

# Nebraska Monthly Economic Indicators: August 21, 2024

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**Summary:** *The Leading Economic Indicator-Nebraska rose by 1.72% in July 2024. The increase in the leading indicator, designed to predict economic growth six months into the future, implies that the Nebraska economy will grow through early 2025. There was an increase in building permits for single-family homes and manufacturing hours worked in July. Business expectations were also positive. Respondents to the July Survey of Nebraska Business reported plans to increase sales and employment over the next six months. Initial claims or unemployment insurance also dropped in July, as a sign of strength for the Nebraska labor market.*

## Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) during July 2024 compared to the previous month. The LEI-N predicts economic growth six months into the future. The LEI-N rose by 1.72%.

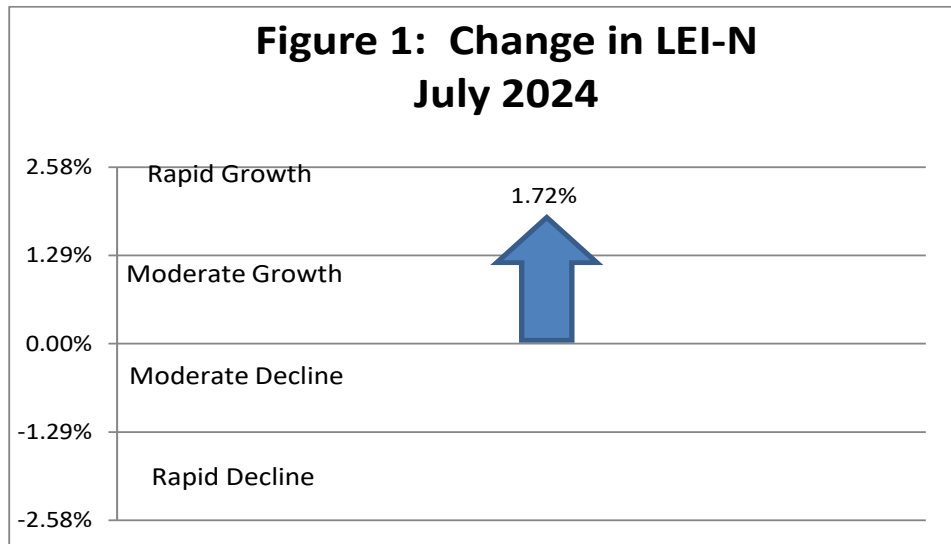


Figure 2 shows the change in the leading indicator over the last six months. The indicator increased in five of the previous six months. Increases in individual months ranged from solid to strong.

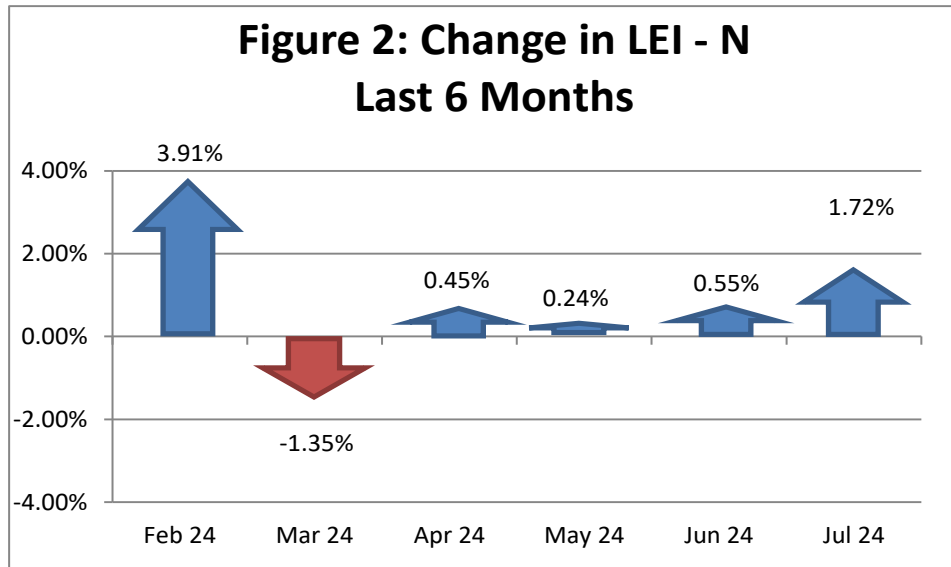
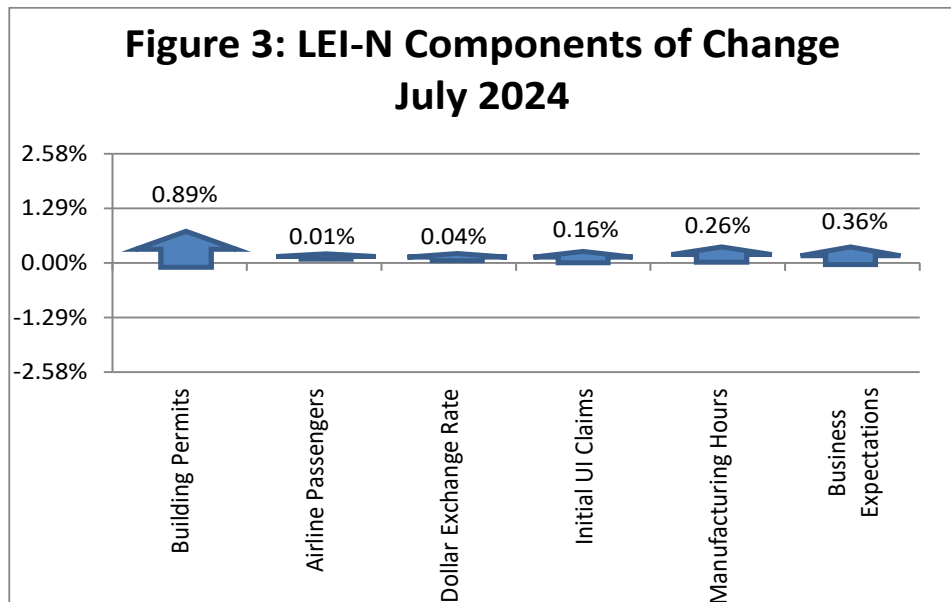


