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Nebraska Monthly Economic Indicators: June 21, 2013

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) rose by 0.09% during May 2013. The small increase in the LEI-N, which predicts economic growth in the state six months in the future, follows a solid increase in April. Taken together, results for the two months suggest moderate economic growth in Nebraska during the fall of 2013. Looking at individual components of the LEI-N, three of the six components of the LEI-N rose during May. Single-family building permits and airline passengers both rose during the month, indicating strength in the housing sector and the broader economy. Business expectations also rose. In particular, respondents to the Survey of Nebraska Business projected an increase in business sales and employment over the next six month. Among declining components, manufacturing hours dropped during May. Initial claims for unemployment insurance also rose, a negative signal for the job market. Finally, the value of the U.S. dollar rose during May, as it has done most of this year. An increase in the value of the U.S. dollar is challenging for exporters.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in May 2013, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, increased by 0.09% in May.

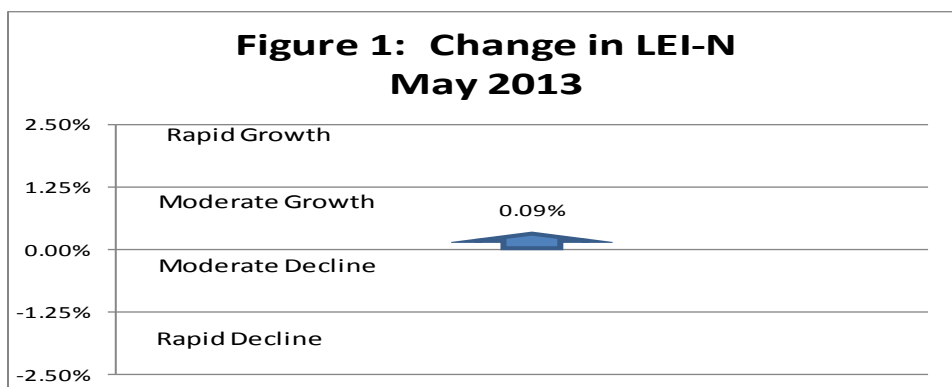


Figure 2 shows the growth in the LEI-N over the last 6 months. Results show that the small increase in the LEI-N in May followed solid growth during April 2013. In other words, results for May failed to build on the solid growth signal from April. This implies moderate, rather than strong, economic growth in Nebraska during the fall of 2013. Note that revisions to manufacturing hours led the value of the LEI-N to switch from a modest decrease to a modest increase during March of 2013.

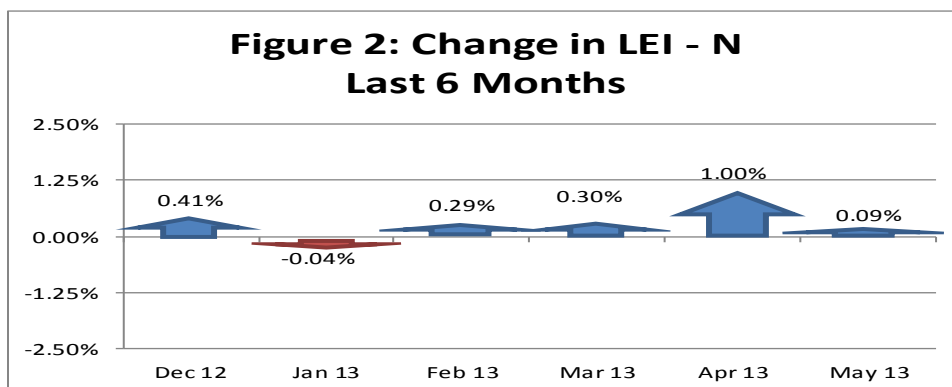
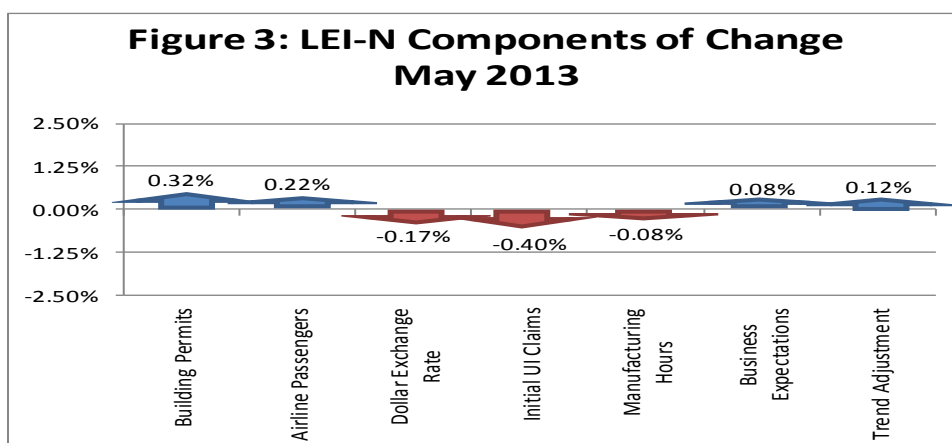
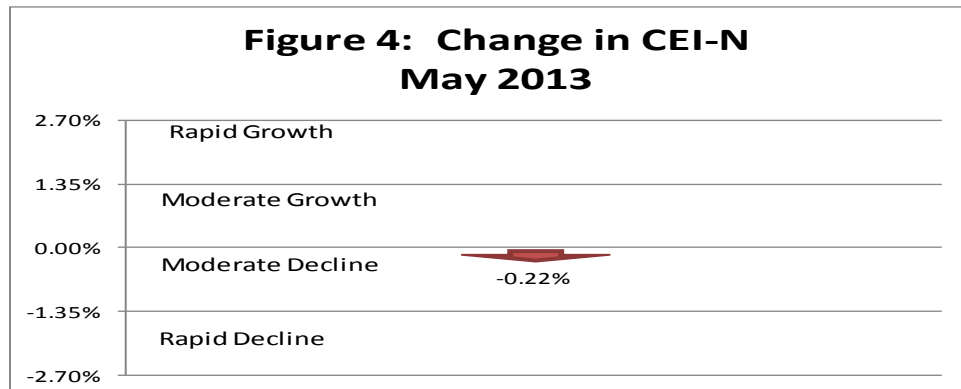


