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Nebraska Monthly Economic Indicators: July 19, 2013

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) rose by 0.87% during June 2013. The increase in the LEI-N, which predicts economic growth in the state six months in the future, follows a small increase in May. Taken together, results for the two months suggest moderate economic growth in Nebraska at the end of 2013. Such moderate expectations are particularly appropriate because improvement in the LEI-N during June was not broad-based. Looking at individual components of the LEI-N, only two of the six components rose during June, three declined and one was unchanged. Single-family building permits rose during June. But the primary reason for the improvement in the LEI-N was a sharp decline in initial unemployment insurance claims during the month, which is a positive signal for the job market and the economy. Among declining components, airline passengers and manufacturing hours both declined modestly during June. Further, the value of the U.S. dollar rose during June, which is negative for businesses that export. Finally, business expectations were neutral during June. Respondents to the Survey of Nebraska Business were as likely to project a decrease in sales and employment at their business over the next six month as they were to project an increase.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in June 2013, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, increased by 0.87% in June.

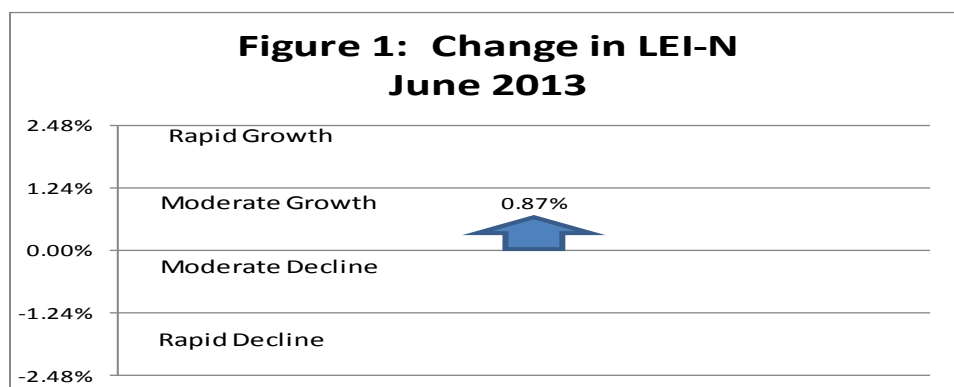


Figure 2 shows the growth in the LEI-N over the last 6 months. The LEI-N began to grow in February. Over the last three months, the LEI-N showed solid growth in April and June but was nearly unchanged during May. These results imply moderate, rather than strong, economic growth in Nebraska at the end of 2013. This is particularly true because the improvement in the LEI-N during June was not broad-based, as is discussed below.

