

Nebraska Monthly Economic Indicators: July 28, 2021

Prepared by the UNL College of Business, Bureau of Business Research

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Summary: The LEI-N rose by 1.17% during June 2021, the ninth consecutive monthly increase. Steady improvement in the leading indicator implies that economic growth will be strong in Nebraska during the second half of 2021. Three components of the leading indicator rose during June. Business expectations, airline passenger counts, and initial claims for unemployment insurance all showed improvement. Specifically, respondents to the June Survey of Nebraska Business reported plans to increase sales and employment in the state over the next six months. Airline passenger enplanements rose sharply as the industry moved closer to pre-pandemic levels of activity. Initial claims for unemployment insurance fell during June.

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) during June 2021 compared to the previous month. The LEI-N predicts economic growth six months into the future. The LEI-N rose by 1.17% during June.

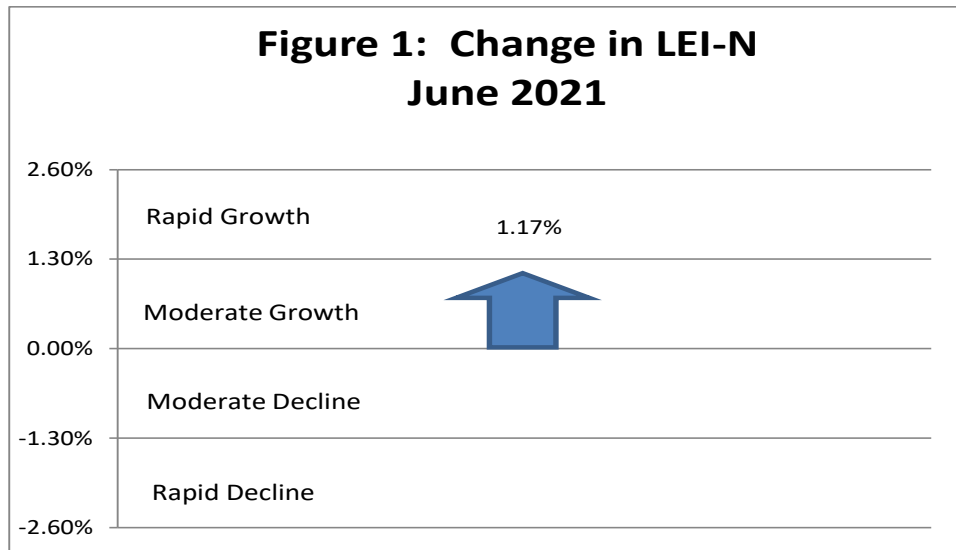


Figure 2 shows the change in the leading indicator over the last six months. The leading indicator has risen consistently and has been strong in recent months. This pattern is consistent with robust economic growth in Nebraska in the second half of 2021.