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during July. The change in the LEI–N is the weighted average of changes in each component (see page 5). All leading indicator components improved during July. There were solid increases in building permits for single-family homes and manufacturing hours worked during the month. Business expectations were also positive. Respondents to the *July Survey of Nebraska Business* reported plans to increase both sales and employment over the next six months. There also was a decline in initial claims for unemployment insurance, as a sign of strength for the state labor market.



## 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 fell by 0.15% in July 2024, as seen in Figure 4.

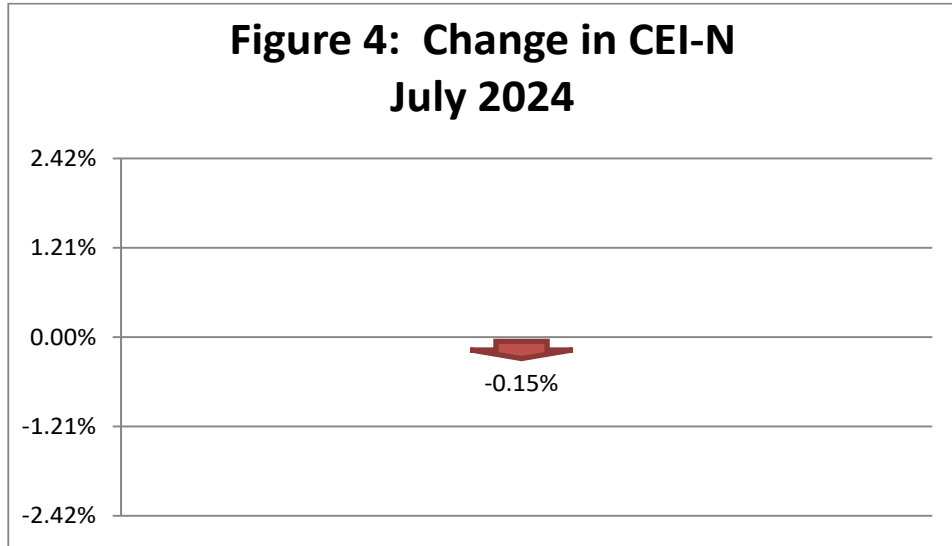
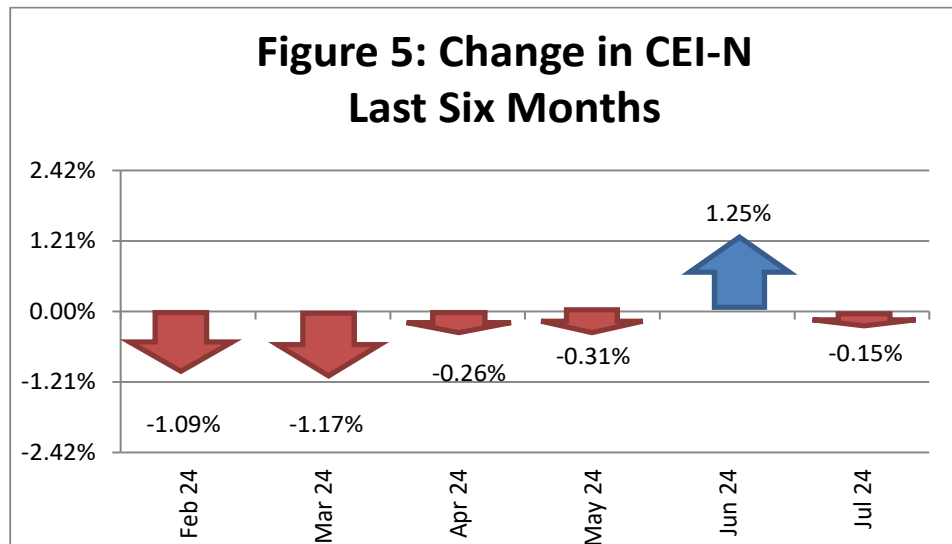


