than the U.S. benchmark West Texas Intermediate (WTI), which is priced in Cushing, Oklahoma (a major storage and distribution hub). As a result, the price spread between Midland and Cushing narrowed, allowing producers in the Permian region to receive relatively better prices. Several projects have also come online in the GOM this year, boosting production. The EIA forecasts U.S. production will grow through 2020, but anticipates growth will slow in 2020 as crude oil prices flatten.

Oklahoma saw another record crude production level for the second month in a row in May. Oklahoma field production of crude oil in May was at a level of 18,689,000 barrels (bbl), 233,000 bbl (1.3 percent) more than the downwardly-revised April production level of 18,456,000 bbl. WTI-Cushing spot crude prices averaged $57.36 per barrel (b) in July, up $2.70/b (4.9 percent) from the June average of $54.66/b but $13.62/b below the July 2018 average.

The number of rigs drilling for oil and natural gas in the U.S. was down eight (8) for the week ending July 26, 2019, for a total count of 946 rigs, according to Houston oilfield services company Baker Hughes Inc. Of that total, 776 rigs (82.0 percent) drilled for oil while 169 (17.9 percent) explored for natural gas. Compared to a year ago, the nation’s rig count was 102 less than the 1,048 rigs reported on July 27, 2018.

Oklahoma’s active rig count continued to decline in July, reaching a two-and-a-half-year low. For the week ending July 26, 2019, the statewide active rig count shed two (2) rigs for a total of 93 rigs, according to Baker Hughes. It was the lowest weekly rig count since 91 rigs were active for the week ended January 20, 2017. Oil-directed rigs accounted for 87 active rigs (94 percent) of total rig activity. Over the year, Oklahoma’s rig count was down 44 (-32.1 percent) from 137 rigs reported on July 27, 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. marketed 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**

The U.S. Energy Information Administration (EIA) reported that in May 2019, for the 25th consecutive month, U.S. dry natural gas production increased year to year for the month. The preliminary level for dry natural gas production in May 2019 was 2,786 billion cubic feet (Bcf), or 89.9 Bcf/d. This level was 8.5 Bcf/d (10.5 percent) higher than the May 2018 level of 81.3 Bcf/d.

Statewide natural gas production reached a record level in May. Oklahoma natural gas gross withdrawals were at a level of 270,769 million cubic feet (MMcf) in May, up 7,868 MMcf (3.0 percent) more than April’s upwardly-revised level of 262,901 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 about $2.37/million British thermal units (MMBtu) in July, down 3 cents/MMBtu (-1.2 percent) from June’s average of $2.40/MMBtu, according to the EIA.

According to oilfield services company Baker Hughes, for the week ending Friday, July 26, the U.S. natural gas rig count was at 169 rigs, five (5) less than the previous week and 17 less than a year ago.

Oklahoma’s natural gas-directed drilling rig count held steady at six (6) units for the week ending July 26, 2019, unchanged from the previous week. Over the year, the number of statewide rotary rigs exploring for natural gas was down two (2) from eight (8) reported for the week ended July 27, 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, dipped to the lowest level in two years in June. Privately-owned housing units authorized by building permits in June were at a seasonally adjusted annual rate of 1,220,000, 6.1 percent below the revised May rate of 1,299,000, and 6.6 percent below the June 2018 rate of 1,306,000, according to the U.S. Census Bureau.

Permits to build single-family homes rose 0.4 percent to a rate of 813,000 units in June, while permits for the construction of apartments plunged 16.8 percent to a pace of 407,000 units.

Confidence among homebuilders increased in July according to the National Association of Home Builders/Wells Fargo Housing Market Index which climbed to a reading of 65, up from 64 in June.
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 the third consecutive month in June. Total residential permitting fell to a seasonally-adjusted level of 816 in June, down 18 permits (-2.1 percent) from the downwardly-revised April level of 834, but 20 permits (2.5 percent) more than the June 2018 estimate of 796 permits, according to figures from the U.S. Census Bureau and the Federal Reserve Bank of St. Louis.

