

# OKLAHOMA

## Economic Indicators

January 2024

# OKLAHOMA ECONOMIC INDICATORS

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## January 2024

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## SPECIAL REPORT:

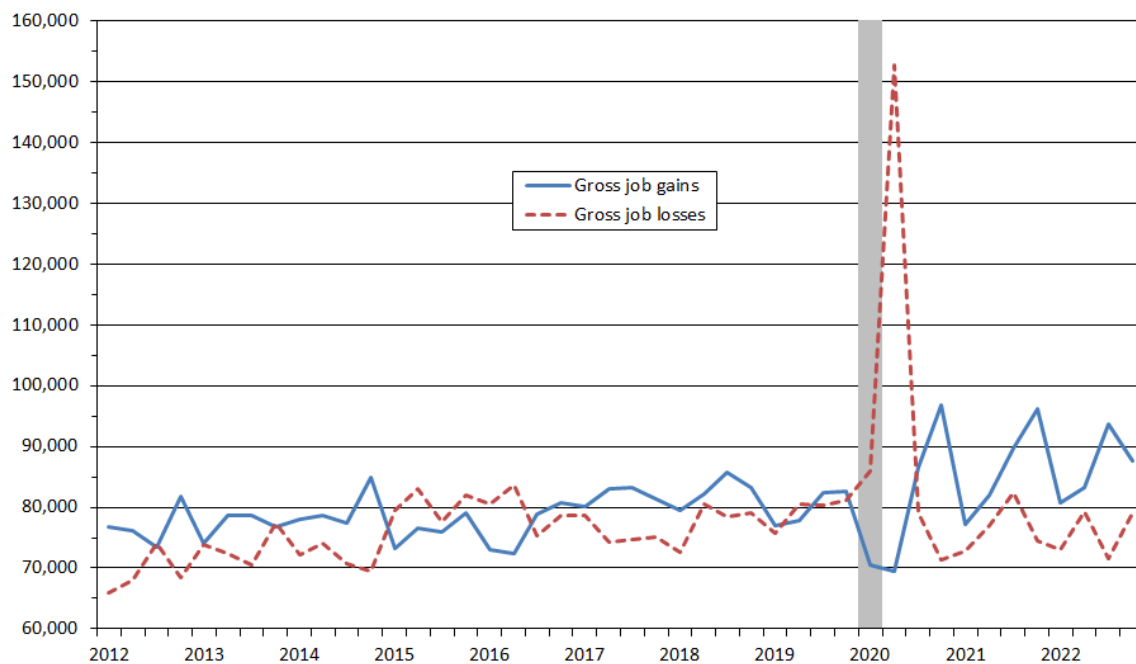
### OKLAHOMA BUSINESS EMPLOYMENT DYNAMICS: 1st Quarter 2023

#### Gross Job Gains and Gross Job Losses: 1st Quarter 2023

From December 2022 to March 2023, gross job gains from opening and expanding private-sector establishments in Oklahoma totaled 83,640, a decrease of 4,517 jobs from the previous quarter. Over this period, gross job losses from closing and contracting private-sector establishments were 70,808, a decrease of 7,261 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 6). The difference between the number of gross job gains and the number of gross job losses yielded a net employment gain of 12,832 jobs in Oklahoma's private sector during the 1st quarter of 2023.

**Chart 1**

Private sector gross job gains and gross job losses in Oklahoma  
March 2012 - December 2022, seasonally adjusted



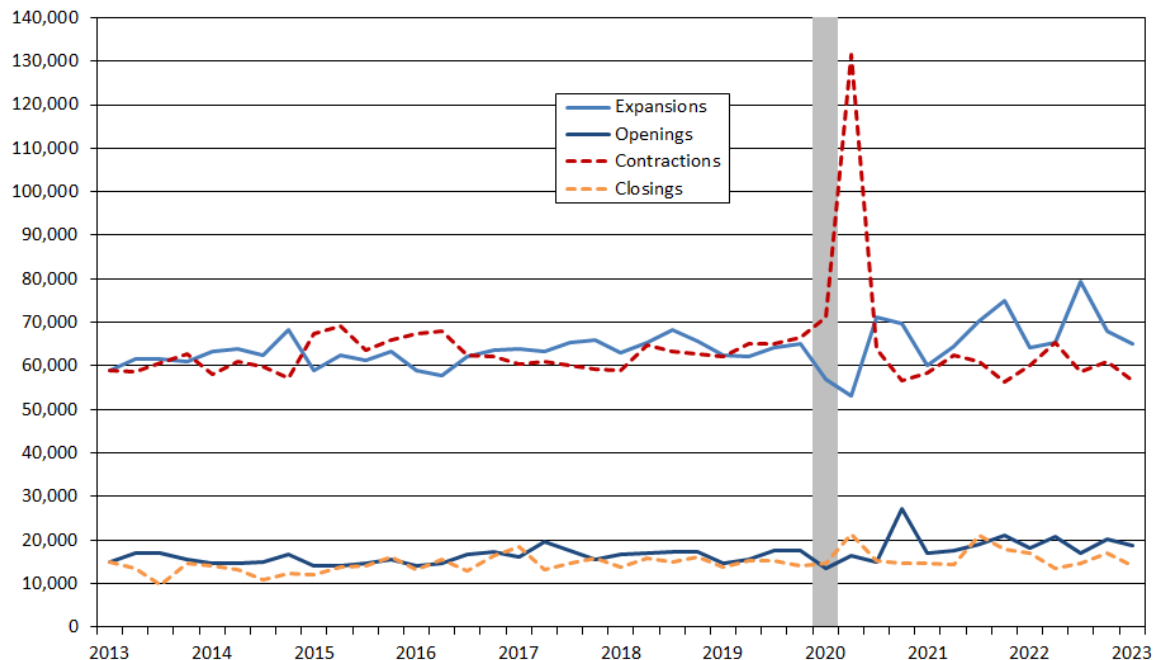
Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period.

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.

## Chart 2

Components of private sector gross job gains and losses in Oklahoma  
March 2013 - March 2023, seasonally adjusted



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession periods.

### Gross Job Gains and Losses: Openings vs. Closings and Expansions vs. Contractions

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 64,998 in the 1st quarter of 2023, a decrease of 3,016 jobs compared to the previous quarter. Opening establishments accounted for 18,642 of the jobs gained in the 1st quarter of 2023, a decrease of 1,501 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 56,589 jobs in the 1st quarter of 2023, a decrease of 4,317 jobs from the prior quarter. In the 1st quarter, closing establishments lost 14,219 jobs, a decrease of 2,944 jobs from the previous quarter.

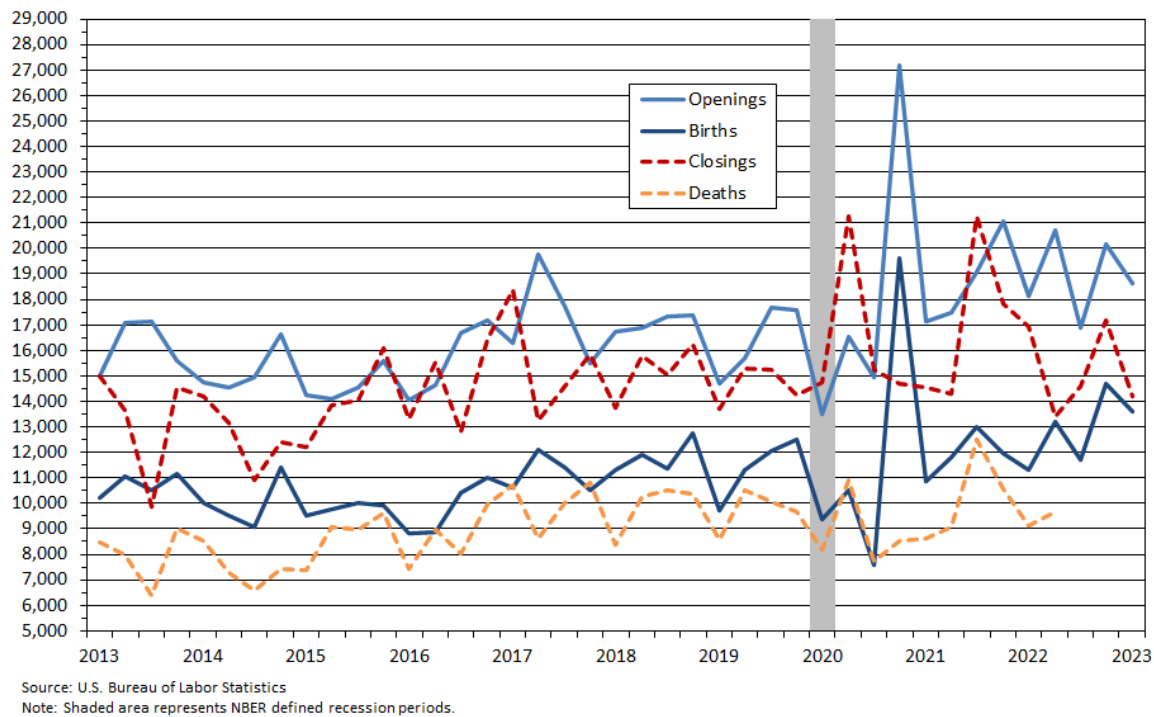
### Establishment Births and Deaths

In Oklahoma, the number of private sector establishment births, (a subset of the openings data), decreased by 665, for a total of 3,635 establishments in the 1st quarter of 2023. These new establishments accounted for 13,578 jobs, a decrease of 1,117 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 2nd quarter of 2022, when 9,648 jobs were lost at 2,598 establishments, an increase of 544 jobs from the 1st quarter of 2022, (see Chart 3, below).

**Chart 3**

Employment from private sector openings, closings, births and deaths in Oklahoma  
March 2013 - March 2023, seasonally adjusted



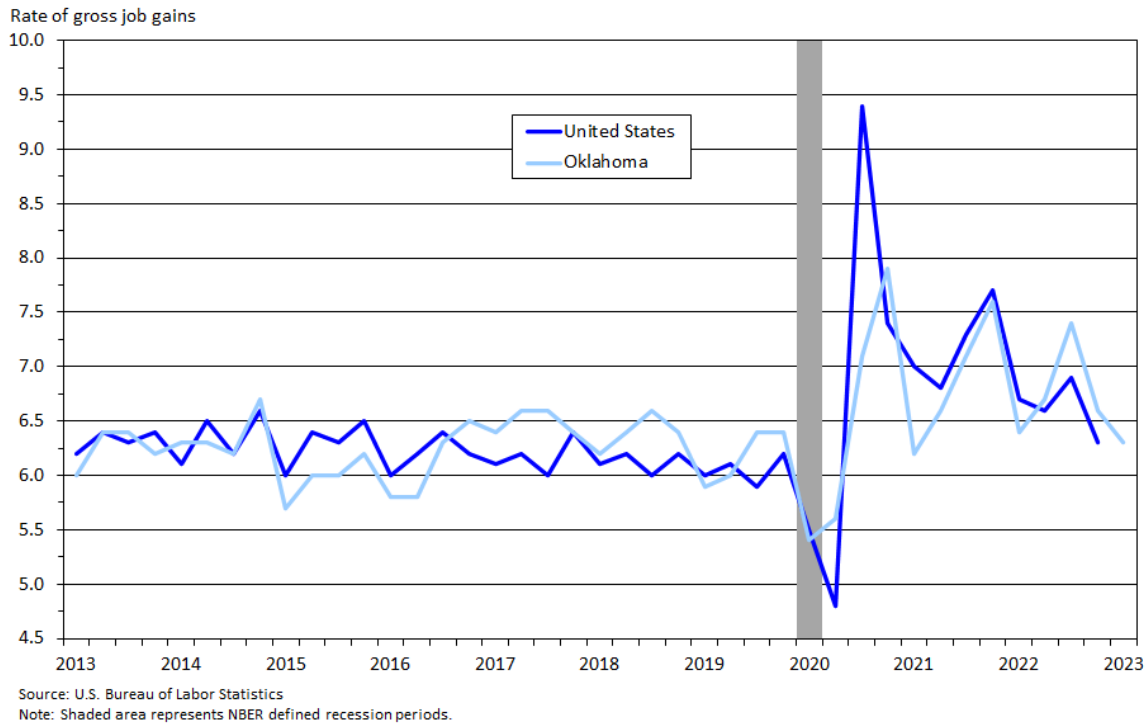
**Gross Job Gains and Gross Job Losses: Percent of Total Private Sector Employment**

In the 1st quarter of 2023, gross job gains represented 6.3 percent of private-sector employment in Oklahoma with expansions accounting for 4.9 percent of total private sector employment and openings contributing 1.4 percent. Nationally, gross job gains accounted for 6.2 percent of private sector employment in the 1st quarter of 2023. 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 nine out of the past 17 quarters, (see Chart 4, page 4).

