

Nebraska Monthly Economic Indicators: November 16, 2012

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) dropped slightly, declining by 0.06%, during October 2012. The decline in the LEI-N, which predicts economic growth in the state six months in the future, followed three months of increase. The slight decline in the LEI-N is not sufficient to reverse the trend seen in the previous three months, and the Nebraska economy is expected to expand slowly in November and December followed by moderate growth in the first half of 2013. Looking at individual components of the LEI-N, there was a decline in three of the six components. Single-family building permits declined in October after several months of improvement. Further, there was a decline in manufacturing hours. Finally, respondents to the Survey of Nebraska Business reported a decline in business expectations for sales and employment. Other indicator components improved during October. Seasonally adjusted airline passenger counts were higher. Seasonally adjusted initial unemployment claims and the dollar exchange rate both fell in October, suggesting improvement in the Nebraska’s labor market and improved prospects for exports.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in October 2012, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, declined by 0.06% in October.

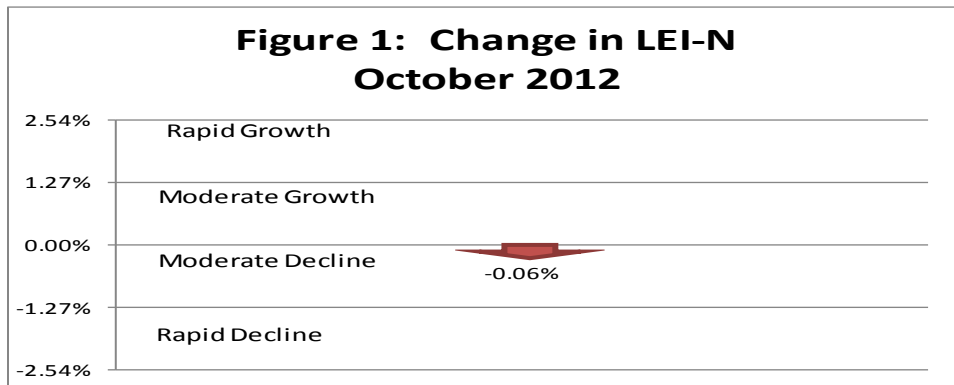


Figure 2 shows the growth in the LEI-N over the last 6 months. The figure shows that the leading indicator grew solidly from July through September, after declining in May and June. This pattern suggests that the Nebraska economy will have limited growth, if any, in the next few months but the rate of growth will accelerate in January of 2013.