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during May 2013. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). Three of the six components of the leading indicator rose in May. Both single-family building permits and airline passenger counts rose during May, suggesting strength in both the housing sector and the broader economy. Further, respondents to the *Survey of Nebraska Business* reported that they expect improvements in sales and employment in their business over the next six months. Among declining components, manufacturing hours declined during May. There also was an increase in initial unemployment insurance claims, a disappointing sign for the labor market. Finally, the value of the U.S. dollar rose during May, as it has done most of this year. An increase in the value of the U.S. dollar is challenging for exporters. Finally, note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

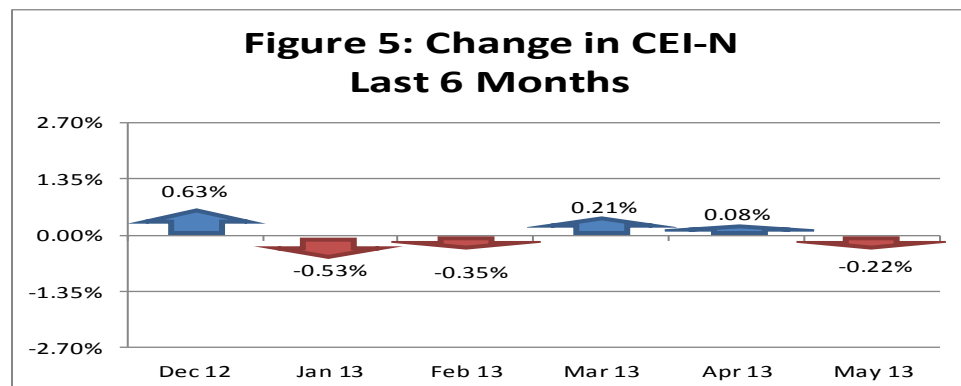


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. The CEI-N declined by 0.22% between April and May of 2013, as seen in Figure 4.



The modest decline in the CEI-N during May followed two months of moderate increase in March and April. Taken together, these results indicate that there has been anemic growth in the Nebraska economy over the last three months. Note that revisions to electricity sales data lead the value of the CEI-N to switch from a moderate increase to a moderate decrease during February of 2013.



As seen in Figure 6, three of the four components of the CEI-N declined during May. Private wages was the only component that increased, reflecting improvements in employment, hourly wages and hours worked during May. Electricity sales declined slightly May, after adjusting for weather conditions during the month. There also was a modest decline in seasonally-adjusted agricultural prices during May. Finally, respondents to the *Survey of Nebraska Business* reported a 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*.

