

7-20-2012

Nebraska Monthly Economic Indicators: July 20, 2012

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Thompson, Eric; Walstad, William; and George, Adam, "Nebraska Monthly Economic Indicators: July 20, 2012" (2012). *Leading Economic Indicator Reports*. 13.

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) declined by 1.11% during June 2012. The decline in the LEI-N, which predicts economic growth in the state six months in the future, is the second in a row, signaling weakness in the Nebraska economy during the fall and winter of 2012. In particular, while the Nebraska economy is expected to grow this summer, growth will slow significantly beginning in the fall. A primary reason for the decline in the LEI-N was a rapid increase in the value of the U.S. dollar during June. The rising U.S. dollar will limit export activity by Nebraska farms and factories. Initial unemployment claims also rose sharply in June portending a weakening job market in Nebraska. Among other indicator components, business expectations were positive in June according to the Survey of Nebraska Business. The three other indicators components, manufacturing hours, building permits and airline passenger counts, changed very little between May and June.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in June 2012, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, fell by 1.11% in June, suggesting slow economic growth during the fall and winter of 2012.

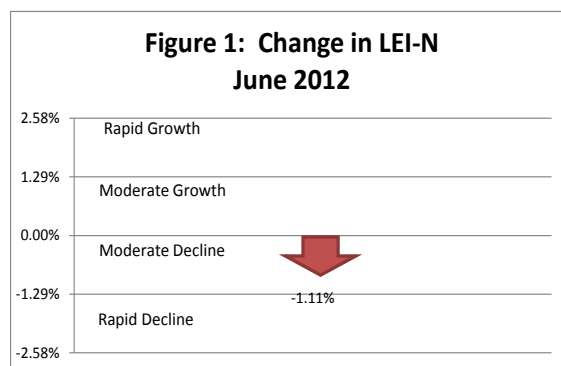


Figure 2 shows the growth in the LEI-N over the last 6 months. The LEI-N increased in January, February and April of this year, but fell sharply over the last two months. This sharp drop suggests that economic growth will stagnate in the Nebraska during the upcoming fall and winter. The two months of decline (and a small decline in March) are not on their own sufficient to conclude that the Nebraska economy will shrink (as occurs during recession) towards the end of the year or in early 2013. However, it will be very interesting to see whether the LEI-N continues to fall over the next few months.

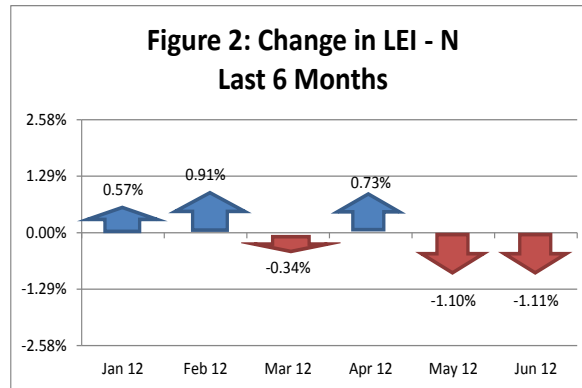
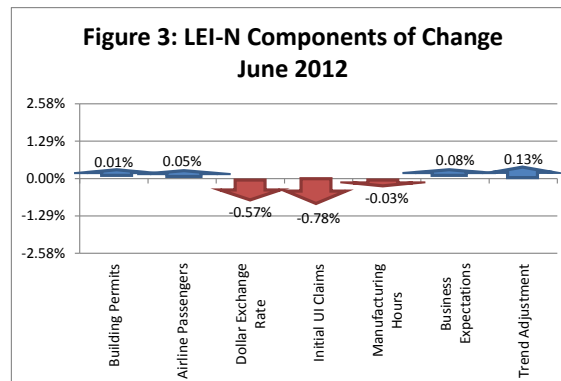
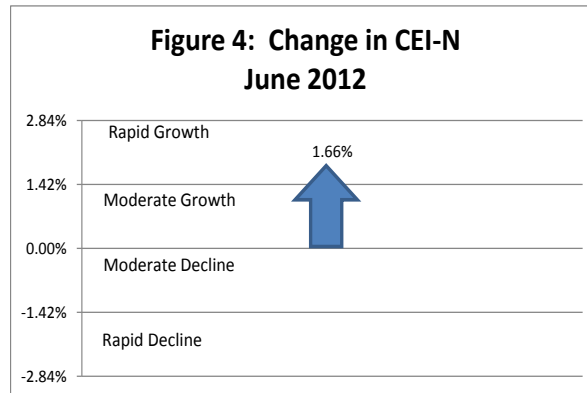


