

Nebraska Monthly Economic Indicators: July 26, 2024

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Leading Economic Indicator.....	1
Coincident Economic Indicator.....	3
Weights and Component Shares.....	5
Performance of the LEI-N and CEI-N.....	6

Summary: *The Leading Economic Indicator-Nebraska rose by 0.58% in June 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 the end of 2024. There was an increase in manufacturing hours worked in June, as Nebraska continues to benefit from strong demand for food products and as U.S. manufacturing activity continues to improve. Business expectations remained positive. Respondents to the June Survey of Nebraska Business reported plans to increase sales and employment over the next six months. Airline passenger counts and building permits for single-family homes also were up slightly in June.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) during June 2024 compared to the previous month. The LEI-N predicts economic growth six months into the future. The LEI-N rose by 0.58%.

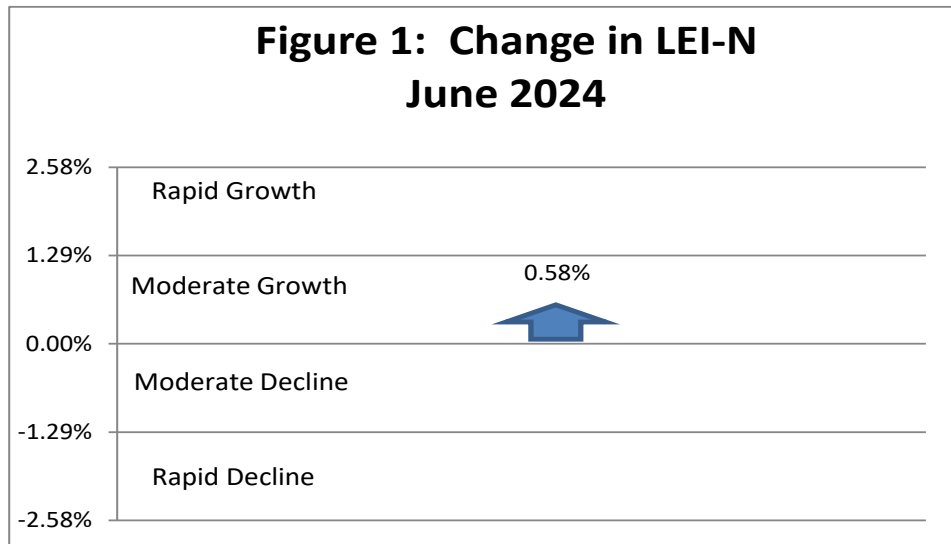


Figure 2 shows the change in the leading indicator over the last six months. The indicator increased overall in both the first and second quarters of 2024, including moderate, steady increases over the last three months.

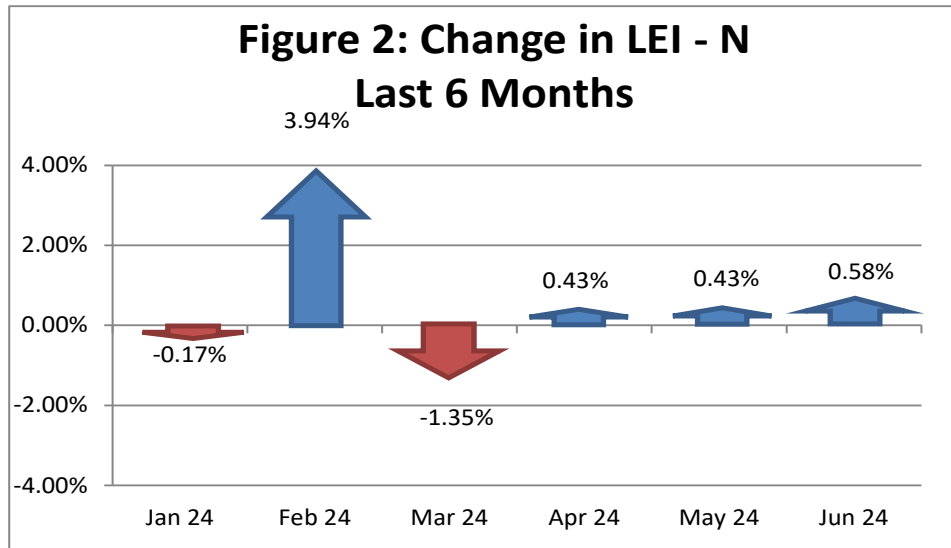
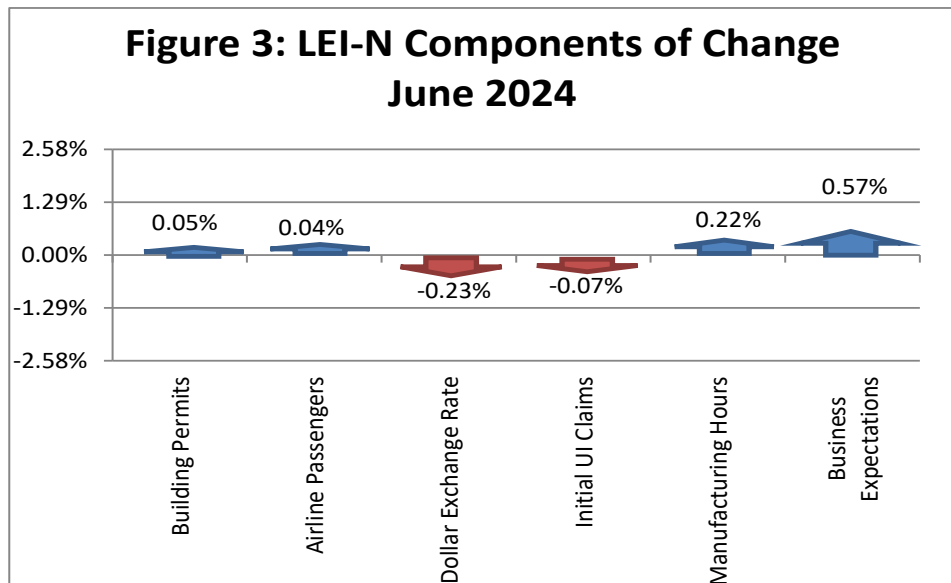


