



MARCH 31, 2015

SPECIAL TOPIC – HOUSING

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Executive Summary

The Regional Economic Indicators Forum (REIF) focuses on the economic performance of the 15-county region that includes Northeastern Minnesota and Northwestern Wisconsin. As part of this forum, the College of St. Scholastica (CSS), University of Minnesota-Duluth (UMD) and University of Wisconsin-Superior (UWS) collect and monitor data related to county-level economic performance, business and consumer confidence, and regional stock performance. In addition, the March 2015 forum includes the special topic of housing. The information below summarizes the research findings.

Economic Indicators Affecting REIF Region

UMD was tasked with the responsibility of collecting and reporting on the economic performance of the 15-county REIF Region. The indicators in this portion of the report track economic trends throughout the region and compare county-level performance to state and regional averages. The indicators selected include measures of employment, demographics, income, housing, and poverty. Data was collected from a variety of sources, including the U.S. Census Bureau, Local Area Unemployment Statistics, and the Quarterly Census of Employment and Wages.

Overall, the REIF region has seen a mix of positive and negative economic trends. The unemployment rate throughout the region has been on the decline over the past four years, and is currently at the lowest level we've seen in many years. This indicates that the region continues to recover from the Great Recession of 2008-2009. Meanwhile, there has been little to no change in employment during the last eight years, and the population throughout the region has decreased by approximately -1.6%. Finally, the percentage of the population in poverty throughout the REIF region is higher than the average for the states of Minnesota and Wisconsin, a concerning trend that should be monitored.

Also included are four indicators related to the topic of housing: Housing Units, One-Year Building Permit Growth Rate, Homeownership Rate, and Median Home Value. Based on the performance of these indicators, we find that the REIF Region has a smaller number of housing units per county than elsewhere in Minnesota or Wisconsin, but the number of building permits has increased in recent years. The region also has lower median home values and higher rates of homeownership than the two states'.

Consumer Confidence Indicators: Predicting the Business Cycle

Consumer confidence indicators are useful tools in predicting future economic conditions of a region. In order to construct those indicators, in spring 2015, UWS surveyed randomly chosen households within the 15-county region as well as prior REIF participants. Student researchers conducted these surveys by phone for the random sample and e-mail for the REIF participants. Completed surveys have sample sizes of 187 for the random sample and 104 for the REIF sample.

Based on the responses of these households three indices were computed, namely, Index of Consumer Sentiment (ICS), Index of Current Conditions (ICC), and Index of Consumer Expectations (ICE). Findings of the random, phone survey show that all three indices increased, thus continuing to exhibit a positive trend. Findings of the non-random, past REIF participants' survey show that all three indices declined. Since both results were collected during the same time period, these findings suggest that while the population in general is feeling positive about current economic performance and future economic outlook, REIF participants, e.g., local government, businessmen, and academics, are growing pessimistic and anticipate an economic slowdown.

Finally, with respect to the special topic of this semester's REIF, about half of the survey participants rated the housing stock in their respective counties as satisfactory, and most believe it can be improved through various programs and policies. Among the top approaches for improving the housing stock are reduction in government red tape and incentives for rehabilitation of existing homes.

Regional Equity Index: An Analysis of the Equity Performance of Stocks of Local Interest

For this portion of the research UWS provides information and a financial analysis on the equity performance of companies of local interest in the REIF region. This ongoing research project tracks the companies' equity performance, creates an index of local stocks to measure economic activity in the region, examines measures of future performance, and makes comparisons to industry averages and market indices. The study extends the timeframe from the second REIF report to 2/28/2015.

Of note, the Regional Equity Index (REI) outperforms the index and investors are more bullish than bearish on the majority of the stocks. Although the REI showed a small positive return (4.65%) year-to-date, the overall performance of the index is slightly above average when compared to the benchmark return of 4.21%. The Value Line® Measures indicate that the stocks in the REI are consistent with market expectations of future performance. The REI's Price-to-Earnings ratio is consistent with the market, and the Forward Price-to-Earnings ratio for each stock in the index showed positive expectations for future earnings. The Short Interest ratio shows investors have positive short term expectations of performance for most of the index stocks. Eight stocks have a short interest ratio less than five, an indication that investors believe stock prices will rise.

Northland Business Confidence Survey

The Northland Business Confidence Survey was created by the College of St. Scholastica's Economic Research Team and distributed by the region's chambers to local businesses in February of 2015. The College received a total of 70 responses, and unlike previous surveys, did not meet the response threshold required for size and sector breakdowns.

The Northland Business Confidence Index measured a reading of 108, where any reading above 100 indicates optimism. This remains in line with the previous readings of 110 (fall 2014) and 111 (spring 2014). The overall business outlook was moderately positive over the last six months, and businesses are anticipating an increase over the next six months. Insufficient demand, shortage of skilled labor, weather conditions, and cost of labor were reported as the factors most inhibiting business growth.

Approximately half of regional businesses reported a lack of housing as a problem in the area. The majority of those respondents expected to see no change in their level of general business activity as result. However, the region's housing is largely predicted by all businesses to be a boon to sales revenue, capital expenditures, and selling prices. Nonetheless, businesses think housing will do more harm than good in their ability to attract skilled labor.

Overview

National Bank of Commerce, in cooperation with the College of St. Scholastica, University of Minnesota-Duluth and University of Wisconsin-Superior, has initiated a long-term study of our area's economic indicators. The research will be ongoing and focusing on trends for a territory that covers 15 counties in Minnesota and Wisconsin.

Participating sponsors of the study are NE MN Small Business Development Center (SBDC) and UW-Superior Small Business Development Center, the Development Association of Superior-Douglas County, APEX, BusinessNorth and the Development Association.

Project Goals

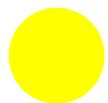
- Support business owners in their business decisions by gathering key local economic indicators and trend information
- Develop specific economic indicators for this region that are not readily available to decision makers
- Develop tools to assess our progress in economic growth. Prepare baseline measures that will allow comparison with other regions and measure future progress of the region
- Track the region's participation in the "new economy" and development in the high tech arena
- Bring professionals together with business owners for discussion about the local economy and related critical issues in a collaborative, non-political environment
- Create a business recruitment and retention tool by publishing the information

Stoplights

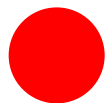
Throughout this report, you will see colored circles that provide a quick way of identifying how a specific measure is performing. The guide below helps interpret the meanings of the three colors.



Green: Positive trend/performance for the REIF region. Indicates that the region is improving or performing better than other parts of the state and/or country.



Yellow: Neutral or stable trend/performance (or no value judgment is placed on the measure).



Red: Negative trend/performance for region.

Economic Indicators Affecting REIF Region

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The University of Minnesota, Duluth was tasked with the responsibility of collecting the data for different economic indicators throughout the region. By gathering data for the REIF region and by county, we can come to a better understanding of what is happening throughout the region and trends can be discovered. Knowing the trends of the economic indicators can also help us predict the future performance of the economic activity in the region. The economic indicators provided in this report range from unemployment rate, demographics, median household income, housing units, poverty rates, employment growth, and many more. The economic indicators used in this report were observed over time periods ranging from a few months to upwards of ten years. Typically, in order to predict economic activity, economic indicators must be watched and analyzed for many months, depending on the indicator. Keeping a close eye on the indicators can predict changes in the economy before they happen.

Population Change



Little to No Population Change Between 2000 to 2013

Description

According to the United States Census Bureau, different U.S. geographic locations, such as state, county, and metropolitan area, have population estimates based on these locations. Persons who are considered to be a usual resident of that specific location are counted in the population data. A usual resident is a person who considers himself/herself to reside in a specific address for majority of his/her time. Percentage change of population for the years 2000 to 2013 is derived by dividing the difference between the 2013 population and the 2000 population for each location.

Why is It Important?

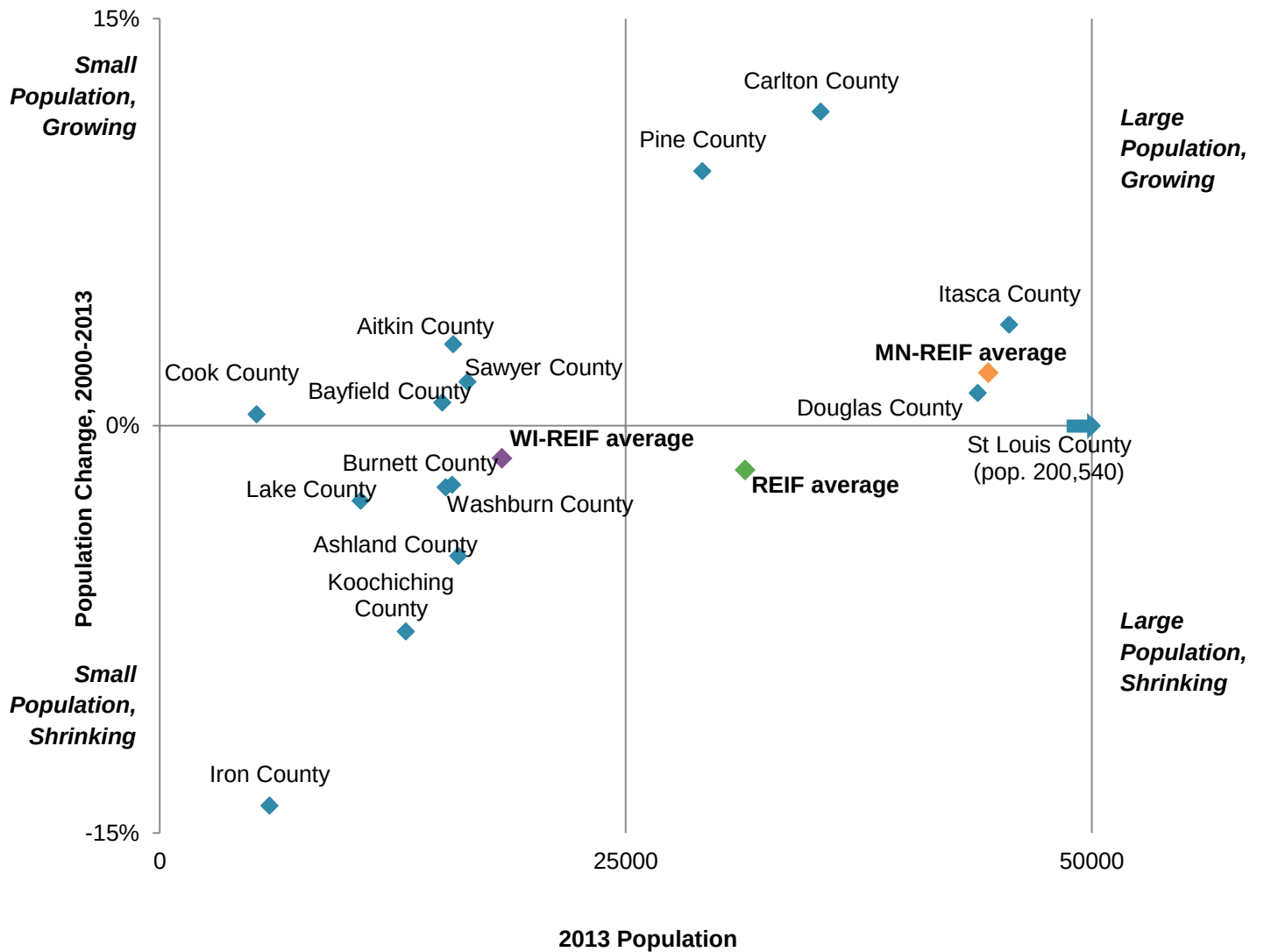
Some regions may have concerns with over population that can affect food sources and pollution. Conversely, many rural areas are concerned with a loss of population, as residents may move away from the area to pursue employment opportunities in metropolitan areas. Population and the percentage changes over the years direct economists to issues affecting a location. These indicators can help highlight patterns or trends, especially if there is a significant decline or increase in the population of a region. Additionally, these indicators can help explain other economic occurrences.