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during June 2012. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). The decline in the LEI-N was due to two factors. The first factor was a steep increase in the trade-weighted value of the U.S. dollar during June. This will discourage exports and economic growth in Nebraska. The second factor was a sharp increase initial unemployment claims during June. There was some positive news in June. Respondents to the monthly *Survey of Nebraska Business* reported an expectation of a modest increase in sales and employment in their businesses over the next six months. Other data provided little evidence of either a positive or negative trend in the Nebraska economy. Building permits, airline passenger counts, and manufacturing hours changed little between May and June. Note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

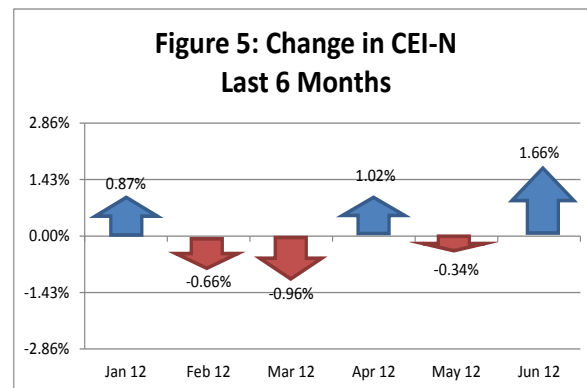


Coincident Economic Indicator – Nebraska

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 grew rapidly, by 1.66%, between May and June of 2012.



As seen in Figure 5, the sharp increase in the CEI-N during June is the third increase this year. Generally, the increases in the CEI-N have been larger than the declines during 2012, suggesting moderate growth in the Nebraska economy so far this year. If sustained, the strong increase in June creates a positive trend for 2012; a trend that until recently had appeared flat.



As seen in Figure 6, the two primary reasons for the rapid growth in the CEI-N during June were private wages and electricity sales. Both components rose sharply during June 2012. Real (inflation adjusted) private wages increased significantly in June, reflecting strength in private employment, hours, and real hourly wages. Electricity sales increased in Nebraska in June, even after adjusting for weather and other seasonal factors. Agricultural commodity prices changed little during the month. On the negative side, respondents to the *Survey of Nebraska Business* reported modest declines 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*.

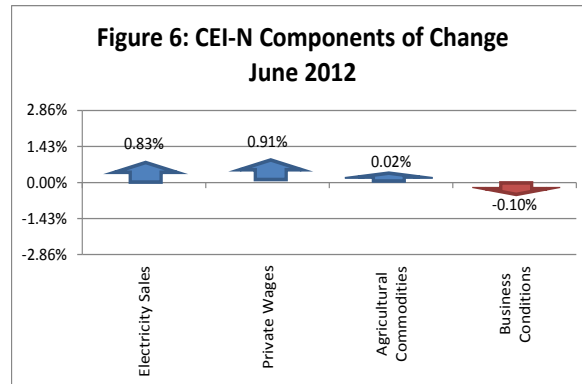
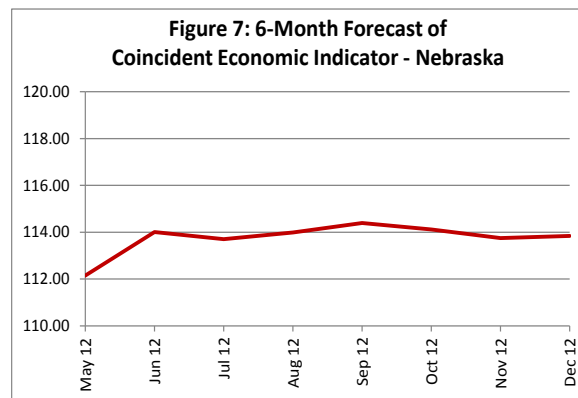


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects changes in the value of LEI-N between January and June of 2012 (see Figure 2). Recall that the LEI-N increased early in the year but declined in recent months. These results suggest growth in the Nebraska economy during the summer of 2012 but a significant decline in growth during the fall and winter. These expectations are depicted in the history and forecast in Figure 7. As noted earlier, the CEI-N rose sharply during June. Figure 7 shows that the CEI-N is expected to maintain and even expand on this higher level during the remainder of the summer. CEI-N is then expected to decline beginning in October 2012.