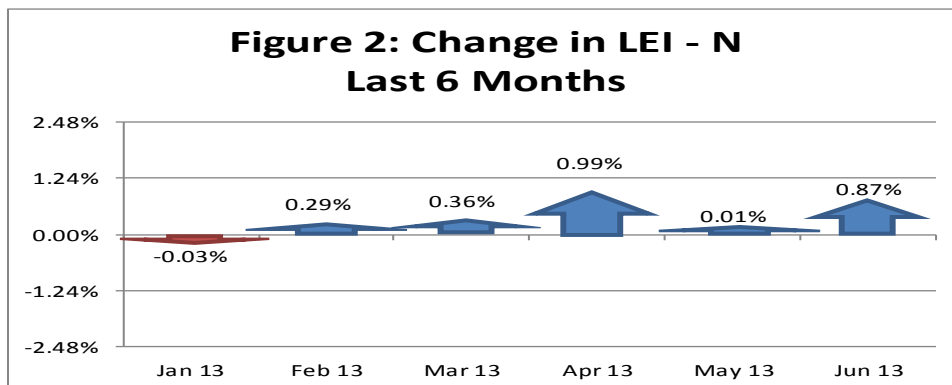
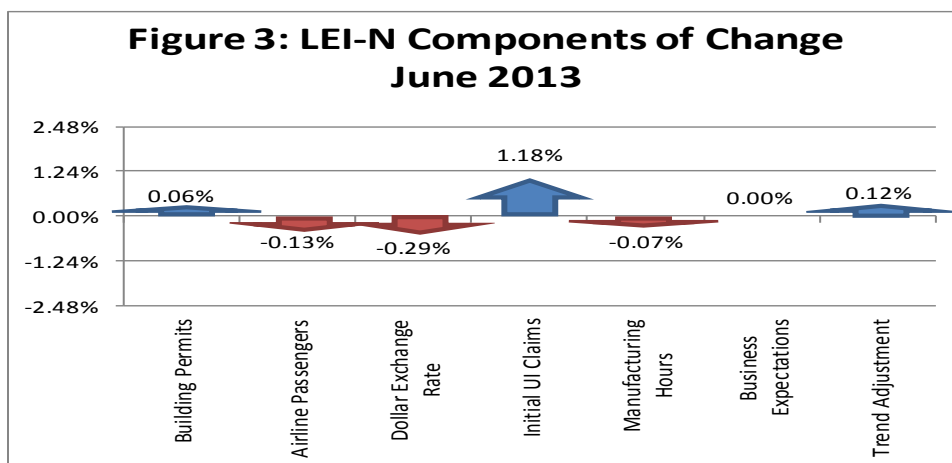
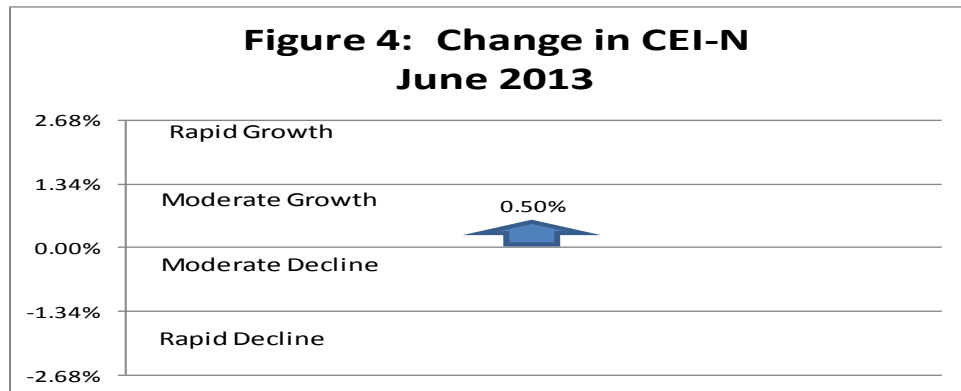


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during June 2013. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). Only two of the six components of the leading indicator rose in June. Building permits rose, in line with an ongoing improvement in the housing sector. But, the primarily reason for the increase in the LEI-N was a sharp decline in initial unemployment insurance claims during June. This is a positive signal for economic growth. Businesses-owners typically maintain more or their workers when they anticipate growing demand. Among declining components, airline passenger counts and manufacturing hours both declined modestly during June. The value of the U.S. also continued to rise in June, which will pressure businesses that export. Business expectations were neutral in June. Respondents to the *Survey of Nebraska Business* were as likely to project a decrease in sales and employment in their business over the next six months as they were to project an increase. Finally, note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

