

Nebraska Monthly Economic Indicators: May 17, 2013

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) rose by 1.16% during April 2013. The increase in the LEI-N, which predicts economic growth in the state six months in the future, suggests moderate economic growth in Nebraska during the fall of 2013. Looking at individual components of the LEI-N, five of the six components of the LEI-N rose during April, while the sixth component, manufacturing hours, remained unchanged. Single-family building permits rose, rebounding from a sharp decline in March. Airline passengers counts also expanded in April, along with business expectations. In particular, respondents to the Survey of Nebraska Business projected an increase in business sales and employment over the next six month. Initial claims for unemployment insurance dropped during April, a sign of strength in the labor market. Finally, after two months of sharp increases, the value of the U.S. dollar declined during April. This will provide relief to exporters who benefit from a lower-valued dollar.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in April 2013, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, increased by 1.16% in April.

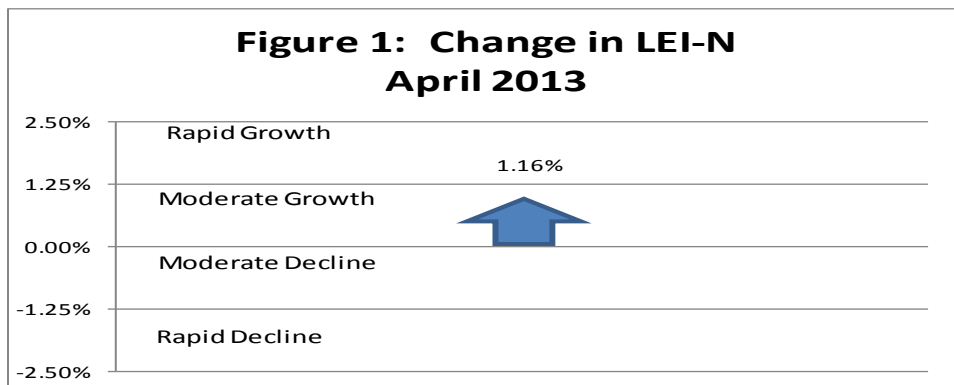


Figure 2 shows the growth in the LEI-N over the last 6 months. The figure shows uneven growth in the LEI-N. The LEI-N increases one month only to decline the next. This uneven rate of growth in the LEI-N suggests weak economic growth in Nebraska in the next few months. However, solid growth in the April LEI-N indicates that growth should accelerate from weak to moderate in Nebraska later in 2013. Such an improvement in growth, however, will need to be confirmed by continued improvements in the LEI-N over the next few months.