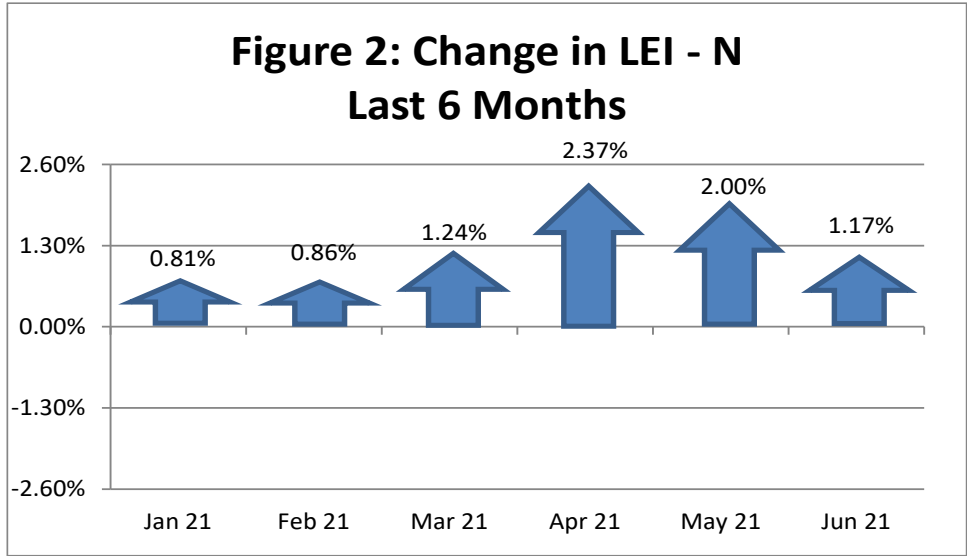
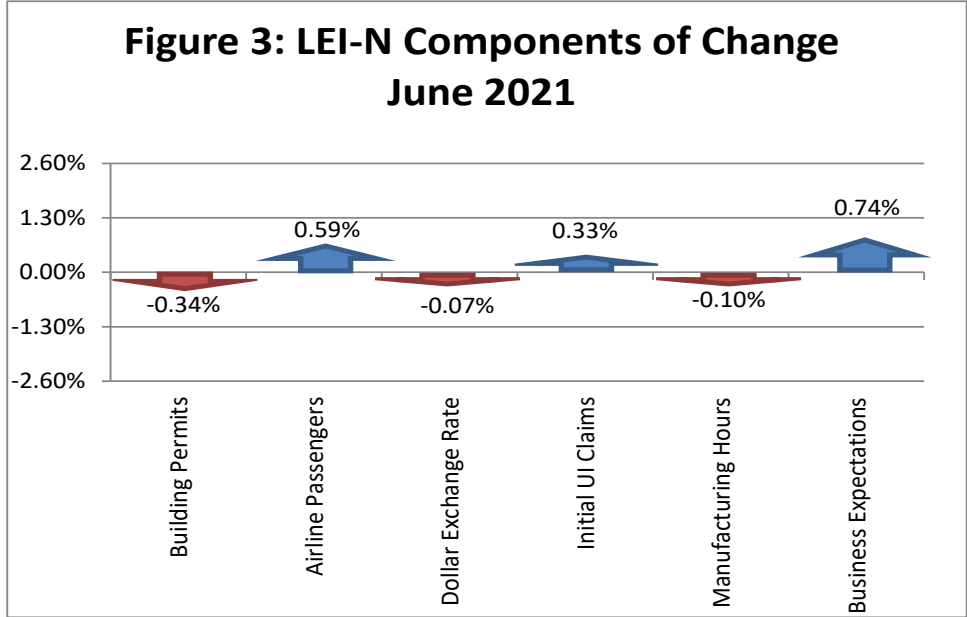


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during June. The change in the LEI–N is the weighted average of changes in each component (see page 5). Three of six LEI–N components improved during June. Business expectations and airline activity were especially strong. Airline passenger counts rose sharply as the industry continued to recover. Respondents to the June *Survey of Nebraska Business* reporting plans to increase employment and sales over the next six months. Initial claims for unemployment insurance also fell in June, which is a positive sign for the state labor market. Building permits for single-family homes was a declining indicator during June. There was also a modest decline in manufacturing hours worked and a small increase in the value of the U.S. dollar. A rising dollar is challenging for agricultural producers, manufacturers, and other Nebraska businesses that compete in international markets.



Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. The CEI-N rose by 1.62% during June 2021, as seen in Figure 4.

