May 2022

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From June 2021 to September 2021, gross job gains from opening and expanding private-sector establishments in Oklahoma totaled 88,311, an increase of 7,040 jobs from the previous quarter. Over this period, gross job losses from closing and contracting private-sector establishments numbered 87,915, an increase of 12,807 jobs from the previous quarter, according to the Oklahoma Employment Security Commission, Economic Research and Analysis Division, and the U.S. Bureau of Labor Statistics, (see Chart 1, below and Table 1, page 7). The difference between the number of gross job gains and the number of gross job losses yielded a net employment gain of 396 jobs in Oklahoma’s private sector during the 3rd quarter of 2021.

Chart 1

[Graph showing gross job gains and gross job losses in Oklahoma from March 2011 to September 2021, seasonally adjusted.

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

Gross job losses in Oklahoma the 2nd quarter of 2020 (152,932) were at the highest level since BED record keeping began in 1992, eclipsing the previous high set in the 1st quarter of 2009, towards the end of the ‘Great Recession’, when 101,545 jobs were lost.
Gross job gains are the sum of increases in employment due to expansions at existing establishments and the addition of new jobs at opening establishments. Gross job gains at expanding establishments in Oklahoma totaled 69,854 in the 3rd quarter of 2021, an increase of 5,972 jobs compared to the previous quarter. Opening establishments accounted for 18,457 of the jobs gained in the 3rd quarter of 2021, an increase of 1,068 jobs from the previous quarter, (see Chart 2, above).

Gross job losses are the result of contractions in employment at existing establishments and the loss of jobs at closing establishments. Contracting establishments in Oklahoma lost 61,027 jobs in the 3rd quarter of 2021, a decrease of 1,243 jobs from the prior quarter. In the 3rd quarter, closing establishments lost 26,888 jobs, an increase of 14,050 jobs from the previous quarter.

Establishment Births and Deaths
In Oklahoma, the number of private sector establishment births, (a subset of the openings data), increased by 203, for a total of 3,504 establishments in the 3rd quarter of 2021. These new establishments accounted for 12,902 jobs, an increase of 1,149 jobs from the previous quarter, (see Chart 3, next page).

Data for establishment deaths, (a subset of the closings data), are now available through the 4th quarter of 2020, when 8,796 jobs were lost at 2,258 establishments, a decrease of 981 jobs from the 3rd quarter of 2020, (see Chart 3, next page).
Gross Job Gains and Gross Job Losses: Percent of Total Private Sector Employment

In the 3rd quarter of 2021, gross job gains represented 7.1 percent of private-sector employment in Oklahoma with expansions accounting for 5.6 percent of total private sector employment and openings contributing 1.5 percent. Nationally, gross job gains accounted for 7.2 percent of private sector employment in the 3rd quarter of 2021. With few exceptions, Oklahoma’s rates of gross job gains have generally tracked with the U.S. rates. However, beginning in the 1st quarter of 2015, the rate of Oklahoma’s gross job gains slipped below the national rate for seven consecutive quarters, exceeded the U.S. rate in the following nine quarters but has lagged behind the U.S. rate in seven out of the past 11 quarters, (see Chart 4, next page).

In the 3rd quarter of 2021, gross job losses represented 7.0 percent of private-sector employment in Oklahoma, with contractions accounting for 4.9 percent and closings adding another 2.1 percent. The national rate of gross job losses was 6.2 percent in the 3rd quarter of 2021. From the 3rd quarter 2013 forward, Oklahoma’s rate of gross job losses has shown more volatility especially the period beginning 1st quarter 2015 through 1st quarter 2017, then began to track more with national trends from the 4th quarter of 2017 forward (see Chart 5, next page).
Chart 4
Private sector gross job gains as a percent of employment, United States and Oklahoma
March 2011 - September 2021, seasonally adjusted

Chart 5
Private sector gross job losses as a percent of employment, United States and Oklahoma
March 2011 - September 2021, seasonally adjusted

Source: U.S. Bureau of Labor Statistics
Note: Shaded area represents NBER defined recession periods.
Gross Job Gains and Gross Job Losses by Industry: 3rd Quarter 2021

Gross job gains exceeded gross job losses in six of Oklahoma’s 11 reported industries in the 3rd quarter of 2021. Oklahoma’s service-providing industries experienced a net job increase of 3,216 jobs in the 3rd quarter. This was the result of 72,691 gross job gains and 69,475 gross job losses. Within service-providing industries, the leisure and hospitality sector had the largest over-the-quarter net job increase, gaining 1,091 jobs, followed by the transportation and warehousing sector with a net increase of 928 jobs in the 3rd quarter. The education and health services sector reported the largest over-the-quarter net job loss of 510 jobs in the 2nd quarter of 2021.

