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Technical Report Coincident and Leading Economic Indicators – Nebraska

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A Bureau of Business Research Technical Report
From the UNL College of Business Administration

Technical Report

Coincident and Leading Economic Indicators – Nebraska

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I. Introduction

State, Federal, and private entities produce a myriad of data about the national and state economy. Much of this data, however, is released with a substantial lag of several months up to several years. Much of the data also only reports on segments of the economy, rather than providing an overall measure of economic progress. Yet, there is a clear need for comprehensive and current measures of the economy, and current updates about the economic outlook. This information is provided at the national level by the Conference Board, which produces a leading and coincident indicator for the national economy. The current indicator represents a snapshot of the current state of the economy and the leading indicator provides a short-term forecast for the national economy.

These national indicators are useful for Nebraska business, and for the public in Nebraska. However, the Nebraska economy does not exactly mirror the national economy, creating a constant concern about whether these national indicators provide information pertinent to Nebraska. As a result, we have developed the Coincident Economic Indicator – Nebraska and the Leading Economic Indicator - Nebraska to fill this void. Together, the two indicators provide a picture of current conditions in Nebraska and a short-term forecast of overall economic conditions in the state. In other words, the CEI - N and LEI - N together provide a current indicator about the strength of the aggregate Nebraska economy and a short-term, 6 month outlook, each of which can be updated on a monthly basis. A key feature of the coincident indicator is that it will provide a current, comprehensive measure of the state economy. Other comprehensive measures such as state GDP or personal income are released with a lag of 6 to 18 months. The leading indicator can identify turning points in the economy. Specifically, the leading indicator will identify and predict acceleration, deceleration, or even the onset of a recession in the Nebraska economy.

This report describes how the CEI - N and the LEI - N were developed, why the components of each indicator were chosen, and tracks the performance of each indicator over the last 10 years.

II. Components of the Index

The Nebraska indicators follow the approach utilized in the Leading and Coincident Indicators for the United States developed by the Conference Board. We developed unique indicators for the Nebraska economy, primarily using economic data from the State of Nebraska and based on the critical components of the Nebraska economy. Each component of both the Coincident Economic Indicator – Nebraska and the Leading Economic Indicator – Nebraska is discussed below in parts A and B of this section. Section C then examines the approach utilized to de-seasonalize and standardize the data.

A. Components of the Coincident Economic Indicator - Nebraska

There are four principal components of the Coincident Economic Indicator - Nebraska. Three of these components, Nebraska real private sector weekly wages, electricity sales, and the survey results on business conditions, each reflect aggregate economic activity in Nebraska. The fourth indicator, the agricultural commodity index, reflects production agriculture, which is an important component of the Nebraska economy and has ties to many other Nebraska industries. Each of the four components is described in more detail below.

Private Sector Weekly Wages

The first component of the Coincident Economic Indicator – Nebraska is real weekly private sector wages in Nebraska. Real private sector weekly wages provides a partial measure of state real GDP, and a

measure that is available on a monthly basis. In particular, private sector wages account for most employee compensation, and employee compensation, in turn, accounts for around two-thirds of state gross domestic product. This is why monthly data on real private sector weekly wages is an important coincident indicator for the overall Nebraska economy.

As the name suggests, real private sector weekly wages is an estimate of the total wages earned by all wage and salary workers in the State of Nebraska during the average week of a particular month. Real private sector weekly wages is estimated by multiplying the total number of private sector workers in Nebraska each month, by the average hours worked per week, and by the average hourly wage. This creates an estimate of the total private wages earned during a typical week during each month. This approach is unaffected by differences in the number of days in each month but instead provides a consistent measure. The measure is also of nominal weekly wages and is adjusted utilizing the monthly value of consumer price index for the Midwest. Therefore, all estimates of real weekly private sector wages are in terms of constant dollars.

Data on private sector employment, average weekly hours and average hourly wages are available for each month from the Bureau of Labor Statistics of the U.S. Department of Labor. The Bureau of Labor Statistics also produces monthly data for the current price index. Data on employment, hours and wages are available during the fourth week of each month.

Electricity Sales

The second component of the Coincident Economic Indicator - Nebraska is electricity sales. The specific measure is the sum of megawatt hours of electricity sales recorded for each month by Omaha Public Power District (OPPD), Lincoln Electric Service (LES) and Nebraska Public Power District (NPPD). OPPD and LES provide total retail sales of electric power, including industrial, commercial and residential customers. NPPD provides an estimate of native load for electricity generation, which is sold to NPPD retail and wholesale customers in the State of Nebraska.

Aggregate electricity sales from these three utilities provide a broad-based measure of the aggregate Nebraska economy. Electricity is an important energy source for the manufacturing sector, and varies with the level of industrial production. Electricity is also utilized by commercial businesses in all sectors of the economy including retail, services, as well as by the government sector. Expansion of electricity sales may indicate an increase in square feet of office space or longer hours of operation, both indicators of an expanding retail and service sector in Nebraska. Electricity also is utilized directly in homes, and therefore, is an important indicator of the strength of the household consumer sector.

Electricity sales are significantly impacted by weather because electricity is used in both cooling buildings in summer and heating buildings in the winter. As a result, electricity sales in a particular year are influenced both by the economic activity in that year as well as weather, in particular the number of cooling degree days and heating degree days. The Bureau of Business Research adjusted monthly electricity sales by cooling degree days and heating degree days for Nebraska calculated by the National Oceanic and Atmospheric Administration (NOAA). Adjustment coefficients were estimated using an econometric model which determined how much electricity sales in each month was influenced by deviations of heating degree days or cooling degree days from their monthly average value. These coefficients were then applied to actual monthly heating and cooling degree days from NOAA (or more specifically, the deviation in each degree day from its monthly average) to "weather normalize" the aggregate electricity sales data.

Data on electricity sales for the Lincoln area is provided by the Lincoln Electric System. That data is delivered during the third week of each month. Data on electricity sales for the Omaha area is provided by the Omaha Public Power District. This data is typically delivered with a one month lag, and thus, must be forecast forward by one month and this is accomplished through ARIMA modeling. Data on electricity sales for the balance of Nebraska is provided by the Nebraska Public Power District. This data is typically provided in the first week of the month.

Agricultural Commodity Prices

The third component of the Coincident Economic Indicator – Nebraska is an index of commodity prices. The index utilizes corn prices in Nebraska to represent crop prices and beef prices to represent livestock prices. Corn has accounted for a majority of crop sales in recent years and corn prices are correlated with most other major crop prices. Beef accounts for the vast majority of all livestock sales.

The price of agricultural commodities is a critical measure of the Nebraska economy because agriculture directly accounts for between 5% and 10% of economic activity in the state. Further, agriculture has an even larger indirect effect. In particular, the majority of manufacturing activity in Nebraska is tied to agriculture. Nebraska has large food processing industries as well as manufacturers of agricultural equipment and other supplies. There are also suppliers to Nebraska agriculture in the wholesale, transportation, and finance industries.

The index of commodity prices is calculated as a weighted average of corn and beef prices in Nebraska. Beef prices are the average price for choice slaughter steers. The weights are based on the variability of each series. Series that are less variable are weighted more since a movement in a variable that varies little suggests a significant change in the farm economy. The specific weight is calculated as the inverse of the standard deviation of corn prices and beef prices (see Section III on Weighting of Components).

Data on corn prices are from Nebraska Agricultural Statistical Services' *Agri-facts* report and are released in the second week of the month. Data on beef prices are from the Agricultural Marketing Service of the U.S. Department of Agriculture and are released during the second week of the month. A six-month moving average is utilized for this series in order to smooth month-to-month fluctuations.

Survey Results on Business Conditions

The fourth component of the Coincident Economic Indicators – Nebraska is information on current business conditions that are reported each month from the Survey of Nebraska Business. That survey is conducted each month by the CBA Bureau of Business Research. The survey is sent to 500 Nebraska businesses each month. A description of the survey is included in Appendix 1. The survey contains two questions regarding how business conditions have changed in the last 6 months, in particular whether business managers or owners report that the sales or employment in their business has increased in the last 6 months. The current conditions measure is a weighted average of a "diffusion index" based on business responses to the question about changes in employment and sales over the last 6 months. The question asks whether sales (or employment) had increased, decreased, or stayed the same over the past 6 months.

Each diffusion index, following the index utilized by the National Association of Purchasing Managers, is calculated as the percentage of respondents who reported that sales (employment) increased

over the last 6 months plus 0.5 multiplied by the percentage of who indicated that sales (employment) were unchanged over the last 6 months. The index has a value of greater than 50 if more firms indicated that sales (employment) grew over the last 6 months than indicated that sales declined over the last 6 months. The larger the gap between the share indicating that sales (employment) grew and the share indicating that sales (employment) declined, the larger the calculated value for the diffusion index.