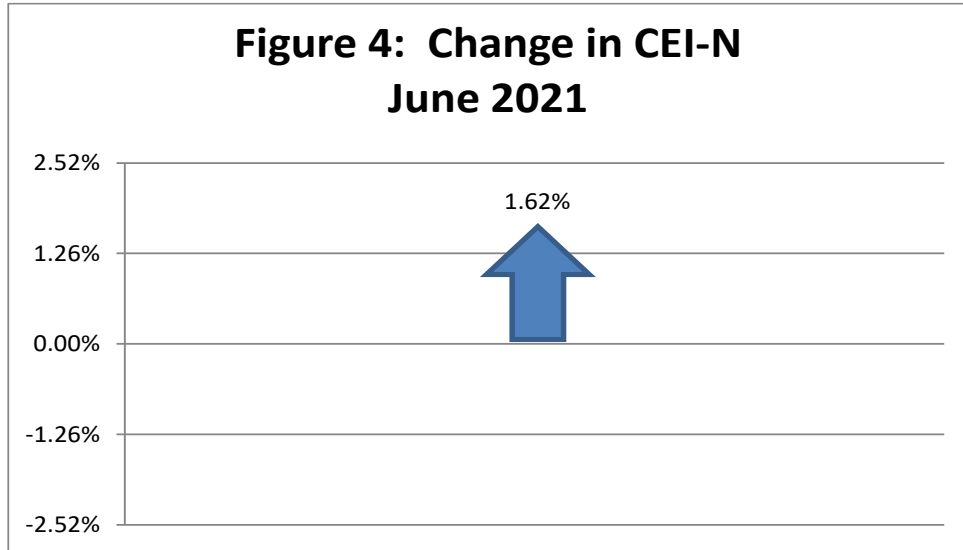
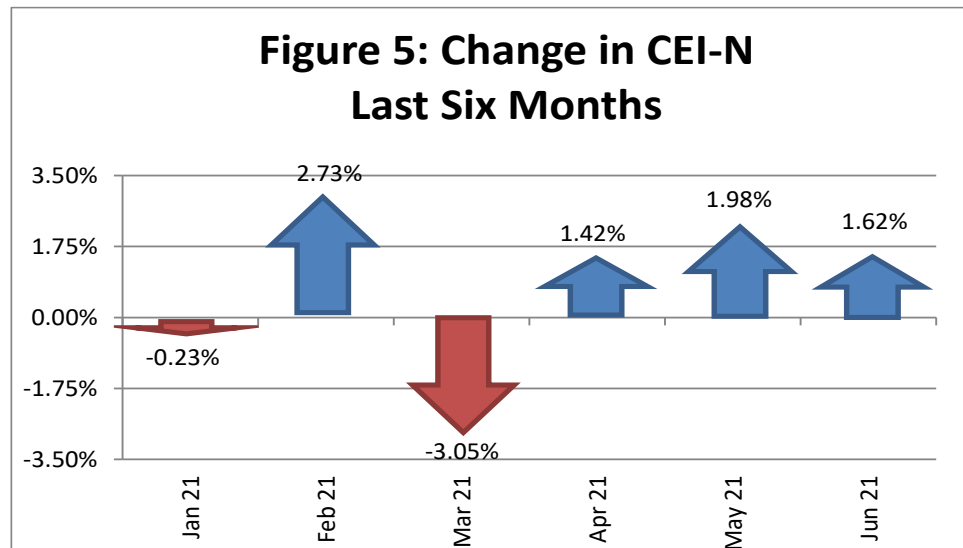


Figure 5 shows the change in the CEI-N over the last 6 months. The CEI-N declined in aggregate during the first quarter of 2021 but grew rapidly during the second quarter. Strong growth appears to be returning to the Nebraska economy.



Business conditions were strong in Nebraska during June. Three of four components of the CEI-N rose during the month. There was strong growth in agricultural commodity prices. Electricity sales also rose on a seasonally adjusted basis. In addition, businesses reported improving conditions. Respondents to the June *Survey of Nebraska Business* reported an increase in sales and employment during the last few months. Private wages were the one declining component. Private wages fell in real terms as inflation exceeded hourly wage growth. A detailed discussion of the components of the CEI-N and LEI-N can be found at <https://business.unl.edu/research/bureau-of-business-research/> in *Technical Report: Coincident and Leading Economic Indicators-Nebraska*.