Goods-producing industries reported a net job decrease of 2,829 jobs in the 3rd quarter of 2021. Within goods-producing industries, the construction sector reported the largest net job loss of 2,533 jobs. The manufacturing sector had a net job decrease of 296 jobs in the 3rd quarter of 2021, (see Chart 6 below).

Chart 6:

Private sector net change in jobs by industry, Oklahoma
June 2021, seasonally adjusted

Source: U.S. Department of Labor, Bureau of Labor Statistics
### Table 1. Oklahoma: Three-month private sector gross job gains and losses, seasonally adjusted

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<thead>
<tr>
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<th>3 months ended</th>
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<tbody>
<tr>
<td></td>
<td>Sep 2020</td>
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<tr>
<td><strong>Levels</strong></td>
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<tr>
<td>Gross job gains</td>
<td>86,685</td>
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<td>Net employment change¹</td>
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<td></td>
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<td><strong>Rates (percent)</strong></td>
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<tr>
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<td>Closing establishments</td>
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<tr>
<td>Net employment change¹</td>
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Source: U.S Bureau of Labor Statistics

¹Net employment change is the difference between total gross job gains and total gross job losses.

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**More Information**

A copy of the full 3rd quarter 2021 Oklahoma BED report along with technical notes and detailed tables is available on the OESC website at: [Business Employment Dynamics-3rd Quarter 2021 (oklahoma.gov)](http://www.bls.gov/bdm)

Additional information about the Business Employment Dynamics program is available online at: [http://www.bls.gov/bdm](http://www.bls.gov/bdm)
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. Each revision is based on more complete economic data.

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 unexpectedly contracted in the 1st quarter, driven by a wider trade deficit as imports surged, and a slowdown in the pace of inventory accumulation. Real gross domestic product (GDP) decreased at an annual rate of 1.4 percent in the 1st quarter of 2022, according to the "advance" estimate released by the Bureau of Economic Analysis (BEA). In the 4th quarter, real GDP increased 6.9 percent.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, picked up to a rate of 2.7 percent from the 4th-quarter's 2.5 percent pace. Outlays on durable goods, such as automobiles, jumped 4.1 percent, following a 2.5 percent rate in the previous quarter. Spending on nondurable goods, such as clothing, declined 2.5 percent, after a 0.4 percent gain in the 4th quarter. Outlays on services, from health care to airline tickets, gained 4.3, after advancing 3.3 percent previously. Personal consumption expenditures (PCE) added 1.83 percentage points to 1st quarter GDP growth, after contributing 1.76 percentage points in the 4th quarter.

Business investment climbed 9.2 percent in the 1st quarter, led by spending on equipment. Outlays on equipment jumped 15.3 percent in the 1st quarter, led by spending on information processing and related equipment. Spending on intellectual property products, such as computer software, grew at an 8.1 percent rate. Spending on structures, which are tied to the oil and gas sector and commercial real estate, decreased 0.9 percent. Nonresidential fixed investment added 1.17 percentage point to 1st quarter GDP, up from 0.40 percentage point reported in the 4th quarter.

Businesses stockpiled inventories, but at a slower pace in the 1st quarter, reflecting decreases in wholesale (led by motor vehicles) and retail (led by “other” retailers). Inventories increased at a $158.7 billion annual rate in the 1st quarter, following a $193.2 billion rate in the 4th quarter. The decline in private inventories subtracted 0.84 percentage point from GDP growth in the 1st quarter, after adding 5.32 percentage points in the previous quarter.