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during June. The change in the LEI–N is the weighted average of changes in each component (see page 5). Four leading indicator components improved during June. There was an increase in manufacturing hours worked during the month, as Nebraska continues to benefit from strong demand for food products and U.S. manufacturing activity continues to improve. Business expectations were also positive. Respondents to the June *Survey of Nebraska Business* reported plans to increase both sales and employment over the next six months. There also was a modest increase in airline passenger counts and building permits for single-family homes.



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 1.18% in June 2024, as seen in Figure 4.

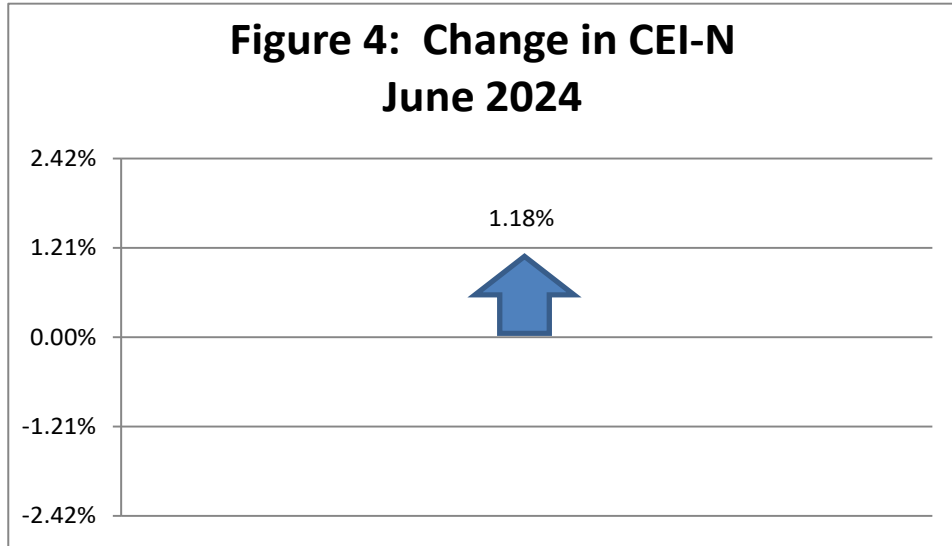
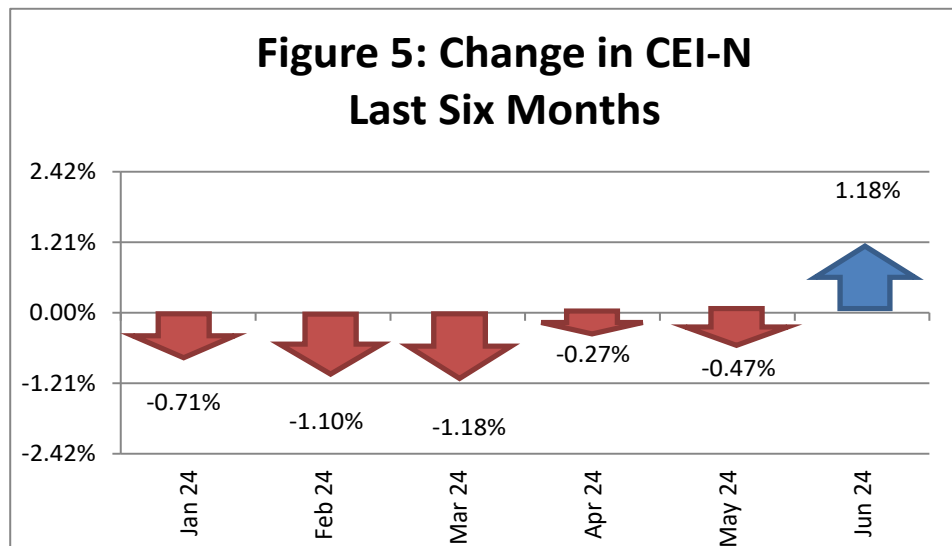