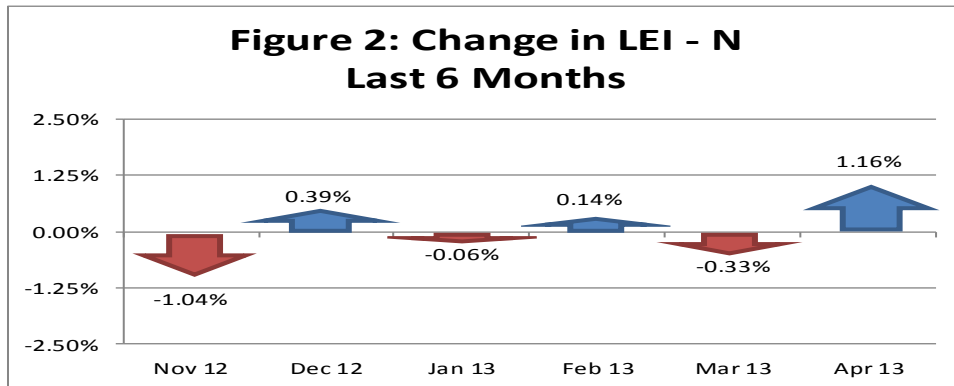
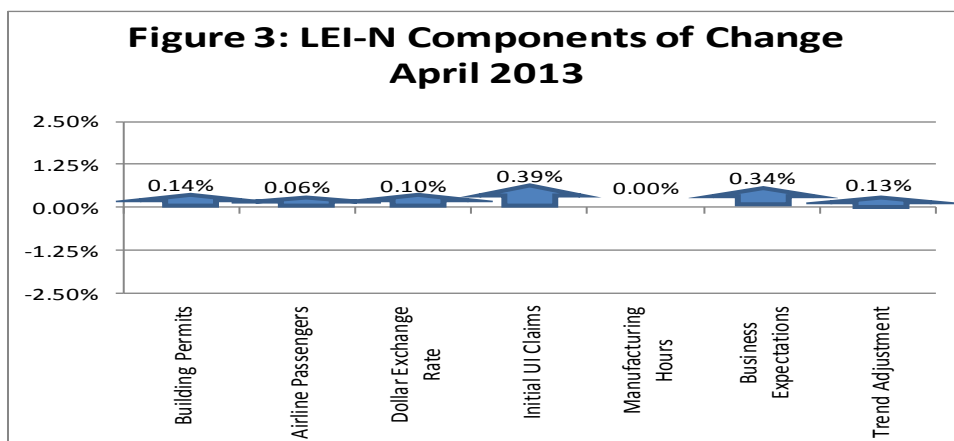
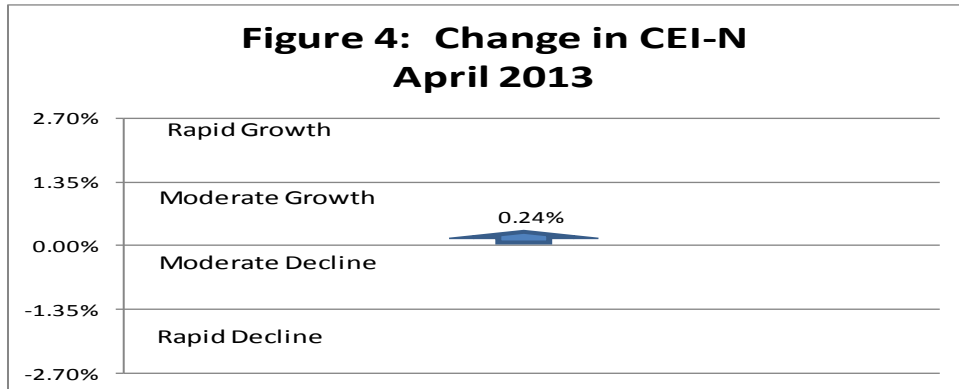


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during April 2013. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). Five of the six components of the leading indicator rose in April, while the sixth component, manufacturing hours, was unchanged. Both single-family building permits and airline passenger counts rose during April. There also was a decline in unemployment insurance claims, a sign of strength in the labor market. Further, after several months of sharp increase, there was a decline in the value of the U.S. dollar in April. A lower value for the U.S. dollar will support export activity. Finally, respondents to the *Survey of Nebraska Business* reported that they expect solid improvements in sales and employment in their business over the next six months. Note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

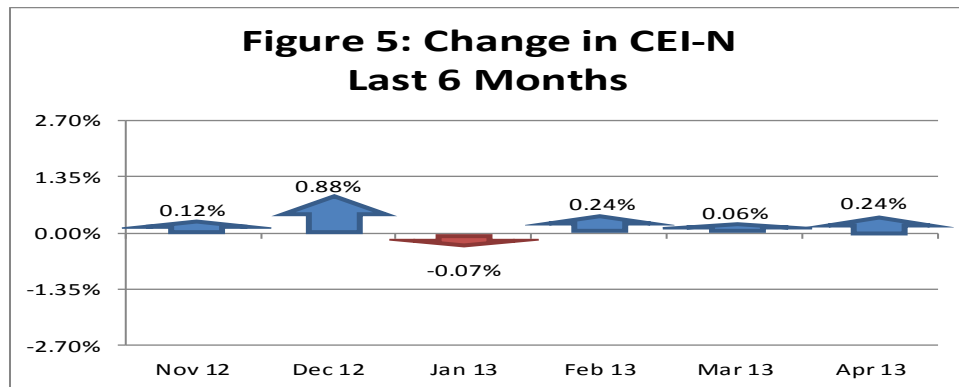


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. The CEI-N rose by 0.24% between March and April of 2013, as seen in Figure 4.