Housing construction held steady in the 1st quarter, increasing at a 2.1 percent rate. Residential fixed investment added 0.10 percentage point to 1st quarter GDP, the same as the 4th quarter.

Imports surged 17.7 percent in the 1st quarter, in part because of front-loading by businesses fearful of shortages due to the Russia-Ukraine war. At the same time, exports plunged 5.9 percent. The sharp widening of the trade deficit subtracted 3.20 percentage point from 1st quarter GDP.

Government consumption expenditures declined again in the 1st quarter, reflecting decreases in government pandemic assistance payments. Federal government spending dipped 5.9 percent in the 1st quarter, as national defense spending plunged 8.5 percent, while nondefense spending declined 2.2 percent. Consumption outlays by state and local governments decreased 0.8 percent in the 1st quarter. Government consumption expenditures and investment subtracted 0.48 percentage point from 1st quarter GDP.
Definition & Importance
The U.S. Bureau of Economic Analysis (BEA) recently began producing statistics of quarterly gross domestic product (GDP) by state dating back to 2005. 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
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 47 states, including Oklahoma, and the District of Columbia in the 4th quarter of 2021, as real GDP for the nation increased at an annual rate of 6.9 percent, according to the Bureau of Economic Analysis (BEA). The percent change in real GDP in the 4th quarter ranged from 10.1 percent in Texas to –2.3 percent in Iowa.

Oklahoma’s real GDP accelerated to an 8.1 percent rate in the 4th quarter of 2021, following a 1.3 percent pace in the 3rd quarter, ranking Oklahoma 7th among all other states and the District of Columbia. Statewide GDP was at a level of $198.8 billion (in constant 2012 dollars) in the 4th quarter, up $3.8 billion from the 3rd quarter level of $195.0 billion.
Information services increased 20.1 percent nationally and contributed increases in all 50 states and the District of Columbia. This industry was the leading contributor to the increases in five states including California and Washington, the states with the fourth and fifth largest increases. Information added 0.44 percentage point to Oklahoma’s GDP in the 4th quarter.

Professional, scientific, and technical services increased 12.3 percent nationally and contributed increases in 49 states and the District of Columbia. This industry was the leading contributor to the increase in six states, including Texas, and the District of Columbia. In Oklahoma, professional, scientific, and technical services contributed 0.29 percentage point to 4th quarter GDP.

Real estate and rental and leasing increased 7.1 percent nationally and contributed increases in all 50 states and the District of Columbia. This industry was the leading contributor to the increases in eight states including Tennessee and Oregon, the states with the 2nd and 3rd largest increases. In Oklahoma, real estate and rental and leasing added 0.69 percentage point to the state’s GDP in 4th quarter.

Mining, quarrying, and oil and gas extraction increased 12.0 percent nationally and was the leading contributor to increases in Oklahoma and Wyoming in the 4th quarter. In Oklahoma, mining, quarrying, and oil and gas extraction added 1.77 percentage points to GDP.

Construction decreased 9.4 percent nationally and contributed to decreases in all 50 states and the District of Columbia. This industry was the leading contributor to decreases in 31 states including Oklahoma, where construction shaved 0.25 percentage point from 4th quarter GDP.

Agriculture, forestry, fishing, and hunting was the leading contributor to decreases in real GDP in Iowa, North Dakota, and Nebraska. In Oklahoma, agriculture, forestry, fishing, and hunting subtracted 0.23 percentage point to the state’s GDP in 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 71.8 percent of total state GDP in 2019.

Current Developments

Real gross domestic product (GDP) declined in 351 out of 384 metropolitan areas in 2020, according to the U.S. Bureau of Economic Analysis (BEA). The percent change in real GDP by metropolitan area ranged from 5.2 percent in Sierra Vista-Douglas, AZ to -20.4 percent in Kahului-Wailuku-Lahaina, HI. Real GDP for U.S. metropolitan areas decreased 3.5 percent in 2020, as every major industry group, (with the exception of information and finance, insurance, real estate, rental, and leasing), saw declines over the year.