Figure 5 shows the change in the CEI-N over the last 6 months. The CEI-N declined from January through May of 2024. Weakening agricultural commodity prices put downward pressure on CEI-N over the period. The CEI-N fell during the first quarter of 2024 but grew overall during the second quarter of the year, given the June increase.



Two components of the CEI-N rose significantly during June 2024, as is seen in Figure 6. Business conditions were positive, as respondents to the June *Survey of Nebraska Business* reported an increase in employment in recent months. Further, real private wages rose sharply during June, due to an increase in employment and hours worked per week. 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*.

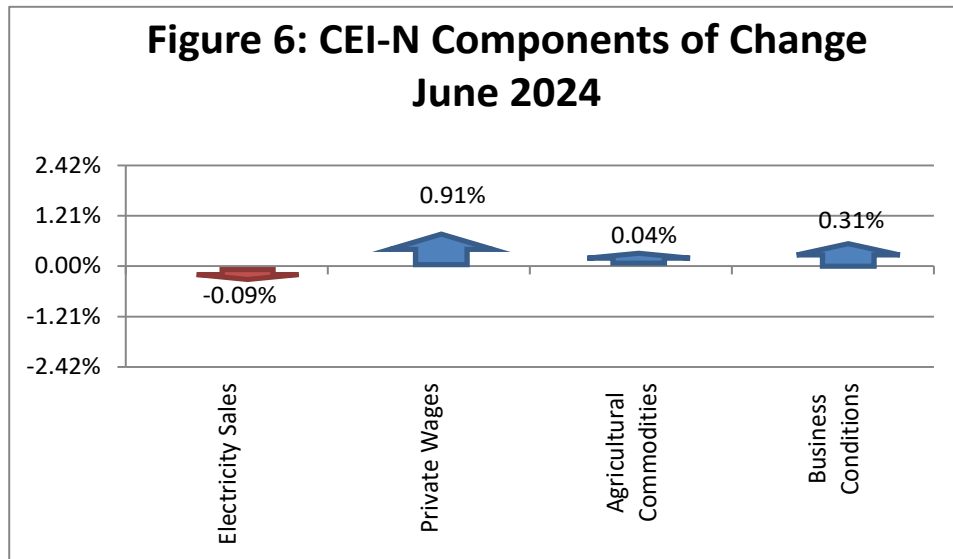
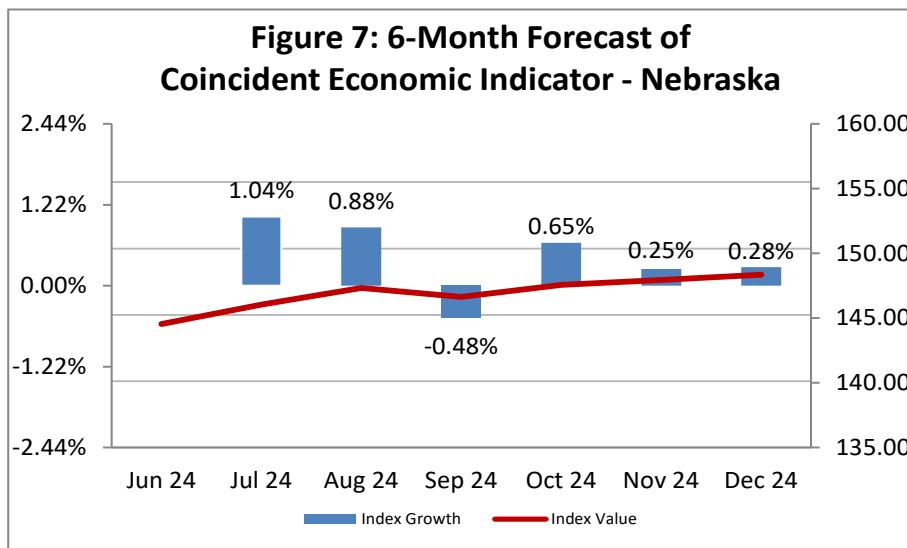


Figure 7 shows a forecast for the CEI-N over the next six months. The forecast calls for stronger economic growth in Nebraska through the summer of 2024 but moderate economic growth towards the end of the year. This expectation is consistent with changes in the LEI-N reported in Figure 2.