How is Our Region Doing?

Figure 1 shows the 2013 population for each county in the REIF region (horizontal axis) as well as the percent change in population from 2000 to 2013 (vertical axis). Also included in the figure are the averages for the eight Minnesota counties and seven Wisconsin counties in the REIF region, and the average for all 15 counties. Overall, the REIF region experienced a small population change (-1.6%) during the thirteen-year period.

While the population change on the REIF region as a whole has not been very substantial, there have been some large changes at the county level. The “Small Population, Shrinking” quadrant, shows that one of the biggest population changes occurs in Iron County, Wisconsin, with a population decrease of -14.0%. This is a significantly larger decrease than the next closest county in value, Koochiching County, Minnesota, with a population decrease of -7.6%. Conversely, growth can be seen in several counties. Carlton County, Minnesota, had the largest increase in population (11.6%) over the time period, and Pine County, Minnesota, shows an increase of 9.4%. The four counties mentioned above have impacted the REIF region average dramatically.

Figure 1: Percent Change in Population by County (2000 to 2013)



Source: United States Census Bureau

Demographics



Population Older, Less Racially Diverse than U.S.

Description

Persons who are considered to be a usual resident of a given geography (county, metropolitan statistical area, state, etc.) are counted in census population data. These population estimates are broken out into three different demographics: age, sex, and ethnicity.

Why is It Important?

Having a diverse population and labor force is a benefit to employers, as it allows them to obtain a wide variety of skill sets. This involves all types of diversity, including age groups, races and ethnicities, and gender. Acquiring a diverse workforce can enable the employer to utilize every aspect of skills throughout the population, which can lead to success.

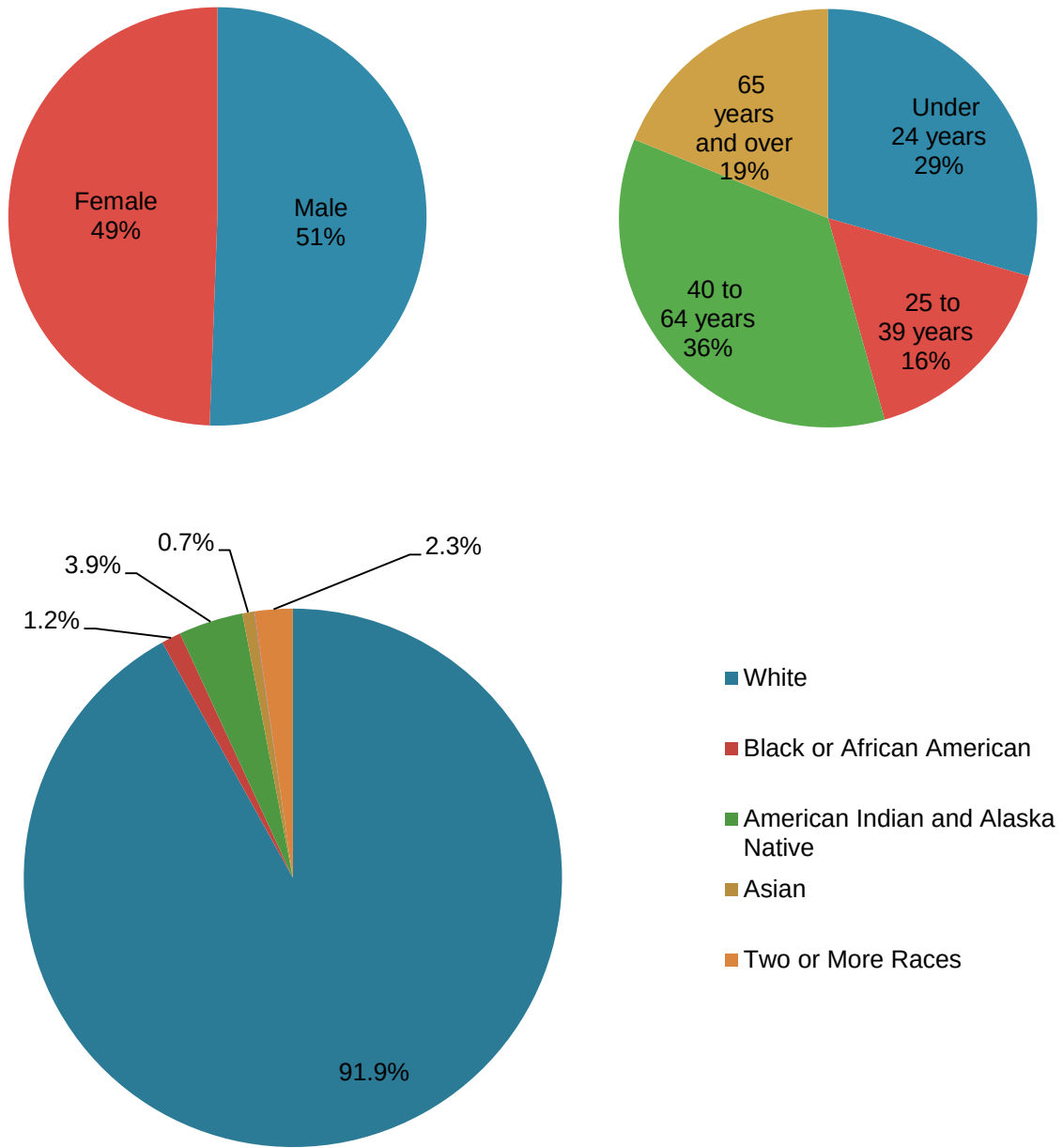
How is Our Region Doing?

Figure 2 includes demographics for gender, age, and race/ethnicity for the REIF region. According to these statistics, the REIF region has slightly more men than women in its population. While this difference is not large, it is unusual, as typically there are more females in a population due to their tendency to live longer. For example, only 49.2% of the United States population is male. Of course, despite having an older population (see details in the next paragraph), the percentage of males throughout the REIF region is still higher. This could be attributed to the fact that the REIF region has a higher share of industrial, manufacturing, and mining jobs that are more male dominated.

The region's largest age group is the 40 to 64 year old population. As the more of the baby-boomer generation moves into the "65 years and older" category, this share of the population will grow significantly in coming years, not only in the region but also across the U.S. This is of great importance for our region, as 19% of the population is already over 65, compared with an average nationwide of 14.1%. Over half of the population in the REIF region falls into the two eldest categories on the chart. Therefore, this demographic should be monitored in the coming years.

Lastly, looking at the race/ethnicity demographic, it is very clear the REIF region is not a racially diverse area, as shown in Figure 2. The population is mainly white at 92%, and that number has not changed much in recent years, even while other parts of the country are growing increasingly diverse. Compare this rate to the percentage of the U.S. population that is white (77% in 2013). This indicates that the REIF region struggles with becoming more racially diverse. In-migration, which has become a major source of population growth in many parts of Minnesota, Wisconsin, and the nation, might be an area to focus on in the future.

Figure 2: Population Demographics (2010 to 2013)



Source: United States Census Bureau

Labor Force



Labor Force Remained Steady

Description

According to the Bureau of Labor and Statistics, labor force is defined as the actual number of people who are available for work. The labor force of an area includes the employed and the unemployed who are at least 16 years old or older, not serving in the military, and not institutionalized.

Why is It Important?

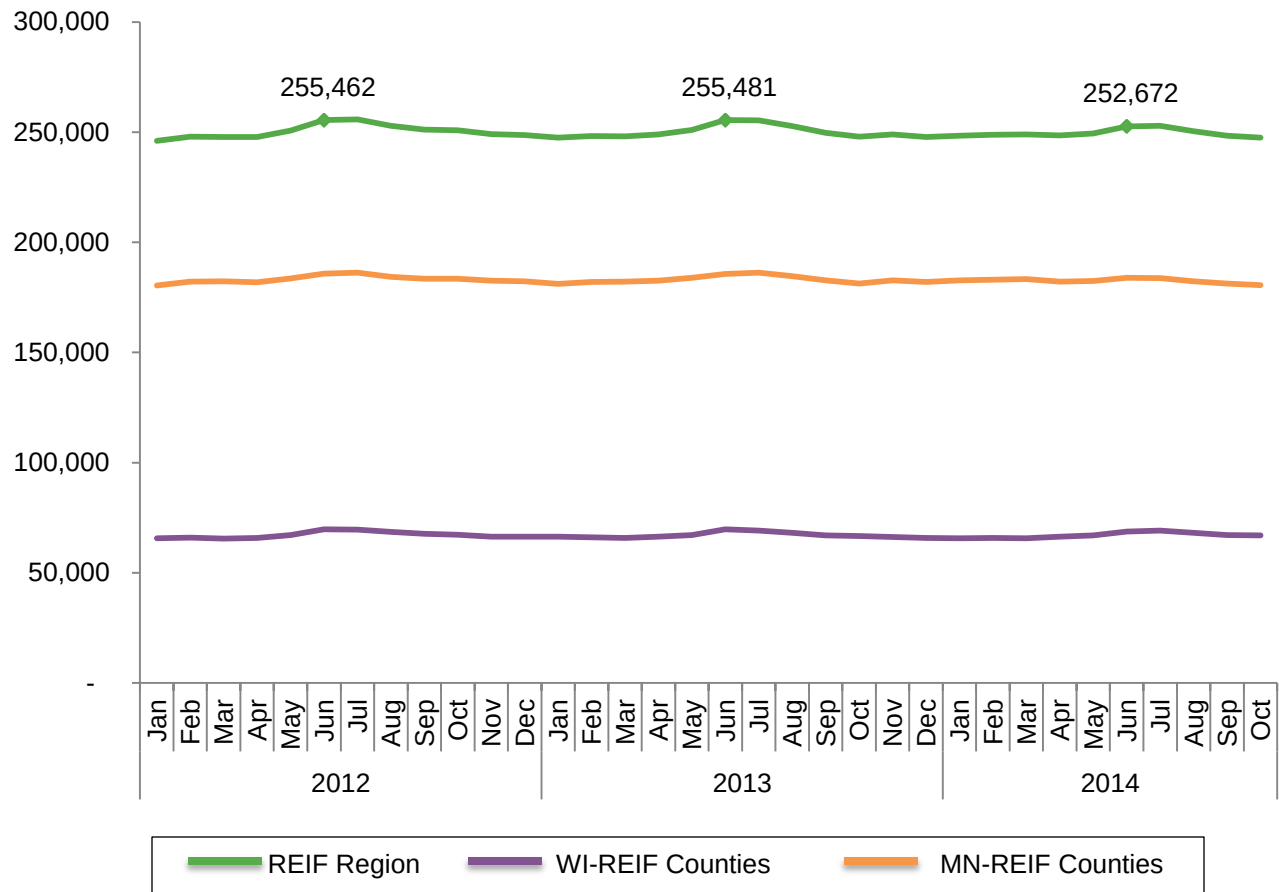
Labor force numbers are used for two very important calculations, the labor force participation rate and the unemployment rate. Because of their substantial influence in indicating the economy strength, both the labor force participation rate and the unemployment rate are two of the most highly watched economic indicators not only by most economists but also by most of the United States population as well. Second, the size of the labor force impacts the economy's ability for growth. A decline in the size of the labor force (whether individuals are leaving due to retirements, family obligations, or other circumstances) directly impacts a region's ability to find and hire skilled workers, especially if the population is growing or remaining steady.