The CEI-N has grown in five of the last 6 months, as seen in Figure 5. The rate of growth has been anemic, however. During 2013, there was a slight decline in the CEI-N in January, and only modest increases from February through April.



As seen in Figure 6, rising electricity sales were the reason for the improvement in the CEI-N during April. Sales improved even after adjusting for weather conditions during the month. The other three components of the CEI-N declined during April. Private wages declined modestly during April. There was a drop in agricultural prices during the month, particularly in corn prices, that subtracted from growth in the CEI-N. There also was a decline in business activity during April. Respondents to the *Survey of Nebraska Business* reported a modest decline in sales and employment activity in recent months. A detailed discussion of the components of the CEI-N, as well as the LEI-N, can be found at www.cba.unl.edu in *Technical Report: Coincident and Leading Economic Indicators- Nebraska*.

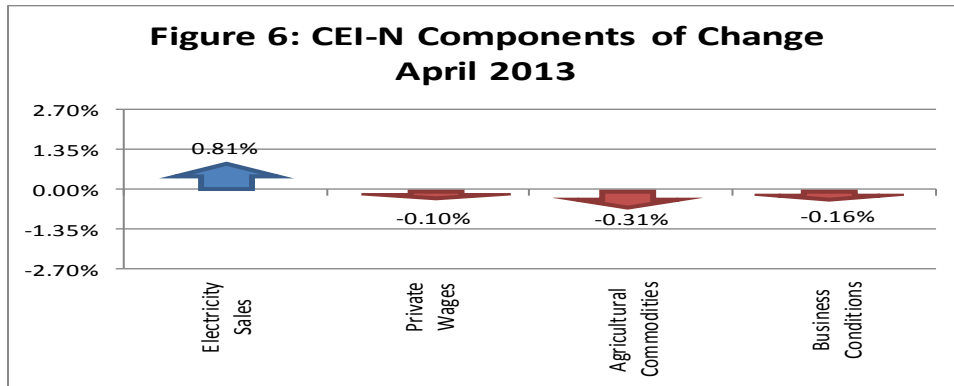
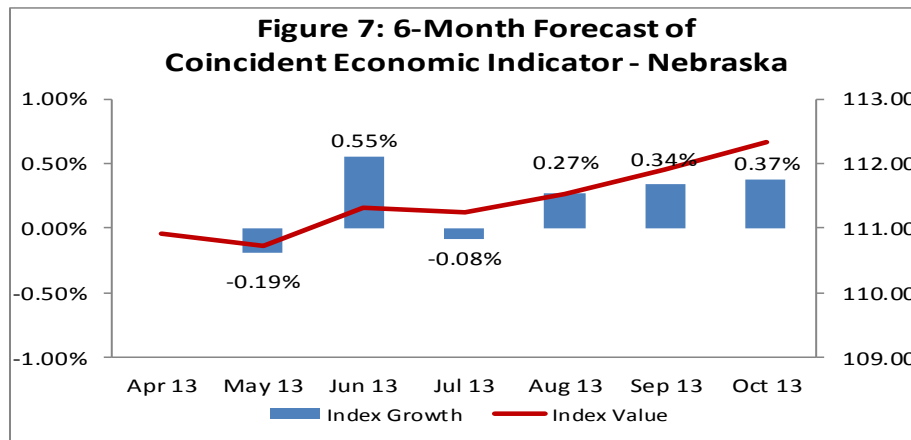


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects the uneven pattern of growth in the LEI-N over the past six months, as seen in Figure 2. The forecast shows continued weak growth in the CEI-N during the next three months, from May through July of 2013. The CEI-N, in fact, is expected to decline in May and fall slightly in July. Growth is expected to improve beginning in August, with the rate of growth improving steadily from August through October of 2013. In other words, a moderate rate of growth is anticipated later in the year.



Weights and Component Shares

Table 1 shows the weights that were 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 smaller standard deviations, 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 that regularly has large movements.