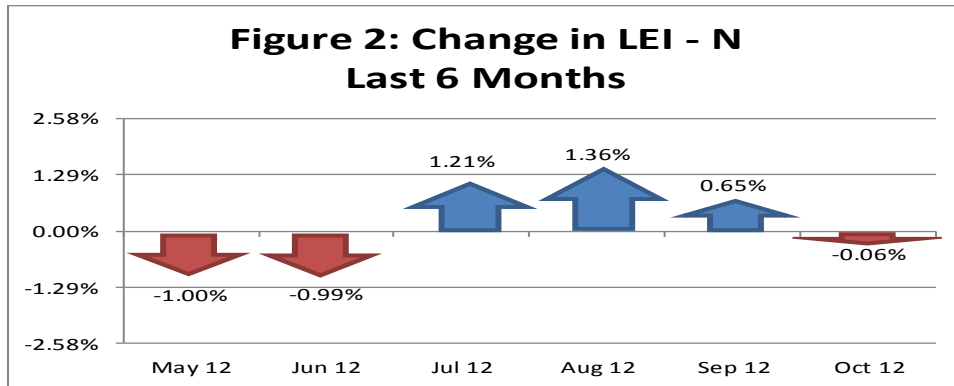
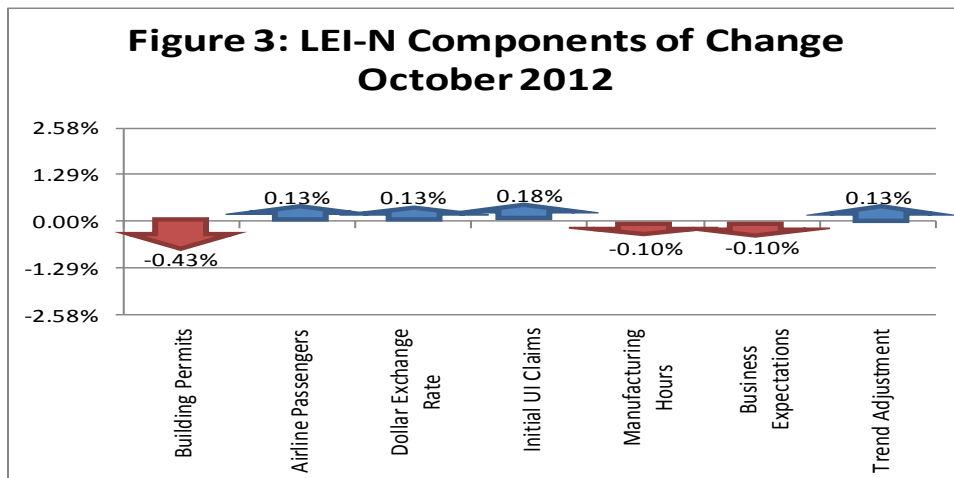
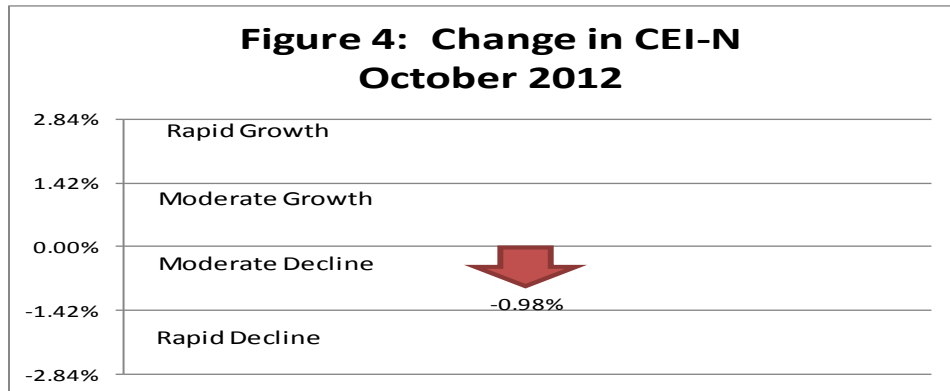


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during October 2012. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). Three of the six components contributed to the increase in the LEI-N. The first was an increase in seasonally adjusted airline passenger counts, an indicator of future business activity and consumer confidence. The second was a decline in initial unemployment claims, which is a sign of an improving labor market. The third was a declining U.S. dollar, which will support growth of Nebraska’s large export sector in the coming months. Three indicator components declined during October, including manufacturing hours. Single-family building permits also declined during October, after several months of increase. There also was a decline in business expectations. In particular, respondents to the *Survey of Nebraska Businesses* reported that they expect a modest decline in sales and employment in their businesses over the next six months. Finally, note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

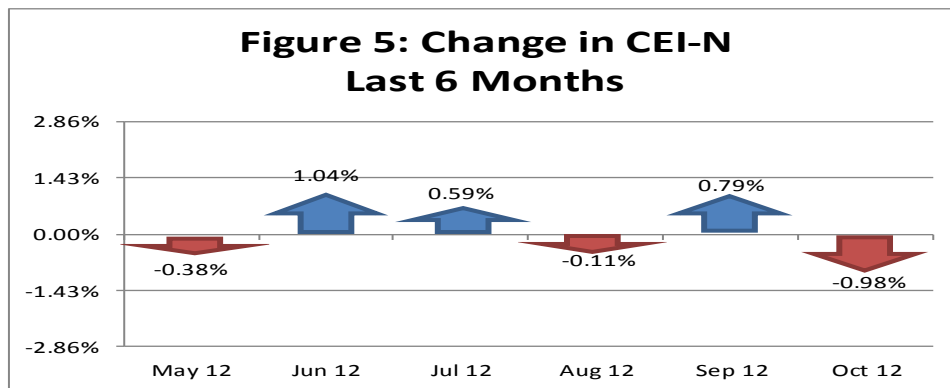


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. As seen in Figure 4, the CEI-N declined by 0.98%, between September and October of 2012.