How is Our Region Doing?

Figure 3 shows that all counties of the REIF region have had a slight but insignificant fluctuation in labor force over the past few years. The slight increases in fluctuations have usually occurred during the month of June and July and are likely explained by seasonal shifts in employment.

Our current labor force is older than ever before. This is due to the very large generation of baby boomers. As the median retirement age is around 60 years old, it is predicted that by the mid-2020s, the majority of baby boomers will be retired, thus decreasing the size of labor force. In fact, it seems that this trend has already started. According to Figure 3, the labor force peaks slightly each year in June. The figure shows that in June of 2012, the labor force for our region was just over 255,000 people. In June of 2013, that number had barely changed. However, by June of 2014 the labor force had declined to 252,672. While this is a very small decrease (-1.1%), it might represent the beginning of a larger trend that will likely intensify over the coming decade.

Figure 3: Labor Force, by Month (January 2012 to October 2014)



Source: Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development

Unemployment Rate by Month



Unemployment Rate Decreasing

Description

According to the Bureau of Labor and Statistics, a person is considered to be unemployed when they do not have a job, have actively looked for work in the past four weeks, and are currently available to work. Also counted as unemployed are people who are temporally laid off and waiting to be called back to that job. Unemployment is a measurement of the total number of people unemployed. The unemployment rate is calculated by dividing the number of unemployed people by total number of people in the labor force.

Why is It Important?

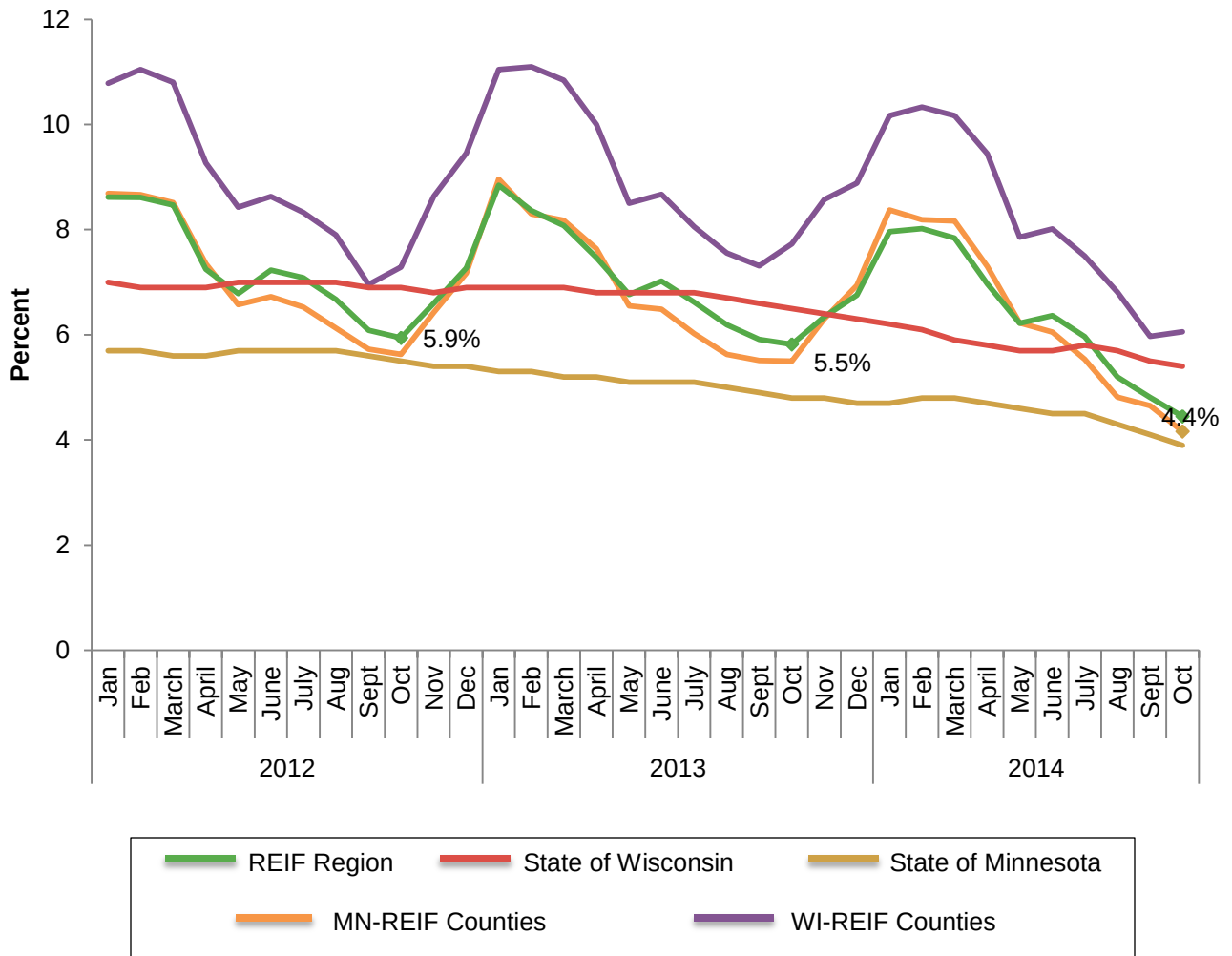
The unemployment rate is one of the most highly watched economic indicators by not only most economists but also by most of the United States' population, especially since the "Great Recession." Unemployment, which is reported monthly, has a strong impact on consumer spending; typically, when a person is laid off from his/her job, he/she does not spend money on anything other than necessities. Additionally, a significant amount of job loss can affect the economy greatly by reducing the amount of production. A rising unemployment rate indicates that the economy is becoming weak, whereas a falling unemployment rate indicates the economy is growing stronger.

How is Our Region Doing?

Figure 4, shows the unemployment rate by month from January 2012 to October 2014. While the unemployment rate from January of 2012 to October of 2014 has fluctuated seasonally, the overall trend during this period has been downward. This decrease in the unemployment rate is a key sign that the REIF economy (as well as the states of Minnesota and Wisconsin) has become stronger.

The state unemployment rates for Minnesota (yellow line) and Wisconsin (purple line), have both decreased steadily over the past few years. This phenomenon is true for the REIF region as well, but the regional unemployment rate has more seasonal fluctuation than the state averages. This is partially due to seasonally dependent industries, such as tourism and construction, which are large contributors to the regional economy. However, by comparing the change in the unemployment rate from year to year, it is clear that the trend is downward. In October of 2012, the average unemployment rate for the REIF region was 5.9%. In October 2013, the rate had dropped to 5.5%. Additionally, in October 2014, the rate was just 4.4%, a significant difference from one year to the next.

Figure 4: Unemployment Rate by Month (January 2012 to October 2014)



Source: Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development

Long-Term Employment Change



During Eight-Year Period, Health Care Shows Strongest Growth, Manufacturing Slowest

Description

According to the United States Bureau of Labor and Statistics, employment data is recorded monthly, which includes the number of workers who were employed during, or received pay for, the period of pay that includes the 12th day of the month. Almost all employees are reported in the state where their job is located.

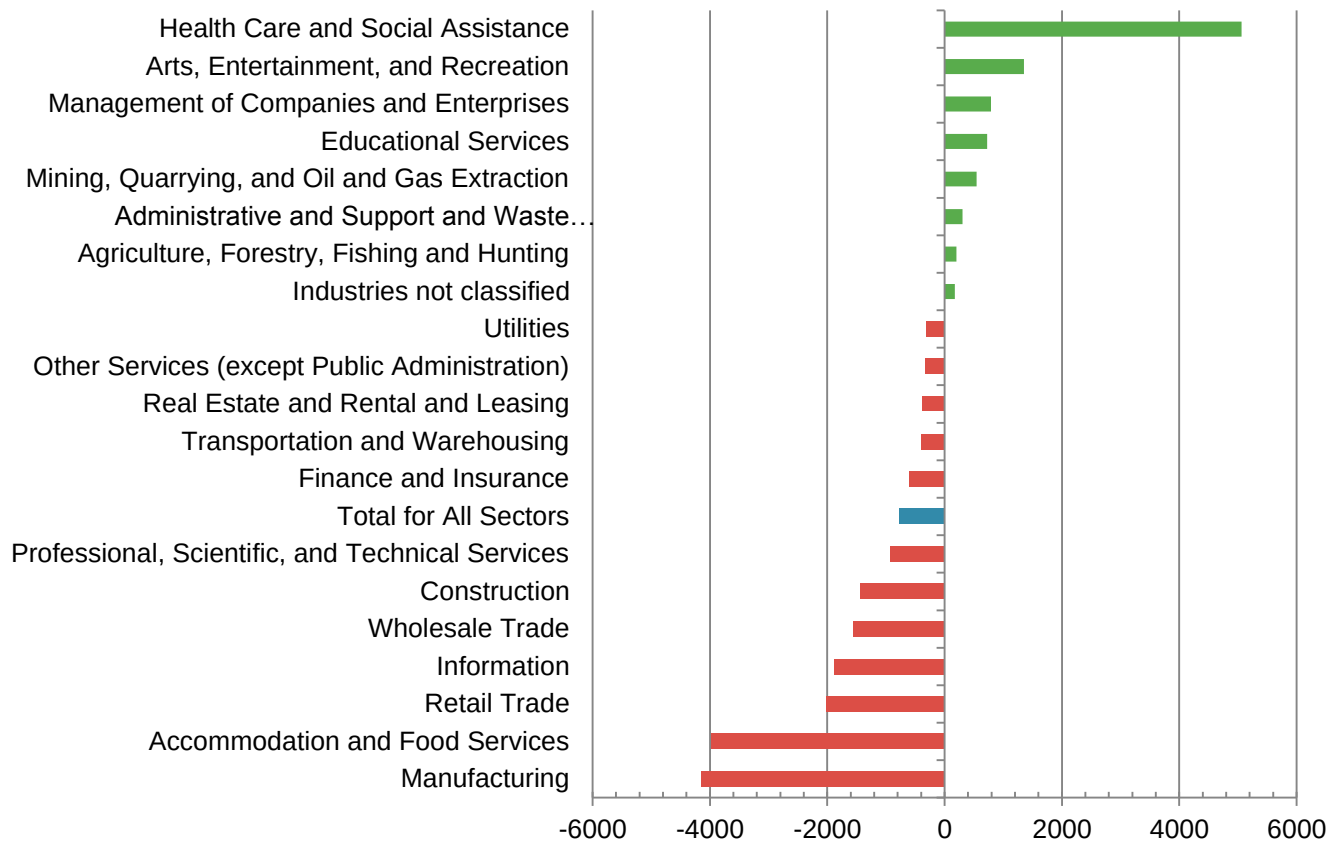
Why is It Important?

Examining the change in employment over a five to ten year period can give significant insight into how the economy is changing throughout a region and can highlight which industries have thrived or suffered over the years. Knowing which industries are adding employees and which industries are declining in employment can also assist people in knowing which jobs to pursue in their region.

How is Our Region Doing?

