DEPARTMENT OF
ECONOMICS
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Economic Outlook 2021: Hope on the Horizon

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The state and national economies continue to recover from the losses associated with the COVID-19 pandemic. By September, the nation recovered fifty-two percent of the nonfarm wage and salary jobs lost to the pandemic, while Oklahoma recovered forty-six percent. This leaves Oklahoma's employment level 4.8 percent lower in the third quarter of 2020 compared to that in the third quarter of 2019, which compares favorably to the 6.9 percent lower level for the nation over the same period. Despite the ongoing recovery in the economies and the emergence of promising vaccines, the current surge of COVID-19 cases and continued weakness in the energy sector provide significant headwinds to Oklahoma's recovery in the near term.

The recovery of the state and national economies from the pandemic occurred earlier and more robustly than forecast last spring by economists. IHS Markit forecast a decline in U.S. real GDP during the second quarter of 26.5 percent, which is close to the 31.4 decline that occurred. IHS Markit forecast flat GDP for the third quarter and only six percent growth in the fourth quarter. Preliminary estimates suggest that U.S. real GDP increased 33.1 percent from the (lower) second quarter base in the third quarter. IHS Markit and other national forecasters expected the state and local economic shutdowns to last longer and did not anticipate the quick and innovative responses by businesses and consumers to resume commerce.

In addition, the boost to personal income from the federal fiscal stimulus turned out to be more than three times what IHS Markit forecast last spring. Personal income surged 10.1 percent from the first to the second quarters of 2020, which is the largest quarterly personal income increase reported by the U.S. Bureau of Economic Analysis dating back to 1948. Had the transfer payments only increased by the amount they did during the largest quarter of personal income decline during the Great Recession (2009Q1), personal income would have instead declined by 2.8 percent, a 12.9 percent difference from the actual change.

The combination of lower forecast economic growth and lower forecast federal stimulus underpinned last spring's forecast of a 9.4 percent decline in state and local tax revenues nationwide for the second quarter by IHS Markit, with only a 1.5 percent increase forecast for the third quarter. The most recent estimates suggest a smaller actual decline in state and local tax revenues nationwide of 4.7 percent in the second quarter and a larger increase of 5 percent (from the lower base) in the third quarter.

The sooner than expected resumption of economic activity and greater than expected boost to personal income from the federal stimulus fueled a rebound in consumption spending. According to Opportunity Insights Tracker, consumer spending in Oklahoma fell to over twenty-six percent below the January level in April before fully recovering in June, rising to nearly seven percent above the January level by mid-November. Consumer spending nationwide declined somewhat more in March and recovered more slowly, and currently lies nearly three percent below the January level. The faster recovery of consumer spending in Oklahoma likely resulted in part from the state economy not shutting down as much and opening up sooner than much of the nation. Baker et al. (2020) report less of a negative consumer spending response to the pandemic in rural, Republican-leaning states during the onset of the pandemic.

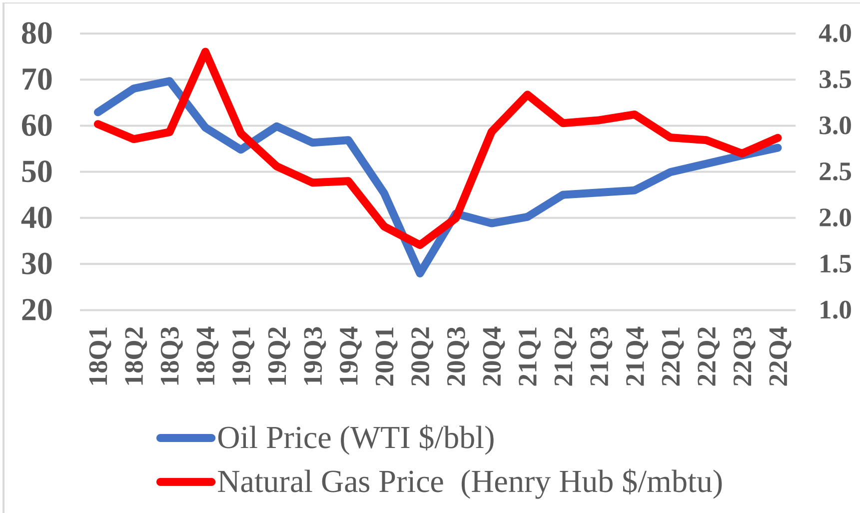

Figure 1. Oil Price Forecasts (U.S. Energy Information Administration-EIA)
(Left axis-WTI oil price $/bbl; Right Axis-Henry Hub natural gas price $/MMBtu)

The effects of declining energy prices continue to play out as forecast. Wage and salary employment in the energy sector has fallen by approximately twenty thousand over the past two years, representing about thirty-seven percent of the workforce. We estimate that for every ten energy sector jobs lost in the state, another fifteen jobs are lost in other sectors. The decline in energy prices then is responsible for a loss of fifty thousand jobs in the state economy, representing about three percent of total wage and salary employment.