After a diffusion index is calculated for sales and employment, a weighted average is taken to generate a combined diffusion index. Weights are based on the inverse for the standard deviation of survey results for employment and sales from the Survey of Nebraska Business and a similar survey conducted by the National Federation of Independent Business (see Section III on Weighting of Components). An index value greater than 50 would contribute to an increase in the overall Coincident Economic Indicator – Nebraska while a value less than 50 would contribute to a decrease.

The survey of 500 businesses is conducted every month and survey results are available during the first week of the next month from the CBA Bureau of Business Research.

B. Components of the Nebraska Leading Economic Indicator

There are six components of the Leading Economic Indicator - Nebraska. Each of these components is an indicator of future economic activity in a key cyclical sector of the economy, or of the economy overall. Several of the components are also part of the U.S. Leading Economic Indicators developed by the Conference Board. The 6 components are Nebraska single-family building permits, Nebraska initial unemployment claims, Nebraska weekly manufacturing hours, Nebraska airline passengers, the trade-weighted exchange rate for the U.S. dollars, and business expectations from Monthly Survey of Nebraska Business. Each component is described in more detail below.

Building Permits for Single Family Homes

Single-family home building permits is the first component of the Leading Economic Indicator - Nebraska. The measure is the number of single-family permits issued by local governments in each of Nebraska's two metropolitan areas of Omaha and Lincoln. Omaha and Lincoln are the focus because permits are not required in all jurisdictions, and are not reported on a monthly basis in many other jurisdictions. While not all building permits lead to home construction, most do and new construction begins over the next few months. This makes building permits a critical indicator of future activity in the construction sector but also of future activity in related components of the finance, real estate, and home furnishing sectors.

The data for Omaha is provided by the Omaha Chamber of Commerce and data for Lincoln is provided by the Lincoln Home Builders Association. The data is typically released in the second week of the month.

Initial Unemployment Claims

Initial unemployment claims are the second component of the Leading Economic Indicator - Nebraska. This component is the number of persons filing their initial claim to the program during the month. National unemployment insurance claims are a component of the U.S. Leading Economic Indicators developed by the Conference Board. While total unemployment is a lagging indicator of the economy, initial claims is a leading indicator. This is because a spike in initial claims suggests that cyclical industries and businesses throughout the economy are beginning to contract, signaling broader economic decline.

Similarly, a reduction in initial claims suggests that few workers are being displaced as businesses anticipate future growth. For this reason, our component variable is the inverse of monthly initial unemployment claims in Nebraska. The use of the inverse of initial claims ensures that the Nebraska economy would be forecast to expand faster in the future if initial unemployment claims are declining.

The source for monthly initial unemployment claims data is the Nebraska Department of Labor. The data is typically available during the third week of the month.

Manufacturing Hours

Weekly manufacturing hours are the third component of the Leading Economic Indicators - Nebraska. This component is the total hours worked each week by production workers in the manufacturing industry in Nebraska, specifically the average number of hours worked each week multiplied by the average number of production workers in Nebraska during the month. Manufacturing hours is also component of the U.S. Leading Indicators. The component focuses specifically on the hours of manufacturing production workers, rather than white collar workers. This is because production workers are most closely tied to the marginal changes in manufacturing output. Manufacturers shed workers and overtime opportunities when manufacturing is in decline and often add overtime hours rather than employees as industrial activity begins to expand. Thus the weekly production worker hours component provides a particularly cyclically sensitive measure of the manufacturing sector.

The data is provided by the Nebraska Department of Labor. The data is typically released during the fourth week of the month.

Air Passengers

The monthly air passenger measure is the fourth component of the Leading Economic Indicator - Nebraska. The measure is a count of all passengers on commercial airlines and private jets, though commercial passengers account for the vast majority of the count. The monthly data is gathered from the Omaha Epply and Lincoln Municipal Airports, and reflects both business and leisure travel. Each of these components of travel provides a leading indicator for the economy. This is because both components are flexible expense categories. Businesses will require fewer sales trips to book orders in the month before production and other economic activity begins to fall. Further, businesses which anticipate a decline in economic activity also may curtail trips to professional meetings or other business trips that are discretionary. Similarly, households that anticipate weakness in the labor market may cancel or decide not to schedule leisure trips. For the same reasons, the number of business and leisure trips may increase before economic activity begins to accelerate.

The sources for monthly passenger statistics are Omaha Epply and Lincoln Municipal Airport. Lincoln data is typically released during the second week of the month and Omaha data during the third week.

U.S. Dollar Exchange Rate

The trade-weighted exchange rate for the U.S. Dollar is the fifth component of the Leading Economic Indicator - Nebraska. The index is the weighted (by volume) composite of the exchange rate with all major trading partners including the European Union, Canada, Mexico, China, Japan, and others. The trade-weighted index is utilized because Nebraska, with its large agricultural, manufacturing, and freight sector, is closely linked with exports. Changes in the exchange rate lead future exports because firms and their customers need time to adjust prices and buying decisions in reaction to exchange rate changes. A

decline in the trade-weighted exchange rate leads to increased economic activity in Nebraska and an increase in the exchange rate has the opposite effect. For this reason, our component variable is the inverse of the trade-weighted exchange rate. This ensures that the Nebraska economy would be expected to grow in the future in reaction to a decline in the U.S. dollar exchange rate.

The source for the trade-weighted exchange rate data is the Federal Reserve Bank of St. Louis and its FRED database. The date is typically released during the first week of the month.

Survey Results on Business Expectations

The sixth component of the Leading Economic Indicators – Nebraska is information on business expectations that are reported each month in Survey of Nebraska Business. That monthly survey is conducted by the CBA Bureau of Business Research. The survey is sent to 500 Nebraska businesses each month. A description of the survey is included in Appendix 1. The survey contains two questions regarding business expectations for the next 6 months, in particular whether owners or managers expect their businesses' sales or employment will increase in the next 6 months. The business expectation measure is a weighted average of a "diffusion index" based on business responses to the questions about sales and employment expectations. The questions asked whether sales (or employment) are expected to increase, decrease, or stay the same over the next 6 months.

Each diffusion index, following the index utilized by the National Association of Purchasing Managers, is calculated as the percentage of respondents who expect that sales (employment) will increase over the last 6 months plus 0.5 multiplied by the percentage who expect that sales (employment) will be unchanged over the next 6 months. The index has a value of greater than 50 if more respondents expect sales (employment) to grow over the next 6 months than expect sales to decline. The larger the gap between the share expecting that sales (employment) will grow and the share expecting that sales (employment) will decline the larger the calculated value for the diffusion index.

After a diffusion index is calculated for sales and employment, a weighted average is taken to generate a combined diffusion index. Weights are based on the inverse for the standard deviation of survey results for employment and sales from the Nebraska Survey of Business and a similar survey conducted by the National Federation of Independent Business (see Section III on Weighting of Components). An index value greater 50 would contribute to an increase in the overall Leading Economic Indicator – Nebraska while a value less than 50 would contribute to a decrease.

The survey of 500 businesses is conducted every month and survey results are available during the first week of the next month from the Bureau of Business Research.

C. Seasonalization and Standardization

Data values for each of the 10 component indexes are presented in Appendix 2. This data provides the basis for the two economic indicators. Such component data, however, must be both seasonalized and standardized before it is used in the calculations for each indicator. Seasonalization and standardization methods are described below. The standardized and seasonalized data are also presented in Appendix 2.

The first adjustment was seasonalization, otherwise known as seasonal adjustment. The component series described above were each seasonalized in order to isolate the portion of month-to-month change that reflects changes in the economy rather than regular seasonal fluctuations.

Seasonalization removes these regular seasonal fluctuations. Seasonalization was accomplished utilizing the Moving Average Multiplicative Method in the Eviews statistical software. This method calculates a centered moving average (centered by 6 months lagged and forward-lagged data), and then calculates the ratio between actual values and the centered average for each data point in the time series. The monthly average for this ratio is the seasonal adjustment term utilized to seasonalize each series.

The exceptions were the three components Survey Results for Business Conditions, Survey Results for Business Expectations and U.S. Dollar Exchange Rate. Multiple years of monthly data are required in order to seasonalize data and these data were first gathered in September 2011. Therefore seasonalization was not yet possible. The U.S. Dollar Exchange Rate variable was not designed to be seasonally adjusted.

Once the data was seasonalized, each series was standardized around the month of May 2007. The value is set at 100 in May 2007 and values for all other months are interpreted as relative to the value in May 2007. Such standardization is required to provide a common point of comparison. In particular, after standardization, the value of each component can directly be interpreted as growth since May 2007. For example, if the value for Nebraska building permits is 93 in August 2011, this indicates that Nebraska building permits are 7% below their May 2007 value. If the building permit value is 107 in August 2011, this would suggest that building permits have increased by 7% between May 2007 and August 2011. An increase in the building permit series of 106 to 107 would be 1% additional growth from the baseline value. The seasonalized data for 8 of 10 components is standardized to its May 2007 level. This is also the month of standardization for the U.S. Concurrent and Leading Economic Indicators.