Figure 5 shows the employment change (measured in number of employees) by industry from 2004 to 2012. The graph highlights which sectors have excelled throughout the REIF region and which have declined. The largest increase in employment has occurred in the Health Care and Social Assistance, which has grown by thousands of employees over the eight-year period. The second largest increase in the region is in the Arts, Entertainment, and Recreation industry. This increase could be attributed to a growth in tourism. As tourism is a significant contributor to our regional economy, an increase in the Arts, Entertainment, and Recreation sector is positive for the REIF economy. The industries that experienced the largest decline in employment include Manufacturing, Accommodation and Food Services, and Retail Trade. A slight decline in employment can be seen in the Total for All Sectors (highlighted in blue) in Figure 5. This number is the difference between all of the sectors combined. This decline can be mainly attributed to the economic Great Recession, which occurred during this period. Although the total number of employees throughout all sectors has declined, it is important to recognize that there are roughly 160,000 employees throughout the REIF region, and an overall decline of 780 employees is relatively small.

Figure 5: Employment Change, by Industry (2004 to 2012)



Source: United States Census Bureau

Long-Term Employment Growth Rate



Employment Growth Shows Little to No Change Over Eight-Year Period

Description

According to the United States Bureau of Labor and Statistics (BLS), employment growth or job growth is the gross number of jobs created from one period to another. The BLS has set a minimum level of job growth throughout the nation that must be met to minimize the effects of new employees entering the labor force.

Why is It Important?

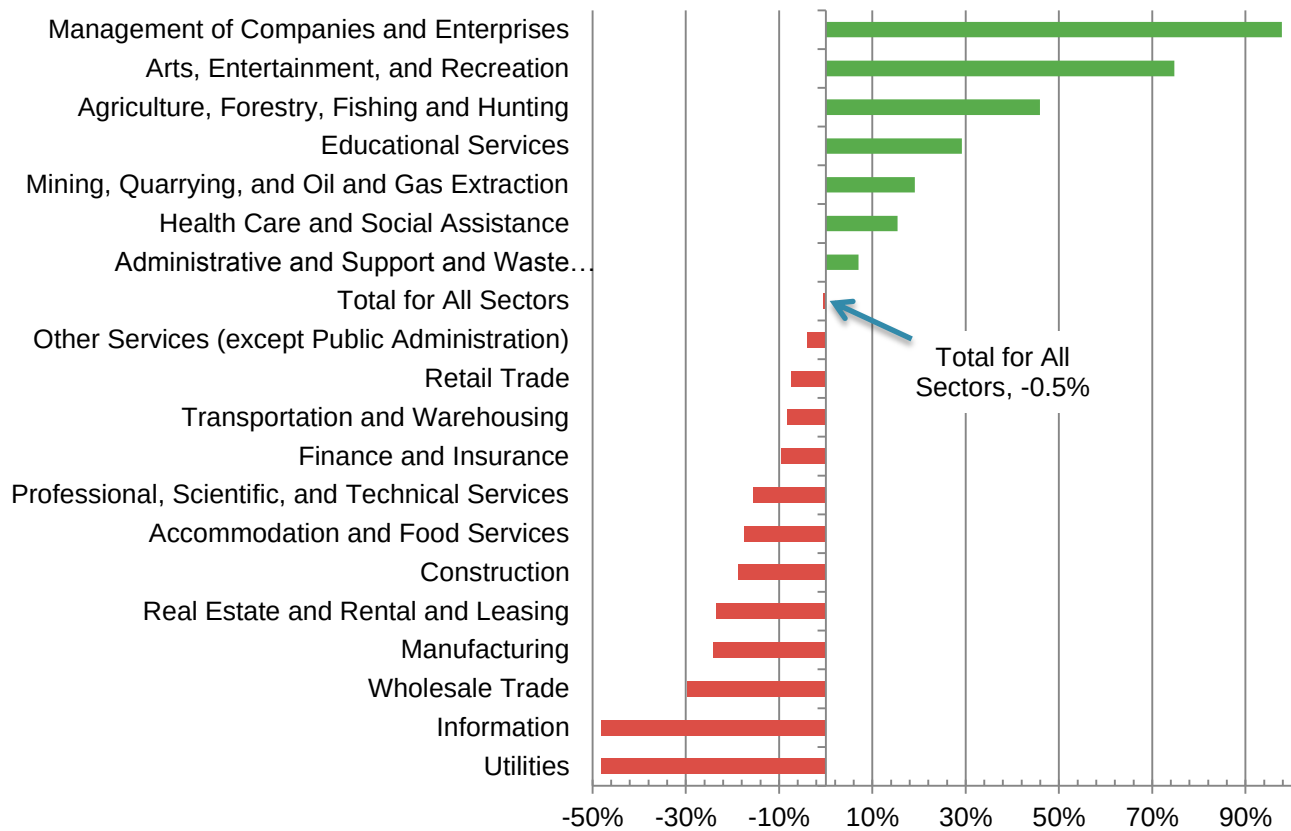
The employment growth in a country or region is a key indicator of the strength or weakness of an economy. If population growth continually increases, but employment growth stays the same, unemployment rates will rise. That being said, it is critical to remember that while the population growth rate is not usually more than about 2% a year, the employment growth rate must keep up in order to mitigate the effects of the new employees entering the work force.

How is Our Region Doing?

Figure 6 shows the percent change in employment (i.e. employment growth rate) over the eight-year period (2004-2012) for the 19 industries in the region and the total for all sectors. The growth rate has significantly increased in some categories and decreased in others. The sector with the largest increase in employment is Management of Companies and Enterprises. This sector has increased by nearly 100% during the time period. However, this is a relatively small sector, and the increase in employment is due to a change of less than 1,000 employees. Other sectors that showed growth during this time period are Arts, Entertainment, and Recreation with a 75% increase, Agriculture, Forestry, Fishing, and Hunting (45.9%), and Educational Services (29.2%). The industries that have experienced the largest declines in employment include Utilities, Information, Wholesale Trade, Manufacturing, and Real Estate.

Overall, the percent change in employment has remained very stable over the eight-year period. The Total for All Sectors category in Figure 6, highlighted with a blue arrow, shows the average employment growth for the REIF region. During the eight-year period there was little to no change in employment. Overall, employment for the REIF region has decreased by only 0.5%. As mentioned earlier, the relationship between employment growth and population growth is an important one. Figure 1, on page 13, shows that the population of the REIF region has declined slightly (-1.6%) over the past 13 years. This small decrease in population is one possible explanation for the slight decline in employment during this time period.

Figure 6: Percent Change in Employment, by Industry (2004 to 2012)



Source: United States Census Bureau

Long-Term Establishment Growth Rate



Establishment Growth Declined Slightly

Description

According to the United States Census Bureau, an establishment is defined as a single physical location where business is conducted or where services or industrial operations are performed. An establishment is not necessarily identical with a company or an enterprise, which may consist of one establishment or more. When two or more activities are conducted at a single location under a single ownership, all activities are generally grouped together as a single establishment and classified on the basis of its major activity.

Why is It Important?

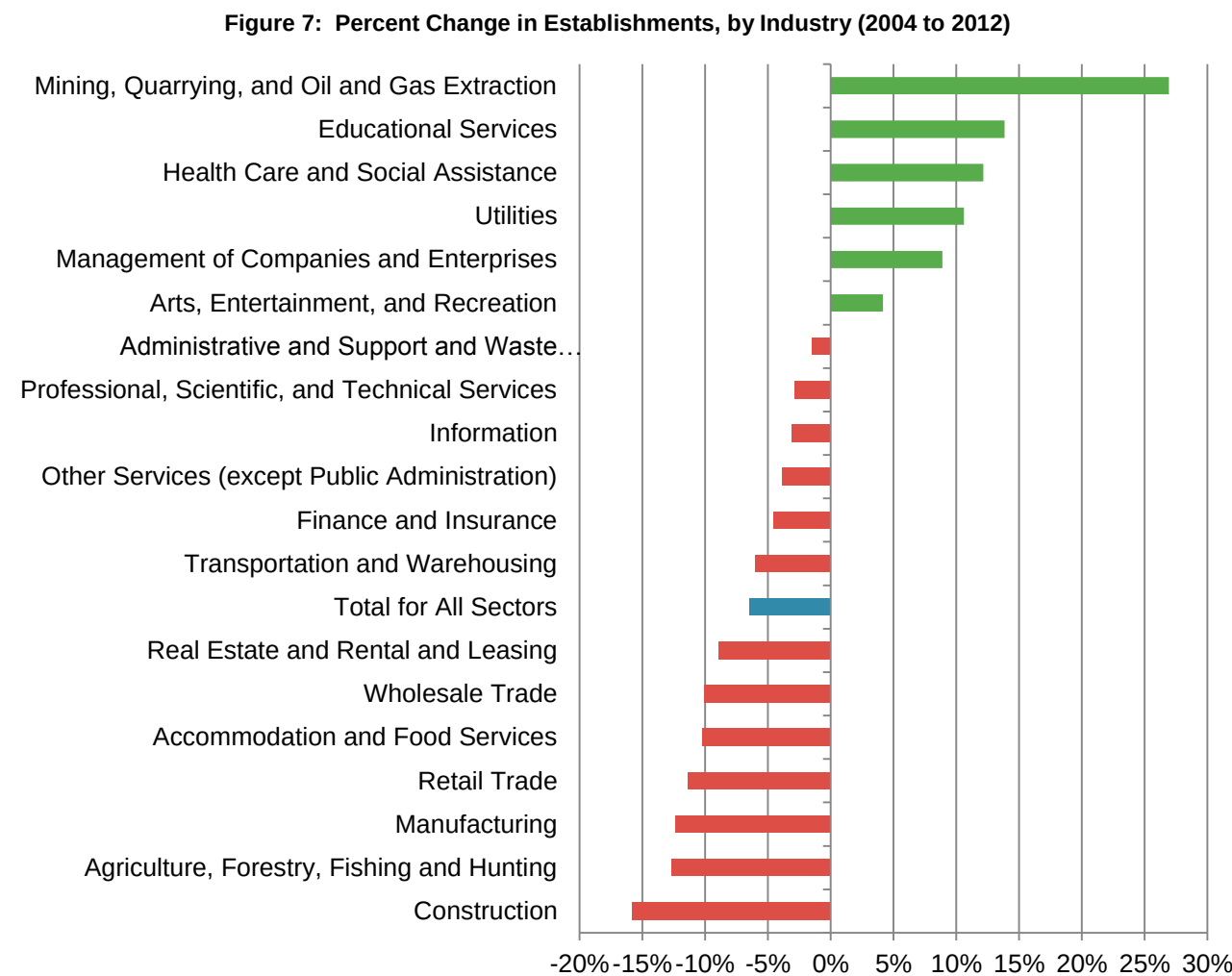
A new establishment usually means new jobs for the region, thus increasing the amount of indirect jobs throughout the area and strengthening the economy. As a new business establishment grows, it typically will bring more employees in as a result. However, it cannot be assumed that all establishments will succeed; therefore, there may be a loss of jobs as well. Naturally, the larger the establishment that goes out of business, the greater the number of people who become unemployed. The survival rates of a business fluctuate throughout the different industries. According to the United States Bureau of Labor and Statistics, the Health Care and Social Assistance sector has one of the highest survival rates among the industries over time, with Construction ranking at the lower end of the spectrum.

How is Our Region Doing?