In 2020, none of Oklahoma’s four metropolitan areas experienced positive GDP growth. Enid MSA’s GDP fell 5.0 percent in 2020 to a level of $2.99 billion, ranking it 306th among 384 metro areas. Lawton MSA GDP declined 2.0 percent in 2020 to a level of $4.55 billion, and ranked 134th among U.S. metro areas. Oklahoma City MSA dropped 5.4 percent to $77.3 billion and ranked 333rd, lifted by professional, scientific, and technical services. Tulsa MSA’s GDP fell 5.0 percent to a level of $51.9 and ranked 309th in 2020, boosted by mining, quarrying, and oil and gas extraction.
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 February 2020. Forty-nine state coincident indexes, including Oklahoma's, were projected to grow over the next six months, while one was expected to decrease. For comparison purposes, the Philadelphia Fed has also developed a similar leading index for its U.S. coincident index, which is projected to grow 1.7 percent over the next six months.

Oklahoma’s leading index rose for a third straight month in February to a level of 1.79 percent.

The Philadelphia Fed noted that the February 2020 release of the state leading indexes was based on data from the time period largely unaffected by the COVID-19 outbreak. Given the extreme impact on initial unemployment claims in recent weeks, their standard approach for estimating the six-month change in coincident indexes may not be reliable in coming months. Therefore, they expect to suspend the release of upcoming state leading indexes until further notice.
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 April, just shy of the half century low reached two years ago. The unemployment rate remained at 3.6 percent in April, and the number of unemployed persons was essentially unchanged, according to the Bureau of Labor Statistics (BLS). The BLS noted that these measures are little different from their values in February 2020 (3.5 percent and 5.7 million, respectively), prior to the coronavirus (COVID-19) pandemic.

Oklahoma’s seasonally adjusted unemployment rate was unchanged at 2.7 percent in April. Over the year, Oklahoma’s seasonally adjusted unemployment rate was 1.8 percentage points lower than April 2021.

In March, Latimer County posted Oklahoma’s highest county unemployment rate of 6.4 percent, while Cimarron County had the lowest county unemployment rate of 1.5 percent. Unemployment rates in March were lower than a year earlier in all of Oklahoma’s 77 counties.
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 145,000 businesses and government agencies representing approximately 697,000 worksites throughout the United States. The CES program has provided estimates of employment, hours, and earnings data by industry for the nation as a whole, all States, and most major metropolitan areas since 1939. In order to account for the size disparity between of U.S. and Oklahoma employment levels, we have indexed the data with January 2001 as the start value.

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

Current Developments
U.S. employers extended a solid streak of hiring in April, despite the highest inflation in 40 years, supply shortages, and higher borrowing costs. Total nonfarm payroll employment increased by 428,000 in April, according to the Bureau of Labor Statistics (BLS). Job growth was widespread over the month, led by gains in leisure and hospitality (78,000 jobs), in manufacturing (55,000 jobs), and in transportation and warehousing (52,000 jobs). However, BLS noted that nonfarm employment is down by 1.2 million, or 0.8 percent, from its pre-pandemic level in February 2020.

Oklahoma’s seasonally adjusted nonfarm employment added 1,100 jobs (0.1 percent) in April, to a level of 1,676,800 while March’s estimate was upwardly revised to 1,675,700. In April, five of Oklahoma’s supersectors added jobs as professional and business services (2,600 jobs) posted the largest monthly gain followed by government (1,100 jobs). Trade, transportation, and utilities (-1,200 jobs) followed by manufacturing (-800 jobs) posted the largest over-the-month job losses in April.
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 nonfarm employment added jobs in 2021, following a dip in 2020 as business closures due to the COVID-19 pandemic pulled employment down. Total nonfarm employment added a non-seasonally adjusted 14,900 jobs (0.9 percent) in 2021. For comparison, 77,500 jobs were lost for a 4.5 percent decline in the previous year.

In 2021, six of 11 of Oklahoma’s supersectors reported job gains. Leisure and hospitality saw the largest job gain adding 8,500 jobs (5.4 percent), as accommodation and food services accounted for the bulk of the job gains (7,700 jobs). Trade, transportation, and utilities shed a non-seasonally adjusted 8,300 jobs (2.7 percent), as retail trade added 4,900 jobs over the year. Professional and business services employment grew by 5,000 jobs (6.3 percent) as employment services gained 4,200 jobs. Other sectors adding jobs were financial activities (-1,300 jobs), and education and health services (1,100 jobs).