Finally, note that no such adjustment was made for the Survey Results for Business Conditions and Survey Results for Business Expectations components. These components are diffusion indexes which are standardized around the value of 50 in all periods rather than variables that need to be standardized around their May 2007 value.

III. Weighting of components

Both the Coincident Economic Indicator – Nebraska and the Leading Economic Indicator – Nebraska take a value of 100 in May 2007. Month-to-month changes in component values lead to month-to-month changes in the aggregate indicator. In particular, changes in each component of each indicator from May 2007 to June 2007 then cause a change in the CEI - N or LEI - N value from May 2007 to June 2007. A similar approach is used to update the two Indicators from June 2007 to July 2007 and so forth up towards the current month. In other words, monthly changes in the components of each indicator determine the change in CEI-N and LEI-N in the current month.

The change in the value of CEI-N or LEI-N is the average of the change in each of its components. Specifically, it is a weighted average of the change in each component. The purpose of the weighting is to place a greater emphasis on changes that occur in components that are generally more stable. In particular, if there is an increase of 1 in two components, and the first component typically rises or falls by 1 each month and the second component typically rises or declines by 0.25, the increase of 1 by the second component provides more compelling evidence that there was a large increase in the underlying economy, rather than typical month to month fluctuations.

The specific weighting scheme utilizes the inverse of the standard deviation of each component. Note that a similar approach to weighting is utilized by the Conference Board in calculating its U.S. Coincident and Leading Economic Indicators. The approach is sensible because the standard deviation describes the typical variability of each component so the inverse of the standard deviation gives a larger weight to changes in components that exhibit less variability. Table III.1 shows the standard deviation and inverse of the standard deviation for 3 components of the Current Economic Indicator - N. These are the three components that contribute to the indicator prior to September 2011 (the month when the Survey of Nebraska Business began). These are the three components that determine the value of CEI-N from January 2001 through August 2011. In the last column the weights are standardized to sum to 1. These standardize weights are used to calculate CEI - N. As seen in Table III.1, monthly changes in private wages determined 52.92% of the monthly change in CEI - N, while monthly changes in electricity sales accounted for 18.42% and monthly changes in agricultural commodities accounted for 28.66%.

Table III.1

Weighting Scheme for Coincident Economic Indicator - Nebraska: January 2001 to August 2011

Variable	Standard Deviation	Inverse STD	Inverse STD Standardize
Electricity Sales	5.0383	0.1985	0.1842
Monthly Wages	1.7539	0.5701	0.5292
Agricultural Commodities	3.2393	0.3087	0.2866

A similar approach is used to calculate the weighting scheme for the Leading Economic Indicator – Nebraska through August 2011, as seen in Table III.2. Monthly changes in the U.S. Dollar Trade-Weighted Exchange Rate determined 41.95% of monthly changes to LEI - N, while monthly changes to manufacturing hours determined 35.65%, changes to airline passengers 13.81%, changes to initial unemployment insurance claims 5.23%, and single-family building permits 3.36%.

Table III.2

Weighting Scheme for Leading Economic Indicator – Nebraska: January 2001 to August 2011

Variable	Standard Deviation	Inverse STD	Inverse STD Standardize
SF Housing Permits	15.6691	0.0638	0.0336
Airline Passengers	3.8160	0.2621	0.1381
Exchange Rate	1.2559	0.7963	0.4195
Initial UI Claims	10.0708	0.0993	0.0523
Manufacturing Hours	1.4780	0.6766	0.3565

The weights in Tables III.1 and III.2 are based on data through August 2011. However, the Survey of Nebraska Business began in September 2011. Business conditions and business expectations from that survey are available to be added into the CEI-N and LEI-N, respectively, beginning that month. Adding the series beginning in September 2011 will require a new set of weights that includes a weight for the survey results and modifies the weights for the other index components (so that the weights continue to sum to 1). Standard deviations for components also are updated, and slightly different, due to additional months of data. These new weights would be utilized for the index beginning in September 2011.

Adjusting the weights naturally requires a value for the standard deviation for survey results. However, since the Survey of Nebraska Business has only been active for one and one-half years, caution should be used when applying standard deviation to sales and employment series from the survey. As a result, we also calculate the standard deviation from the small business survey of the National Federation of Independent Business. That survey also asks businesses about recent growth in both sales and employment, and expectations for growth in sales and employment over the next six months. A standard deviation was calculated for the actual sales and employment growth from the NFIB survey. This standard deviation is given a 50% weight in calculation the standard deviations in Tables III.3 and III.4, with the remaining 50% weight applied to the standard deviation of survey results from the Survey of Nebraska Business itself. The simple average standard deviation from the two sources is presented and used in Tables III.3 and III.4 based on data available through December 2012. Naturally, greater weight will be given to the standard deviation based from the Survey of Nebraska Business as additional months of surveying are completed.

Table III.3

Weighting Scheme for Coincident Economic Indicator - Nebraska: Beginning September 2011

Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)
Electricity Sales	4.6821	0.2136	0.1687
Private Wages	1.7832	0.5608	0.4431
Agricultural Commodities	3.3157	0.3016	0.2383
Survey Business Conditions	5.2709	0.1897	0.1499

Table III.4

Weighting Scheme for Leading Economic Indicator - Nebraska: Beginning September 2011

Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)
SF Housing Permits	14.3511	0.0697	0.0329
Airline Passengers	3.6482	0.2741	0.1296
Exchange Rate	1.2443	0.8037	0.3799
Initial UI Claims	9.9779	0.1002	0.0474
Manufacturing Hours	1.4376	0.6956	0.3288
Survey Business Expectations	5.8116	0.1721	0.0813

IV. Performance of the Index

This section examines the performance of the Coincident Economic Indicator – Nebraska and the Leading Economic Indicator - Nebraska. Two basic comparisons are made. Trends in the CEI-N from 2001 to 2011 are compared with trends in real Nebraska Gross State Product during the period. This comparison is appropriate because both the CEI-N and the real GDP are broad measures of the economic growth in the state. Trends in the Leading Economic Indicators - Nebraska (LEI-N) are further compared with CEI -N. This is done document how the LEI-N predicts growth in the Nebraska economy six months into the future.

Figure IV.1 shows the values of the Coincident Economic Indicator - Nebraska (CEI-N) and real Nebraska gross state product (real GDP) for the period from 2001 to 2011. The comparison ends in 2011 since this is the last year for which real gross state product data is available, at this time. Real gross state

product data is provided by the Bureau of Economic Analysis of the U.S. Department of Commerce on an annual basis only. Quarterly values for real GDP were estimated using the annual data and quarterly data on labor earnings in Nebraska, which are also available from the Bureau of Economic Analysis. Figure IV.1 clearly shows that CEI-N closely tracks Nebraska real GDP for the period, with growth in both indexes trending up beginning in 2002, flattening from 2007 to mid-2008, dropping rapidly in early 2009 and then returning to growth. While the two series are not a perfect match, the series do have these major trends in common, and more generally, are very correlated. The correlation coefficient between the two series pictured in Figure IV.1 is 0.94.