Figure 7 shows the percent change in establishments (i.e. establishment growth rate) by industry from the year 2004 through 2012. The percent change in establishments has significantly increased in some industry sectors and has significantly decreased in others. It is notable that the largest increase in establishment growth is in the Mining, Quarrying, and Oil and Gas Extraction sector, with an increase of 26.9% over the eight-year period. This sector has also seen a growth in employment of nearly 20% (see Figure 6 on page 23). Clearly, the mining industry has contributed to large economic growth in the region from 2004 to 2012. Educational Services is another area that has seen establishment growth, with a nearly 15% increase in the number of establishments over the eight-year period, and it has had a significant increase in employment growth as well. Because employment relies so heavily on establishment growth, it is important to keep in mind that the sectors that have increased in employment growth usually have increased in establishment growth as well.

The Total for All Sectors category in Figure 7 is highlighted in blue and indicates the total percent change in establishment growth. Overall, the establishment growth rate has declined by 6.5%. However, this decline is larger than the percent change in the region's employment (-0.5%) and

suggests that the region had more employees per establishment in 2012 than it did in 2004. This could be the result of fewer small businesses, expansions of existing firms, or new large companies coming to the region.



Source: United States Census Bureau

One Year Employment Growth Rate



Construction Growing, Information Slowing Over One Year Period

Description

Quarterly employment numbers are reported by the Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development. These statistics include the number of workers who were employed during, or received pay, for that month.

Quarterly numbers are reported every three months (for example January, February, March are Q1).

Why is It Important?

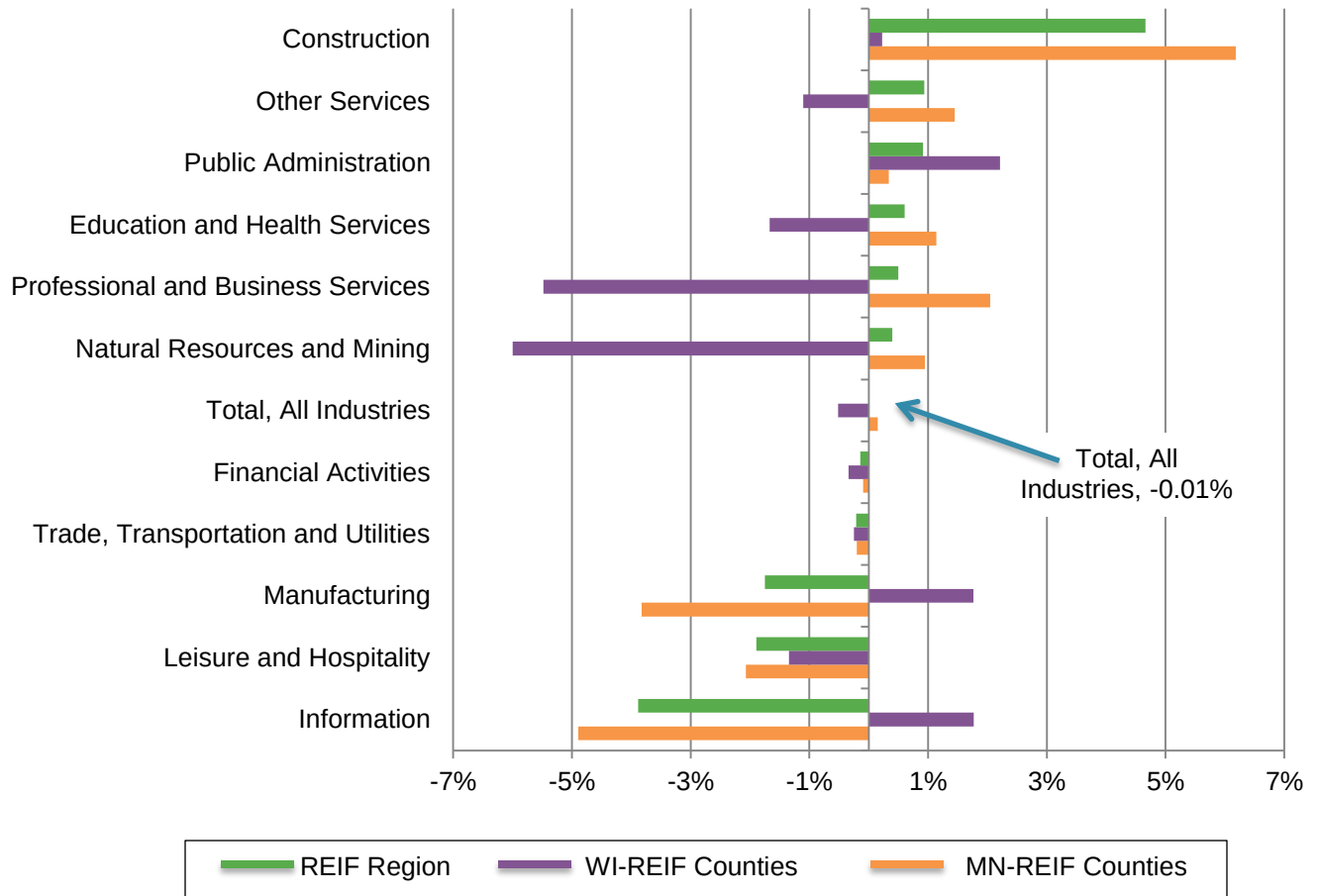
Knowing which industries are adding employees and which industries have been declining in employment is particularly helpful in identifying a region's strengths and opportunities. The one-year employment growth rate (e.g. Q1 2013 to Q1 2014) can highlight recent events, such as commodity price changes and plant closures, but it can also indicate long-term trends, such as skills shortages and vocational training needs. Comparing the one-year change in employment to long-term growth can give a region insight into how the economy is changing and which industries are thriving or suffering.

How is Our Region Doing?

Figure 8 shows the percent change in employment (i.e. employment growth rate) by industry for one year (Q1 2013 to Q1 2014). Overall, the REIF region suffered a very small decrease of -0.01% in employment growth across all industries. This number is nearly zero, indicating that despite a small increase in employment (0.2%) throughout the Minnesota counties and a small decline in Wisconsin counties (-0.5%), the impact on the overall economy was negligible. There are many sectors that experienced positive employment growth during the one-year period, with construction being the largest for the REIF region. This sector had a 4.7% increase in employment, with much of that increase coming from the Minnesota REIF counties. Other growth areas included Public Administration, Education and Health Services, and Professional and Business Services, while Information, Leisure and Hospitality, and Manufacturing sectors saw negative growth.

It is important to use these results in combination with the Long-Term Employment Growth rate (page 22) and the Quarterly Employment Growth Rate (page 28) to show a more complete picture of what is happening throughout the economy. The Quarterly Employment Growth was very slow (-3.4%), due to severe weather during the first quarter of 2014. Similarly, Long-Term Employment Growth for the region was down slightly (-0.01%) from 2004-2012. Therefore, considering the extreme weather conditions and the region's long-term employment trends, it could be argued that employment growth of -0.01% is indicative of a positive trend for future growth.

Figure 8: Percent Change in Employment by Industry (Q1 2013 to Q1 2014)



Source: Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development

Quarterly Employment Growth Rate



Weather Caused Quarterly Employment Growth to Decline Significantly

Description

Quarterly employment numbers are reported by the Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development. These statistics include the number of workers who were employed during, or received pay, for that month. Quarterly numbers are reported every three months (for example January, February, March are Q1).

Why is It Important?

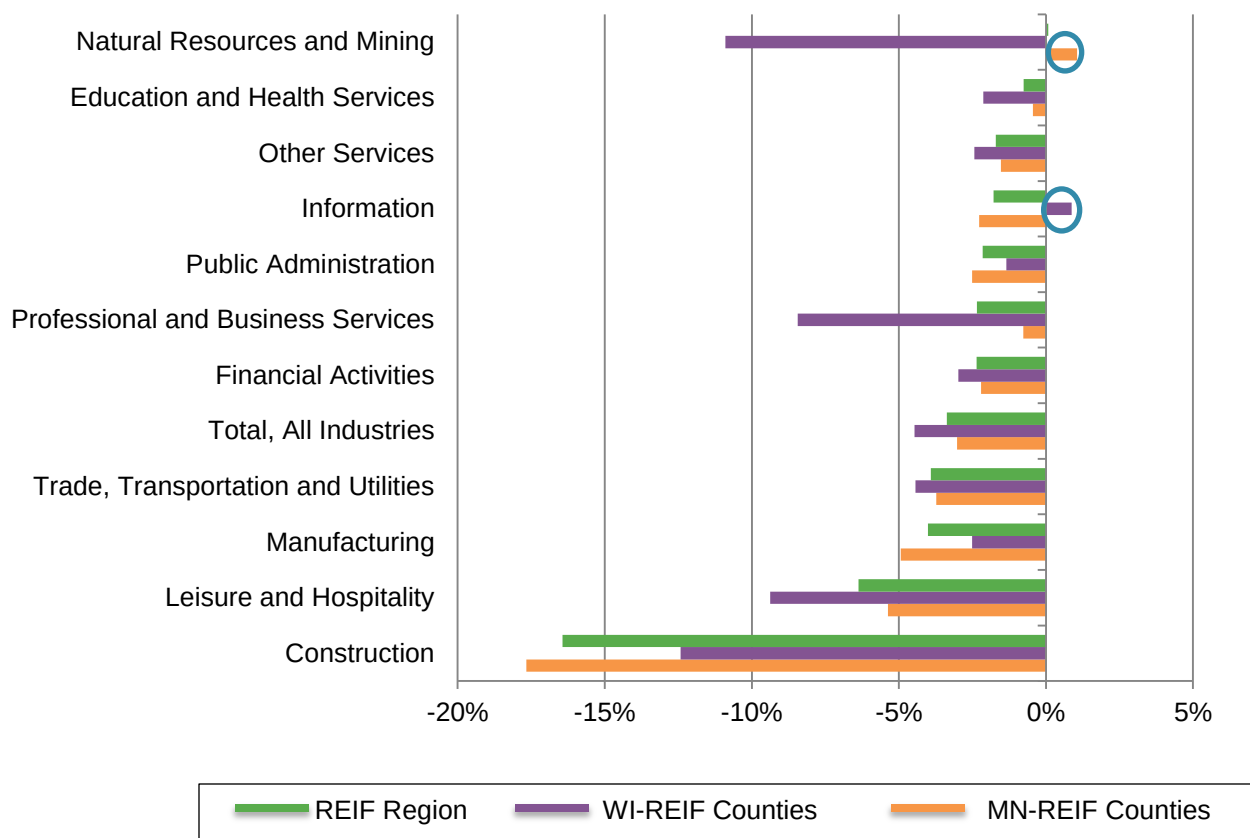
Knowing which industries are adding employees and which industries have been declining in employment is particularly helpful in identifying a region's strengths and opportunities. The quarterly employment growth rate (e.g. Q4 2013 to Q1 2014) can highlight recent events, such as commodity price changes and plant closures. Comparing the quarterly growth rate to the one-year growth rate can give a region insight into how the economy is changing and which industries are thriving or suffering.

How is Our Region Doing?

Figure 9 shows the percent change in employment (i.e. employment growth rate) by industry for one quarter (Q4 2013 to Q1 2014). It is easy to see that the percent change from Q4 of 2013 to Q1 of 2014 has been negative in almost every industry, with the exception of two sectors, as circled in blue in Figure 9. While this would suggest that the economy is suffering, it is important to note the most likely cause. In January 2014, the mean temperature throughout the region was approximately 1.8 degrees Fahrenheit. The extremely cold weather and significant snowfall had substantial impact on Q1 employment numbers of 2014, as well as other economic quarterly statistics. The weather hindered people from being out in the region spending money and caused a ripple effect in the employment for most industries. The information sector (e.g. data, communications) showed a very small increase (0.88%) in the Wisconsin counties, as did the Natural Resources and Mining sector in the Minnesota counties (1.1%) and the REIF region (0.1%). While there can be some speculation as to the cause of the increase, no definitive reason is available.