In the 1st quarter of 2023, gross job losses represented 5.3 percent of private-sector employment in Oklahoma, with contractions accounting for 4.2 percent and closings adding another 1.1 percent. The national rate of gross job losses was 5.4 percent in the 1st quarter of 2023. 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 tracking more with national trends from the 4th quarter of 2017 forward, (see Chart 5, page 4).

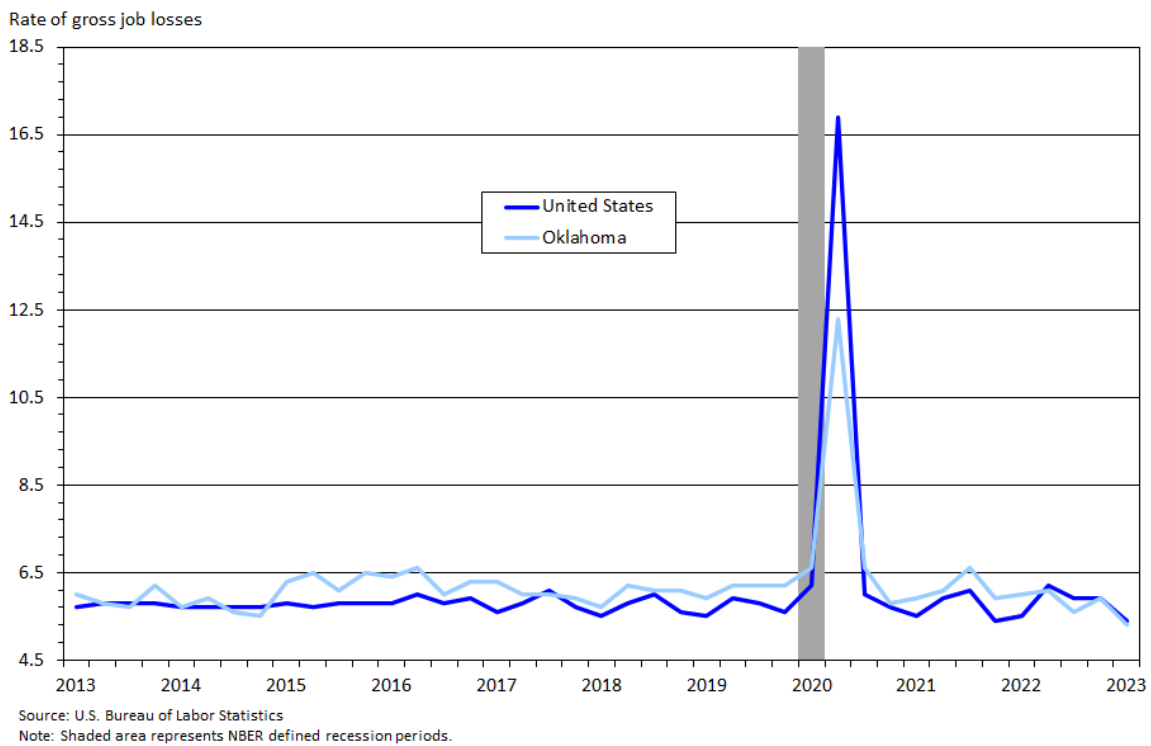
#### Chart 4

Private sector gross job gains as a percent of employment, United States and Oklahoma  
March 2013 - March 2023, seasonally adjusted



#### Chart 5

Private sector gross job losses as a percent of employment, United States and Oklahoma  
March 2013 - March 2023, seasonally adjusted



<b>Table 1. Oklahoma: Three-month private sector gross job gains and losses, seasonally adjusted</b>					
Category	3 months ended				
	March 2022	June 2022	Sep 2022	Dec 2022	March 2023
	Levels				
Gross job gains.....	<b>82,274</b>	<b>86,041</b>	<b>96,273</b>	<b>88,157</b>	<b>83,640</b>
Expanding establishments	64,145	65,306	79,396	68,014	64,998
Opening establishments	18,129	20,735	16,877	20,143	18,642
Gross job losses.....	<b>77,077</b>	<b>78,698</b>	<b>73,231</b>	<b>78,069</b>	<b>70,808</b>
Contracting establishments	60,167	65,316	58,632	60,906	56,589
Closing establishments	16,910	13,382	14,599	17,163	14,219
Net employment change <sup>1</sup>	5,197	7,343	23,042	10,088	12,832
	Rates (percent)				
Gross job gains.....	<b>6.4</b>	<b>6.7</b>	<b>7.4</b>	<b>6.6</b>	<b>6.3</b>
Expanding establishments	5.0	5.1	6.1	5.1	4.9
Opening establishments	1.4	1.6	1.3	1.5	1.4
Gross job losses.....	<b>6.0</b>	<b>6.1</b>	<b>5.6</b>	<b>5.9</b>	<b>5.3</b>
Contracting establishments	4.7	5.1	4.5	4.6	4.2
Closing establishments	1.3	1.0	1.1	1.3	1.1
Net employment change <sup>1</sup>	0.4	0.6	1.8	0.7	1.0
Source: U.S Bureau of Labor Statistics					
<sup>1</sup> Net employment change is the difference between total gross job gains and total gross job losses.					

### More Information

A copy of the full 1st quarter 2023 Oklahoma BED report along with technical notes and detailed tables is available on the OESC website at: [Business Employment Dynamics-1st Quarter 2023 \(oklahoma.gov\)](https://www.oklahomabed.com/Business-Employment-Dynamics-1st-Quarter-2023)

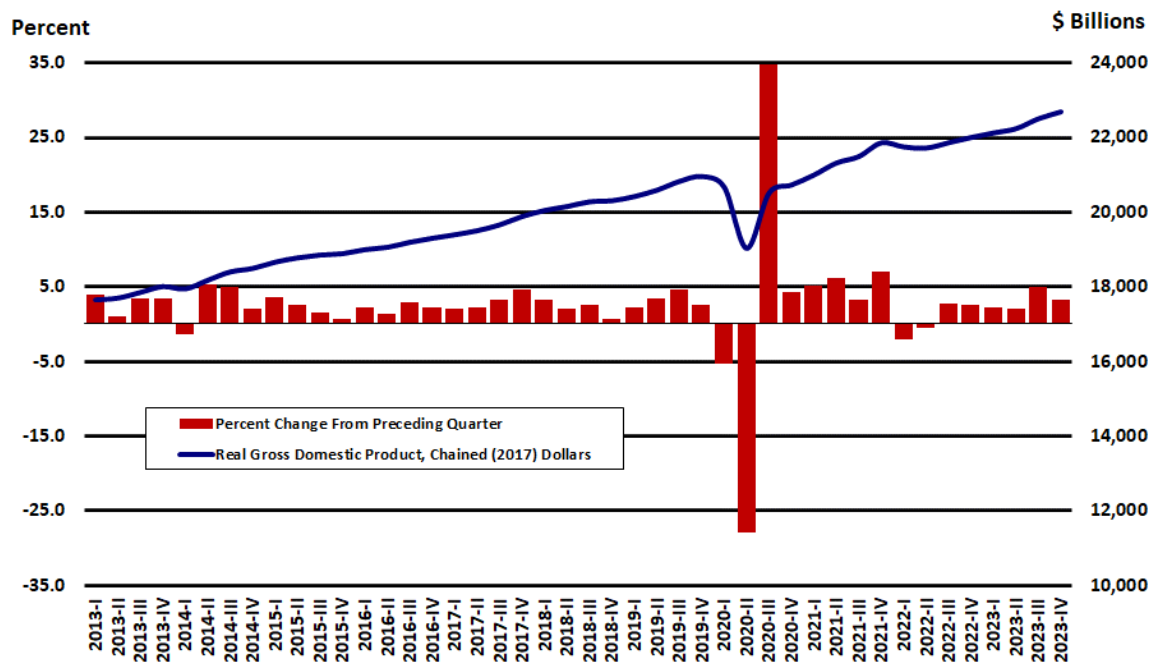
Additional information about the Business Employment Dynamics program is available online at: <http://www.bls.gov/bdm>



## Real Gross Domestic Product and Quarterly Change

1st Quarter 2013 to 4th Quarter 2023 ("Advance" Estimate)

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



### Definition & Importance

Gross Domestic Product (GDP)—the output of goods and services produced by labor and property located in the United States—is the broadest measure of economic activity. It is also the measure that is most indicative of whether the economy is in recession. In the post-World War II period, there has been no recession in which GDP did not decrease in at least two quarters, (the exceptions being during the recessions of 1960-61 and 2001).

The Bureau of Economic Analysis (BEA), U.S. Department of Commerce releases GDP data on a quarterly basis, usually during the fourth week of the month. Data are for the prior quarter, so data released in April are for the 1st quarter. Each quarter's data are revised in each of the following two months after the initial release. 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 grew at a robust pace in the final three months of 2023, driven by consumer spending and government outlays. Real gross domestic product (GDP) increased at an annual rate of 3.3 percent in the 4th quarter of 2023, according to the "advance" estimate released by the Bureau of Economic Analysis (BEA). In the 3rd quarter, real GDP increased 4.9 percent.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, increased 2.8 percent in the 4th quarter, down just slightly from the previous quarter. Spending on durable goods, such as recreational goods and vehicles, climbed 4.6 percent. Outlays on services, such as food services and accommodations as well as health care, increased 2.4 percent. Spending on nondurable goods, such as prescription drugs, was up to 3.4 percent. Personal consumption expenditures (PCE) added 1.91 percentage points to 4th quarter GDP growth.

Business investment accelerated to a 1.9 percent annual rate in the 4th quarter, reflecting increases in intellectual property products, structures, and equipment. Expenditures on structures, which are tied to the oil and gas sector and commercial real estate, grew at a 3.2 percent pace. Business outlays on equipment rose 1.0 percent. Spending on intellectual property products increased 2.1 percent. Nonresidential fixed investment contributed 0.26 percentage point to 4th quarter GDP.

The change in businesses inventory levels remained at a healthy pace in the October to December period. Business inventories increased at a rate of \$82.7 billion in the 4th quarter. The change in private inventories contributed 0.07 percentage point to GDP growth in the 4th quarter of 2023.