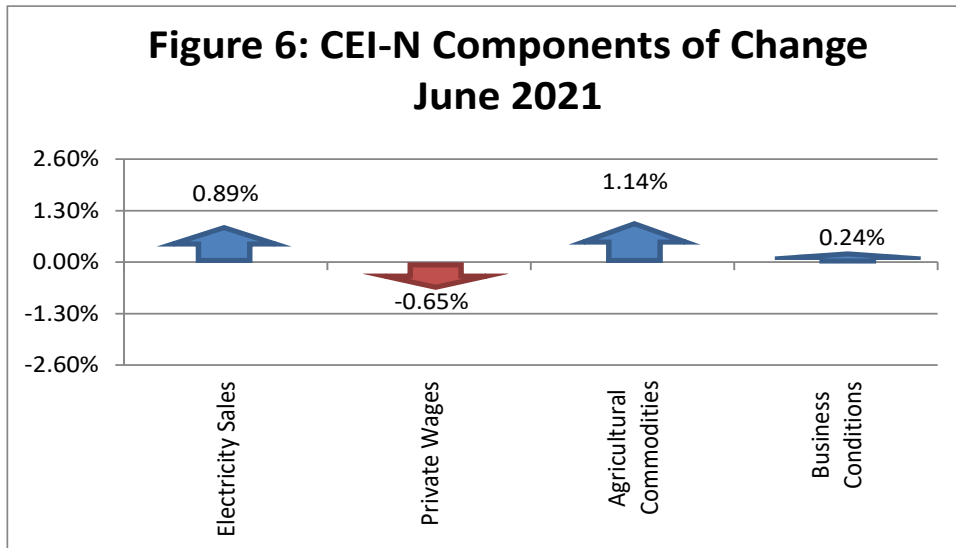
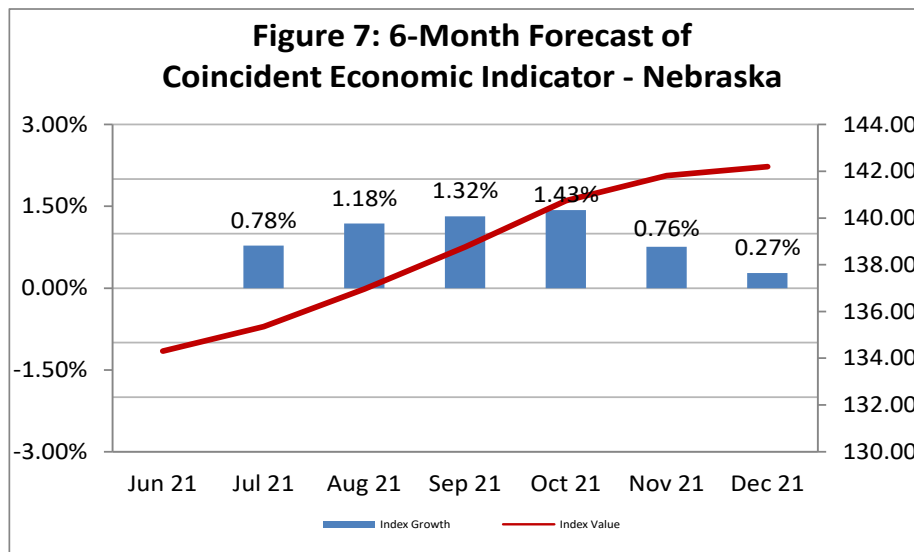


Figure 7 shows a forecast for the CEI-N over the next six months. The forecast calls for growth in the CEI-N through December 2021, including strong growth from August through October. This finding is consistent with the recent increase in the LEI-N reported in Figure 2.



Weights and Component Shares

Table 1 shows the weights used to aggregate the individual components into the LEI-N and CEI-N. The weights are the inverse of the “standardized” standard deviation of each component variable. The term standardized simply means that the inverse standard deviations are adjusted proportionately to sum to 1. This weighting scheme makes sense since individual components that are more stable have a smaller standard deviation, and therefore, a larger inverse standard deviation. A large movement in a typically stable economic series would provide a more powerful signal of economic change than a large movement in a series with significant month-to-month fluctuations.

| Leading Economic Indicator - Nebraska | | | | Coincident Economic Indicator - Nebraska | | | |
|---------------------------------------|--------------------|-------------|----------------------------------|--|--------------------|-------------|----------------------------------|
| Variable | Standard Deviation | Inverse STD | Weight (Inverse STD Standardize) | Variable | Standard Deviation | Inverse STD | Weight (Inverse STD Standardize) |
| SF Housing Permits | 13.6971 | 0.0730 | 0.0374 | Electricity Sales | 4.8222 | 0.2074 | 0.1700 |
| Airline Passengers | 6.2689 | 0.1595 | 0.0817 | Private Wages | 2.0960 | 0.4771 | 0.3911 |
| Exchange Rate | 1.1623 | 0.8604 | 0.4404 | Agricultural Commodities | 3.5189 | 0.2842 | 0.2329 |
| Initial UI Claims | 18.5958 | 0.0538 | 0.0275 | Survey Business Conditions | 3.9792 | 0.2513 | 0.2060 |
| Manufacturing Hours | 1.7534 | 0.5703 | 0.2919 | | | | |
| Survey Business Expectations | 4.2267 | 0.2366 | 0.1211 | | | | |

Tables 2 and 3 show the calculation for the change in LEI-N and CEI-N between May and June of 2021. Weights (from Table 1) are multiplied by the change to calculate the contribution of each component. Contributions are converted to percentage terms and summed.