It is important to compare these results with the one-year (page 26), and long-term (page 22) employment growth rates. Comparing these data provides a broader indication as to what was happening during the time period, rather than focusing solely on a single quarter. The first quarter of the year can tell a different story depending on weather patterns, and it is valuable to remember that when looking at graphs like Figure 9.

Figure 9: Percent Change in Employment by Industry (Q4 2013 to Q1 2014)



Source: Minnesota Department of Employment and Economic Development and Wisconsin Department of Workforce Development

Education Level: High School Graduate or Higher



91% of Residents Have High School Diploma

Description

According to the United States Census QuickFacts, any individual who has obtained a high school diploma or its equivalent is considered to be a high school graduate. Percentages are calculated by dividing the amount of high school graduates by the total number of persons who are age 25 or older.

Why is It Important?

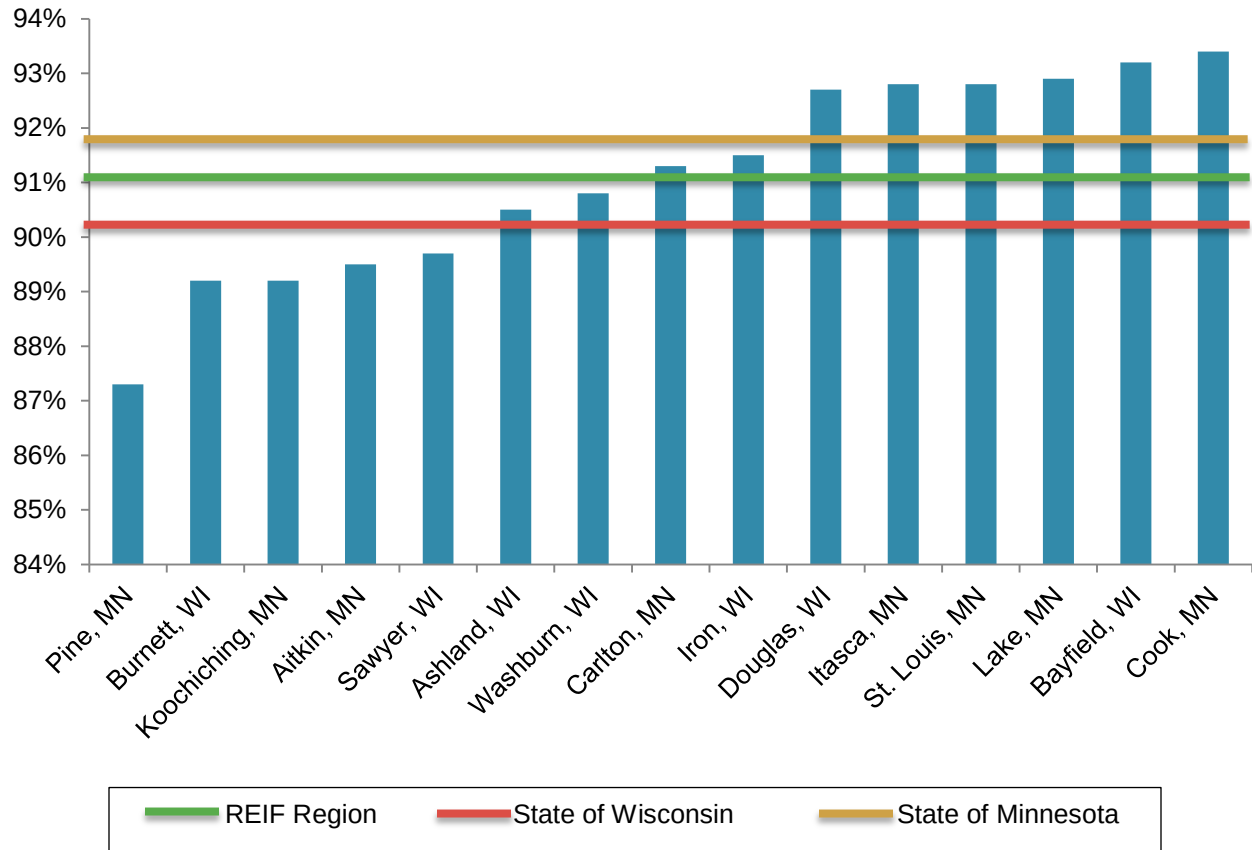
A high school diploma is one of the major prerequisites for most occupational opportunities in one's adult life. In coming years the importance of attaining a high school diploma will become increasingly more critical for acquiring a job, especially to stay above the poverty line. According to the U.S. Bureau of Labor and Statistics (BLS) 2012 data, 26% of occupations do not currently require a high school diploma. However, by the year 2022, only 11% of occupations will allow for less than a high school diploma. What's more, these occupations average \$20,110 per year, which is \$3,382 less than the average poverty threshold in 2012 for a family of four. The 2012 data from the BLS also states that the median annual wage for an individual with a high school diploma is \$35,170 per year. This suggests that acquiring a high school diploma increases a person's salary by approximately \$15,000 per year.

How is Our Region Doing?

Figure 10 shows that on average, 91% of REIF residents have a high school diploma or higher¹. This average is slightly lower than the average for the state of Minnesota (91.9%) and slightly higher than the average for the state of Wisconsin (90.4%), but it compares favorably with the U.S. average (86.0%). The counties with the highest rate of high school graduates include Cook, Lake, and St. Louis Counties in Minnesota and Bayfield County in Wisconsin. The counties with the lowest rates of high school graduates include Pine, Koochiching, and Aitkin Counties in Minnesota and Burnett County in Wisconsin. However, the high school graduation rate for the United States is lower than even the lowest-performing county in our region, Pine County (87.3%). Compared to the United States, the REIF region is doing fairly well in terms of the overall percentage of people who have obtained a high school diploma or higher.

¹ The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 10: Percentage of High School Graduates or Higher by County (2009 to 2013)



Source: United States Census Bureau

Education Level: Bachelor's Degree or Higher



Percentage of Persons with a Bachelor's Degree or Higher for Persons of Ages 25+ is Lower Than States'

Description

According to the United States Census QuickFacts, a person is counted as having a bachelor's degree or higher if he/she has obtained the minimum of a bachelor's degree from an accredited institution. Data includes people age 25 or older. Percentages are calculated by dividing the amount of people who have obtained a bachelor's degree or higher by the total number of people 25 years of age or older.

Why is It Important?

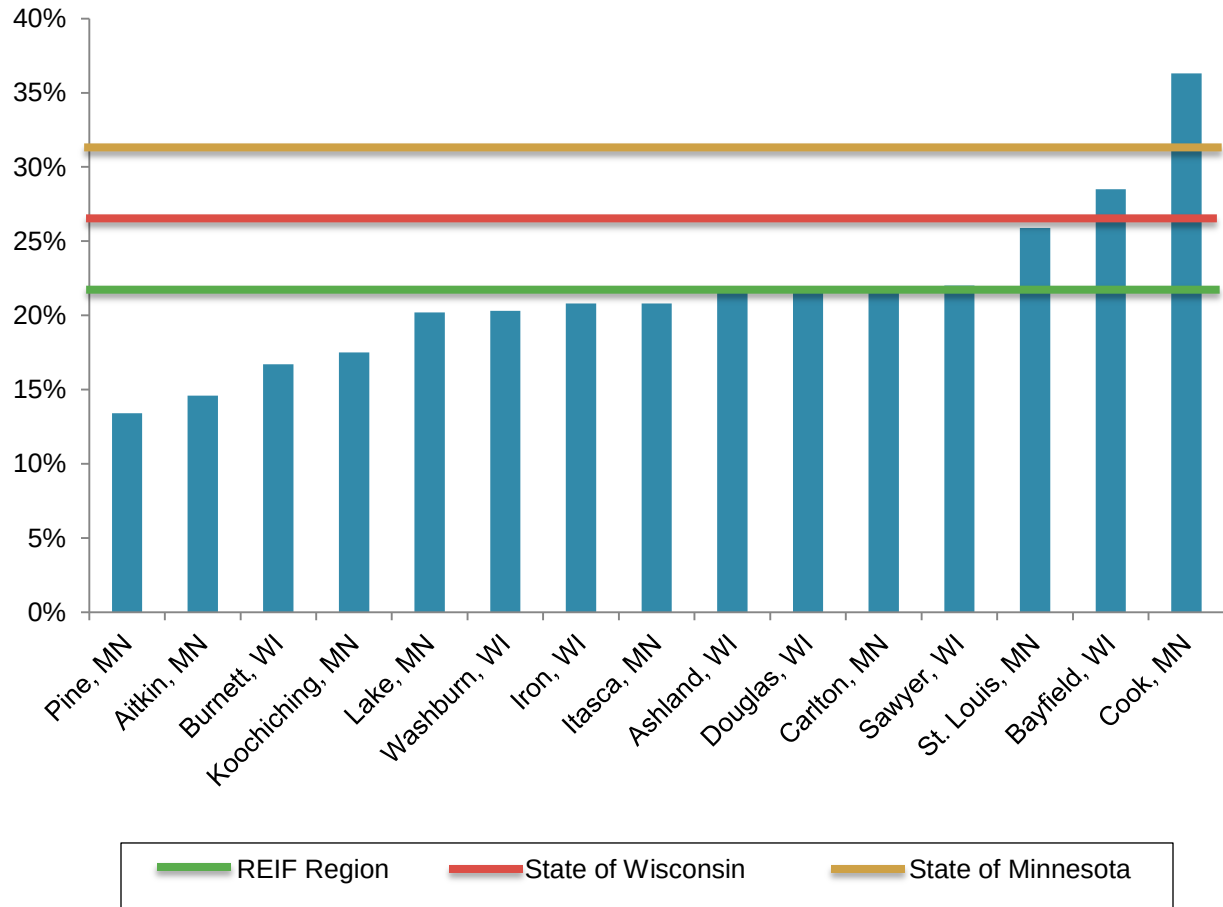
In the past, many people were able to make a living without a college degree. However, that option has been changing. Approximately one-third of the jobs offered in the United States require a post-secondary education, according to 2012 data from the U.S. Bureau of Labor Statistics (BLS). The BLS predicts that from 2012 to 2022, the percentage of people needing a post-secondary degree for a job will grow by approximately 12.1% for a Bachelor's degree, 18.4% for a master's degree, and 16.0% for occupations requiring a doctoral or professional degree. These numbers are a critical portrayal of how important post-secondary education is and the importance of increasing the number of degrees obtained by students throughout the country.

How is Our Region Doing?

Figure 11 shows the percentage of the REIF population with a bachelor's degree or higher, by county². Counties with the lowest levels of educational attainment are on the left, and counties with the highest levels are on the right. The averages for the REIF region (green), the state of Minnesota (gold), and the state of Wisconsin (red) are also included. The graph indicates that the REIF region has fewer post-secondary degrees by percentage of population than either of the states. Comparing the percentage of degrees nationwide to the REIF region shows that the region's amount is lower than the U.S. average as well. The percentage of the U.S. population with a bachelor's degrees or higher is 28.8%, just under the average for the state of Minnesota (32.2%) and just above the state of Wisconsin (26.8%). Referring to Figure 11, Cook and St. Louis (Minnesota) Counties along with Bayfield (Wisconsin) County have the highest amount of residents with advanced degrees, while Pine, Aitkin, and Koochiching (Minnesota) Counties along with Burnett County (Wisconsin) have the lowest.