As seen in Figure 5, the decline in the CEI-N during October suggests a slowdown in the Nebraska economy during the fall. After expanding overall during the summer months of June through August, the CEI-N has not increased in the fall. In particular, the increase in September was smaller than the decline in October. The decline in October CEI-N was predicted by the decline in the LEI-N in May 2012.



As seen in Figure 6, private wages, electricity sales, and business conditions all contributed to the decline in the CEI-N. Real (inflation adjusted) private wages declined during October, reflecting moderate employment growth but a decline in weekly hours worked and real hourly wages. Weather adjusted electricity sales also declined in October relative to September. Further, respondents to the *Survey of Nebraska Business* reported a decline in sales and employment activity in recent months. Only one component, agricultural commodity prices, rose in October. This increase in prices will help mitigate the economic costs of the 2012 drought. 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*.

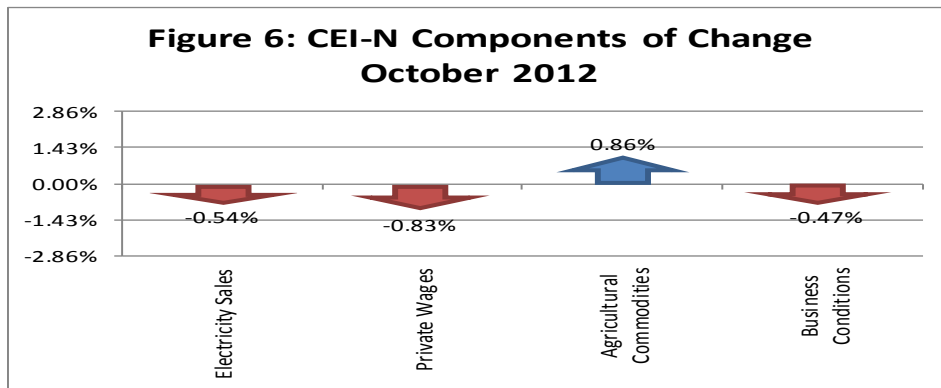
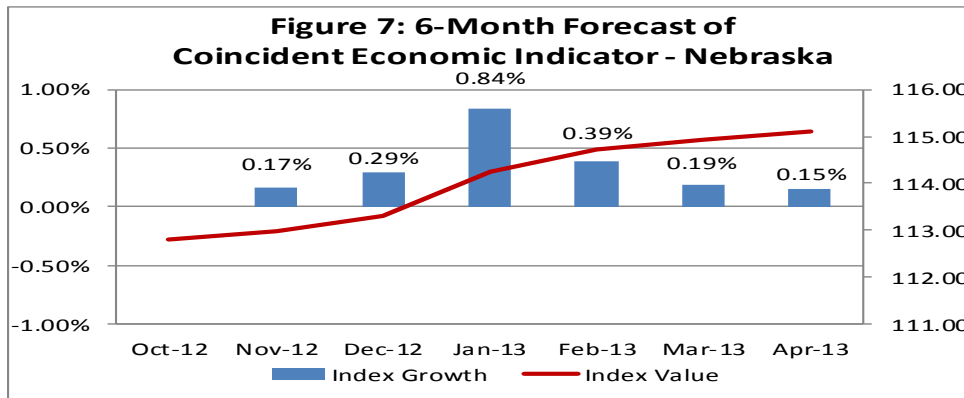


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects changes in the value of LEI-N between May and October of 2012 (see Figure 2). Recall that the LEI-N declined during May and June but then rose solidly from July through September and declined only slightly in October. This pattern suggests weak growth, if any, in the Nebraska economy for the rest of the year but solid in the first half of 2013. These expectations are depicted in Figure 7. The CEI-N is expected to manage a slight increase during November and December and growth will accelerate in January 2013. Growth in the CEI-N will be sustained through April 2013.