As shown in Figure 1, the U.S. Energy Information Administration forecasts the West Texas Intermediate oil price to finish 2020 slightly below 40 dollars per barrel, before increasing to the mid-40s by the middle of 2021 and remaining there for the rest of the year before rising to the mid-50s during 2022. The forecast Henry Hub price of natural gas follows a similar pattern, though rising more sharply in 2021 before leveling off in 2022. The number of rigs actively drilling for oil or gas in Oklahoma dropped from over 140 during the fourth quarter of 2018 to nine in June of this year, with thirteen rigs most recently reported by Baker Hughes, Inc. to be in operation.

Following the sharp rebound in the third quarter, employment growth is forecast to slow in both the nation and the state. As shown in Figure 2, the recovery in Oklahoma employment initially is V-shaped but then slows after the third quarter to mimic the logo of Nike. Continued growth depends critically on growth in the national economy and recovery in the energy sector.

High-frequency indicators of economic activity across the state and nation reveal the challenges for continued economic recovery in the near term. Opportunity Insights reports that both the count of small businesses open and small-business revenues declined significantly in late October and early November in both the state and nation. Opportunity Insights also reports Oklahoma's job postings in the week prior to Thanksgiving week 16.5 percent below the January 2020 level, compared to 18.3 percent for the nation. IHS Markit reports that prior to Thanksgiving travel, passenger throughput at U.S. airports was sixty-three percent below that of

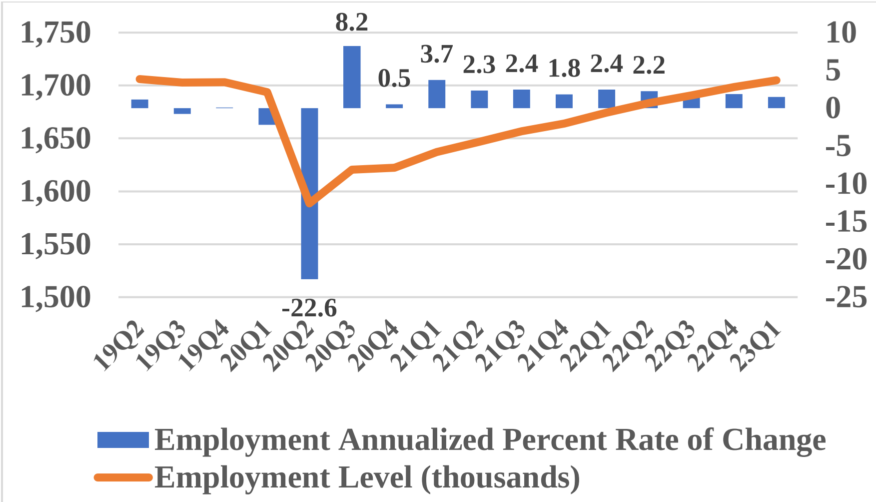

Figure 2. Oklahoma Total Nonfarm Wage and Salary Employment

one-year earlier. Revenue per available room at U.S. hotels recently was reported to be 52% below the year-ago level.

As shown in Figure 3, Oklahoma employment sectors (as defined by the U.S. Bureau of Labor Statistics) most negatively affected (in excess of ten percent) from 2019Q3 to 2020Q3 by the decline in energy prices and the pandemic include: Transportation Equipment Manufacturing (except Aerospace Manufacturing); Arts, Entertainment, and Recreation Services; Mining and Logging; Educational Services; Other Durable Goods Manufacturing; Machinery Manufacturing; Specialty Trade Contractors; Administrative and Support and Waste Management and Remediation Services; and Heavy and Civil Engineering Construction. Sectors that experienced increased employment over the 2019Q3 to 2020Q3 period include: General Merchandise Stores; Federal Government (because of the population census); Financial Activities; Food Manufacturing; Utilities; Aerospace Manufacturing; Construction of Buildings; and Food and Beverage Stores.