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	14.5158	0.0689	0.0339	Electricity Sales	4.8857	0.2047	0.1723
Airline Passengers	3.6941	0.2707	0.1333	Private Wages	1.8095	0.5526	0.4652
Exchange Rate	1.2591	0.7942	0.3911	Agricultural Commodities	3.2274	0.3098	0.2608
Initial UI Claims	9.9446	0.1006	0.0495	Survey Business Conditions	8.2757	0.1208	0.1017
Manufacturing Hours	1.4642	0.6830	0.3364				
Survey Business Expectations	8.8351	0.1132	0.0557				

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

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	51.63	51.37	0.25	0.03	0.01	0.01%
Airline Passengers	91.10	90.74	0.37	0.13	0.05	0.05%
U.S. Dollar Exchange Rate (Inverse)	102.34	103.80	-1.46	0.39	-0.57	-0.57%
Initial Unemployment Insurance Claims (Inverse)	52.65	68.61	-15.96	0.05	-0.79	-0.78%
Manufacturing Hours	86.98	87.07	-0.09	0.34	-0.03	-0.03%
Survey Business Expectations ¹	51.48		1.48	0.06	0.08	0.08%
Trend Adjustment					0.13	0.13%
Total (weighted average)	99.72	100.85			-1.12	-1.11%

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	112.92	107.55	5.38	0.17	0.93	0.83%
Private Wage	95.46	93.28	2.19	0.47	1.02	0.91%
Agricultural Commodities	148.48	148.38	0.10	0.26	0.03	0.02%
Survey Business Conditions ¹	48.89		-1.11	0.10	-0.11	-0.10%
Total (weighted average)	114.01	112.15			1.86	1.66%

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.

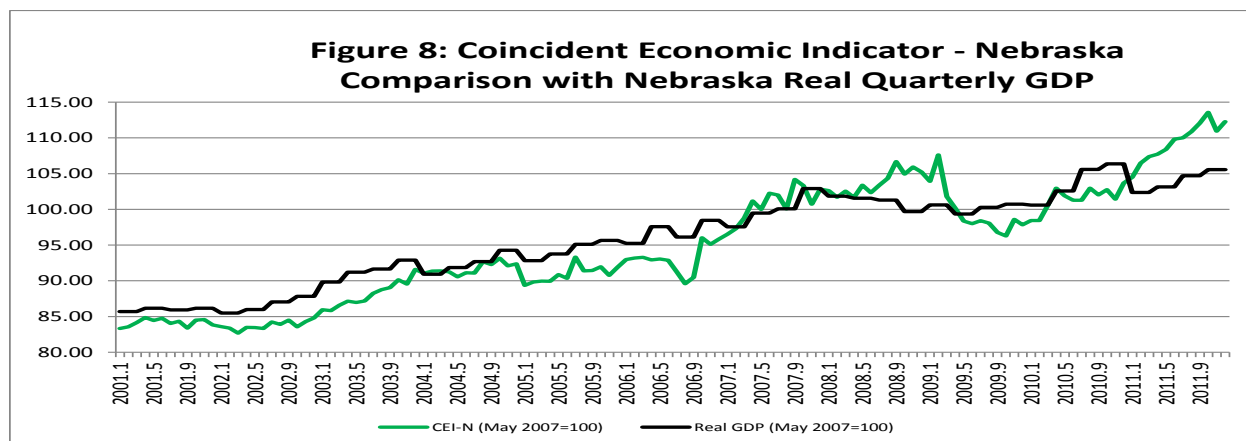


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months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