Figure IV.1
Comparison of CEI-N and Nebraska Real GDP

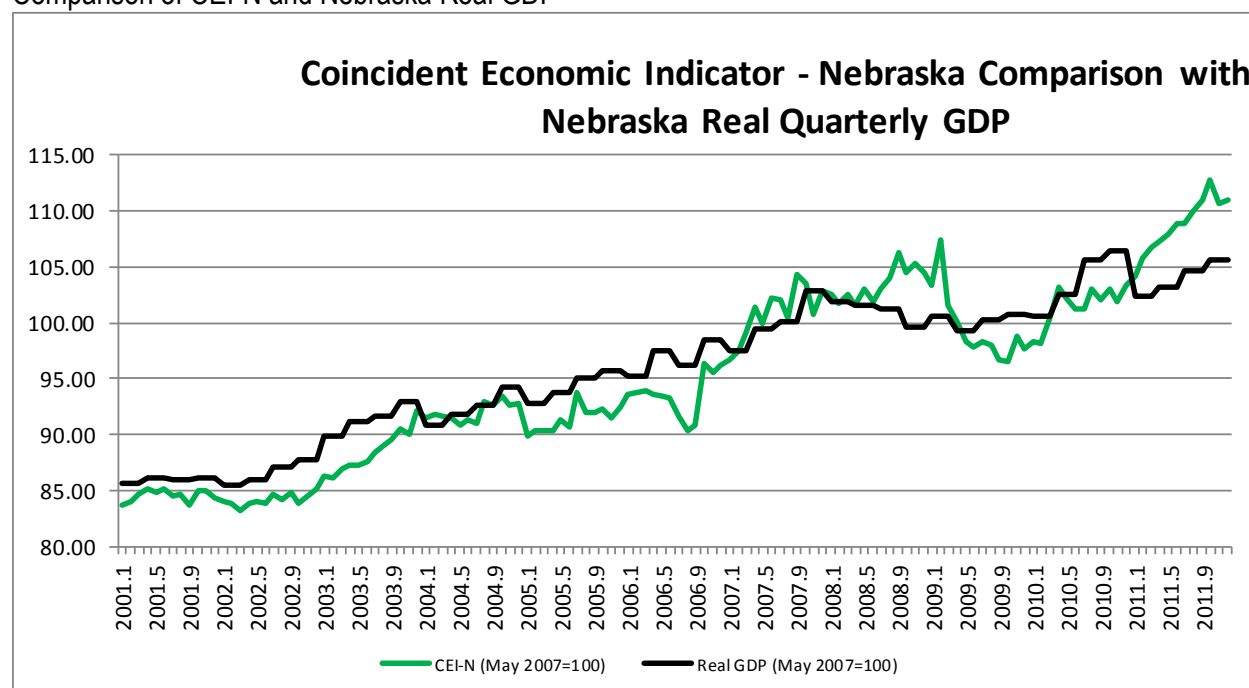
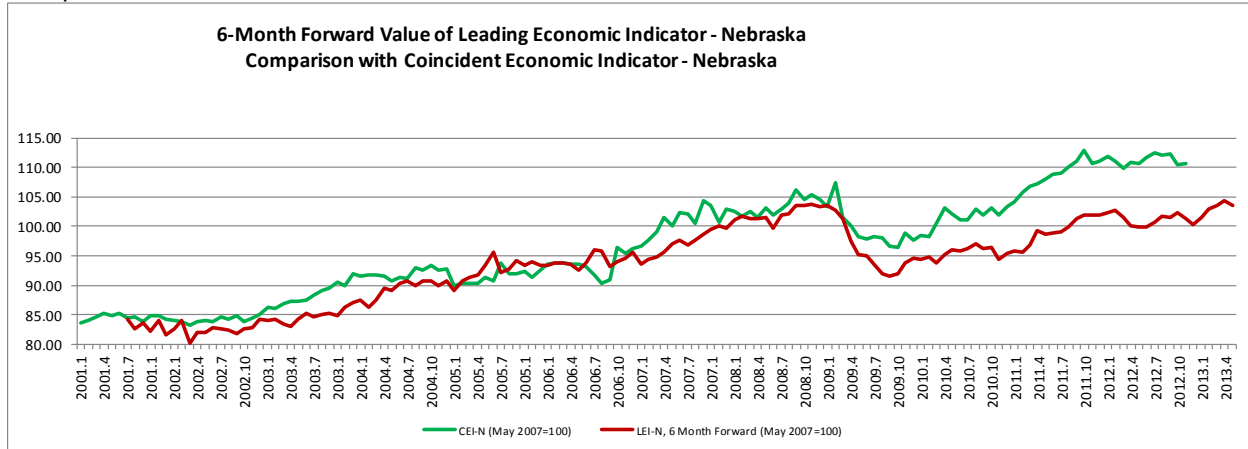


Figure IV.2 shows the 6 month forward prediction for the Leading Economic Indicator – Nebraska and the values for the Coincident Economic Indicator - Nebraska. Recall that the LEI-N is intended to forecast Nebraska economic growth 6 months into the future. Movements in the LEI-N 6 months earlier therefore should predict movements in the CEI-N in the current period. Therefore, in Figure IV.2, we graph the value of LEI-N 6 months forward into the future. Figure IV.2 therefore is comparing the predicted movement in CEI-N (predicted by LEI-N) in a period with the actual movement in CEI-N. Figure IV.2 shows that the LEI-N predicts the CEI-N, and therefore, trends in the Nebraska economy. The 6-months forward LEI-N trends upward between 2002 and early 2008 and then drops precipitously in early 2009, in line with the CEI-N. The 6-months forward LEI-N also begins rising rapidly in mid-2009, at the same time that the CEI-N begins its strong recovery. The correlation coefficient between the two indicators pictured in Figure IV.2 is 0.91.

Figure IV.2
Comparison of 6 Months Forward LEI-N and CEI-N



V. Summary

In summary, the performance evaluation shows that the Coincident Economic Indicator - Nebraska tracks trends and movement in the Nebraska economy. Further, the Leading Economic Indicator - Nebraska forecasts 6-months ahead movements in the Nebraska economy, as measured by the CEI-N. For example, as picture in Figure IV.2, the LEI-N for June through December 2012 forecasts continued improvement in the Nebraska economy from January 2013 through June 2013. The College of Business Administrative research team from the Department of Economics and Bureau of Business Research will continue to produce both indicators on a monthly basis, in order to track improvements in the Nebraska economy, and produce short-term forecast for the Nebraska economy 6 months forward.

Appendix 1: The Survey of Nebraska Business

The Survey of Nebraska Business is designed to obtain the opinions of owners and managers of a cross-section of Nebraska businesses about current and projected growth **in their own business**. The survey is sent to a random sample of 500 Nebraska businesses of all sizes. Owners and managers asked to respond to the survey are asked about the growth in both sales and employment in their businesses over the past 6 months, and their expectations for growth in sales and employment over the next six months.

The Survey of Nebraska Business is sent each month to a random sample of 500 Nebraska businesses. The list of 500 businesses is drawn from a population of 140,000 Nebraska businesses maintained by the Dun & Braadstreet organization. Dun & Braadstreet monitors the financial conditions and loan information of most U.S. businesses. We note that the Bureau of Economic Analysis of the U.S. Department of Commerce estimated that there were a similar number of business establishments in Nebraska as of 2009, the last year that their data was available. The 500 surveyed business establishments therefore are drawn from a population of businesses that is representative of the Nebraska business community. In particular, there are many single-person operations such as persons who work from a home office or farmers. This implies that the survey provides a large and representative sample of rural Nebraska businesses.

Several steps are taken to improve the survey response rate. Survey recipients are sent a post card alerting them that they will soon be receiving the survey, within about a week. Such warnings increase the likelihood that respondents will notice and identify the survey when it arrives. Owners and managers who do not respond to the initial survey are sent a second copy of the survey later in the month. Post cards are mailed on the first business day of each month and the initial survey form is sent one week later. Second mailings are sent at the end of the third week of the month. Thus, surveys represent owner and manager opinions from throughout the month though about two-thirds of respondents respond to the initial mailing. The overall response rate averages 30%.

As seen in the sample survey form, respondents are asked to report on whether their own establishment employment and sales have risen, declined, or stayed the same over the last 6 months. Respondents then are asked to provide their expectation of whether sales and employment will increase, decline, or stay the same over the next 6 months. The use of these broad, directional categories is appropriate for calculating the diffusion indexes described earlier in this technical report. Respondents also are asked about their expectations for the general economy over the next six months. This information is not utilized in the LEI-N, however, as the key information from business owners is their expectations about their own business. As most respondents are privately-held, small businesses that do not need to issue quarterly reports, information about these businesses is a unique resource generated by the Survey of Nebraska Business. Respondents overall expectations are tracked and reported elsewhere by the Bureau of Business Research, along with responses to the sixth question in the survey. This sixth question invites respondents to report their opinion on the primary issues facing their business.

Survey of Nebraska Business
University of Nebraska-Lincoln Bureau of Business Research

Directions: Please answer the following questions about your business. If you manage branch location, please answer the questions for your location only. Non-profit organizations should refer to sales and other revenue sources.

1) Over the last 6 months, was the dollar sales volume at your business higher, lower, or about the same as it was over the previous 6 months?

- ☐ higher
- ☐ lower
- ☐ about the same

2) During the next 6 months, do you expect that your dollar sales volume at your business will be higher, lower, or about the same as it was over the last 6 months?

- ☐ higher
- ☐ lower
- ☐ about the same

3) During the last 6 months, did the total number of employees at your business increase, decrease or stay the same?

- ☐ Increase
- ☐ decrease
- ☐ stay the same

4) During the next 6 months, do you expect that the total number of employees at your business will increase, decrease, or stay the same?

- ☐ increase
- ☐ decrease
- ☐ stay the same

5) For the economy in general, do you think that business conditions six months from now will be better, worse, or about the same as they are now?