Figure 5 shows the change in the CEI-N over the last 6 months. The CEI-N declined sharply in February and March but has steadied over the last four months. Cumulatively, the CEI-N has risen in recent months. The June increase significantly exceeded modest declines in April, May, and July.



One component of the CEI-N rose significantly during July 2024, as is seen in Figure 6. Specifically, electricity sales rose after adjusting for seasonal conditions. However, there also was a decline in private wages during the month. This occurred due to a drop in hours worked per week. Agricultural commodity prices were essentially unchanged during the month and business conditions were only marginally positive. 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*.

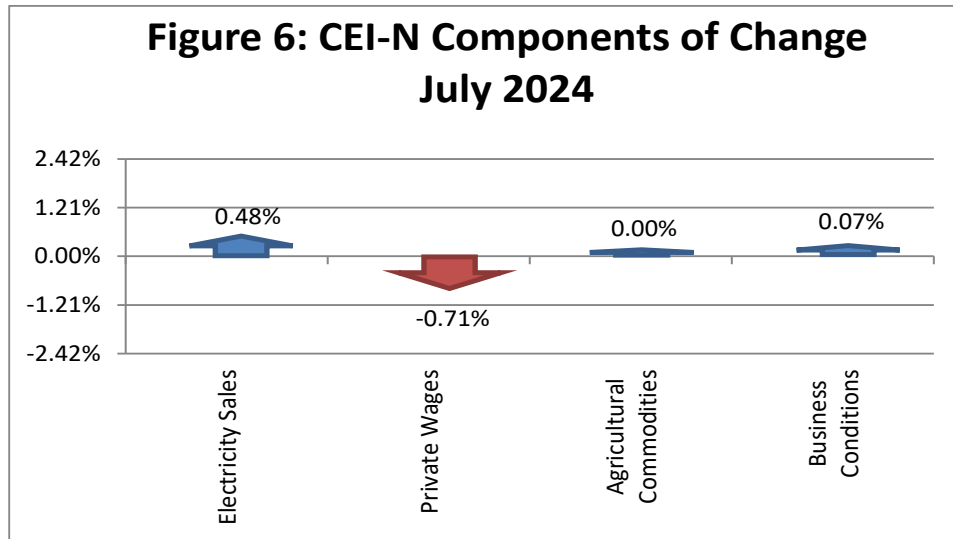
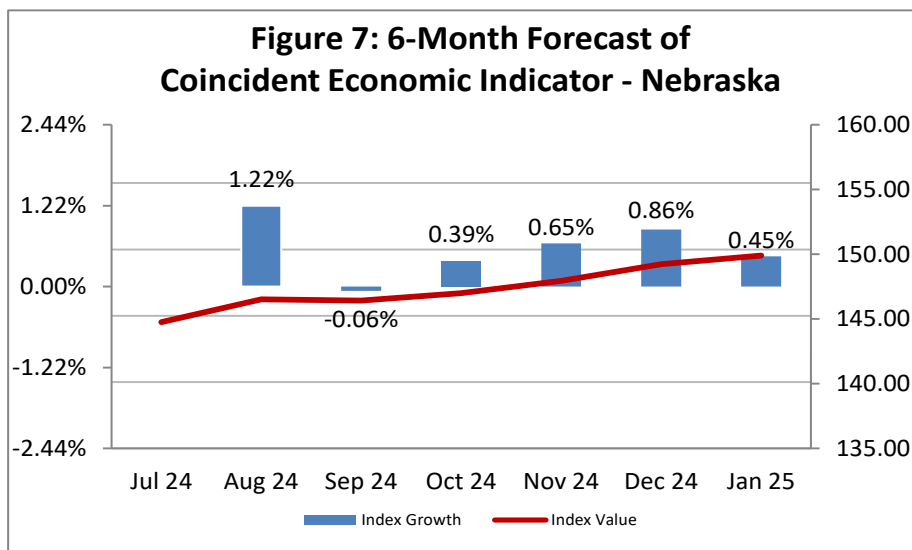


Figure 7 shows a forecast for the CEI-N over the next six months. The forecast calls for economic growth in Nebraska through early 2025. This expectation is consistent with changes in the LEI-N reported in Figure 2.