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	14.4058	0.0694	0.0339	Electricity Sales	4.8511	0.2061	0.1757
Airline Passengers	3.6698	0.2725	0.1329	Private Wages	1.8382	0.5440	0.4637
Exchange Rate	1.2503	0.7998	0.3901	Agricultural Commodities	3.3101	0.3021	0.2575
Initial UI Claims	9.9228	0.1008	0.0492	Survey Business Conditions	8.2757	0.1208	0.1030
Manufacturing Hours	1.4398	0.6945	0.3388				
Survey Business Expectations	8.8351	0.1132	0.0552				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between September and October. 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. There is also a trend adjustment factor for the U.S. 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	54.64	67.78	-13.13	0.03	-0.44	-0.43%
Airline Passengers	91.91	90.91	1.00	0.13	0.13	0.13%
U.S. Dollar Exchange Rate (Inverse)	105.70	105.34	0.36	0.39	0.14	0.13%
Initial Unemployment Insurance Claims (Inverse)	64.44	60.68	3.76	0.05	0.18	0.18%
Manufacturing Hours	89.94	90.23	-0.29	0.34	-0.10	-0.10%
Survey Business Expectations ¹	48.06		-1.94	0.06	-0.11	-0.10%
Trend Adjustment					0.13	0.13%
Total (weighted average)	103.02	103.08			-0.06	-0.06%

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	103.23	106.72	-3.49	0.18	-0.61	-0.54%
Private Wage	94.42	96.46	-2.04	0.46	-0.95	-0.83%
Agricultural Commodities	155.76	151.95	3.81	0.26	0.98	0.86%
Survey Business Conditions ¹	44.82		-5.18	0.10	-0.53	-0.47%
Total (weighted average)	112.79	113.91			-1.11	-0.98%

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.

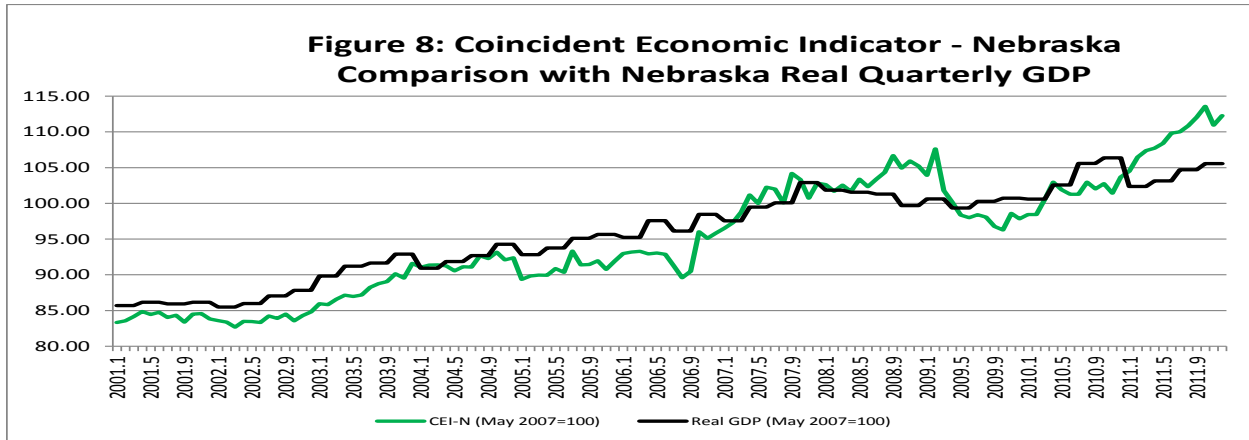


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months 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 0.91.