Mining and logging shed 4,000 jobs (-12.7 percent) during the 2020-2021 period as support activities for mining lost 2,500 jobs. Manufacturing employment declined by 2,400 jobs (-1.8 percent) with durable goods manufacturing accounting for all the job losses. Construction dropped 1,700 jobs (-2.2 percent). Government employment declined by 1,100 jobs (-0.3 percent, while information shed 500 jobs.
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. According to the 2020 County Business Patterns, the manufacturing sector was the 5th-largest employer, employing 12.0 million workers in the United States—and the top 10 average annual employee payroll at $61,653. 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 added jobs again in April, as factories hired the most since last July. Manufacturing added 55,000 jobs in April, according to the Bureau of Labor Statistics (BLS). Employment in durable goods industries rose by 31,000 jobs in April, with gains in transportation equipment (+14,000 jobs) and machinery (+7,000 jobs). Nondurable goods manufacturing added 24,000 jobs, with job growth in food manufacturing (+8,000 jobs) and plastics and rubber products (+6,000 jobs).

Oklahoma manufacturing employment shed a seasonally adjusted 800 jobs (-0.6 percent) over the month in April to a level of 131,600. In April, durable goods manufacturing lost 500 jobs (-0.6 percent) while non-durable goods manufacturing lost 300 jobs (-0.7 percent).

Over the year, statewide manufacturing employment added a seasonally adjusted 2,900 jobs (2.3 percent) from April 2021, as non-durable goods manufacturing gained 1,500 jobs (3.4 percent) and durable goods manufacturing added 1,400 jobs (1.7 percent).
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
A measure of U.S. factory activity fell again in April to a 20-month low, as new orders and production edged lower. The April Manufacturing PMI® registered 55.4 percent, a decrease of 1.7 percentage points from the March reading of 57.1 percent, according to the latest ISM Manufacturing Report On Business®.

In April, the index of new orders slipped 0.3 percentage point to 53.5 percent, while the production index declined 0.9 percentage point to 53.6 percent. Labor shortages worsened in April as factory hiring dropped a sharp 5.4 points, with the gauge of employment falling to a reading of 50.9. Prices eased in April as the Prices Index registered 84.6 percent in, down 2.5 percentage points compared to the March reading of 87.1 percent.
The Creighton University Mid-America Business Conditions Index, a leading economic indicator for the nine-state region stretching from Minnesota to Arkansas, rose above growth neutral for the 23rd straight month. The April Business Conditions Index, which uses the identical methodology as the national ISM and ranges between 0 and 100 with 50.0 representing growth neutral, sank to a still healthy 65.9 from March’s very strong 71.3.

“Creighton’s monthly survey results indicate the region continues to add manufacturing activity at a healthy pace but with significant inflationary pressures. Supply chain disruptions and labor shortages remain as chief challenges for firms in the region,” 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 dropped in April but remained in a range indicating healthy growth with a reading of 65.8 from 69.7 in April. Components of the overall April index were: new orders at 70.1, production or sales at 63.6, delivery lead time at 71.9, inventories at 61.5 and employment at 62.5. Both durable and non-durable goods producers have expanded for 2022. Over the past 12 months, BLS reported that Oklahoma average hourly manufacturing wages expanded by 4.2 percent, below the regional median of 6.4 percent.
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 set in the domestic spot market at Cushing, Oklahoma.

Background
The discovery of oil transformed Oklahoma's economy. By the time Oklahoma became a state in 1907, it was the largest oil producer in the nation. Excluding federal offshore areas, Oklahoma was the 4th-largest crude oil producer among the states in 2020, accounting for nearly 5 percent of the nation's crude oil production (at 211,808,000 barrels). Crude oil wells and gathering pipeline systems are concentrated in central Oklahoma. One of the 100 largest oil fields in the United States, the Sho-Vel-Tum field, is in Oklahoma and has continuously produced crude oil since its discovery in 1905.