In June, permits for single-family homes were at a seasonally-adjusted level of 732, down 90 permits (-10.9 percent) from the downwardly-revised level of 822 permits in May. Multi-family permitting rebounded to a seasonally-adjusted level of 84 units in June, an increase of 72 permits (607.7 percent) from the upwardly-revised level of 12 in the previous month. Single-family permitting accounted for 89.7 percent of total residential permitting activity in June while the more volatile multi-family permitting accounted for only 10.3 percent.

For the first half of 2019, statewide residential permitting was at a level of 5,573 permits issued, which is 325 (6.2 percent) more compared to 5,247 permits issued during the first six 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. consumer spending and prices rose moderately in June, while incomes turned in a solid gain for the fourth straight month. Personal income increased $83.6 billion (0.4 percent) in June according to estimates by the Bureau of Economic Analysis (BEA). Disposable personal income increased $69.7 billion (0.4 percent) and personal consumption expenditures (PCE) increased $41.0 billion (0.3 percent). May’s PCE change was revised upward to 0.5 percent from the previous 0.4 percent estimate.

In June, outlays on durable goods such as motor vehicles rose a modest 0.4 percent following a robust 1.5 percent pace in the previous month. Purchases of nondurable goods such as food and clothing increased 0.2 percent while outlays on services, such as utilities and doctor visits rose 0.3 percent.

Core inflation, which excludes the volatile food and energy categories, rose 1.4 percent in June, well below the Federal Reserve’s 2.0 percent inflation target.

The personal saving rate, personal saving as a percentage of disposable personal income, rose to 8.1 percent of after-tax incomes in June, reflecting annual revisions by the BEA.
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 rose at a solid pace in June, as households stepped up purchases of motor vehicles and other discretionary spending items. Advance estimates of U.S. retail and food services sales for June 2019, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were $519.9 billion, an increase of 0.4 percent from the previous month, and 3.4 percent above June 2018, according to the U.S. Census Bureau. The April 2019 to May 2019 percent change was revised downward from 0.5 percent to 0.4 percent.

Sales rose 0.7 percent at auto dealers in June following a similar gain in May. Sales at service stations fell 2.8 percent, reflecting lower pump prices. Excluding the volatile auto and gas categories, sales increased 0.7 percent in June.

Internet sales jumped 1.7 percent in June. Sales at restaurants and bars climbed 0.9 percent, a positive sign because such spending is more discretionary than purchases at grocery stores or gas stations. Sales at building material stores rebounded 0.5 percent after dropping 1.5 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 jumped 0.7 percent in June after an upwardly revised 0.6 percent increase in May.
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 fell in June, brought down by plunging gasoline sales. Total adjusted retail trade for June was at a level of $3.36 billion, a 5.8 percent decline from the upwardly revised May level of $3.57 billion. Over the year, total adjusted retail sales was 1.5 percent less than the June 2018 level of $3.42 billion. Excluding estimated gasoline sales, total retail sales for June grew 0.19 percent over the month.

Total durable goods sales slipped 0.2 percent in June. Sales at electronics & music stores dropped 2.9 percent, while furniture declined 0.3 percent and auto accessories & repair slipped 0.24 percent. Advancing categories were lumber & hardware (0.6 percent); miscellaneous durable goods (0.2 percent); and used merchandise (0.5 percent).

Non-durable goods purchases plunged 7.5 percent in June as lower pump prices pulled the volatile estimated gasoline sales down 41.8 percent over the month. Other declining non-durable goods categories in June were liquor stores (-4.2 percent) and apparel (-0.9 percent). Improving non-durable goods categories included general merchandise stores (0.8 percent); eating & drinking places (0.3 percent); food stores (0.3 percent); drug stores (0.6 percent); and miscellaneous non-durable goods (0.2 percent).
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