Many of the sectors that declined the most from 2019Q3-2020Q3 are forecast to increase the most from 2020Q3-2021Q3. The largest rates of increase (all over five percent) are forecast for Arts, Entertainment, and Recreation Services; Heavy and Civil Engineering Construction; Accommodation and Food Services; Real Estate Services; and Specialty Trade Contractors. Despite experiencing among the largest declines during 2019Q3-2020Q3, several sectors are forecast to continue to decline or only slightly increase: Other Durable Goods Manufacturing; Transportation Equipment Manufacturing (except Aerospace Manufacturing); Educational Services; Machinery Manufacturing; and Mining and Logging. Other sectors forecast to significantly decline include Publishing Industries and Other Information Services.

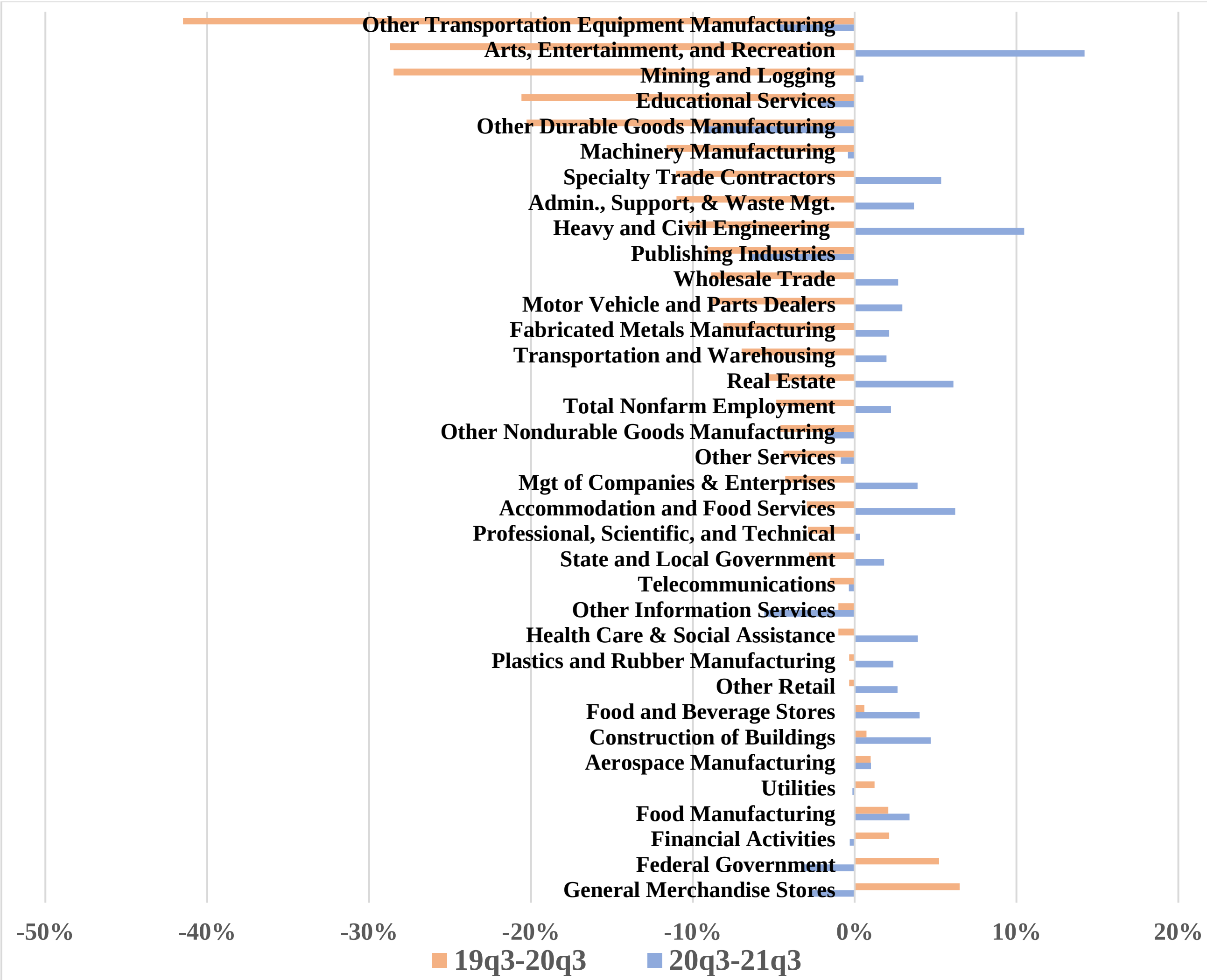

Figure 3. Oklahoma Sector Employment Growth Rates (%): 2019Q3-2020Q3 and 2020Q3-2021Q3

Table 1 contains the quarterly growth rates for several indicators of the state and national economies from 2020Q2 through 2021Q2 (the end of fiscal year 2021). The forecasts reflect responses to past fiscal and monetary stimulus but are based on an assumption of no additional fiscal stimulus because of the current political gridlock. The baseline forecast is based on assumptions of a widely distributed and adopted COVID-19 vaccine by the spring and summer of 2021 and no additional widespread lockdowns of businesses in the near term.