The city of Cushing, in central Oklahoma, is a major crude oil trading hub connecting Gulf Coast producers to Midwest refining markets and is home to about 14 percent of the nation’s commercial crude oil storage capacity. 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 2020, Oklahoma had 5 operable petroleum refineries with a combined daily processing capacity of almost 523,000 barrels per calendar day, nearly 3 percent of the total U.S. capacity.

**Current Developments**

The U.S. Energy Information Administration (EIA) noted that the May *Short-Term Energy Outlook* (STEO), was subject to heightened levels of uncertainty resulting from a variety of factors, including Russia’s full-scale invasion of Ukraine. Major factors driving energy supply uncertainty include how sanctions affect Russia’s oil production, the production decisions of OPEC+, and the rate at which U.S. oil and natural gas producers increase drilling. International benchmark Brent crude oil spot price averaged $105 per barrel (bbl) in April, a $13/bbl decrease from March, but above $100/bbl following Russia’s full-scale invasion of Ukraine. EIA expects the Brent price will average $107/bbl in 2nd quarter 2022 and $103/b in the 2nd half of 2022, and falling to $97/bbl in 2023.

U.S. crude oil production in the EIA’s forecast averages 11.9 million bbl/d in 2022, up 0.7 million bbl/d from 2021. EIA forecasts that production will increase to more than 12.8 million bbl/d in 2023, surpassing the previous annual average record of 12.3 million bbl/d set in 2019.

Crude production in Oklahoma plunged over the month in February—the most recently reported monthly data point. Statewide field production of crude oil was at a preliminary level of 10,793,000 bbl in February, 1,458,000 bbl (-11.9 percent) less than the upwardly revised January level of 12,251,000 bbl, according to data reported by the EIA. Compared to a year ago, Oklahoma crude production was up 1,972,000 bbl (22.4 percent) from the February 2021 production level of 8,821,000 bbl.

West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, averaged $101.78/bbl in April, down $6.72/bbl from the March average of $108.50/bbl. Rising crude oil prices have contributed to an increasing number of active oil rigs and rising crude oil production.

According to oil field services company Baker Hughes, oil-directed rig activity in the United States, which reflect crude oil drilling, was up 3 at 552 for the week ending April 29, while the nation’s total rig count was also up 3 to a level of 698. Compared to a year ago, the nation’s total rig count was 258 more than 440 rigs reported on April 30, 2021.

For the week ending April 29, the state’s active rig count held steady over the week at a total of 51, and up 2 rigs from a month earlier, according to Baker Hughes. Oil-directed rigs accounted for 98 percent of total rig activity in the month of March. Oklahoma’s active rig count was up 30 from 21 active rigs reported operating on April 30, 2021.
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's proved natural gas reserves are the 3rd-largest in the nation, after Texas and Pennsylvania. The state has 8 percent of the nation's total proved reserves and contains all or part of 14 of the 100 largest U.S. natural gas fields, as measured by proved reserves. Annual natural gas production was at an all-time high of almost 3.2 trillion cubic feet in 2019.

Most natural gas in Oklahoma is consumed by the electricity generation and industrial sectors. About half of Oklahoma households use natural gas as their primary energy source for home heating. Nevertheless, only about one-seventh of Oklahoma’s natural gas output is consumed within the state. The remaining supply is sent via pipeline to northern and eastern markets through Kansas, Texas, and Arkansas.
Current Developments

In the May Short-Term Energy Outlook (STEO), the U.S. Energy Information Administration (EIA) expects the Henry Hub price to average $7.83/MMBtu in 2nd quarter 2022 and average $8.59/MMBtu in the 2nd half of 2022. High forecast natural gas prices reflect EIA’s expectation that natural gas storage levels will remain less than the five-year (2017–2021) average this summer. Lower-than-average storage levels partly result from limited opportunities for natural gas-to-coal switching for power generation, which EIA forecasts will keep the demand for natural gas for power generation high despite high prices. Natural gas prices could rise significantly above forecast levels if summer temperatures are hotter than assumed in this forecast and electricity demand is higher. EIA expects the Henry Hub spot price will average $4.74/MMBtu in 2023. The forecast drop in prices for 2023 reflects EIA’s expectation that the rate of natural gas production will increase next year while LNG export and demand growth slow, contributing to higher storage levels in 2023 than in 2022.