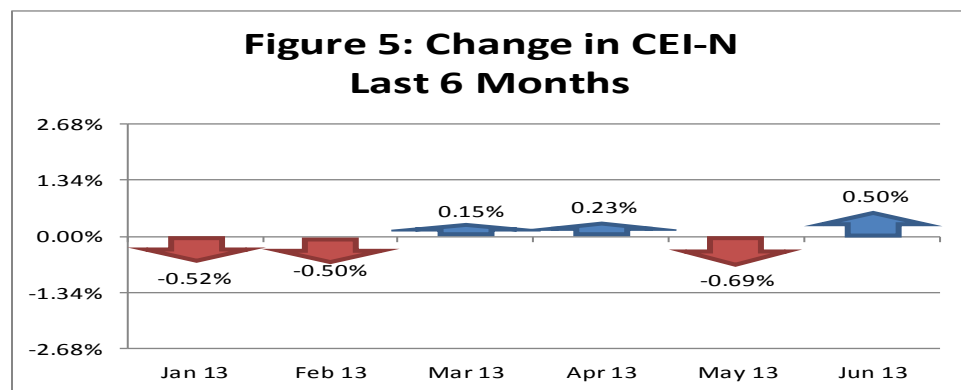


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. The CEI-N increased by 0.50% between May and June of 2013, as seen in Figure 4.



The moderate increase in the CEI-N during June followed a decline in May and a modest increase in April. Taken together, these results indicate that there was only anemic growth in the Nebraska economy during the second quarter of 2013. This growth, however, represents an improvement from the decline seen during the first quarter, and may suggest that growth is beginning to improve in Nebraska.



As seen in Figure 6, two of the four components of the CEI-N rose during June. Growth in private wages was solid, reflecting improvements in employment, hourly wages and hours worked during the month. Agricultural prices also rose, but only slightly. There was a modest decline in electricity sales in June, after adjusting for weather conditions during the month. Finally, respondents to the *Survey of Nebraska Business* reported a modest decline in sales 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*.

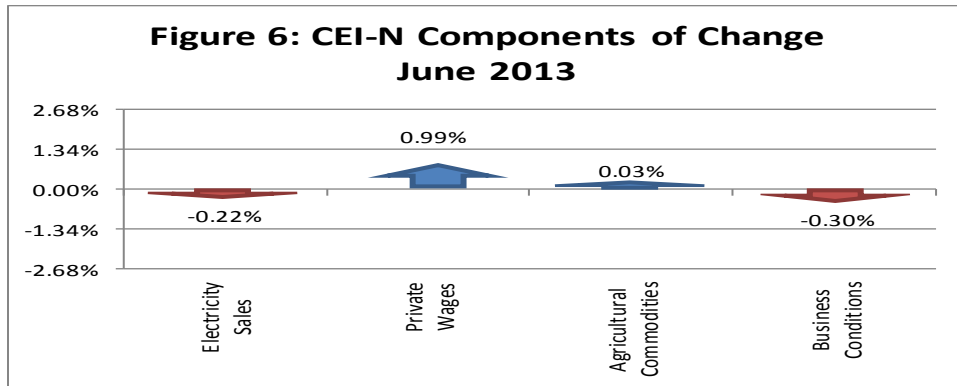
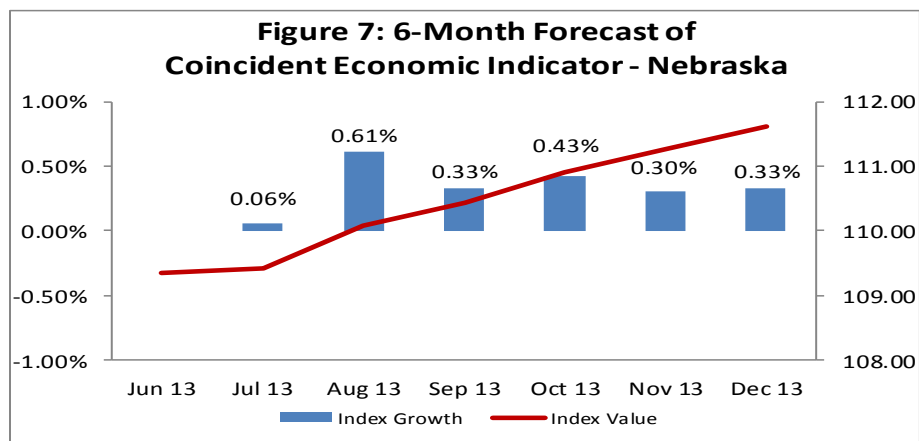


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects modest improvement in the LEI-N over the past six months, as seen in Figure 2, and portends moderate growth in the CEI-N through the end of 2013. Moderate growth in CEI-N during the second half of the year will generate moderate economic growth for the year 2013 overall.