- ☐ better
- ☐ worse
- ☐ about the same

6) What is the most important issue facing your business today? _____

Thank you for your participation. Please return the survey to

347 College of Business Administration Building, University of Nebraska-Lincoln, Lincoln, NE 68588-0406

Appendix 2: Data and Index Values: 2001 to 2011

		Nebraska Coincident Economic Indicator				Data Values					Nebraska Leading Economic Indicator				
		Electricity	Weekly Wages				Single-Family		U.S. Dollar		Initial		Weekly		
Year	Month	Sales (MWH)	(\$)	Corn Price (\$)	Beef Price (\$)		Building	Airline	Exchange		Unemployment		Manufacturing		
							Permits	Passengers	Rate		Claims		Hours		
2001	1	1,869,615	\$403,801,573	\$1.97	\$78.16		250	310,258	122.85		7,966		3,446,940		
2001	2	1,656,261	\$403,137,590	\$1.95	\$79.62		233	307,489	123.54		6,145		3,375,040		
2001	3	1,604,837	\$406,157,173	\$1.98	\$79.65		345	376,596	125.56		5,072		3,476,500		
2001	4	1,516,522	\$396,427,195	\$1.95	\$77.95		405	335,173	126.53		5,116		3,324,780		
2001	5	1,597,537	\$400,405,712	\$1.81	\$75.62		479	381,777	126.39		5,835		3,519,360		
2001	6	1,875,554	\$404,369,103	\$1.77	\$73.80		452	406,833	127.24		6,257		3,451,360		
2001	7	2,387,932	\$411,560,850	\$1.86	\$71.29		403	409,755	127.67		5,495		3,469,200		
2001	8	2,353,286	\$409,079,567	\$1.90	\$70.22		409	397,924	125.57		4,761		3,536,400		
2001	9	1,750,101	\$403,984,906	\$1.87	\$68.82		325	238,065	125.93		4,480		3,507,000		
2001	10	1,693,826	\$435,003,834	\$1.86	\$66.27		326	331,745	126.77		6,253		3,477,760		
2001	11	1,754,058	\$436,464,760	\$1.85	\$64.60		336	312,540	127.29		8,132		3,469,400		
2001	12	1,889,134	\$435,755,659	\$1.91	\$63.52		239	316,335	127.36		11,089		3,581,280		
2002	1	1,894,006	\$408,735,562	\$1.94	\$67.26		270	291,420	128.95		9,206		3,419,240		
2002	2	1,695,863	\$408,689,856	\$1.90	\$70.81		327	283,294	129.69		6,479		3,382,250		
2002	3	1,608,247	\$412,006,187	\$1.93	\$72.23		364	356,042	128.94		6,937		3,422,730		
2002	4	1,557,456	\$402,282,739	\$1.85	\$67.73		462	314,543	128.57		6,376		3,389,980		
2002	5	1,656,999	\$405,998,721	\$1.91	\$65.54		453	362,459	127.01		6,446		3,402,280		
2002	6	1,893,327	\$409,835,615	\$1.96	\$63.63		404	389,366	125.57		5,534		3,538,080		
2002	7	2,596,724	\$422,228,771	\$2.11	\$62.58		470	390,799	123.81		7,521		3,489,250		
2002	8	2,405,634	\$420,537,995	\$2.38	\$63.09		429	371,054	125.23		5,376		3,497,460		
2002	9	1,854,889	\$417,769,184	\$2.48	\$64.29		409	304,733	126.16		5,333		3,431,610		
2002	10	1,645,679	\$444,413,519	\$2.37	\$64.86		458	340,025	127.07		6,930		3,337,440		
2002	11	1,705,896	\$445,266,704	\$2.37	\$69.66		397	312,078	125.78		7,040		3,378,240		
2002	12	1,875,017	\$445,879,894	\$2.32	\$72.31		303	353,489	125.13		10,854		3,394,380		
2003	1	1,925,514	\$421,136,348	\$2.32	\$77.37		298	289,780	123.59		9,534		3,295,740		
2003	2	1,717,656	\$420,220,006	\$2.34	\$78.58		356	289,857	123.44		7,332		3,312,000		
2003	3	1,751,400	\$422,665,567	\$2.33	\$77.42		428	349,139	122.96		6,147		3,348,180		
2003	4	1,581,280	\$413,414,301	\$2.31	\$79.20		539	304,387	121.99		6,459		3,280,180		
2003	5	1,647,058	\$417,066,472	\$2.37	\$79.39		559	363,868	118.01		6,733		3,292,450		
2003	6	1,909,959	\$420,672,659	\$2.31	\$76.02		564	396,351	117.37		6,647		3,384,840		
2003	7	2,631,824	\$433,319,288	\$2.11	\$76.52		610	398,567	118.58		6,578		3,335,640		
2003	8	2,526,526	\$434,700,760	\$2.09	\$81.30		426	365,554	119.89		4,749		3,364,200		
2003	9	1,895,328	\$431,252,105	\$2.16	\$90.35		499	320,380	118.55		5,680		3,348,180		
2003	10	1,785,473	\$461,029,466	\$2.16	\$101.81		555	349,482	116.21		5,821		3,344,340		
2003	11	1,708,676	\$461,475,969	\$2.20	\$102.36		400	318,277	116.08		6,913		3,368,400		
2003	12	2,043,329	\$462,083,517	\$2.28	\$89.82		393	341,428	114.51		10,861		3,344,640		

		Data Values (Continued)									
		Nebraska Coincident Economic Indicator					Nebraska Leading Economic Indicator				
Year	Month	Electricity Sales (MWH)	Weekly Wages (\$)	Corn Price (\$)	Beef Price (\$)		Single-Family Building Permits	Airline Passengers	U.S. Dollar Exchange Rate	Initial Unemployment Claims	Weekly Manufacturing Hours
2004	1	1,983,097	\$433,365,093	\$2.38	\$80.47		313	293,055	112.60	8,978	3,317,480
2004	2	1,828,655	\$431,700,741	\$2.53	\$78.36		388	298,160	113.14	7,499	3,273,450
2004	3	1,788,602	\$437,030,455	\$2.62	\$85.52		595	371,400	114.26	6,209	3,253,600
2004	4	1,643,182	\$428,120,161	\$2.82	\$87.00		636	341,582	115.07	5,188	3,227,010
2004	5	1,748,983	\$432,643,386	\$2.80	\$87.95		576	379,482	116.94	5,548	3,331,050
2004	6	2,036,490	\$436,563,160	\$2.82	\$88.85		645	421,366	115.83	5,973	3,371,780
2004	7	2,492,882	\$455,644,537	\$2.57	\$84.17		557	407,870	115.02	6,253	3,231,900
2004	8	2,570,344	\$453,245,526	\$2.35	\$84.44		614	381,063	115.18	5,637	3,355,370
2004	9	1,922,256	\$449,646,705	\$2.15	\$82.35		526	347,036	114.71	5,106	3,295,440
2004	10	1,784,105	\$493,104,107	\$2.15	\$84.40		495	374,242	113.10	5,578	3,270,960
2004	11	1,812,558	\$494,707,440	\$2.13	\$83.95		435	341,824	110.23	6,868	3,299,250
2004	12	2,045,229	\$495,398,797	\$2.01	\$86.87		420	352,521	109.00	9,582	3,371,780
2005	1	2,025,247	\$439,162,177	\$2.04	\$87.81		269	316,298	109.58	9,401	3,166,800
2005	2	1,870,836	\$440,835,345	\$1.89	\$87.80		402	316,301	109.79	5,824	3,108,630
2005	3	1,834,030	\$445,621,869	\$1.98	\$91.36		652	395,146	109.19	5,799	3,108,660
2005	4	1,578,595	\$448,571,116	\$1.92	\$92.55		520	361,769	110.11	4,989	3,183,520
2005	5	1,783,460	\$452,466,012	\$1.93	\$88.70		641	410,911	110.59	5,051	3,215,040
2005	6	1,995,423	\$456,562,179	\$1.97	\$83.57		582	451,438	111.68	5,514	3,275,400
2005	7	2,767,549	\$487,950,467	\$2.04	\$79.74		607	434,353	112.12	5,959	3,266,830
2005	8	2,496,859	\$483,789,411	\$1.86	\$80.59		580	405,035	110.69	4,860	3,223,920
2005	9	1,974,708	\$480,794,071	\$1.72	\$84.47		555	374,095	110.59	5,110	3,144,000
2005	10	1,830,505	\$513,420,230	\$1.82	\$87.72		563	393,931	111.64	5,197	3,100,630
2005	11	1,796,246	\$514,371,303	\$1.79	\$90.00		415	365,098	112.41	7,325	3,080,720
2005	12	2,061,537	\$514,365,101	\$1.80	\$93.65		363	371,410	111.70	10,044	3,156,050
2006	1	2,120,666	\$485,226,463	\$1.91	\$93.22		340	334,698	110.17	6,801	3,072,960
2006	2	1,860,389	\$486,970,525	\$1.94	\$89.22		381	326,682	110.42	5,172	3,171,780
2006	3	1,838,482	\$490,959,432	\$1.96	\$85.76		396	399,976	110.58	6,873	3,187,350
2006	4	1,682,945	\$481,471,407	\$2.00	\$81.70		412	365,587	109.81	4,463	3,136,000
2006	5	1,857,758	\$486,507,318	\$2.08	\$78.98		445	417,721	107.56	5,540	3,218,130
2006	6	2,140,319	\$491,778,801	\$2.06	\$81.20		443	436,530	108.84	5,000	3,336,880
2006	7	2,764,386	\$488,757,504	\$2.11	\$81.23		360	417,660	108.57	5,567	3,230,080
2006	8	2,492,864	\$485,117,555	\$2.08	\$86.34		409	398,290	107.85	5,471	3,214,020
2006	9	1,875,594	\$483,327,720	\$2.13	\$89.20		343	363,539	108.12	4,504	3,174,920
2006	10	1,884,338	\$537,739,908	\$2.52	\$87.55		335	401,523	108.39	5,412	3,212,640
2006	11	1,896,312	\$539,831,129	\$2.76	\$86.45		301	377,987	107.50	6,520	3,193,470
2006	12	2,090,181	\$540,464,703	\$2.95	\$85.73		231	369,488	106.68	9,049	3,280,200