Oklahoma natural gas production plummeted over the month in February. Statewide natural gas gross withdrawals were at a preliminary level of 193,546 million cubic feet (MMcf) in February, down 19,753 MMcf (-9.3 percent) from the downwardly revised January level of 213,299 MMcf. Over the year, statewide natural gas production was up 30,452 MMcf (18.7 percent) from the February 2021 level of 163,094 MMcf.

In April, the Henry Hub natural gas spot price averaged $6.59 per million British thermal units (MMBtu), which was up from the March average of $4.90/MMBtu and higher than the April 2021 average of $2.66/MMBtu.

According to Baker Hughes, for the week ending April 29, the national natural gas rig count held steady at 144 over the week and up 48 rigs over the year.

Oklahoma drillers reported one active natural gas-directed rig for the week ending April 29, according to Baker Hughes.
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 outsized impact on the economy. Each home built creates an average of three jobs for a year and about $130,000 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. applications to build, a sign of future residential construction activity, tumbled to a five-month low in April, suggesting the housing market may be slowing amid soaring prices, shortages of materials, and rising mortgage rates. Privately-owned housing units authorized by building permits in April were at a seasonally adjusted annual rate of 1,819,000, 3.2 percent below the revised March rate of 1,879,000, but 3.1 percent above the April 2021 rate of 1,765,000, according to the U.S. Census Bureau and the U.S. Department of Housing and Urban Development.

Permits for single-family homes plunged 4.6 percent to a rate of 1.11 million units in April. Building permits for multi-family housing projects declined 0.6 percent to a rate of 656,000 units.

Builder confidence dropped to the lowest level in nearly two years in May. The National Association of Home Builders/Wells Fargo Housing Market Index (HMI) dropped to 69 in May following a reading of 77 in April.
Definition & Importance

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

Current Developments

Oklahoma home builders requested fewer applications for new residential construction in April, as permits for single family homes fell to the lowest level in two years. Total residential permitting in April was at a seasonally adjusted level of 1,171, down 70 (-5.7 percent) from the March level of 1,241, and down 208 (-15.1 percent) from the April 2021 level of 1,379 permits, according to figures from the U.S. Census Bureau and the Federal Reserve Bank of St. Louis.

In April, permitting for single family homes was at a level of 1,030 units, down 118 (-10.3 percent), from the downwardly revised level of 1,148 in March. Multi-family permitting was at a seasonally adjusted level of 141 in April, up 47 (50.6 percent), from the previous month’s level of 94 permits. Single-family permitting accounted for 88 percent of total residential permitting activity in April while the more volatile multi-family permitting accounted for 12 percent.

Statewide residential construction in 2021 rose to the highest level since 2006. Oklahoma total residential permitting for 2021 was at a revised seasonally adjusted level of 15,199 permits. This is 1,518 permits (11.1 percent) more than the 13,682 total permits issued during 2020.


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 rose in March, while personal income gains are being eroded by surging inflation. Personal income increased $107.2 billion (0.5 percent) in March, according to estimates released the Bureau of Economic Analysis (BEA). Disposable personal income (DPI) increased $89.7 billion (0.5 percent) and personal consumption expenditures (PCE) increased $185.0 billion (1.1 percent). Real DPI decreased 0.4 percent in March and Real PCE increased 0.2 percent; goods The PCE price index increased 0.9 percent. Excluding food and energy, the PCE price index increased 0.3 percent. The core PCE price index jumped 5.2 percent year-on-year in March, after accelerating 5.3 percent in February.

In March, spending on services such as dining out and hotel stays increased 1.1 percent. Purchases of goods increased 1.2 percent, mostly reflecting gasoline and other energy products, as well as food. Spending on durable goods such as motor vehicles, slipped 1.0 percent.