Investment in housing increased again in the 4th quarter, following nine consecutive quarters of contraction, weakened by higher mortgage rates. Residential investment, a gauge of homebuilding, increased 1.1 percent in the 4th quarter, following a 6.7 percent bounce in the previous quarter. Residential fixed investment added 0.04 percentage point to 4th quarter GDP.

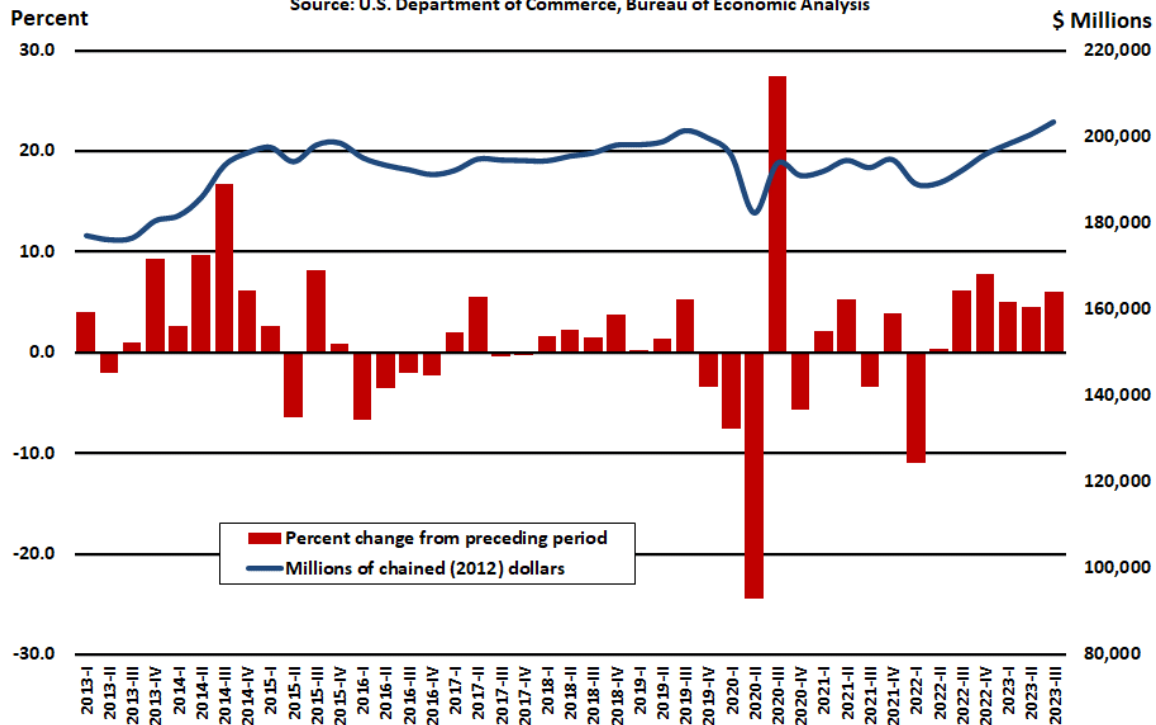
A narrower trade gap also contributed to 4th quarter GDP growth. Exports, which add to GDP jumped to a 6.3 percent rate while imports, which subtract, increased 1.9 percent. The narrowing trade gap added 0.43 percentage points to 4th quarter GDP.

State and local government spending rose in the 4th quarter, reflecting increases in compensation of state and local government employees and investment in structures. Federal government spending increased 2.5 percent in the 4th quarter, as national defense spending increased 0.9 percent, while nondefense spending rose 4.6 percent. Consumption outlays by state and local governments increased 3.7 percent in the 4th quarter. Government consumption expenditures and investment added 0.56 percentage point to 4th quarter GDP.

## Oklahoma Real Gross Domestic Product and Quarterly Change

1st Quarter 2013 to 3rd Quarter 2023, Seasonally Adjusted Annual Rates

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



### 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

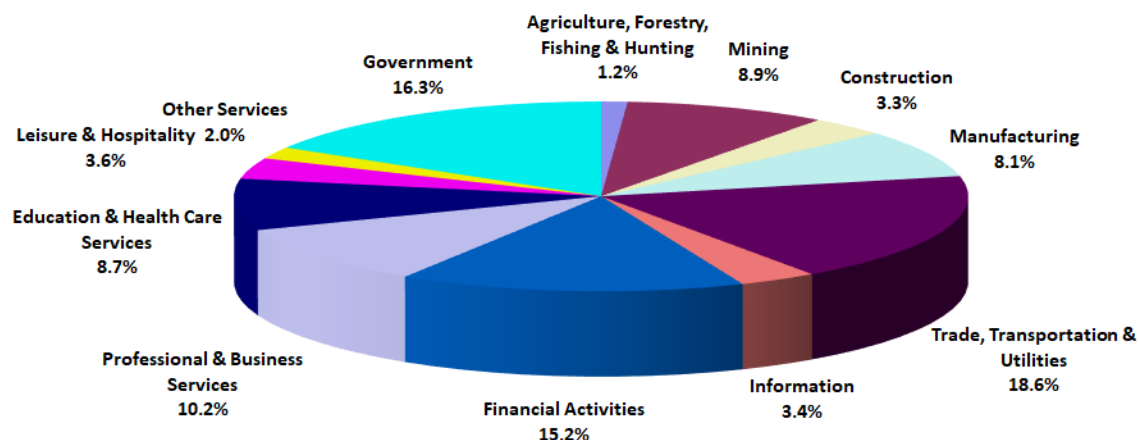
Real gross domestic product (GDP) by state—a measure of nationwide growth calculated as the sum of GDP of all states and the District of Columbia—increased in all 50 states and the District of Columbia in the 3rd quarter of 2023, with the percent change ranging from 9.7 percent in Kansas to 0.7 percent in Arkansas, according to statistics released today by the U.S. Bureau of Economic Analysis (BEA). Current-dollar GDP increased in all 50 states and the District of Columbia in the 3rd quarter, with the percent change ranging from 12.8 percent in Texas to 4.1 percent in Arkansas.

Oklahoma's real GDP accelerated to a 6.0 percent rate in the 3rd quarter of 2023, following a 4.5 percent pace in the 2nd quarter, ranking Oklahoma 9th among all other states and the District of Columbia. Statewide GDP was at a level of \$203.3 billion (in constant 2012 dollars) in the 3rd quarter, up \$2.9 billion from the 2nd quarter level of \$200.4 billion.

## Industry Share of Oklahoma's Economy, 3rd Quarter 2023

(by percentage of Gross Domestic Product)

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



In the 3rd quarter of 2023, real GDP for the nation grew at an annual rate of 4.9 percent. Real GDP also increased in 15 of the 23 industry groups for which BEA prepares quarterly state estimates. Retail trade; information; and nondurable goods manufacturing were the leading contributors to the increase in real GDP nationally in the 3rd quarter.

Agriculture, forestry, fishing, and hunting, which decreased nationally and in 33 states, was the leading contributor to growth in Kansas and Nebraska, the states with the largest and third-largest increases in real GDP. In contrast, this industry was the leading offset to growth in Arkansas and Mississippi, the states with the smallest increases in real GDP. In Oklahoma, agriculture, forestry, fishing, and hunting was the second-leading contributor to 3rd quarter GDP growth, adding 1.18 percentage points.

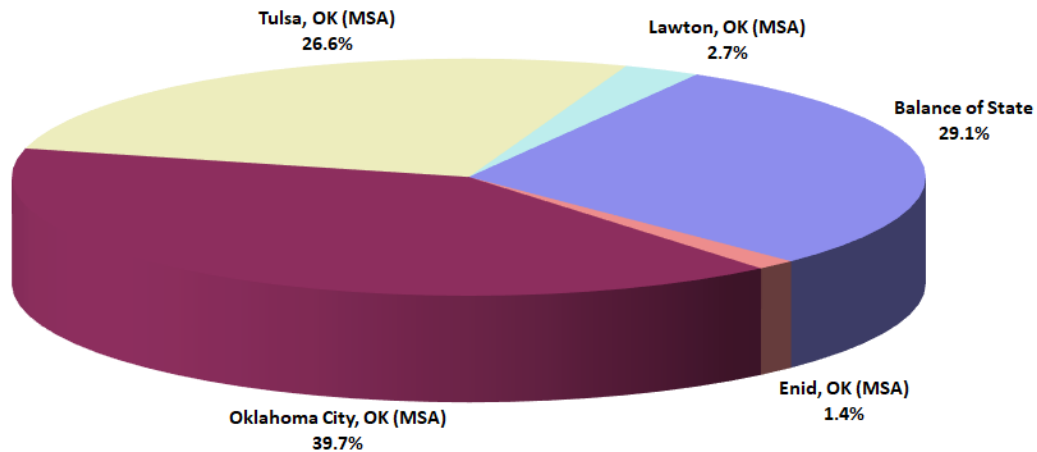
Retail trade was the leading contributor to growth in 39 states, including Texas and Idaho, the states with the second- and fourth-largest increases in real GDP. Retail trade was the leading contributor to growth in Oklahoma in the 3rd quarter adding 1.45 percentage points.

Nondurable-goods manufacturing was the leading contributor to growth in three states, including Louisiana, the state with the fifth-largest increase in real GDP. In the 3rd quarter, nondurable goods manufacturing contributed 0.55 percentage point to statewide GDP growth.

In Oklahoma, mining, quarrying, and oil and gas extraction was the third-leading contributor to 3rd quarter GDP growth, adding 1.12 percentage points.

## Metropolitan Area Contribution to State Real Gross Domestic Product 2022

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



### 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 72.2 percent of total state GDP in 2021.

### Current Developments

Real gross domestic product (GDP) increased in 285 out of 384 metropolitan areas in 2022, according to the U.S. Bureau of Economic Analysis (BEA). The percent change in real GDP by metropolitan area ranged from 10.1 percent in Kokomo, IN to -8.8 percent in Greeley, CO. Real GDP for U.S. metropolitan areas increased 2.1 percent in 2022.

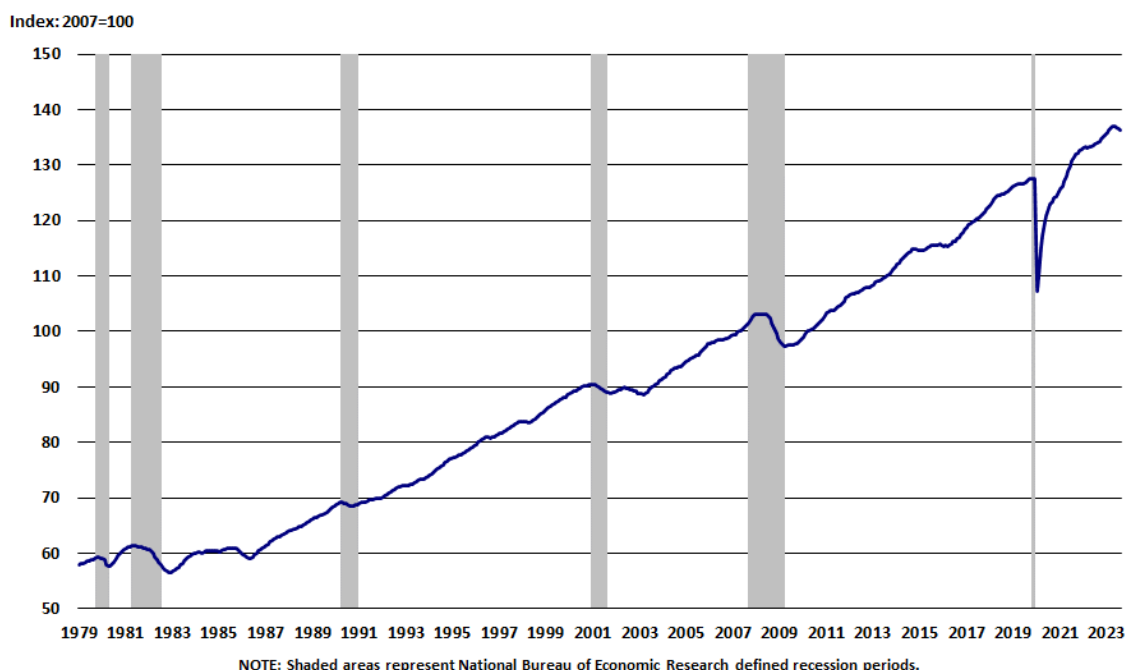
In 2022, all of Oklahoma's four metropolitan areas experienced negative GDP growth. Oklahoma City MSA real GDP declined 0.6 percent in 2022 to a level of \$76.1 billion, ranking it 318th among 385 metro areas. Lawton MSA real GDP decreased 1.8 percent in 2022 to a level of \$5.2 billion, and ranked 347th among U.S. metro areas. Tulsa MSA declined 2.2 percent to \$51.0 billion and ranked 364th. Enid MSA real GDP decreased 2.4 percent to a level of \$2.7 and ranked 369th among 385 U.S. metropolitan areas in 2022.