Following the dramatic declines during the second quarter that occurred during the beginning of the COVID-19 pandemic, the nation saw sharp bounce backs in real gross domestic product (GDP), nonfarm wage and salary employment, and nominal personal income during the third quarter. The Oklahoma economy suffered smaller economic declines during the second quarter, but also smaller rebounds in the third quarter than the national economy. Both the smaller economic decline in the second quarter and continued pullbacks in the energy sector limited Oklahoma's bounce back in the third quarter.

Table 1. Annualized Quarterly Growth in Key U.S. and Oklahoma Economic Indicators (%): 2020Q2-2021Q2 (Last History Period: 2020Q3 for employment and unemployment; 2020Q2 for income and GDP)

	20Q2	20Q3	20Q4	21Q1	21Q2
Oklahoma Real GDP	-31.7	1.2	-1.3	0.8	1.3
U.S. Real GDP	-31.4	33.1	3.7	2.7	1.0
Oklahoma Nonfarm Emp.	-22.6	8.2	0.5	3.7	2.3
U.S. Nonfarm Emp.	-40.0	22.9	7.1	7.3	3.6
Oklahoma Personal Income	47.1	-22.0	-12.3	-3.5	2.7
U.S. Personal Income	34.2	-10.2	-10.4	-2.5	2.3
Oklahoma Wage and Salary	-18.5	4.0	3.8	5.0	3.8
U.S. Wage and Salary	-25.7	21.6	9.8	8.1	3.7
Oklahoma Unemp. Rate	11.0	6.1	6.4	5.3	5.2
U.S. Unemployment Rate	13.0	8.8	6.8	6.0	5.8

We forecast continued economic struggles during the fourth quarter of the year and into the first quarter of 2021 in Oklahoma. Expiration of the federal fiscal stimulus and continued high levels of COVID-19 cases limits the pace of economic recovery through the middle of 2021. Oklahoma’s energy sector will bottom out and begin modestly growing in the second quarter of 2021 in response to rising oil prices from growth in world energy demand.

Table 2 shows the quarterly forecasts during 2021Q3-2022Q2 (Fiscal Year 2022). The pace of Oklahoma’s economic recovery picks up steam with modest growth in the energy sector and resumption of some pre-pandemic economic activities with distribution of COVID-19 vaccines. Accompanying the expected growth in the energy sector is expected growth in manufacturing of equipment for the energy sector, along with growth in other energy-dependent sectors in the state.

Table 2. Annualized Quarterly Growth in Key U.S. and Oklahoma Economic Indicators (%): 2021Q3-2022Q2

	21Q3	21Q4	22Q1	22Q2
Oklahoma Real GDP	3.9	3.6	4.3	5.2
U.S. Real GDP	1.9	1.9	3.2	3.3
Oklahoma Nonfarm Emp.	2.4	1.8	2.4	2.2
U.S. Nonfarm Employment	2.9	2.5	3.1	2.6
Oklahoma Personal Income	3.5	3.8	5.8	4.9
U.S. Personal Income	2.5	2.2	4.6	4.3
Oklahoma Wage and Salary	5.0	5.1	5.4	5.6
U.S. Wage and Salary	3.5	3.6	4.9	4.7
Oklahoma Unemp. Rate	4.9	4.7	4.4	4.2
U.S. Unemployment Rate	5.6	5.4	5.0	4.7