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.

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	14.1222	0.0708	0.0328	Electricity Sales	4.7979	0.2084	0.1490
Airline Passengers	3.6141	0.2767	0.1283	Private Wages	1.7525	0.5706	0.4079
Exchange Rate	1.2289	0.8138	0.3774	Agricultural Commodities	3.2858	0.3043	0.2175
Initial UI Claims	10.0418	0.0996	0.0462	Survey Business Conditions	3.1689	0.3156	0.2256
Manufacturing Hours	1.4715	0.6796	0.3151				
Survey Business Expectations	4.6299	0.2160	0.1002				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between May and June 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 0.12% per month. The U.S. Leading Economic Indicator also has a trend adjacent factor.

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	72.61	70.63	1.98	0.03	0.06	0.06%
Airline Passengers	89.19	90.23	-1.04	0.13	-0.13	-0.13%
U.S. Dollar Exchange Rate (Inverse)	102.89	103.71	-0.82	0.38	-0.31	-0.29%
Initial Unemployment Insurance Claims (Inverse)	94.97	67.91	27.05	0.05	1.25	1.18%
Manufacturing Hours	91.37	91.61	-0.24	0.32	-0.08	-0.07%
Survey Business Expectations ¹	49.95		-0.05	0.10	0.00	0.00%
Trend Adjustment					0.13	0.12%
Total (weighted average)	106.68	105.76			0.92	0.87%

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	111.75	113.38	-1.63	0.15	-0.24	-0.22%
Private Wage	96.56	93.93	2.63	0.41	1.07	0.99%
Agricultural Commodities	155.36	155.20	0.17	0.22	0.04	0.03%
Survey Business Conditions ¹	48.57		-1.43	0.23	-0.32	-0.30%
Total (weighted average)	108.81	109.56			0.54	0.50%

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.

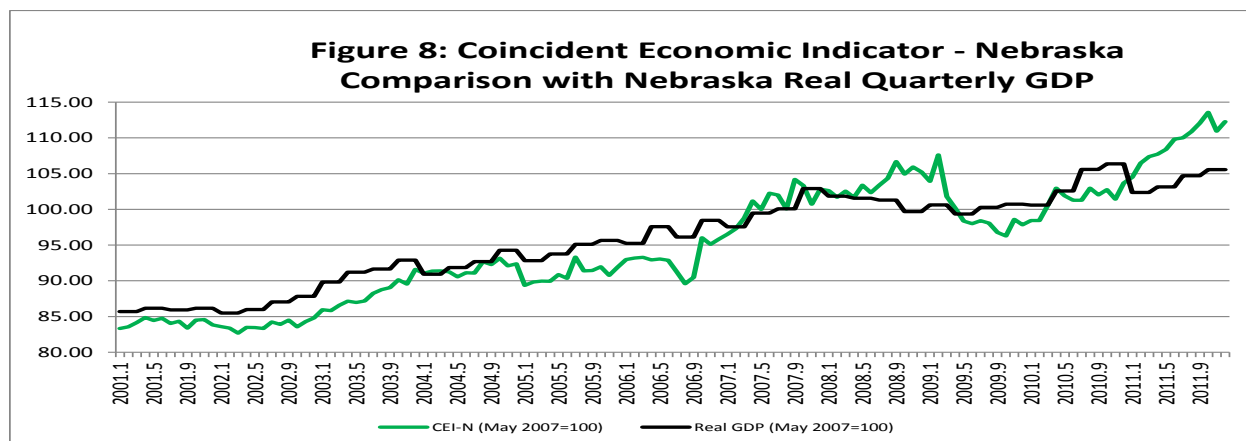


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months 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.