		Data Values (Continued)									
		Nebraska Coincident Economic Indicator					Nebraska Leading Economic Indicator				
		Electricity	Weekly Wages				Single-Family		U.S. Dollar	Initial	Weekly
Year	Month	Sales (MWH)	(\$)	Corn Price (\$)	Beef Price (\$)		Building	Airline	Exchange	Unemployment	Manufacturing
							Permits	Passengers	Rate	Claims	Hours
2007	1	2,088,684	\$508,030,716	\$3.04	\$86.53		199	334,115	107.70	9,303	3,256,320
2007	2	1,932,772	\$507,481,920	\$3.26	\$90.48		235	331,131	107.33	5,530	3,278,250
2007	3	1,956,852	\$514,531,741	\$3.28	\$97.78		354	401,651	106.79	5,187	3,326,400
2007	4	1,676,772	\$537,812,050	\$3.32	\$97.78		446	378,010	105.44	4,833	3,330,720
2007	5	1,799,674	\$531,531,207	\$3.49	\$95.16		517	438,904	104.55	4,886	3,319,600
2007	6	2,156,057	\$546,815,339	\$3.64	\$87.26		361	447,714	104.28	4,255	3,350,490
2007	7	2,803,693	\$543,814,576	\$3.42	\$89.08		460	455,102	102.95	4,922	3,342,680
2007	8	2,557,797	\$536,641,597	\$3.26	\$91.46		433	432,755	103.52	4,203	3,317,790
2007	9	2,318,621	\$537,963,338	\$3.22	\$93.68		323	381,510	102.15	3,886	3,304,160
2007	10	2,300,926	\$531,280,386	\$3.20	\$91.51		305	409,602	100.08	5,347	3,293,750
2007	11	2,295,270	\$528,585,461	\$3.38	\$93.77		165	373,882	98.66	5,624	3,251,440
2007	12	2,496,900	\$549,954,149	\$3.82	\$90.68		112	371,031	99.48	9,715	3,229,660
2008	1	2,474,256	\$519,683,703	\$4.00	\$88.96		168	344,215	98.65	8,390	3,207,950
2008	2	2,063,202	\$524,059,159	\$4.44	\$90.99		176	346,342	97.83	5,536	3,188,360
2008	3	1,977,933	\$538,327,390	\$4.53	\$89.29		235	405,871	95.91	5,199	3,301,500
2008	4	1,739,968	\$524,547,221	\$5.01	\$90.10		319	384,258	95.54	5,182	3,288,720
2008	5	1,978,628	\$534,705,494	\$5.13	\$93.87		376	435,398	95.90	5,349	3,331,630
2008	6	2,053,302	\$544,177,367	\$5.40	\$94.88		375	448,909	96.08	5,352	3,300,710
2008	7	2,903,203	\$531,090,945	\$5.12	\$97.99		383	459,233	95.37	6,390	3,280,200
2008	8	2,791,322	\$538,011,045	\$5.23	\$99.43		309	397,925	97.89	4,775	3,278,250
2008	9	2,289,843	\$531,114,221	\$5.27	\$97.38		331	365,006	100.30	4,964	3,253,620
2008	10	1,935,264	\$538,719,854	\$4.34	\$91.38		258	399,569	106.96	7,619	3,260,560
2008	11	2,065,546	\$547,224,479	\$4.43	\$90.45		132	341,753	109.64	8,293	3,240,960
2008	12	2,306,894	\$539,216,000	\$4.03	\$83.97		86	367,824	108.49	15,187	3,190,320
2009	1	2,280,977	\$517,813,402	\$4.28	\$80.99		72	321,101	109.16	12,206	3,066,850
2009	2	2,471,188	\$530,184,576	\$3.96	\$79.91		167	319,043	111.85	9,422	2,944,350
2009	3	1,979,822	\$529,533,885	\$3.90	\$81.97		177	388,162	112.34	9,365	2,973,600
2009	4	1,710,954	\$524,644,695	\$3.78	\$86.65		280	375,285	109.55	9,022	2,869,360
2009	5	1,842,958	\$521,663,868	\$3.86	\$85.13		355	414,923	106.40	9,271	2,932,300
2009	6	2,106,955	\$526,888,580	\$3.94	\$81.46		443	434,750	105.04	9,525	2,852,240
2009	7	2,843,113	\$523,811,681	\$3.60	\$82.69		383	435,864	104.68	9,009	2,828,000
2009	8	2,636,400	\$540,945,574	\$3.29	\$82.45		281	389,965	103.39	7,634	2,812,940
2009	9	2,019,348	\$522,545,998	\$3.18	\$82.83		191	359,849	102.61	7,159	2,766,100
2009	10	1,856,396	\$528,697,901	\$3.55	\$83.17		233	379,968	101.15	8,817	2,826,190
2009	11	2,164,329	\$541,095,526	\$3.71	\$83.31		180	343,552	100.67	9,692	2,844,930
2009	12	2,429,082	\$525,287,070	\$3.64	\$80.28		174	341,764	101.12	16,305	2,849,000