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	14.1857	0.0705	0.0328	Electricity Sales	4.6591	0.2146	0.1583
Airline Passengers	3.6323	0.2753	0.1283	Private Wages	1.7170	0.5824	0.4295
Exchange Rate	1.2337	0.8106	0.3776	Agricultural Commodities	3.3272	0.3006	0.2216
Initial UI Claims	9.8620	0.1014	0.0472	Survey Business Conditions	3.8685	0.2585	0.1906
Manufacturing Hours	1.4511	0.6892	0.3210				
Survey Business Expectations	5.0072	0.1997	0.0930				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between March and April of 2013. Weights (from Table 1) are multiplied by the change to calculate the contribution of each component. Contributions are converted to percentage terms and summed. Note that in Table 2 a trend adjustment factor is utilized in calculating LEI-N. This is done because LEI-N historically under-predicts CEI-N by 0.13% per month. The U.S. Leading Economic Indicator also has a trend adjacent factor.

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	68.33	63.89	4.44	0.03	0.15	0.14%
Airline Passengers	88.16	87.65	0.51	0.13	0.07	0.06%
U.S. Dollar Exchange Rate (Inverse)	104.13	103.84	0.29	0.38	0.11	0.10%
Initial Unemployment Insurance Claims (Inverse)	80.82	72.33	8.49	0.05	0.40	0.39%
Manufacturing Hours	89.09	89.09	0.01	0.32	0.00	0.00%
Survey Business Expectations ¹	53.82		3.82	0.09	0.36	0.34%
Trend Adjustment					0.13	0.13%
Total (weighted average)	105.00	103.79			1.21	1.16%

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	111.52	105.85	5.67	0.16	0.90	0.81%
Private Wage	96.83	97.09	-0.25	0.43	-0.11	-0.10%
Agricultural Commodities	154.63	156.16	-1.52	0.22	-0.34	-0.31%
Survey Business Conditions ¹	49.04		-0.96	0.19	-0.18	-0.16%
Total (weighted average)	110.93	110.66			0.27	0.24%

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 2011. The comparison ends in 2011 since this is the last year for which data on real gross state product is available. Annual real gross state product data is provided by the Bureau of Economic Analysis, U.S. Department of Commerce, and quarterly values were estimated using quarterly earnings data. CEI-N closely tracks Nebraska real GDP for the period. The correlation coefficient between the two pictured series is 0.94.

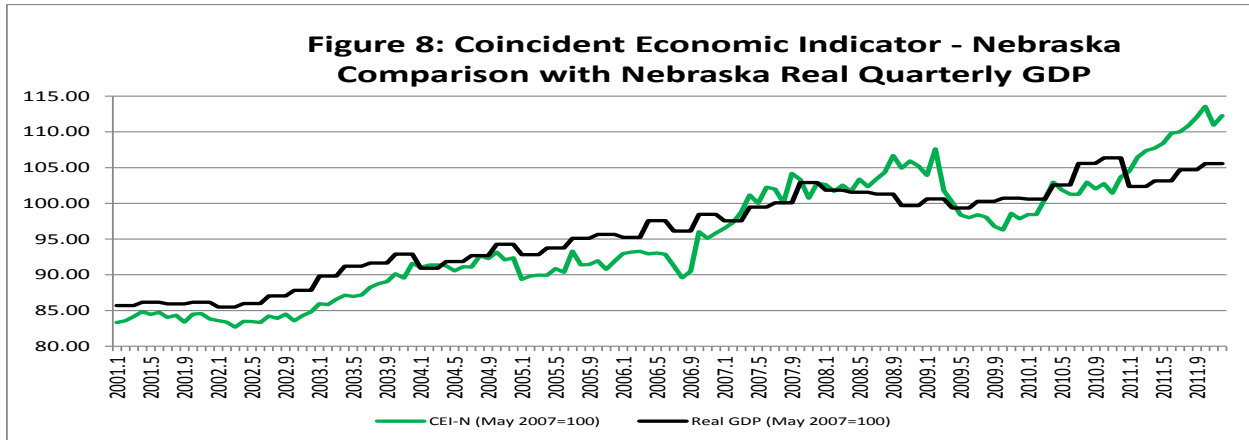


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months earlier) with the actual movement in CEI-N. In Figure 9, predicted values using the LEI-N closely track trends and movement in the CEI-N. The correlation coefficient between CEI-N and six-month forward values of LEI-N is 0.92.