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.

Table 1: Component Weights for LEI-N and CEI-N							
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	13.9523	0.0717	0.0379	Electricity Sales	4.6881	0.2133	0.1718
Airline Passengers	6.0701	0.1647	0.0872	Private Wages	2.0476	0.4884	0.3934
Exchange Rate	1.1292	0.8856	0.4685	Agricultural Commodities	3.5714	0.2800	0.2256
Initial UI Claims	19.3243	0.0517	0.0274	Survey Business Conditions	3.8521	0.2596	0.2091
Manufacturing Hours	2.1049	0.4751	0.2514				
Survey Business Expectations	4.1449	0.2413	0.1276				

Tables 2 and 3 show the calculation for the change in LEI-N and CEI-N between May and June 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.

Table 2: Component Contributions to the Change in Leading Economic Indicator						
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	73.07	70.29	2.78	0.04	0.11	0.05%
Airline Passengers	117.35	116.33	1.02	0.09	0.09	0.04%
U.S. Dollar Exchange Rate (Inverse)	76.04	77.04	-1.00	0.47	-0.47	-0.23%
Initial Unemployment Insurance Claims (Inverse)	167.70	173.13	-5.43	0.03	-0.15	-0.07%
Manufacturing Hours	101.74	99.97	1.77	0.25	0.45	0.22%
Survey Business Expectations ¹	58.98		8.98	0.13	1.15	0.57%
Total (weighted average)	201.65	200.49			1.17	0.58%

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

Table 3: Component Contributions to the Change in Coincident Economic Indicator						
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	182.68	183.42	-0.74	0.17	-0.13	-0.09%
Private Wage	120.79	117.48	3.31	0.39	1.30	0.91%
Agricultural Commodities	171.59	171.31	0.28	0.23	0.06	0.04%
Survey Business Conditions ¹	52.11		2.11	0.21	0.44	0.31%
Total (weighted average)	144.54	142.86			1.68	1.18%

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 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.

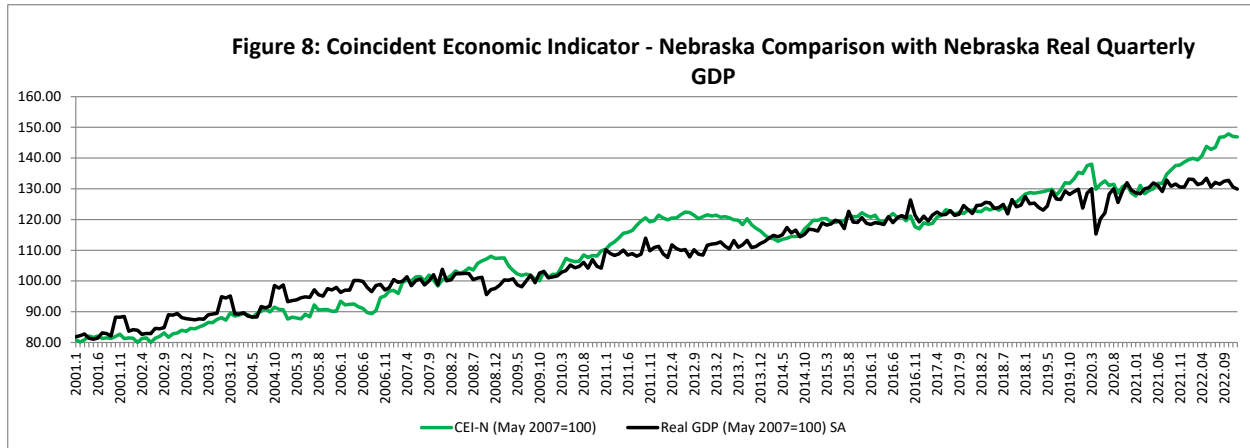


Figure 9 again shows the values for the CEI-N. It also graphs six-month forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 compares the predicted movement in CEI-N (predicted by LEI-N values six months 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.