		Data Values (Continued)									
		Nebraska Coincident Economic Indicator					Nebraska Leading Economic Indicator				
		Electricity	Weekly Wages				Single-Family		U.S. Dollar	Initial	Weekly
Year	Month	Sales (MWH)	(\$)	Corn Price (\$)	Beef Price (\$)		Building	Airline	Exchange	Unemployment	Manufacturing
							Permits	Passengers	Rate	Claims	Hours
2010	1	2,373,426	\$519,737,366	\$3.70	\$83.64		160	\$311,229.00	101.40	12,175	2,805,460
2010	2	2,076,714	\$522,921,855	\$3.57	\$87.62		276	\$312,699.00	102.91	8,742	2,837,940
2010	3	2,135,409	\$529,479,235	\$3.60	\$93.66		235	\$404,347.00	102.02	9,400	2,803,760
2010	4	1,962,873	\$546,005,129	\$3.44	\$99.85		288	\$373,694.00	101.51	7,308	2,792,000
2010	5	1,922,808	\$561,606,454	\$3.51	\$97.55		187	\$405,736.00	104.31	7,932	2,846,060
2010	6	2,133,612	\$557,730,691	\$3.44	\$92.10		217	\$441,691.00	104.87	8,049	2,857,700
2010	7	2,745,151	\$557,000,032	\$3.54	\$93.28		179	\$442,367.00	103.25	7,545	2,821,000
2010	8	2,807,467	\$569,971,696	\$3.68	\$96.39		164	\$389,716.00	102.45	7,995	2,811,840
2010	9	2,058,349	\$557,578,879	\$3.99	\$97.34		177	\$373,513.00	101.45	7,075	2,823,960
2010	10	1,968,136	\$559,366,870	\$4.22	\$97.96		193	\$403,730.00	98.82	7,290	2,868,240
2010	11	1,995,925	\$553,922,582	\$4.46	\$99.51		134	\$358,825.00	99.10	9,612	2,891,630
2010	12	2,340,386	\$549,767,140	\$4.83	\$102.29		118	\$355,511.00	99.75	12,521	2,886,660
2011	1	2,264,747	\$541,696,976	\$4.81	\$105.32		104	\$323,342.00	98.60	12,264	2,847,150
2011	2	2,141,497	\$538,640,248	\$5.49	\$108.86		123	\$319,142.00	97.85	7,842	2,883,450
2011	3	2,088,168	\$538,947,353	\$5.30	\$116.53		209	\$399,887.00	96.92	7,998	2,914,560
2011	4	1,766,452	\$545,656,140	\$6.18	\$120.09		232	\$359,023.00	95.32	7,439	2,984,520
2011	5	1,837,945	\$559,203,152	\$5.97	\$111.56		248	\$410,319.00	95.28	8,035	2,976,660
2011	6	2,193,267	\$553,530,485	\$6.32	\$109.06		207	\$429,345.00	95.25	7,799	2,959,200
2011	7	2,774,066	\$551,415,890	\$6.26	\$111.00		240	\$419,924.00	94.59	7,442	2,928,150
2011	8	2,820,632	\$551,572,445	\$6.93	\$114.19		268	\$379,064.00	95.13	8,070	2,960,200
2011	9	2,108,122	\$554,268,000	\$6.55	\$116.91		191	\$367,351.00	97.98	6516	2,950,980
2011	10	1,999,601	\$572,776,591	\$5.61	\$120.98		211	\$380,514.00	98.89	7583	2,884,560
2011	11	2,025,496	\$551,899,051	\$5.77	\$124.83		165	\$352,356.00	99.52	8633	2,836,100
2011	12	2,252,088	\$558,071,192	\$5.81	\$121.55		149	\$342,521.00	100.45	12485	2,867,040
2011	1	2,302,897	\$555,044,351	\$6.02	\$123.41		129	\$316,160.00	99.83	10514	2,833,530
2011	2	2,116,646	\$542,985,914	\$6.22	\$125.47		159	\$318,883.00	98.10	7986	2,844,870
2011	3	2,023,775	\$540,385,566	\$6.25	\$127.33		217	\$379,821.00	98.70	8579	2,852,560
2011	4	1,755,623	\$558,231,540	\$6.39	\$122.34		217	\$350,168.00	99.01	5969	2,896,680
2011	5	1,870,295	\$558,151,667	\$6.36	\$121.91		259	\$399,357.00	100.74	7178	2,890,380
2011	6	2,268,428	\$559,837,982	\$6.30	\$119.69		246	\$423,054.00	102.18	9590	2,878,250
2011	7	2,938,761	\$569,620,958	\$7.05	\$114.65		226	\$408,872.00	101.70	6567	2,906,040
2011	8	2,900,195	\$561,295,182	\$7.76	\$119.93		266	\$390,275.00	100.82	7734	2,920,920
2011	9	2,110,891	\$574,137,211	\$6.86	\$124.90		263	\$356,028.00	99.24	7135	2,983,860
2011	10	1,873,090	\$561,789,378	\$6.59	\$125.66		225	\$381,671.00	98.96	6754	3,035,760
2011	11	1,946,647	\$559,979,269	\$6.90	\$125.91		228	\$339,789.00	99.59	9194	2,976,600

		Component Index Values								
		Nebraska Coincident Economic Indicator				Nebraska Leading Economic Indicator				
		Electricity		Commodity		Single-Family Building		U.S. Dollar	Initial	Weekly
Year	Month	Sales	Weekly Wages	Price		Permits	Airline Passengers	Exchange Rate	Unemployment Claims	Manufacturing Hours
2001	1	89.34	87.66	68.85		91.20	90.38	85.10	95.31	106.15
2001	2	87.42	88.07	70.45		76.36	89.21	84.62	89.29	104.76
2001	3	87.01	88.62	72.03		90.69	88.97	83.26	98.40	106.17
2001	4	89.39	88.27	72.85		88.67	88.85	82.62	93.53	103.26
2001	5	88.62	87.95	73.05		102.26	88.59	82.72	86.62	107.71
2001	6	89.52	88.38	72.66		100.16	86.92	82.16	85.34	102.62
2001	7	87.20	87.89	72.65		88.62	88.46	81.89	91.81	104.63
2001	8	89.65	87.61	72.33		92.29	93.31	83.26	86.43	105.58
2001	9	87.96	86.78	71.66		84.29	64.16	83.02	90.94	105.90
2001	10	91.71	88.12	70.68		80.28	82.43	82.47	79.31	106.18
2001	11	93.00	88.16	69.59		96.35	83.28	82.13	75.06	105.18
2001	12	90.92	88.38	68.31		85.69	82.21	82.08	79.19	107.99
2002	1	90.52	88.71	67.05		100.13	84.91	81.08	82.60	105.35
2002	2	89.68	89.17	66.32		106.97	82.46	80.61	84.56	105.00
2002	3	86.94	88.99	66.09		95.12	84.31	81.08	72.19	104.62
2002	4	91.92	88.53	65.72		101.76	83.17	81.32	74.47	105.21
2002	5	91.98	88.83	65.72		96.74	84.13	82.31	77.72	103.98
2002	6	90.82	88.82	66.01		89.23	83.18	83.26	95.45	105.19
2002	7	94.39	88.69	66.55		103.51	84.51	84.44	67.84	105.12
2002	8	91.65	88.55	67.13		96.46	87.05	83.48	77.74	104.43
2002	9	93.25	88.92	67.73		105.13	81.75	82.87	78.21	103.72
2002	10	89.07	88.16	68.68		112.71	84.23	82.28	71.40	101.96
2002	11	90.74	88.06	70.10		114.66	83.40	83.12	85.76	102.52
2002	12	89.94	88.61	71.51		108.61	91.71	83.55	81.08	102.40
2003	1	92.04	89.39	72.80		113.08	84.44	84.59	80.19	101.68
2003	2	90.95	89.04	73.87		115.18	84.72	84.70	73.55	102.74
2003	3	94.49	88.84	74.56		111.64	82.85	85.02	82.42	102.38
2003	4	93.64	89.29	75.67		119.92	80.22	85.70	72.37	101.63
2003	5	91.29	89.62	76.61		119.80	84.43	88.59	73.56	100.36
2003	6	91.92	89.49	77.26		123.45	84.75	89.07	77.93	100.64
2003	7	95.20	89.65	77.73		134.58	86.54	88.16	78.74	100.29
2003	8	96.68	89.87	78.48		94.82	85.88	87.20	90.54	100.54
2003	9	95.38	90.14	80.45		126.09	85.41	88.19	75.05	101.42
2003	10	96.49	90.16	83.50		135.79	86.09	89.96	84.87	102.26
2003	11	91.08	89.75	86.23		117.97	85.22	90.07	86.15	102.41
2003	12	97.69	90.39	87.63		140.76	88.57	91.30	80.73	101.04

Component Index Values (Continued)										
Nebraska Coincident Economic Indicator					Nebraska Leading Economic Indicator					
Year	Month	Electricity Sales	Weekly Wages	Commodity Price	Single-Family Building Permits	Airline Passengers	U.S. Dollar Exchange Rate	Initial Unemployment Claims	Weekly Manufacturing Hours	
2004	1	94.62	90.48	87.70	122.71	85.40	92.84	86.35	102.51	
2004	2	96.74	90.40	87.30	126.13	87.44	92.40	71.09	101.39	
2004	3	95.92	90.84	86.78	155.65	88.53	91.50	82.03	99.37	
2004	4	97.87	90.36	85.43	143.25	89.72	90.86	89.24	99.63	
2004	5	97.03	90.06	84.35	121.73	87.78	89.40	88.79	101.26	
2004	6	98.38	90.06	85.32	140.20	90.28	90.26	84.23	100.35	
2004	7	90.18	91.72	86.92	121.70	88.84	90.90	83.41	97.02	
2004	8	99.01	91.28	88.09	133.98	89.86	90.76	77.67	100.48	
2004	9	96.73	91.87	87.51	130.84	91.83	91.14	84.65	100.05	
2004	10	96.04	94.04	86.65	120.62	91.69	92.43	88.62	99.99	
2004	11	96.36	93.24	85.35	134.62	91.61	94.85	85.73	100.57	
2004	12	97.16	94.23	83.63	151.33	91.65	95.91	92.31	102.08	
2005	1	96.27	89.48	82.49	108.54	92.26	95.41	83.91	97.90	
2005	2	98.80	89.83	81.55	133.33	92.87	95.22	90.28	96.16	
2005	3	98.17	90.07	81.92	171.96	94.61	95.75	88.16	94.75	
2005	4	94.79	91.26	82.03	117.55	94.58	94.94	91.83	97.90	
2005	5	98.83	91.53	82.09	132.90	94.62	94.53	96.79	97.36	
2005	6	96.55	91.35	81.86	124.32	96.98	93.61	88.29	97.71	
2005	7	100.72	95.71	81.53	130.71	94.94	93.24	87.75	98.09	
2005	8	96.91	94.09	81.12	124.23	96.09	94.45	92.09	96.85	
2005	9	99.27	93.68	80.23	134.77	98.30	94.53	83.81	95.68	
2005	10	98.40	94.70	79.97	137.66	95.89	93.65	95.70	94.68	
2005	11	94.83	94.30	80.07	136.70	97.66	93.00	79.71	94.01	
2005	12	97.24	95.12	80.85	133.77	97.17	93.59	88.80	95.67	
2006	1	100.10	95.57	81.78	141.36	97.70	94.89	117.39	94.97	
2006	2	97.79	96.27	82.56	129.76	96.02	94.68	101.49	98.08	
2006	3	98.16	96.29	82.79	106.59	96.28	94.54	74.27	96.91	
2006	4	101.95	94.81	81.85	92.95	95.04	95.21	103.04	96.02	
2006	5	103.09	94.80	80.75	88.54	95.61	97.20	88.07	97.17	
2006	6	104.01	94.52	79.78	93.08	94.04	96.06	95.32	99.92	
2006	7	101.42	92.95	79.05	74.81	91.31	96.30	93.14	97.16	
2006	8	97.43	91.58	79.26	87.24	95.07	96.94	82.17	96.89	
2006	9	94.25	93.47	80.20	82.52	95.00	96.70	93.11	96.84	
2006	10	101.57	99.99	82.27	83.31	97.41	96.46	92.90	97.89	
2006	11	99.01	98.17	84.51	106.36	100.91	97.25	89.02	97.45	
2006	12	97.58	98.94	86.46	87.80	97.47	98.00	100.59	99.43	