² The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 11: Percentage of Persons with a Bachelor's Degree or Higher, by County (2009 to 2013)



Source: United States Census Bureau

Housing Units



Fewer Housing Units Per County

Description

According to the United States Census QuickFacts, a housing unit is identified as separate living quarters, such as a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (can be vacant if it is intended for occupancy). A housing unit is considered owner-occupied if the owner or co-owner lives within the unit, even if the unit has been mortgaged or has not been paid for fully.

Why is It Important?

The number of housing units throughout a region is indicative of the strength of the economy. Occupied housing units show the commitment of the people to the region, as they are establishing a residence and being a contributing member to the community/economy. More filled housing units typically equates to more contributors to the economy. This number will fluctuate as renters and the transient population move more frequently.

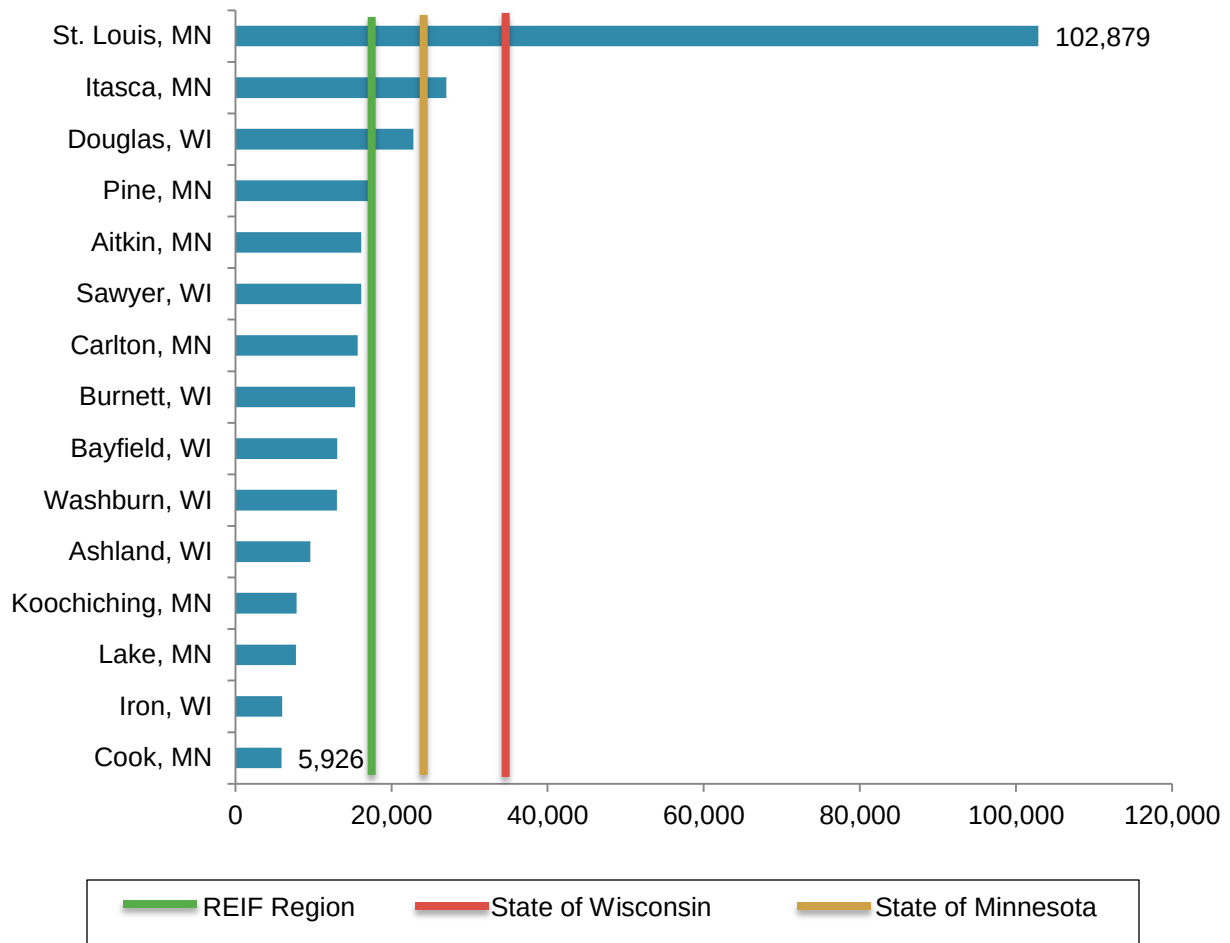
How is Our Region Doing?

Figure 12 shows the number of housing units in each regional county as compared to the average for all counties in Minnesota and Wisconsin. St. Louis County, Minnesota, has the largest number of housing units in the region. Despite the relatively large number of housing units in St. Louis County, the REIF region still has fewer housing units, on average, than the typical Minnesota or Wisconsin county.

The REIF Region boasts one unique characteristic in regards to the number of housing units and population, in that some counties actually have more housing units than people. In 2013, Cook and Aitkin Counties (Minnesota) and Iron and Burnett Counties (Wisconsin) all had more housing units than their populations. This is likely due to the important role that tourism and vacation properties play in this region, particularly in those selected counties. For Aitkin, Iron, and Burnett counties, the difference was small (less than 3%). In Cook County, however, there were 14% more houses (5,926) in the county than there were residents (5,200) in 2013.

It is helpful to compare Figure 12, showing the total number of housing units for each county, to Figure 13 on page 37, the percentage change in building permits (2012-2013) by county. This helps highlight counties within the REIF region that are adding new housing units, as well as counties where construction is slowing. Figure 13 shows that Itasca County (Minnesota) has had the largest increase in the number of building permits issued, while Cook County (Minnesota) has had the largest decline during that time period.

Figure 12: Housing Units by County (2013)



Source: United States Census Bureau

One-Year Building Permit Growth Rate



Issuance of Building Permits from 2012 to 2013 Increases

Description

According to the United States Census QuickFacts, building permits are identified as the number of new privately owned homes with permits provided by the appropriate authorization organization; they are also referred to as a housing start, which indicates the construction of a housing unit. The housing unit is considered owner-occupied if the owner or co-owner lives within the unit, even if the unit is mortgaged or not fully paid for.

Why is It Important?

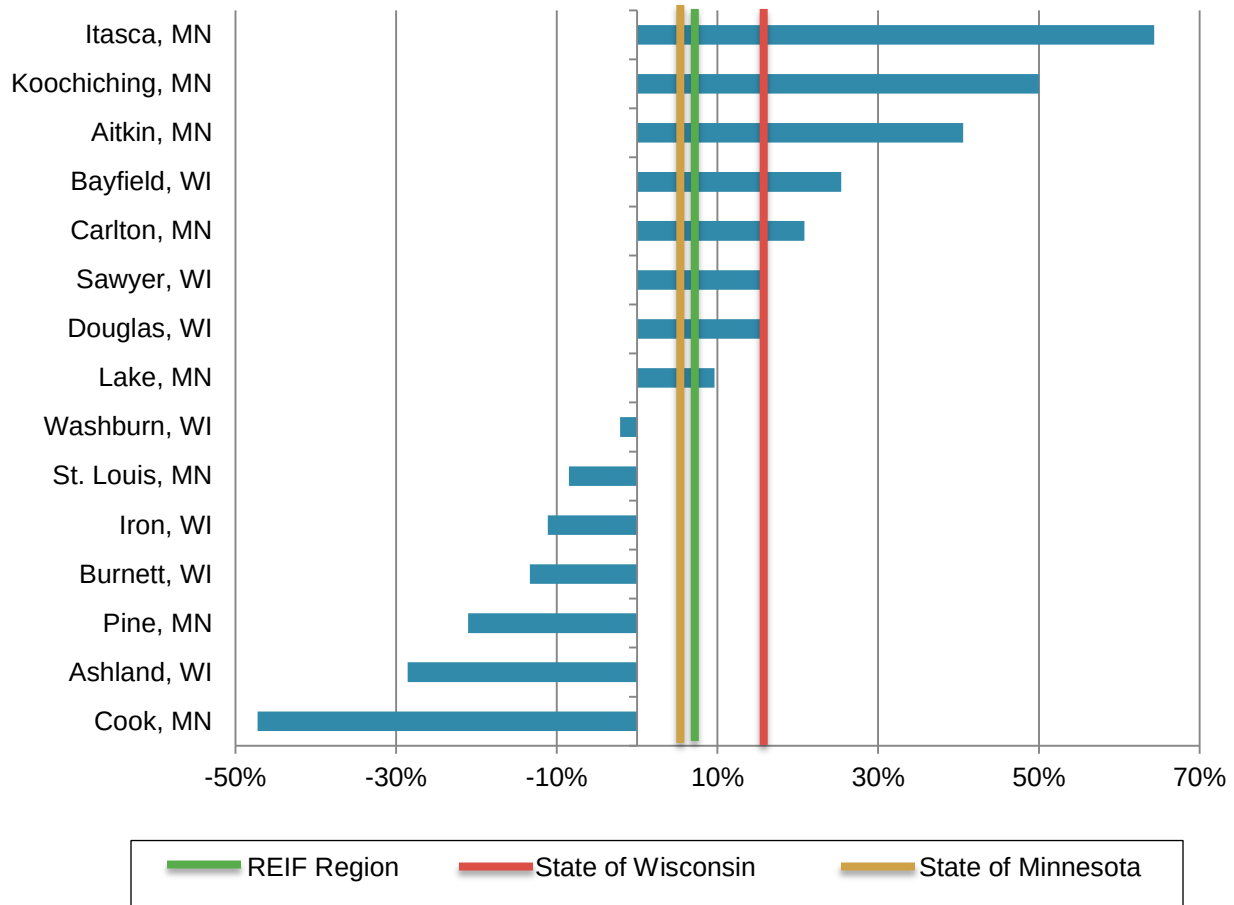
New housing starts represent approximately 4% of the annual gross domestic product (GDP) throughout the United States. An increase in new housing is a key indicator that the economy is strengthening. During the mortgage crisis, the amount of homeowners declined throughout the nation, and the number of homes that became foreclosed skyrocketed. This induced an downward economic spiral affecting many major economic indicators, including the number of new housing starts. While the economy has recently been emerging from the effects of the Great Recession, the housing market has been slower to recover. Therefore, economists have been carefully watching this indicator to determine the recovery rate of the housing market.

How is Our Region Doing?

Figure 13 shows the growth rate in the issuance of building permits by county, over the one year period from 2012 to 2013. The average growth rate for the REIF region (green), the state of Minnesota (gold), and the state of Wisconsin (red) are also shown. The number of building permits issued in the REIF region increased from 2012 to 2013. This increase (8.1%) was higher than the state of Minnesota (7.6%) but lower than the state of Wisconsin (15.2%). Although the REIF region's percentage increase wasn't as significant as the state of Wisconsin's, it is important to see that the region increased, which is a positive sign for the economy.

While many counties experienced large increases in the percentage of building permits issued (Itasca, Koochiching, Aitkin Counties in Minnesota) and other experienced large decreases (Cook, and Pine Counties in Minnesota and Ashland County in Wisconsin) over the one year period, many of these counties have a small number of total housing units, and a small number of building permits issued in a given year. Therefore, a small increase or decrease can lead to a large percentage change. For example, Cook County had 53 building permits in 2012 and 36 building permits in 2013, while Ashland County had 14 building permits issued in 2012 and 10 in 2013. This indicator can help identify areas of growth but should be evaluated in combination with other trends, such as the number of housing units overall (page 34).