With inflation wiping out the compensation gains, consumers are tapping into savings to fund their spending. The personal savings rate—personal saving as a percentage of disposable personal income—dropped to 6.2 percent in March, the lowest since December 2013, from 6.8 percent in February.
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—a measure of nationwide income calculated as the sum of personal income of all states and the District of Columbia—increased 2.4 percent at an annual rate in the 4th quarter of 2021 after increasing 3.0 percent in the 3rd quarter, according to estimates by the Bureau of Economic Analysis (BEA). The percent change in personal income across all states ranged from 9.2 percent in Texas to −8.7 percent in North Dakota.

Oklahoma's personal income increased at an 8.2 percent rate in the 4th quarter of 2021, to a level of $211.3 billion, ranking the state 3rd among all states. For the 3rd quarter of 2021, Oklahoma’s personal income was revised downward to $207.2 billion (0.2 percent) from the previous estimate of $209.1 billion (1.2 percent).

Increases in earnings in mining were the leading contributor to increases in personal income in Texas and Oklahoma, the states with the largest and third largest increase in personal income in the 4th quarter of 2021.

Farm earnings was the leading contributor to decreases in personal income in North Dakota and four other states including South Dakota, Iowa, Nebraska, and Kansas. The decrease in farm earnings followed decreases in payments to farmers from the Coronavirus Food Assistance Program and the Paycheck Protection Program. In Oklahoma, farm earnings subtracted 1.26 percentage points from total earnings in the 4th quarter of 2021.
**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 sales rose solidly in April, as consumers bought more motor vehicles and increased spending at restaurants. Advance estimates of U.S. retail and food services sales for March 2022, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were $665.7 billion, an increase of 0.5 percent from the previous month, and 6.9 percent above March 2021, according to the U.S. Census Bureau. Total sales for the January 2022 through March 2022 period were up 12.9 percent from the same period a year ago. The January 2022 to February 2022 percent change was revised from up 0.3 percent to up 0.8 percent.

Sales at auto dealerships rebounded 2.2 percent in April, after falling 1.6 percent in March. Receipts at service stations declined 2.7 percent in April. Excluding the volatile automobile and gasoline categories, retail sales rose 1.0 percent in April.

Sales at electronics and appliance retailers (1.0 percent) and furniture stores (0.7 percent) had strong gains in April. Sales at building material, garden equipment and supplies stores dipped 0.1 percent. Sales at sporting goods, hobby, musical instrument and book stores fell 0.5 percent. Online sales jumped 2.1 percent for the month.

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 increased 1.0 percent in April, while March was revised higher increasing 1.1 percent instead of dipping 0.1 percent as previously reported.
Definition & Importance
The Center for Economic and Management Research (CEMR) Price College of Business, at the University of Oklahoma produces the Oklahoma Monthly Retail Sales Series containing monthly estimates of retail sales for Oklahoma, the Oklahoma City, Tulsa, and Lawton Metropolitan Statistical Areas and 48 selected cities in Oklahoma. The series is based on sales tax collection data provided by the Business Tax Division, Oklahoma Tax Commission (OTC). In order to take out monthly volatility, we have used a six-month moving average.

Current Developments
Statewide retail spending rose in April, as record high pump prices are swallowing a larger chunk of overall spending. Total adjusted retail trade in April was at a level of $4.42 billion, up 4.4 percent from the revised March level of $4.24 billion. Over the year, total adjusted retail trade was up 7.8 percent from the April 2021 level of $4.10 billion. Excluding estimated gasoline sales, total retail sales for April increased 0.3 percent over the month.

In April, total durable goods sales increased 0.6 percent, as four of six durable goods categories reported growing receipts over the month. Used merchandise (2.2 percent); lumber & hardware (1.7 percent); computer, electronics & music stores (0.9 percent); and auto accessories & repair (0.7 percent) reported gains over the month. Declining durable goods categories in April included furniture (-2.2 percent) and miscellaneous durable goods (-1.6 percent).

Non-durable goods expenditures grew 5.7 percent in April, as volatile estimated gasoline sales continued to climb sharply, rising 32.8 percent over the month. Other advancing non-durable goods categories were sales at food stores (0.7 percent); liquor stores (0.8 percent); eating & drinking places (0.1 percent); and general merchandise stores (0.2 percent). Apparel stores (-1.1 percent); miscellaneous non-durables (-0.4 percent); and drug stores (-0.9 percent) reported declining sales in April.
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