## Coincident Economic Activity Index for Oklahoma, 1979-2023

Source: Federal Reserve Bank of Philadelphia, retrieved from FRED, Federal Reserve Bank of St. Louis

Index: 2007=100



### 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

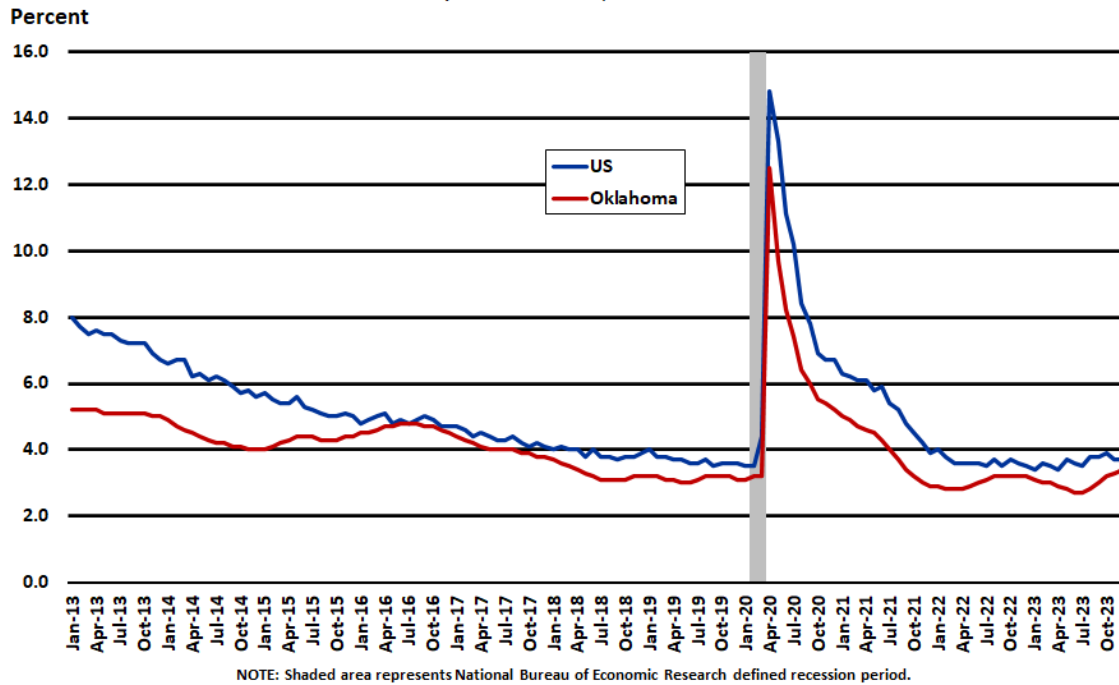
The Federal Reserve Bank of Philadelphia has released the coincident indexes for the 50 states for December 2023. Over the past three months, the indexes increased in 25 states, decreased in 22 states, and remained stable in three, for a three-month diffusion index of 6. Additionally, in the past month, the indexes increased in 26 states, decreased in 16 states, and remained stable in eight, for a one-month diffusion index of 20. For comparison purposes, the Philadelphia Fed has also developed a similar coincident index for the entire United States. The Philadelphia Fed's U.S. index increased 0.7 percent over the past three months and 0.2 percent in December.

In the three months to December, the coincident index for Oklahoma decreased 0.3 percent. The level of payroll employment, and average hours worked in manufacturing increased over the past three months. However, the unemployment rate increased during the three-month period. Overall, Oklahoma's economic activity as measured by the coincident index has risen 1.6 percent over the past 12 months.

## U.S. and Oklahoma Unemployment Rate (Seasonally Adjusted)

January 2013 to December 2023

Source: U.S. Department of Labor, Bureau of Labor Statistics



### Definition & Importance

The Bureau of Labor Statistics [Local Area Unemployment Statistics \(LAUS\)](#) program produces monthly estimates of total employment and unemployment from a national survey of 60,000 households. The unemployment rate measures the percentage of people who are without work and is calculated by dividing the estimated number of unemployed people by the civilian labor force. The result expresses unemployment as a percentage of the labor force.

The unemployment rate is a lagging indicator of economic activity. During a recession, many people leave the labor force entirely. As a result, the jobless rate may not increase as much as expected. This means that the jobless rate may continue to increase in the early stages of recovery because more people are returning to the labor force as they believe they will be able to find work. The civilian unemployment rate tends towards greater stability than payroll employment on a monthly basis and reveals the degree to which labor resources are utilized in the economy.

### Current Developments

The U.S. unemployment rate held steady in December, while the labor force participation rate slid to its lowest since February. The unemployment rate was unchanged at 3.7 percent in December, according to the Bureau of Labor Statistics (BLS). The unemployment rate had ranged from 3.4 percent to 3.9 percent since March 2022.

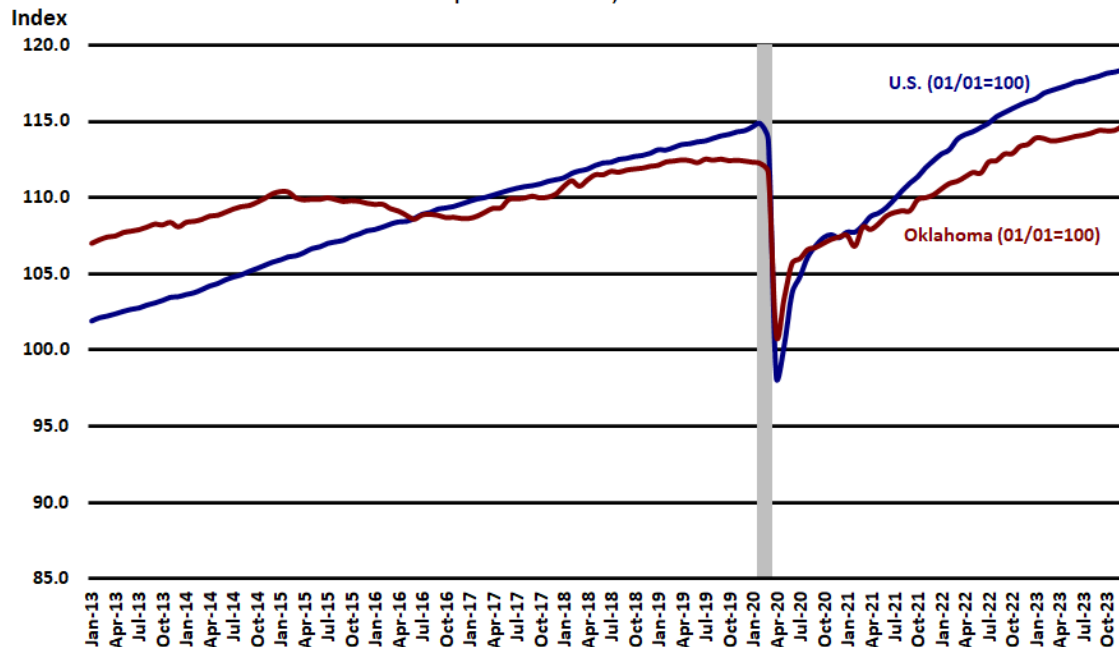
Oklahoma's seasonally adjusted unemployment rate moved up 0.1 percentage point to 3.4 percent in December. Over the year, the state's seasonally adjusted unemployment rate was 0.2 percentage point higher than December 2022.

In November, McIntosh County posted Oklahoma's highest county unemployment rate of 5.5 percent. Seminole County reported the second-highest rate for the month, followed by Haskell County. Woods County reported the lowest county unemployment rate of 1.8 percent in November. Unemployment rates in November were higher than a year earlier in 64 counties, lower in 9 counties and unchanged in 4 counties.

## U.S. and Oklahoma Nonfarm Payroll Employment (Seasonally Adjusted)

Index: January 2001=100

Source: U.S. Department of Labor, Bureau of Labor Statistics



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

### Definition & Importance

Nonfarm payroll employment data is produced by the [Current Employment Statistics \(CES\)](#) program of the Bureau of Labor Statistics (BLS). The CES Survey is a monthly survey of approximately 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

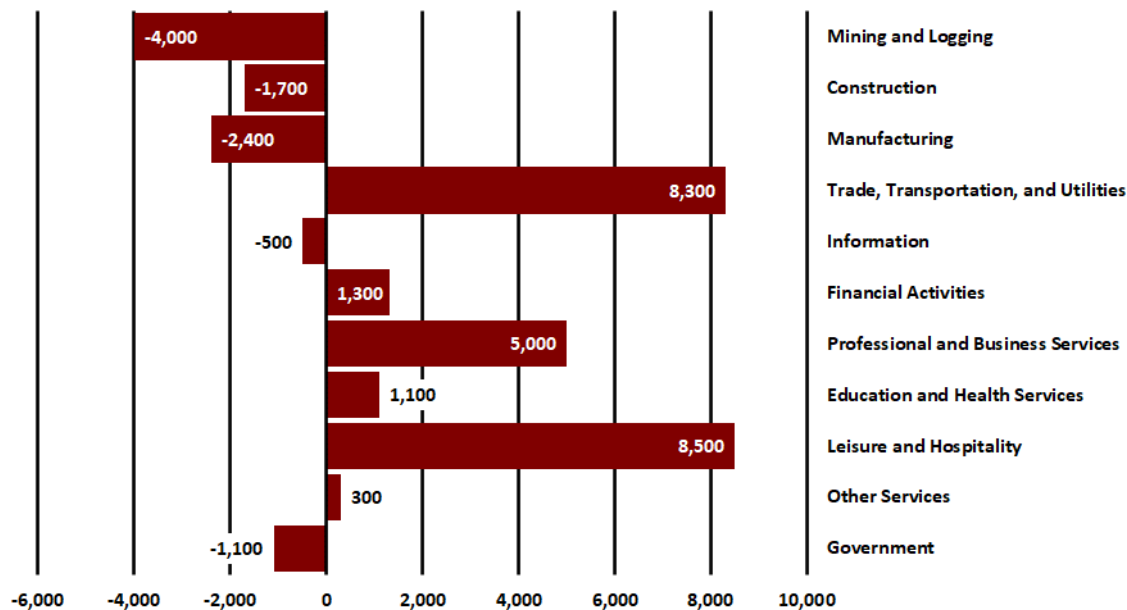
U.S payroll employment closed out 2023 strong in December, as employers continued to hire at a brisk pace. Total nonfarm payroll employment increased by 216,000 in December, according to the Bureau of Labor Statistics (BLS). Employment continued to trend up in government, health care, social assistance, and construction, while transportation and warehousing lost jobs. Payroll employment rose by 2.7 million in 2023 (an average monthly gain of 225,000), less than the increase of 4.8 million in 2022 (an average monthly gain of 399,000).