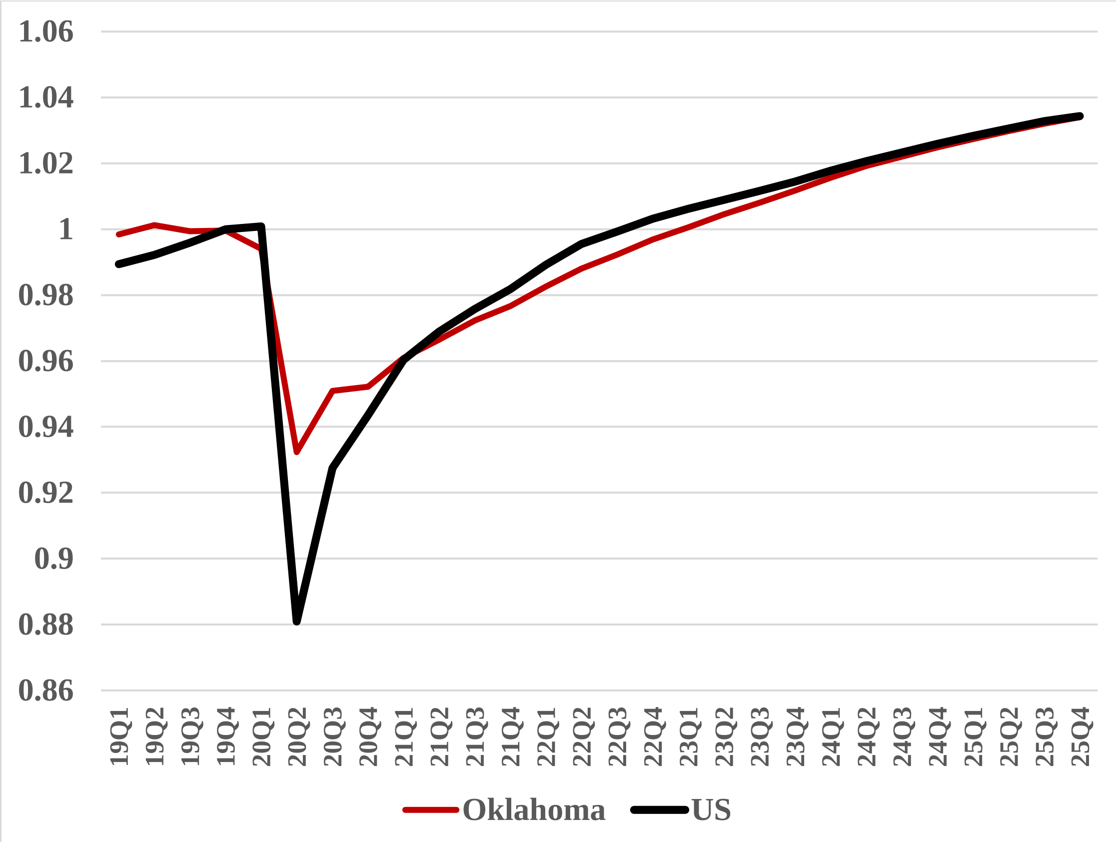

Figure 4. Total Nonfarm Wage and Salary Employment (2019q4=1)

Figure 4 shows the declines and forecast paths of recovery for the state and national economies out through 2025. National employment is forecast to return to its 2019Q4 level around the third quarter of 2022. Because of the lag in the recovery of the energy sector, Oklahoma's employment is forecast not to return to its 2019Q4 level until the first quarter of 2023. Figure 4 also shows the growth of national employment prior to the pandemic and the peaking of Oklahoma's employment in 2019Q2 because the decline in the energy sector had begun the prior quarter.

There are both upside and downside risks to the forecasts. On the upside, the baseline forecast does not include additional federal fiscal stimulus because of the current political gridlock. The provision of additional fiscal stimulus would significantly boost personal income and tax collections in the state. If the recent breakout of oil prices to the upside is not met by increased production by OPEC, the recovery in Oklahoma's energy sector may start sooner than forecast.

On the downside, the current national surge in COVID-19 cases could lead to further restrictions on businesses in parts of the nation and increased reluctance of people to frequent businesses involving face-to-face contact. In examining state-level data on past COVID-19 infections and consumption, IHS Markit (2020) finds that measures implemented by states to contain the virus and increased social distancing by individuals both independently reduce consumption. The immediate consumption effects are large but the lasting effects are small as business and individuals adopt alternative modes of commerce. IHS Markit (2020) simulates the economic effects of a surge in COVID-19 infections per day to 334 thousand during the week ending 27 December, as forecast by the University Washington's Institute for Health Metrics and Evaluation, and re-tightening of state containment efforts to three-fourths of their levels last spring. The simulated scenario results in a reduction of the current forecast of positive annualized 3.7 percent U.S. real GDP growth in the fourth quarter to negative 3 percent.

The baseline forecast anticipates widespread distribution and adoption of COVID-19 vaccines by the spring and summer of 2021. If there is a delay in the distribution of the vaccine or use of the vaccine by the public, the pandemic could last longer and hinder economic recovery. The Federal Reserve has speculated that the economy may not return to its pre-pandemic structure with the vaccines, which may leave segments of the labor force unemployed or under employed for the foreseeable future, producing the lower leg of what has been referred to as a K-shaped recovery in the labor market.

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Opportunity Insights Economic Tracker data are available at tracker.opportunityinsights.org.