| Leading Economic Indicator - Nebraska | | | | | | |
|---|---------|----------|------------|--------|--------------|--|
| Component Index Value (May 2007=100) | | | | | | |
| Component | Current | Previous | Difference | Weight | Contribution | Percentage Contribution (Relative to Previous LEI-N) |
| SF Building Permits | 75.62 | 91.11 | -15.49 | 0.04 | -0.58 | -0.34% |
| Airline Passengers | 100.87 | 88.67 | 12.20 | 0.08 | 1.00 | 0.59% |
| U.S. Dollar Exchange Rate (Inverse) | 83.43 | 83.69 | -0.25 | 0.44 | -0.11 | -0.07% |
| Initial Unemployment Insurance Claims (Inverse) | 122.13 | 101.73 | 20.40 | 0.03 | 0.56 | 0.33% |
| Manufacturing Hours | 99.02 | 99.57 | -0.55 | 0.29 | -0.16 | -0.10% |
| Survey Business Expectations ¹ | 60.36 | | 10.36 | 0.12 | 1.25 | 0.74% |
| Total (weighted average) | 170.40 | 168.43 | | | 1.96 | 1.17% |

¹ Survey results are a diffusion Index, which is always compared to 50

| Coincident Economic Indicator - Nebraska | | | | | | |
|--|---------|----------|------------|--------|--------------|--|
| Component Index Value (May 2007=100) | | | | | | |
| Component | Current | Previous | Difference | Weight | Contribution | Percentage Contribution (Relative to Previous CEI-N) |
| Electricity Sales | 180.82 | 173.86 | 6.96 | 0.17 | 1.18 | 0.89% |
| Private Wage | 112.25 | 114.45 | -2.20 | 0.39 | -0.86 | -0.65% |
| Agricultural Commodities | 133.39 | 126.92 | 6.46 | 0.23 | 1.51 | 1.14% |
| Survey Business Conditions ¹ | 51.52 | | 1.52 | 0.21 | 0.31 | 0.24% |
| Total (weighted average) | 134.31 | 132.16 | | | 2.14 | 1.62% |

¹ Survey results are a diffusion Index, which is always compared to 50

Performance of the LEI-N and CEI-N

Further information is available on both economic indicators to demonstrate how well the CEI-N tracks the Nebraska economy and how well the LEI-N leads the CEI-N. Figure 8 shows the value of CEI-N and the real gross state product (real GDP) in Nebraska for 2001 through the first quarter of 2021, using data provided by the Bureau of Economic Analysis, U.S. Department of Commerce. CEI-N closely tracks Nebraska's real GDP for the period. The correlation coefficient between the two-pictured series is 0.95.

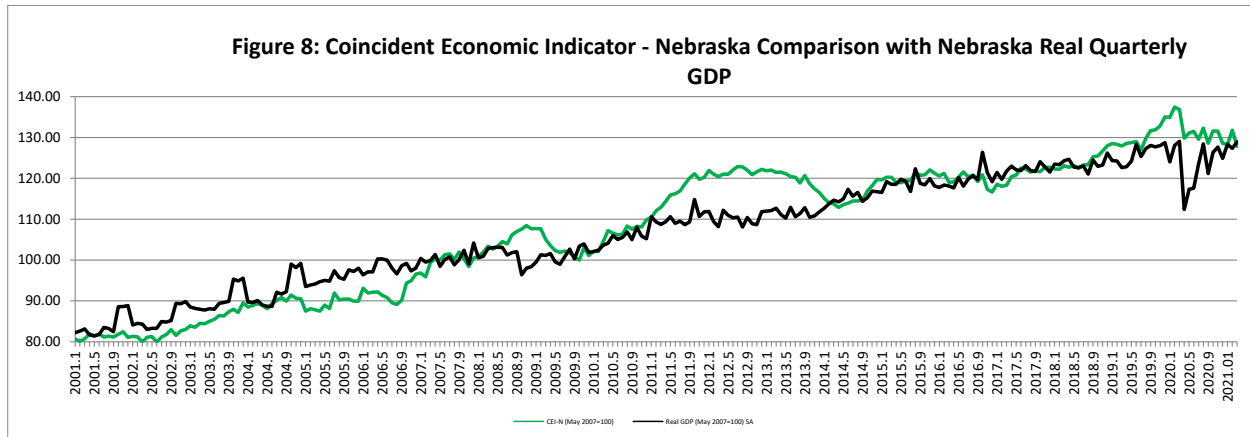


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months earlier) with the actual movement in CEI-N. In Figure 9, predicted values using the LEI-N track trends and movement in the CEI-N. The long-run correlation coefficient between CEI-N and six-month forward values of LEI-N is 0.86.