Oklahoma's seasonally adjusted nonfarm employment added 4,000 jobs (0.2 percent) over the month in December, to a level of 1,739,800 while the November estimate was downwardly revised to 1,735,800. In December, seven of Oklahoma's supersectors added jobs, as education and health services (2,500 jobs) followed by trade, transportation, and utilities (1,200 jobs) reported the largest job gains over the month. Financial activities (-1,100 jobs) followed by government (-600 jobs) posted the largest over-themonth job losses in December.

## Oklahoma Employment Change by Industry, 2020-2021

Annual Averages (Not Seasonally Adjusted)

Source: Current Employment Statistics (CES), U.S. Department of Labor, Bureau of Labor Statistics



### Definition & Importance

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

### Current Developments

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.

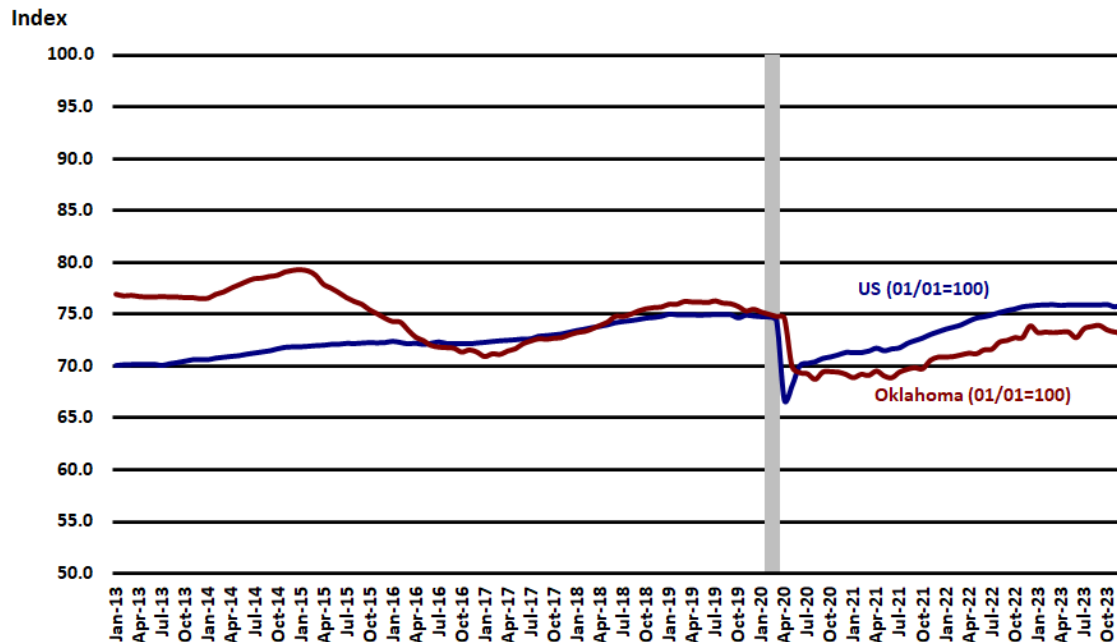
In 2021, six of 11 of Oklahoma's supersectors reported job gains. Leisure and hospitality saw the largest job gain adding 8,500 jobs (5.4 percent), as accommodation and food services accounted for the bulk of the job gains (7,700 jobs). Trade, transportation, and utilities shed a non-seasonally adjusted 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 lost 4,000 jobs (-12.7 percent) 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.

## U.S. and Oklahoma Manufacturing Employment (Seasonally Adjusted)

Index: January 2001 = 100

Source: U.S. Department of Labor, Bureau of Labor Statistics



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

### Definition & Importance

Manufacturing employment data is also produced by the Bureau of Labor Statistics' Current Employment Statistics (CES) program. Manufacturing and production are still important parts of both the U.S. and Oklahoma economies. 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 \$61,520. In Oklahoma, manufacturing accounts for one of the largest shares of private output and employment in the state. In addition, many manufacturing jobs are among the highest paying jobs in the state. In order to account for the size disparity between the U.S. and Oklahoma employment levels, we have indexed the data with January 2001 as the starting value.

### Current Developments

U.S. factory payrolls increased at a weak pace in December, as 2023 was a disappointing year for manufacturing employment. Manufacturing employment rose by 6,000 in December, according to the Bureau of Labor Statistics. Employment in manufacturing has shown little net change over the year.

Oklahoma manufacturing employment added a seasonally adjusted 800 jobs (0.6 percent) over the month in December to a level of 136,000. In December, durable goods manufacturing employment increased by 1,200 jobs (1.3 percent), while non-durable goods manufacturing fell by 400 jobs (-0.9 percent).

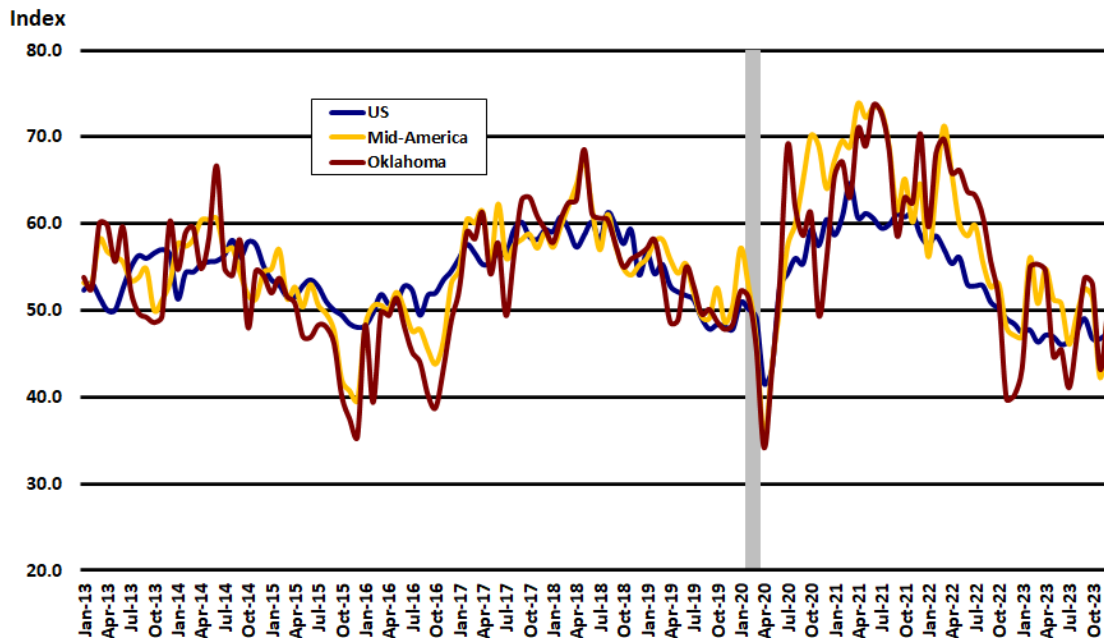
Over the year, statewide manufacturing employment picked up a seasonally adjusted 700 jobs (0.5 percent) compared to December 2022, as durable goods manufacturing gained 2,000 jobs (1.1 percent), while non-durable goods manufacturing declined by 1,300 jobs (-2.8 percent).



## Purchasing Managers' Index (Manufacturing)

January 2013 to December 2023

Sources: ISM Manufacturing Report On Business® and Business Conditions Index for Mid-America, Creighton University



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

### Definition & Importance

Economists consider the [Institute for Supply Management's Purchasing Managers' Index \(PMI™\)](#) a key economic indicator. The Institute for Supply Management (ISM®) surveys more than 300 manufacturing firms on employment, production, new orders, supplier deliveries, and inventories. The ISM® manufacturing index is constructed so that any level at 50 or above signifies growth in the manufacturing sector, 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 contracted further in December, though the pace of decline slowed amid a modest rebound in production and improvement in factory employment. The Manufacturing PMI® registered 47.4 percent in December, after being unchanged at 46.7 for two straight months, according to the latest Manufacturing ISM® [Report On Business®](#). It was the 14th consecutive month that the PMI stayed below 50, which indicates contraction in manufacturing.

The ISM survey's forward-looking new orders sub-index fell to 47.1 in December from 48.3 in November, but remained in contractionary territory. The survey's gauge of factory employment rose to 48.1 from 45.8 in November. The production sub-index rebounded in December, coming in at 50.3 from 48.5 in November. The survey's measure of prices paid by manufacturers dropped to 45.2 from a seven-month high of 49.9 in November. The speed of supplier deliveries slowed in December to a reading of 47 percent, 0.8 percentage point higher than the 46.2 percent recorded in November.

After falling below growth neutral in November, the Creighton University [Mid-America Business Conditions Index](#), a leading economic indicator for the nine-state region stretching from Minnesota to Arkansas, bounced above the 50.0 growth neutral threshold in December. The Business Conditions Index, which uses the identical methodology as the national Institute for Supply Management (ISM) and ranges between 0 and 100 with 50.0 representing growth neutral, climbed to 50.3 from 42.2 in November.

“Even with the positive bounce in December’s reading, supply managers remained pessimistic regarding the 2024 economy with 46 percent expecting a 2024 recession in the first half of the year. Less than one-fifth, or 19 percent, anticipate an economic expansion in the first half of 2024,” 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.

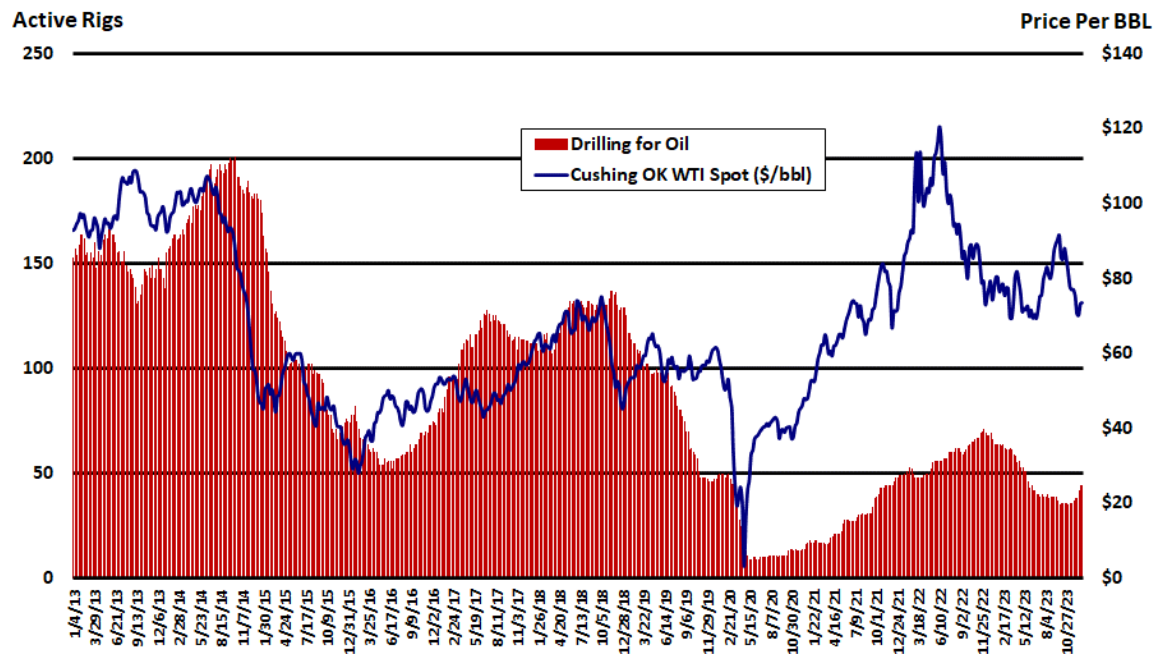
After sinking below growth neutral for November, Oklahoma’s Business Conditions Index rose to 50.5 from 43.2 in November. Components of the overall December index were: new orders at 40.4; production or sales at 50.0; delivery lead time at 66.5; inventories at 46.0; and employment at 49.7.