Component Index Values (Continued)										
Nebraska Coincident Economic Indicator					Nebraska Leading Economic Indicator					
Year	Month	Electricity Sales	Weekly Wages	Commodity Price	Single-Family Building Permits	Airline Passengers	U.S. Dollar Exchange Rate	Initial Unemployment Claims	Weekly Manufacturing Hours	
2007	1	97.68	99.01	88.27	83.64	97.55	97.07	85.40	100.51	
2007	2	101.31	98.12	90.32	80.62	97.45	97.40	94.48	101.31	
2007	3	104.46	98.51	92.88	97.29	97.02	97.90	99.13	100.97	
2007	4	102.16	102.99	94.65	98.69	97.62	99.15	95.45	101.69	
2007	5	100.00	100.00	96.43	100.00	100.00	100.00	100.00	100.00	
2007	6	105.39	101.70	97.55	74.49	96.77	100.25	111.22	100.68	
2007	7	103.79	101.35	98.67	93.56	99.28	101.55	104.11	100.85	
2007	8	100.17	99.31	99.05	93.87	103.81	100.99	108.28	100.41	
2007	9	116.82	100.70	98.76	77.24	99.45	102.34	105.71	100.97	
2007	10	124.67	96.08	98.63	76.66	98.95	104.46	94.91	100.14	
2007	11	118.81	92.96	98.74	60.99	99.73	105.96	102.73	99.01	
2007	12	115.47	97.80	99.72	43.78	98.61	105.09	93.91	97.82	
2008	1	115.09	97.04	100.51	71.64	100.65	105.98	93.58	98.90	
2008	2	107.35	97.38	102.05	60.73	102.07	106.87	94.70	98.40	
2008	3	104.83	99.28	103.24	64.55	98.16	109.01	99.56	100.22	
2008	4	106.29	96.02	104.98	68.52	98.78	109.43	90.39	100.12	
2008	5	110.84	96.07	107.15	71.22	98.91	109.02	92.20	100.32	
2008	6	101.03	96.05	109.75	77.89	97.22	108.82	89.08	99.52	
2008	7	108.61	93.74	112.64	76.57	99.91	109.62	78.80	99.35	
2008	8	108.99	94.20	115.22	67.98	95.87	106.80	96.29	99.49	
2008	9	115.68	94.47	117.76	80.55	94.77	104.23	82.24	99.43	
2008	10	105.40	95.02	117.90	65.30	96.42	97.74	66.71	98.95	
2008	11	106.41	96.71	117.03	49.89	91.12	95.35	69.31	98.40	
2008	12	105.88	97.08	114.00	33.77	98.35	96.37	60.01	96.64	
2009	1	105.66	96.78	110.62	30.68	94.10	95.77	63.09	94.41	
2009	2	127.64	98.60	105.95	57.35	94.03	93.47	55.88	90.71	
2009	3	104.45	98.51	101.55	47.27	93.75	93.06	56.08	90.39	
2009	4	104.57	97.00	99.05	58.79	96.23	95.43	52.21	87.18	
2009	5	104.02	94.96	96.99	67.43	94.27	98.26	53.32	88.26	
2009	6	104.04	94.38	96.20	92.55	94.14	99.53	50.93	86.24	
2009	7	107.29	94.69	95.27	78.02	94.77	99.88	54.86	85.98	
2009	8	102.05	96.31	94.72	62.83	94.35	101.12	62.05	85.55	
2009	9	102.43	94.13	93.98	46.83	93.00	101.89	57.85	84.42	
2009	10	101.65	93.79	94.23	59.39	91.47	103.36	56.98	85.63	
2009	11	111.85	94.40	94.27	66.25	91.56	103.85	59.68	86.15	
2009	12	111.14	92.48	94.03	67.75	91.79	103.39	54.56	86.29	

		Component Index Values (Continued)								
		Nebraska Coincident Economic Indicator				Nebraska Leading Economic Indicator				
		Electricity		Commodity	Single-Family		U.S. Dollar	Initial	Weekly	
Year	Month	Sales	Weekly Wages	Price	Building	Airline	Exchange Rate	Unemployment	Manufacturing	
					Permits	Passengers		Claims	Hours	
2010	1	109.91	94.23	94.40	68.51	91.44	103.10	62.14	86.32	
2010	2	106.13	94.83	95.30	93.55	92.23	101.59	60.42	87.32	
2010	3	111.91	96.05	96.90	60.56	97.35	102.48	56.80	85.42	
2010	4	119.95	97.91	97.55	59.96	95.81	102.99	64.92	84.66	
2010	5	109.48	99.47	98.50	35.68	92.31	100.23	62.48	85.67	
2010	6	105.44	98.67	99.35	46.14	95.48	99.69	61.74	86.57	
2010	7	103.98	98.73	100.16	37.26	96.32	101.26	64.36	85.95	
2010	8	107.94	99.90	101.65	36.95	94.52	102.05	60.77	85.57	
2010	9	104.81	98.43	103.13	44.25	95.96	103.06	60.11	86.05	
2010	10	108.24	98.02	105.40	49.84	97.21	105.80	67.70	86.88	
2010	11	103.73	96.22	107.61	46.98	95.55	105.50	60.72	87.53	
2010	12	107.06	95.62	111.40	45.03	95.78	104.81	69.39	87.42	
2011	1	104.77	96.20	114.98	44.09	95.12	106.03	60.66	87.59	
2011	2	108.70	95.64	118.99	40.78	94.15	106.84	67.27	88.59	
2011	3	109.00	95.34	122.78	52.16	96.00	107.87	68.05	88.93	
2011	4	107.81	94.50	126.92	48.43	92.14	109.68	63.58	90.40	
2011	5	105.19	95.14	130.21	48.00	93.53	109.73	61.78	89.62	
2011	6	108.20	94.30	132.97	44.43	92.68	109.76	64.87	89.70	
2011	7	105.26	93.96	135.83	52.04	91.61	110.52	64.26	89.28	
2011	8	107.81	93.08	139.29	60.66	92.11	109.89	61.85	90.14	
2011	9	107.83	93.86	141.96	48.00	94.02	106.71	67.27	89.80	
2011	10	110.02	97.17	142.90	54.76	91.46	105.72	63.76	87.35	
2011	11	106.03	93.33	144.78	54.80	93.79	105.05	68.73	85.94	
2011	12	103.18	94.65	145.94	55.85	92.41	104.08	67.38	86.80	
2012	1	106.67	95.73	147.19	54.59	93.10	104.72	70.35	87.17	
2012	2	106.95	93.94	146.84	52.36	94.16	106.57	65.98	87.29	
2012	3	105.07	93.07	146.84	53.07	91.00	105.93	64.20	87.14	
2012	4	106.93	94.41	146.44	45.24	89.95	105.59	79.17	87.70	
2012	5	107.46	93.40	146.43	50.60	91.11	103.78	69.48	87.06	
2012	6	111.73	94.07	146.64	53.61	91.25	102.32	53.14	87.23	
2012	7	111.89	95.65	147.08	50.25	89.31	102.79	72.10	88.63	
2012	8	110.54	93.07	149.51	59.91	94.95	103.70	65.36	88.96	
2012	9	108.16	95.24	150.98	66.65	90.90	105.34	62.37	90.71	
2012	10	102.80	93.29	153.54	58.09	91.71	105.64	70.82	91.95	
2012	11	102.26	93.33	155.47	73.57	90.41	104.98	65.05	90.29	