## 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.

<b>Table 1: Component Weights for LEI-N and CEI-N</b>							
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	14.1990	0.0704	0.0372	Electricity Sales	4.6639	0.2144	0.1726
Airline Passengers	6.0597	0.1650	0.0873	Private Wages	2.0512	0.4875	0.3924
Exchange Rate	1.1274	0.8870	0.4691	Agricultural Commodities	3.5626	0.2807	0.2259
Initial UI Claims	19.2495	0.0519	0.0275	Survey Business Conditions	3.8478	0.2599	0.2092
Manufacturing Hours	2.1057	0.4749	0.2511				
Survey Business Expectations	4.1380	0.2417	0.1278				

Tables 2 and 3 show the calculation for the change in LEI-N and CEI-N between June and July of 2024. Weights (from Table 1) are multiplied by the change to calculate the contribution of each component. Contributions are converted to percentage terms and summed.

<b>Table 2: Component Contributions to the Change in Leading Economic Indicator</b>						
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	118.16	70.07	48.09	0.04	1.79	0.89%
Airline Passengers	117.62	117.35	0.27	0.09	0.02	0.01%
U.S. Dollar Exchange Rate (Inverse)	76.22	76.04	0.17	0.47	0.08	0.04%
Initial Unemployment Insurance Claims (Inverse)	181.60	169.62	11.98	0.03	0.33	0.16%
Manufacturing Hours	104.05	102.00	2.05	0.25	0.51	0.26%
Survey Business Expectations <sup>1</sup>	55.69		5.69	0.13	0.73	0.36%
<b>Total (weighted average)</b>	<b>205.26</b>	<b>201.79</b>			<b>3.47</b>	<b>1.72%</b>

<sup>1</sup> Survey results are a diffusion Index, which is always compared to 50

<b>Table 3: Component Contributions to the Change in Coincident Economic Indicator</b>						
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	188.48	184.44	4.04	0.17	0.70	0.48%
Private Wage	117.97	120.57	-2.61	0.39	-1.02	-0.71%
Agricultural Commodities	172.26	172.25	0.02	0.23	0.00	0.00%
Survey Business Conditions <sup>1</sup>	50.47		0.47	0.21	0.10	0.07%
<b>Total (weighted average)</b>	<b>144.75</b>	<b>144.97</b>			<b>-0.22</b>	<b>-0.15%</b>

<sup>1</sup> 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 from 2001 through the fourth quarter of 2022, using data provided by the Bureau of Economic Analysis, U.S. Department of Commerce. CEI-N closely tracks Nebraska's real GDP for the full two-decade period, although it sometimes exceeds state GDP for a period, typically when agricultural commodity prices are higher. The correlation coefficient between the two-pictured series is 0.96.

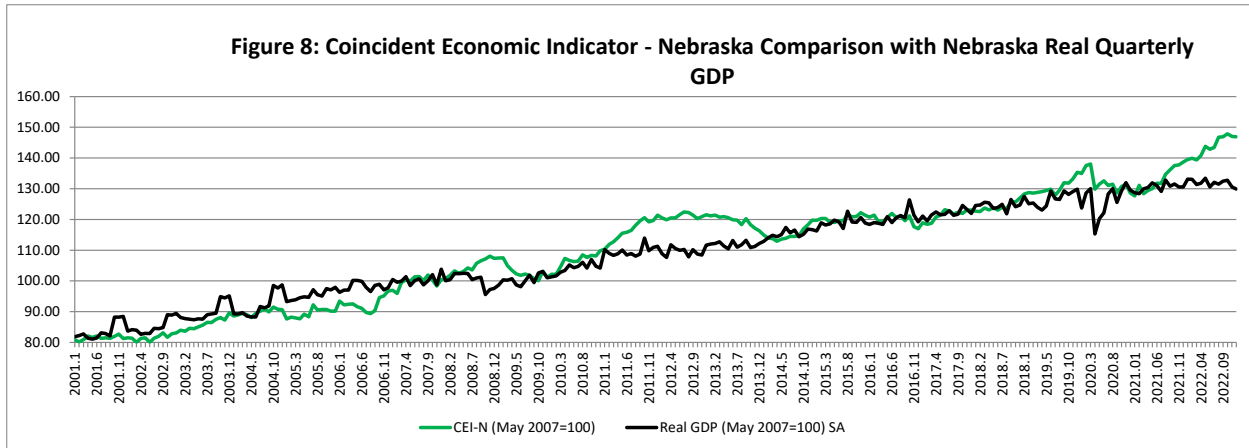


Figure 9 again shows the values for the CEI-N. It also graphs six-month forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 compares the predicted movement in CEI-N (predicted by LEI-N values six months 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 0.92. The two series, however, have deviated in recent months. The two series often deviate during periods when agricultural commodity prices are declining or rising rapidly.