“Over the past 12 months, according to U.S. Bureau of Statistics data, the state’s manufacturing sector boosted employment by 300, or 0.2 percent, with the average hourly wage rate expanding by 3.0 percent for the period, or slightly below the 3.1 percent increase in consumer prices,” said Goss.

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

January 2013 to December 2023

SOURCES: U.S. Department of Energy, Energy Information Administration and Baker Hughes Rig Counts



### Definition & Importance

Crude oil is an important commodity in the global market. Prices fluctuate depending on supply and demand conditions in the world. Since oil is such an important part of the economy, it can also help determine the direction of inflation. In the U.S. consumer prices have moderated whenever oil prices have fallen but have accelerated when oil prices have risen. The U.S. Energy Information Administration (EIA) provides weekly information on petroleum inventories in the U.S., whether produced here or abroad.

The Baker Hughes rig count is an important indicator for the energy industry and Oklahoma. When drilling rigs are active, they consume products and services produced by the oil service industry. The active rig count acts as a leading indicator of demand for products used in drilling, completing, producing, and processing hydrocarbons.

West Texas Intermediate (WTI-Cushing) is a light crude oil produced in Texas and southern Oklahoma which serves as a reference or "marker" for pricing a number of other crude streams and which is 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 6th-largest crude oil producer among the states in 2022, accounting for over 4 percent of the nation's crude oil production (at 445,000 barrels per day). Crude oil wells and gathering pipeline systems are concentrated in central Oklahoma. The state's largest producing field, and the 11th largest in the United States, the [Sho-Vel-Tum](#) field, in eastern Stephens and western Carter Counties has continuously produced crude oil since its discovery in 1905.

The city of Cushing, in central Oklahoma, is home to about 14 percent of the nation's commercial crude oil storage capacity and 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 2022, those refineries had a combined distillation capacity of more than 524,000 barrels per day—roughly 3 percent of the total U.S. refining capacity.

### **Current Developments**

In the recent [\*Short-Term Energy Outlook\*](#) (STEO), the U.S. Energy Information Administration (EIA) forecasts that crude oil production in the United States will reach 13.2 million barrels per day (bbl/d) in 2024 and more than 13.4 million bbl/d in 2025, both of which would be new records. Production growth continues over the next two years driven by increases in well efficiency. However, growth slows because of fewer active drilling rigs.

EIA also forecasts that international benchmark Brent crude oil price will average \$82 per barrel (bbl) in 2024, about the same as in 2023, and then fall to \$79/bbl in 2025, when EIA expects production growth will slightly outpace demand growth, allowing inventories to build modestly and place some downward pressure on crude oil prices

Crude production in Oklahoma increased over the month in October—the most recently reported monthly data point. Statewide field production of crude oil was at a preliminary level of 13,098,000 bbl in October, up 366,000 bbl (2.9 percent) from the September level of 12,732,000 bbl, according to data reported by the EIA. Compared to a year ago, Oklahoma crude production was down 91,000 bbl (-0.7 percent) from the October 2022 production level of 13,189,000 bbl. For 2022, statewide crude production was at a level of 151,535,000 bbl, up 3,698,000 bbl (2.5 percent) from the 2021 production level of 147,837,000 bbl.

West Texas Intermediate (WTI-Cushing) crude oil for delivery at Cushing, Oklahoma, averaged below \$80.00/bbl from January through July 2023 but began to rise in August 2023 due to Saudi Arabia's crude oil production cuts. WTI-Cushing averaged \$71.90/bbl in December, down \$5.79/bbl from the November average of \$77.69/bbl. Since September, the WTI-Cushing crude oil price has fallen nearly \$18/bbl.

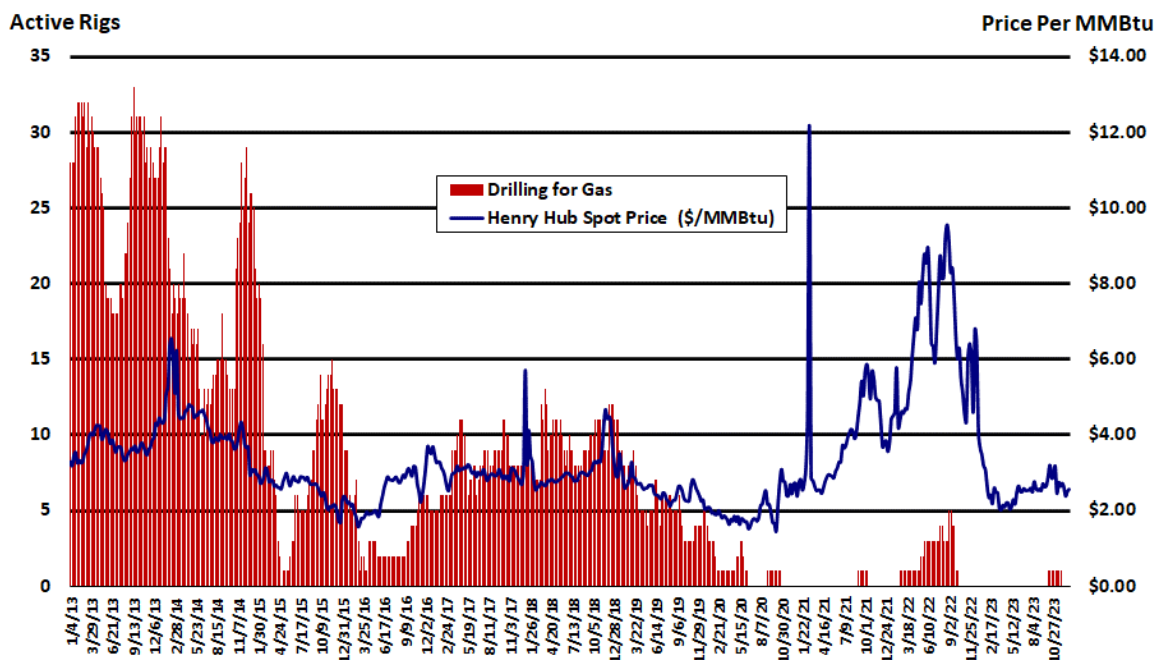
The U.S. oil-directed rig count picked up 2 rigs to 500 over the week ending December 29, 2023, according to oil field services company Baker Hughes. Compared to a year ago, the nation's total rig count was 121 less than 621 rigs reported on December 30, 2022.

For the week ending December 29, 2023, Oklahoma's total active rig count was unchanged at a level of 44, according to Baker Hughes. Oil-directed rigs accounted for 100 percent of total rig activity in December. Over the year, Oklahoma's active rig count was down 25 from 69 active rigs reported operating on December 30, 2022.

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

January 2013 to December 2023

Sources: U.S. Department of Energy, Energy Information Administration and Baker Hughes Rig Counts



### Definition & Importance

The U.S. Energy Information Administration (EIA) provides weekly information on natural gas stocks in underground storage for the U.S., and three regions of the country. The level of inventories helps determine prices for natural gas products. Natural gas product prices are determined by supply and demand—like any other good or service. During periods of strong economic growth, one would expect demand to be robust. If inventories are low, this will lead to increases in natural gas prices. If inventories are high and rising in a period of strong demand, prices may not need to increase at all, or as much. However, during a period of sluggish economic activity, demand for natural gas may not be as strong. If inventories are rising, this may push down oil prices.

The Henry Hub in Erath, Louisiana is a key benchmark location for natural gas pricing throughout the United States. The Henry Hub is the largest centralized point for natural gas spot and futures trading in the United States. The New York Mercantile Exchange (NYMEX) uses the Henry Hub as the point of delivery for its natural gas futures contract. Henry Hub “spot gas” represents natural gas sales contracted for *next day* delivery and title transfer at the Henry Hub. The settlement prices at the Henry Hub are used as benchmarks for the entire North American natural gas market. Approximately 49 percent of U.S. wellhead production either occurs near the Henry Hub or passes close to the Henry Hub as it moves to downstream consumption markets.

### Background

Oklahoma'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. In 2022, Oklahoma was the nation's 5th-largest producer of marketed natural gas. Statewide annual natural gas production was at an all-time high of more than 3.0 trillion cubic feet in 2019.

In 2022, Oklahoma was the nation's 6th-largest consumer of natural gas on a per capita basis. The electric power sector and the industrial sector together use slightly more than four-fifths of the



natural gas delivered to consumers in Oklahoma, and the residential and commercial sectors consume almost all the rest.

### **Current Developments**

In the January [Short-Term Energy Outlook](#) (STEO), The U.S. Energy Information Administration (EIA) expects the U.S. benchmark natural gas spot price at the Henry Hub to average under \$3.00 per million British thermal units (MMBtu) in 2024 and 2025. The annual average Henry Hub prices in 2024 and 2025 increase from 2023 in the forecast because EIA expects natural gas demand growth to outpace natural gas supply growth. Despite increased demand, our forecast prices for 2024 and 2025 are less than half the annual average price in 2022 and are only slightly higher than the \$2.54/MMBtu reported for 2023.

Oklahoma natural gas production increased over the month in October. Statewide natural gas gross withdrawals were at a preliminary level of 240,412 million cubic feet (MMcf) in October, up 5,880 MMcf (2.5 percent) from the previous month's level of 234,532 MMcf. Over the year, statewide natural gas production was down 5,343 MMcf (-2.2 percent) from the October 2022 level of 245,755 MMcf.

In December, the Henry Hub spot price averaged \$2.52 per million British thermal units (MMBtu), down 19 cents from \$2.71/MMBtu in November. The Henry Hub price began to decline in January of this year and averaged \$2.53/MMBtu for all of 2023, almost \$4.00/MMBtu less than the 2022 annual average of \$6.45/MMBtu.