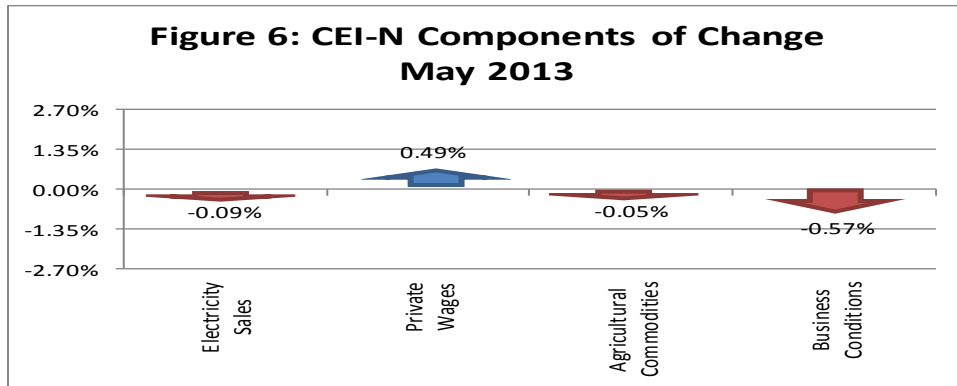
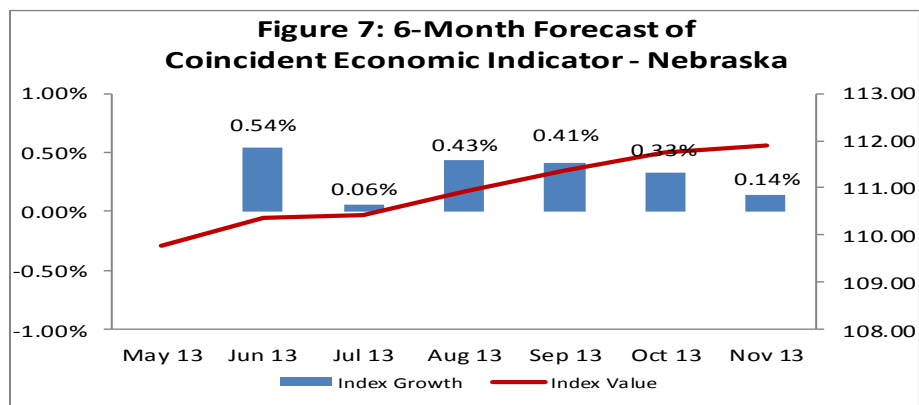


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects modest improvement in the LEI-N over the past six months, as seen in Figure 2, and portends moderate growth in the CEI-N from June through November of 2013. These results suggest that growth in CEI-N will improve during the second half of 2013, yielding moderate overall economic growth during 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.

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	14.2293	0.0703	0.0328	Electricity Sales	4.8083	0.2080	0.1521
Airline Passengers	3.6241	0.2759	0.1290	Private Wages	1.7473	0.5723	0.4185
Exchange Rate	1.2307	0.8126	0.3798	Agricultural Commodities	3.2891	0.3040	0.2223
Initial UI Claims	9.8266	0.1018	0.0476	Survey Business Conditions	3.5298	0.2833	0.2071
Manufacturing Hours	1.4764	0.6773	0.3166				
Survey Business Expectations	4.9592	0.2016	0.0942				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between April and May 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	76.87	66.59	10.28	0.03	0.34	0.32%
Airline Passengers	90.22	88.45	1.77	0.13	0.23	0.22%
U.S. Dollar Exchange Rate (Inverse)	103.71	104.18	-0.47	0.38	-0.18	-0.17%
Initial Unemployment Insurance Claims (Inverse)	69.64	78.56	-8.92	0.05	-0.42	-0.40%
Manufacturing Hours	91.14	91.40	-0.27	0.32	-0.08	-0.08%
Survey Business Expectations ¹	50.88		0.88	0.09	0.08	0.08%
Trend Adjustment					0.13	0.12%
Total (weighted average)	105.77	105.68			0.09	0.09%

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	111.52	112.18	-0.67	0.15	-0.10	-0.09%
Private Wage	95.68	94.40	1.28	0.42	0.54	0.49%
Agricultural Commodities	155.20	155.45	-0.25	0.22	-0.06	-0.05%
Survey Business Conditions ¹	46.97		-3.03	0.21	-0.63	-0.57%
Total (weighted average)	109.77	110.02			-0.25	-0.22%

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.

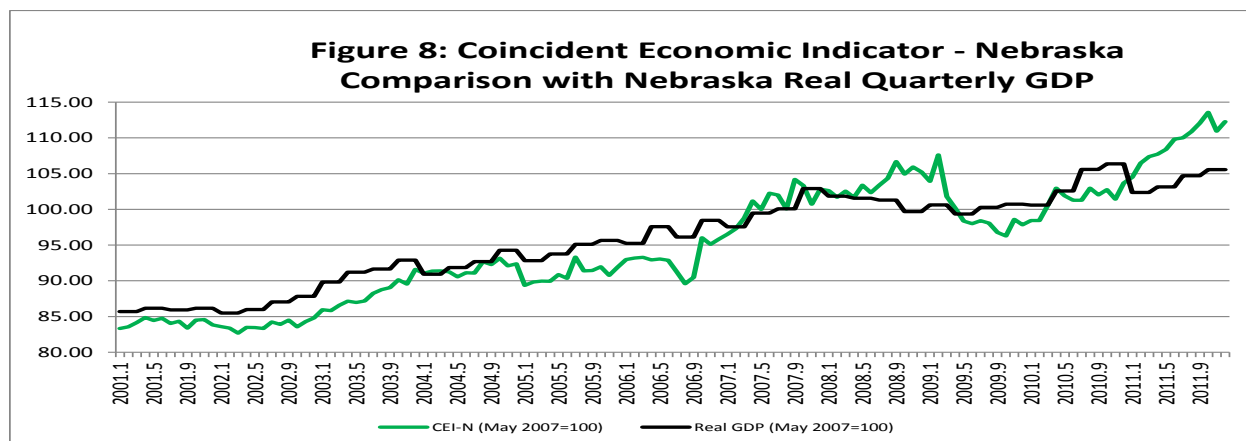


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months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