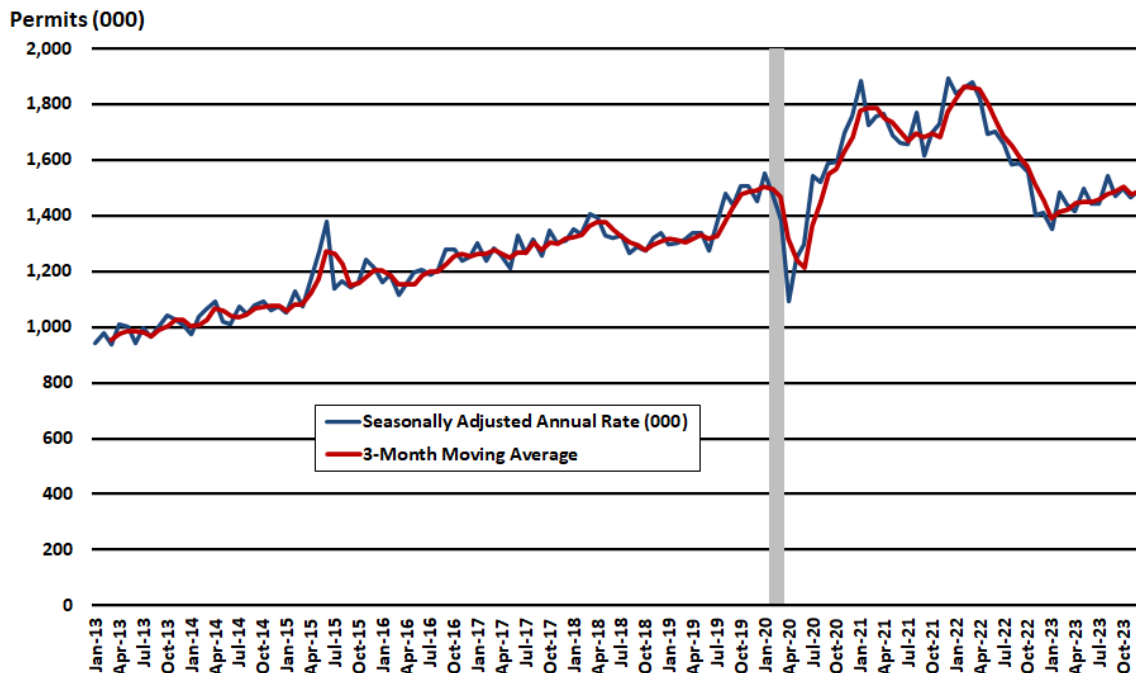
For the week ending on December 29, the [Baker Hughes Company](#) reported 120 active natural gas-directed rigs in the United States, unchanged from the previous week. The natural gas-directed rig count fluctuated between 150 rigs and 162 rigs for the first four months of 2023 and then began to decline in May, falling to a low of 113 rigs on September 8.

Oklahoma drillers reported no active natural gas-directed rigs for the week ending December 29, 2023, unchanged over the month, according to Baker Hughes.

## U.S. New Private Housing Units Authorized by Building Permit

January 2013 to December 2023, Seasonally Adjusted

Source: U.S. Census Bureau and Department of Housing and Urban Development



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

### Definition & Importance

The U.S. Census Bureau and the Department of Housing and Urban Development jointly provide monthly national and regional data on the number of new housing units authorized by building permits; authorized, but not started; started; under construction; and completed. The data are for new, privately-owned housing units (single and multifamily), excluding "HUD-code" manufactured homes. Because permits precede construction, they are considered a leading indicator for the residential construction industry and the overall economy. Most of the construction begins the same month the permit is issued. The remainder usually begins construction during the following three months; therefore, we also use a three-month moving average.

While home construction represents a small portion of the housing market, it has an outsize impact on the economy. Each home built creates an average of three jobs for a year and about \$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

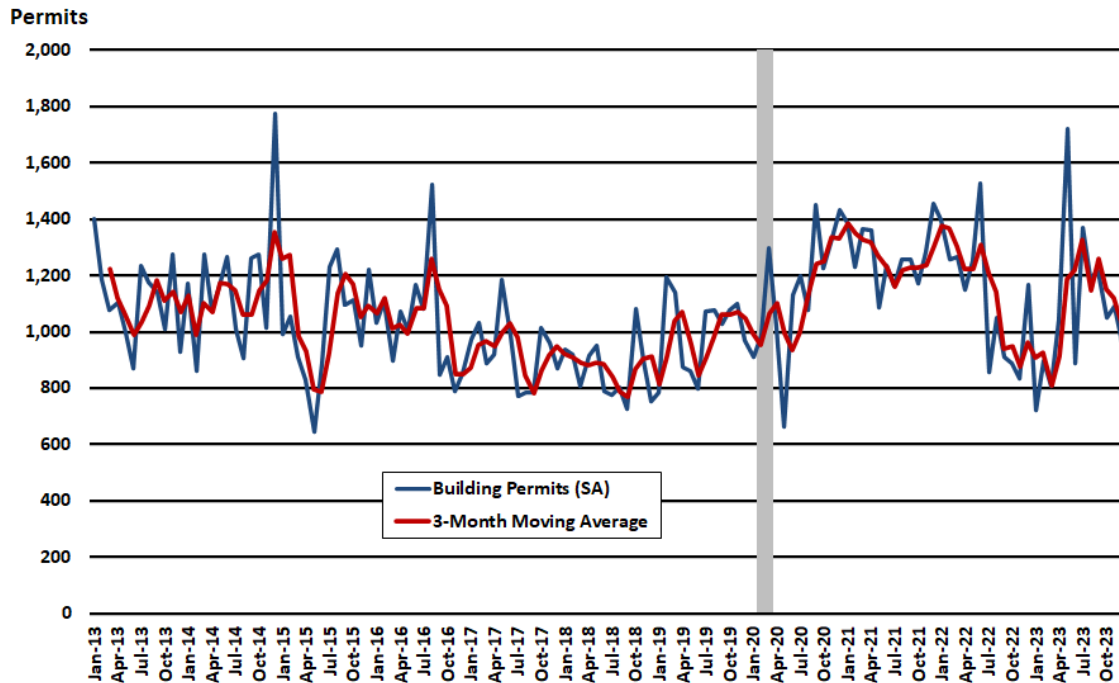
U.S. applications to build single-family homes, a sign of future residential construction activity, rose in December, an indication that homebuilders remained confident about the direction of the housing market as mortgage rates have moved lower. Privately-owned housing units authorized by building permits in December were at a seasonally adjusted annual rate of 1,495,000, 1.9 percent above the revised November rate of 1,467,000 and is 6.1 percent above the December 2022 rate of 1,409,000, according to the U.S. Census Bureau and the U.S. Department of Housing and Urban Development. An estimated 1,469,800 housing units were authorized by building permits in 2023, 11.7 percent below the 2022 figure of 1,665,100.

Permits for single-family homes increased 1.7 percent to a rate of 994,000 units in December, the highest level since May 2022. Permits for multi-family housing projects rose 1.4 percent to a rate of 449,000 units.

## Oklahoma New Private Housing Units Authorized by Building Permit

January 2013 to December 2023, Seasonally Adjusted

Sources: U.S. Census Bureau and Department of Housing and Urban Development, Federal Reserve Bank of St. Louis



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

### Definition & Importance

The data services of the Federal Reserve Bank of St. Louis 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 requester fewer applications for residential construction in December. Total residential permitting in December was at a seasonally adjusted level of 964, down 125 (-11.5 percent) from the November level of 1,089, and down 201 (-17.3 percent) from the December 2022 level of 1,165 permits, according to figures from the U.S. Census Bureau and the Federal Reserve Bank of St. Louis.

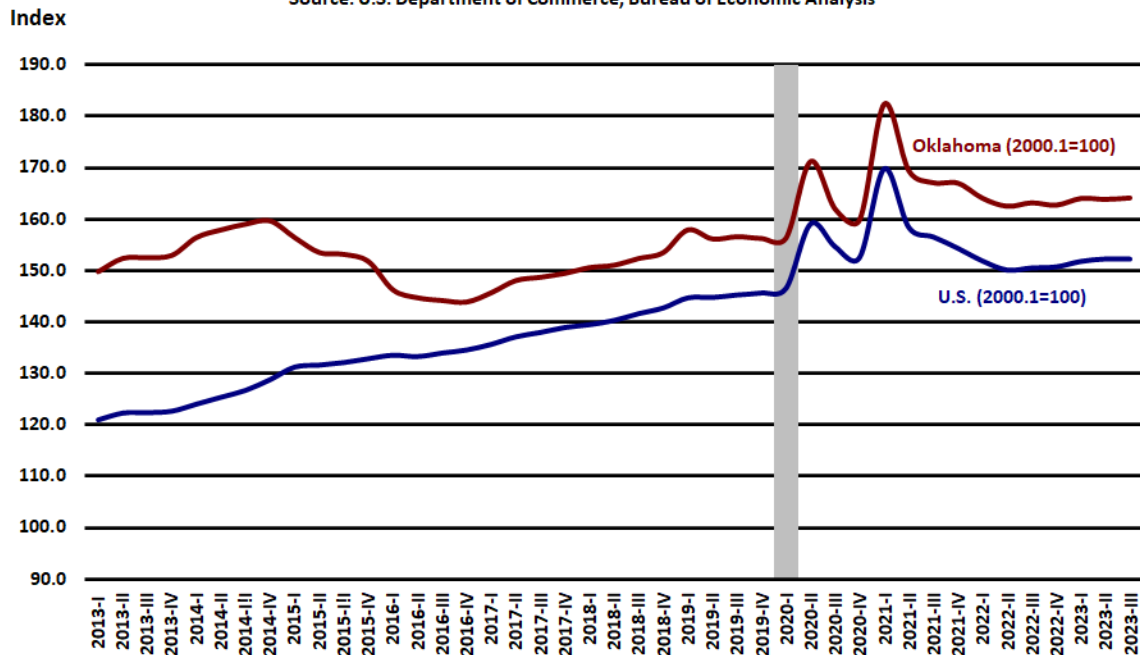
In December, permitting for single family homes was at a seasonally adjusted level of 833 units, down 95 (-10.3 percent), from a level of 928 in the previous month. Multi-family permitting was at a seasonally adjusted level of 131 in December, down 30 (-18.4 percent) from the previous month's level of 161. Single-family permitting accounted for 86.4 percent of total residential permitting activity in December while the more volatile multi-family permitting accounted for 13.6 percent.

Statewide residential construction declined in 2023. Total residential permitting for 2023 was at a seasonally adjusted level of 12,947 permits, 597 fewer permits (-4.4 percent) less than the 13,545 total permits issued during 2022.

## U.S. and Oklahoma Real Personal Income, Q1/13 to Q3/23

Index: 1st Quarter 2000 = 100

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



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

### Definition & Importance

Personal income is a broad measure of economic activity and one for which relatively current data are available. Personal income includes earnings, property income such as dividends, interest, and rent and transfer payments, such as retirement, unemployment insurance, and various other benefit payments. It is a measure of income that is available for spending and is seen as an indicator of the economic well-being of the residents of a state. Earnings and wages make up the largest portion of personal income.

To show the vastly different levels of total personal income for the U.S. and Oklahoma on the same chart, these data have been converted to index numbers. This chart shows a comparison of Oklahoma and U.S. growth in real personal income with 1st quarter 2000 as the base year.

### Current Developments

Consumer spending and personal income both rose in December, and prices rose marginally. Personal income increased \$60.0 billion (0.3 percent at a monthly rate) in December, according to estimates by the Bureau of Economic Analysis (BEA). Disposable personal income (DPI), personal income less personal current taxes, increased \$51.8 billion (0.3 percent) and personal consumption expenditures (PCE) increased \$133.9 billion (0.7 percent). The PCE price index increased 0.2 percent. Excluding food and energy, the PCE price index increased 0.2 percent.

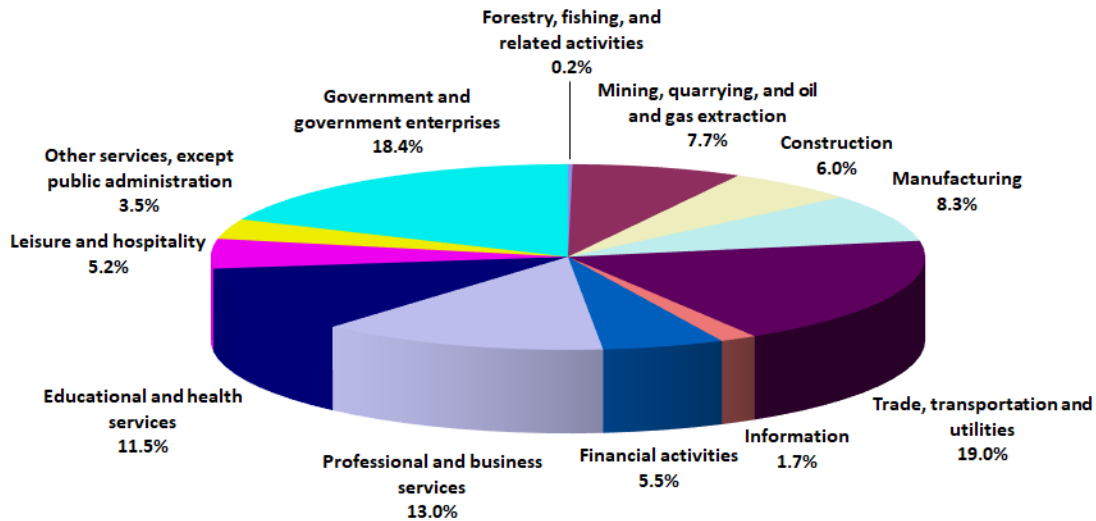
In December, spending on services rose 0.6 percent, driven by spending on financial services and insurance, health care, and recreation services. Outlays on goods surged 0.9 percent as purchases of durable goods, such as motor vehicles and parts, jumped 1.1 percent, while non-durable goods spending, such as prescription drugs and gasoline increased 0.8 percent.

The personal savings rate—personal saving as a percentage of disposable personal income—fell to 3.7 percent in December, down from 4.1 percent in the previous month.

## Oklahoma Nonfarm Industry Contribution to Earnings

Third Quarter 2023

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



### Definition & Importance

Quarterly estimates of state personal income are seasonally adjusted at annual rates by the Bureau of Economic Analysis (BEA). Quarterly personal income estimates are revised on a regular schedule to reflect more complete information than the data that were available when the estimates were initially prepared and to incorporate updated seasonal factors.

### Current Developments

State personal income—a measure of nationwide income calculated as the sum of personal income of all states and the District of Columbia—increased in 49 states and the District of Columbia in the 3rd quarter of 2023, with the percent change ranging from 5.2 percent in Texas to 0.0 percent in Arkansas, according to estimates by the U.S. Bureau of Economic Analysis (BEA).

Oklahoma's personal income accelerated to a 4.3 percent rate in the 3rd quarter of 2023, to a level of \$238.2 billion, ranking the state 7th among all states. For the 2nd quarter of 2023, Oklahoma's personal income was revised upward to \$235.7 billion (2.3 percent) from the previous estimate of \$235.4 billion (1.7 percent).

Earnings increased in all 50 states and the District of Columbia, while growing 5.9 percent nationally. The percent change in earnings ranged from 8.3 percent in Texas to 1.3 percent in North Dakota. Earnings was the leading contributor to growth in personal income in 35 states and the District of Columbia. In Oklahoma, earnings increased 7.6 percent in the 3rd quarter of 2023.

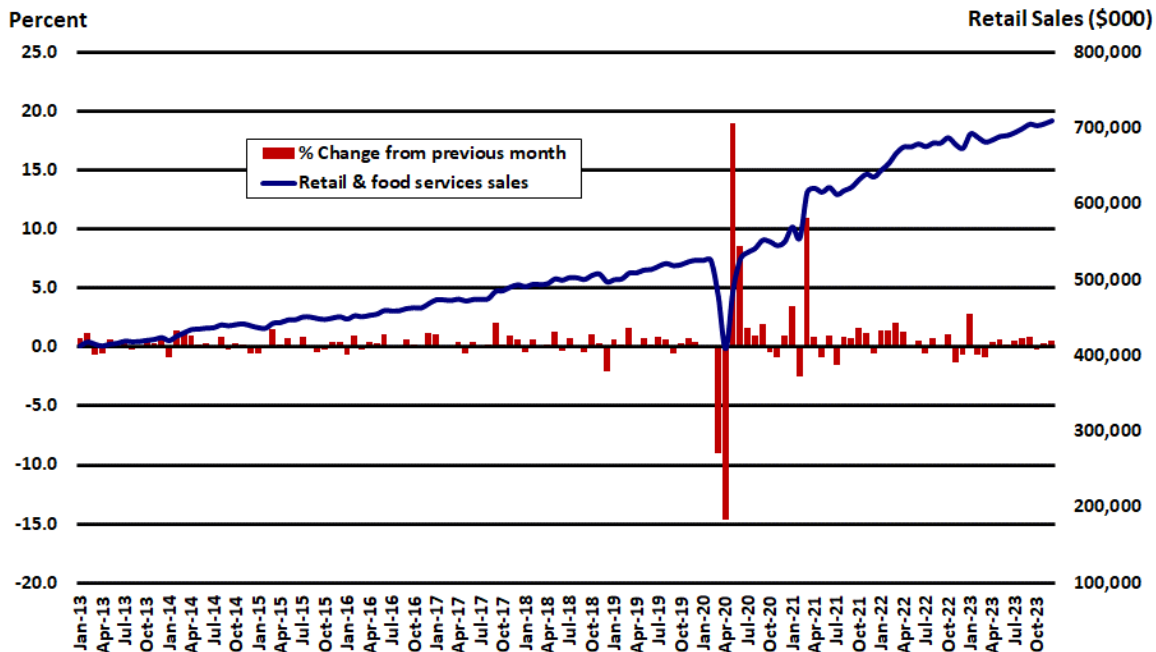
Earnings increased in 20 of the 24 industries for which BEA prepares quarterly estimates. State and local government; construction; and professional, scientific, and technical services were the leading contributors to the overall growth in earnings nationally. In Oklahoma, mining, quarrying, and oil and gas extraction; state and local government; and construction were the leading contributors to the overall growth in earnings in the 3rd quarter of 2023.



## U.S. Retail Sales (Adjusted for Seasonal, Holiday, and Trading-Day Differences)

January 2013 to December 2023

Source: U.S. Census Bureau, Advance Monthly Sales for Retail Trade and Food Services



### Definition & Importance

Retail sales measure the total receipts at stores that sell merchandise and related services to final consumers. Sales are by retail and food services stores. Data are collected from the Monthly Retail Trade Survey conducted by the U.S. Bureau of the Census. Essentially, retail sales cover the durables and nondurables portions of consumer spending. Consumer spending accounts for roughly two-thirds of the U.S. GDP and is therefore essential to Oklahoma's economy. Retail sales account for around one-half of consumer spending and economic recovery calls for consumption growth.

### Current Developments

Holiday shoppers picked up the pace in December, as sales rose at clothing and accessory stores and online sellers, closing out a strong 2023. Advance estimates of U.S. retail and food services sales for December 2023, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were \$709.9 billion, up 0.6 percent from the previous month, and up 5.6 percent above December 2022, according to the U.S. Census Bureau. Total sales for the 12 months of 2023 were up 3.2 percent from 2022. The October 2023 to November 2023 percent change was unrevised from up 0.3 percent.

Sales gains were broad-based over the month in December, as both clothing and accessory stores and online retailers saw 1.5 percent increases over the month. Sales at clothing and accessories stores were also up (0.6 percent).

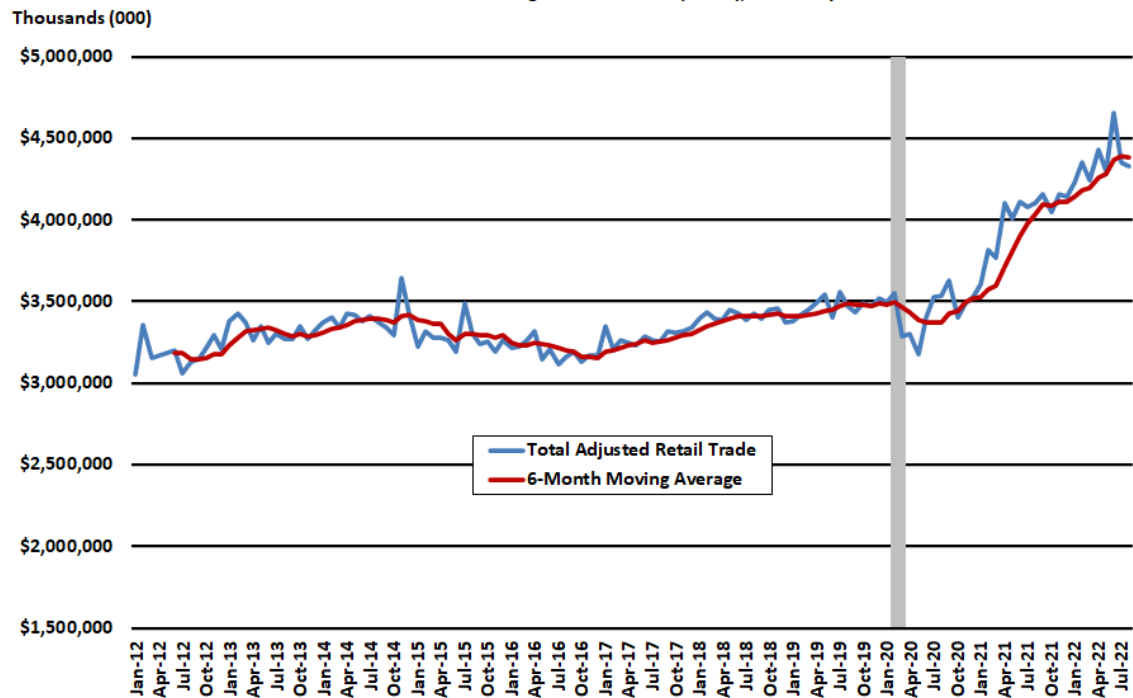
Sales at motor dealerships rose 1.2 percent in December, following a 0.8 percent gain in November. Receipts at gas stations saw a 1.3 percent drop as fuel prices eased. Excluding sales at gasoline stations and on cars and parts, retail sales rose 0.6 percent in December.

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 0.8 percent in December, following a revised 0.5 percent gain in the previous month.

## Oklahoma Total Adjusted Retail Trade

January 2012 to August 2022

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



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

### Definition & Importance

The Center for Economic and Management Research (CEMR) Price College of Business, at the University of Oklahoma produces the Oklahoma Monthly Retail Sales Series containing monthly estimates of retail sales for Oklahoma, the Oklahoma City, Tulsa, and Lawton Metropolitan Statistical Areas and 48 selected cities in Oklahoma. The series is based on sales tax collection data provided by the Business Tax Division, Oklahoma Tax Commission (OTC). In order to take out monthly volatility, we have used a six-month moving average.

### Current Developments

*NOTE: As of August 2022, the Center for Economic and Management Research (CEMR) Price College of Business, at the University of Oklahoma discontinued publication of the Oklahoma Business Bulletin and the Oklahoma Monthly Retail Sales Series. We are currently exploring options for replacing this dataset.*

*This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. This product was created by the recipient and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner.*