Figure 13: Percent Change in Building Permits by County (2012 to 2013)



Source: United States Census Bureau

Homeownership Rate



Homeownership Rate Higher than States' and U.S.³

Description

According to the United States Census QuickFacts, the homeownership rate is calculated by dividing the number of owner occupied units by the number of housing units occupied by people. A housing unit is identified as separate living quarters, such as a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (can be vacant if it is intended for occupancy). A housing unit is considered owner-occupied if the owner or co-owner lives within the unit, even if the unit has been mortgaged or has not been paid for fully.

Why is It Important?

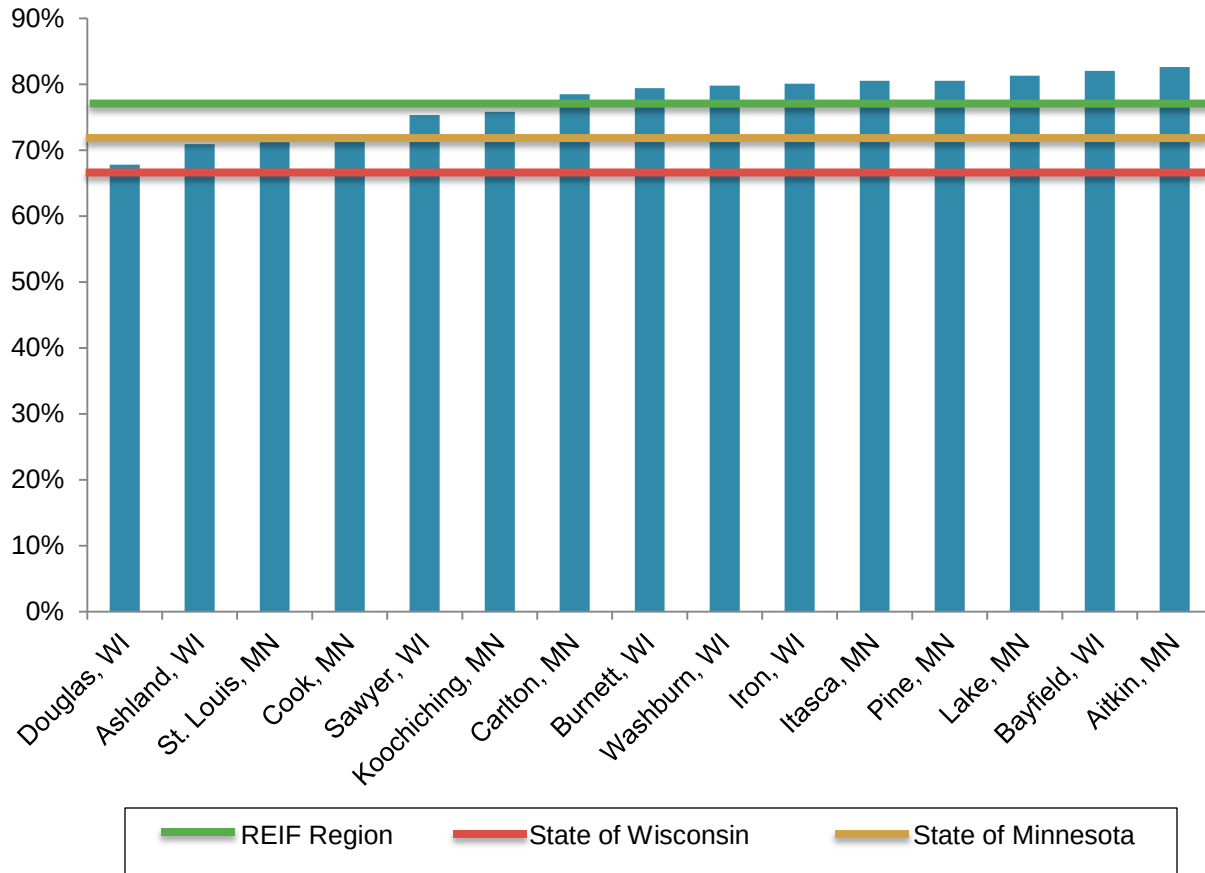
Owner occupied housing/homes show the commitment to the community by its residents. Those living in their purchased property typically are contributing members of the community's economy with the intent of longer-term residency and a vested nature in the community and economy. Thus, a higher the homeownership rate is typically good for the economy. A high homeownership rate, however, can also hinder economic growth by creating lower levels of labor mobility and greater commuting times, and it can indicate a weak rental market.

How is Our Region Doing?

Figure 14 shows the homeownership rate by county³, as well as the average rate for the REIF region, the state of Minnesota and the state of Wisconsin. The figure shows that the homeownership rate throughout the REIF region is considerably better than the states of Minnesota and Wisconsin. In 2012, the region had an average homeownership rate of 77% throughout the 15 counties, while the state of Minnesota's average rate was 73%, and Wisconsin's was 68%. The average for the United States was 65%. These numbers are indicative of an older, more stable population, and one that is more financially secure than other regions. However, the higher rate of homeownership could also simply be the result of having a more rural population than the rest of the states and the country, which simply has fewer homes and fewer rental properties. The counties with the highest rates of homeownership include Aitkin, Lake, and Pine in Minnesota and Bayfield in Wisconsin. The counties with the lowest rates of homeownership include Douglas and Ashland in Wisconsin and St. Louis and Cook in Minnesota.

³ The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 14: Homeownership Rate by County



Source: United States Census Bureau

Median Home Value



Median Home Value Less Than States'

Description

According to United States Census Bureau QuickFacts, respondents were asked to estimate the selling price of their housing unit and lot, if they were to be for sale. The data includes owner-occupied, single-family homes on less than 10 acres of land⁴.

Why is It Important?

Median value of owner-occupied housing units is an important economic indicator because, for most people, the value of one's home is the largest asset to their finances. Having an accurate estimate of that value can provide a region with important information related to personal wealth, property values, and tax revenues. Not only is it important for property assessments to be made on homes because it is an asset to a person's financial stance, but it is also important for accurate property taxes to be paid on the property.

How is Our Region Doing?

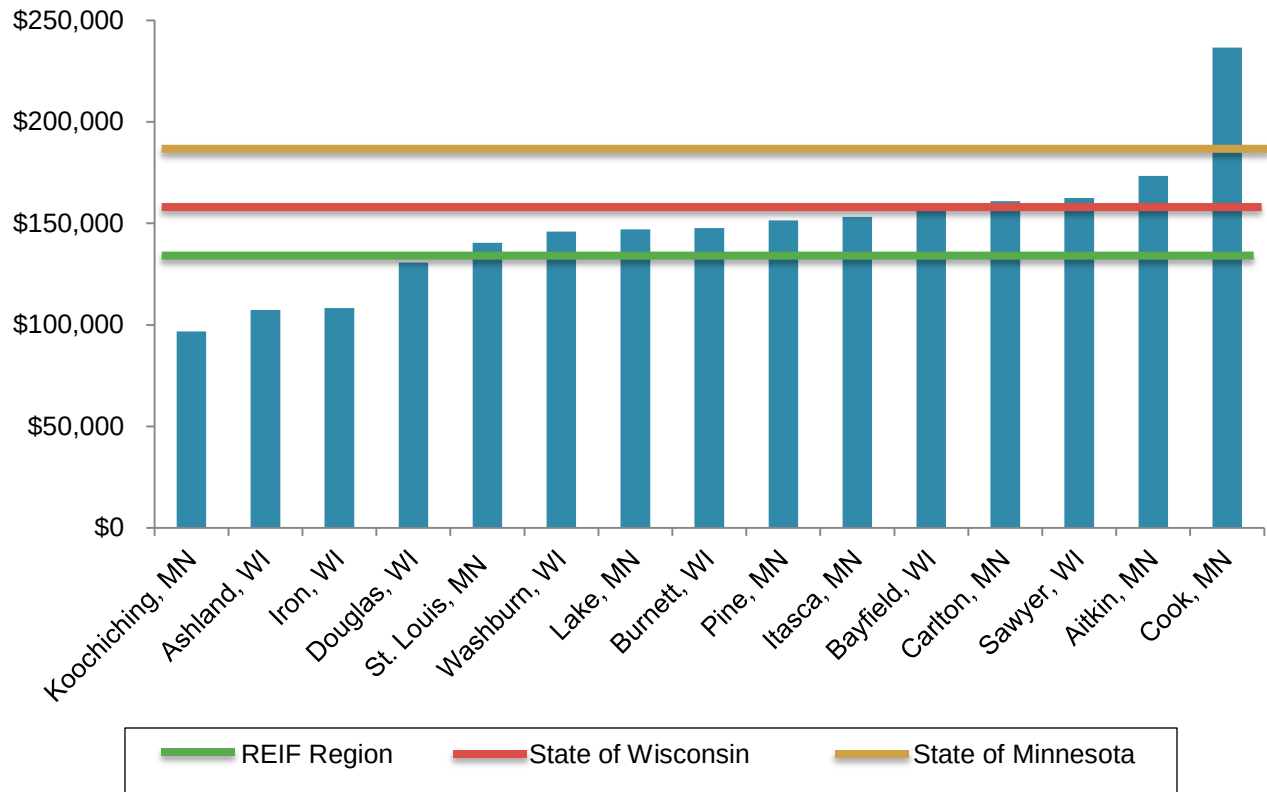
Figure 15 shows the median home value by county⁵, as well as the median value for the state of Minnesota (gold), the state of Wisconsin (red), and the average for the REIF region (green). The median value of owner-occupied housing throughout the REIF region is lower than the median for Wisconsin or Minnesota. Although median home values in the REIF region (\$147,380) are significantly lower than the state of Minnesota (\$194,300), it is important to know that the REIF region is doing well compared to some states, including Michigan (\$121,700), Iowa (\$124,300), North Dakota (\$132,400), Indiana (\$122,800), and Ohio (\$130,800). The Midwest is not known for having the highest property values, which has attracted many families throughout the years, in order to escape the higher values some other states offer, such as Maryland (\$292,700), New York (\$288,200), New Jersey (\$327,100), and California (\$366,400). These high median home values mean high property taxes, which some young families find hard maintain from year to year.

Figure 15 shows Cook County in Minnesota has the highest median home values in the region, by a significant margin. Counties with the lowest median home values include Koochiching County in Minnesota, and Ashland, Iron, and Douglas counties in Wisconsin.

⁴ Excluded in this data involve mobile homes, houses with a business or medical office, houses on 10 acres or more, and housing units that are in multi-unit structures.

⁵ The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 15: Median Home Value by County (2009 to 2013)



Source: United States Census Bureau

Median Household Income



Median Household Income is Lower than States'

Description

According to the United States Census QuickFacts, household income is defined as the income of the householder plus the incomes of all other individuals 15 years of age or older that occupy that household. This can include persons who are related to the household, but do not necessarily have to be related. Income is calculated by including not only the individuals' wages and salaries but also other forms of alternative income.

Why is It Important?

Median household income is a common representation of the wealth of a population or region. It can help highlight which regions are struggling (even if they are above poverty) and which regions are thriving. Median household income is often compared with other indicators, such as gross domestic product, to show whether household purchasing power has increased or decreased.

How is Our Region Doing?

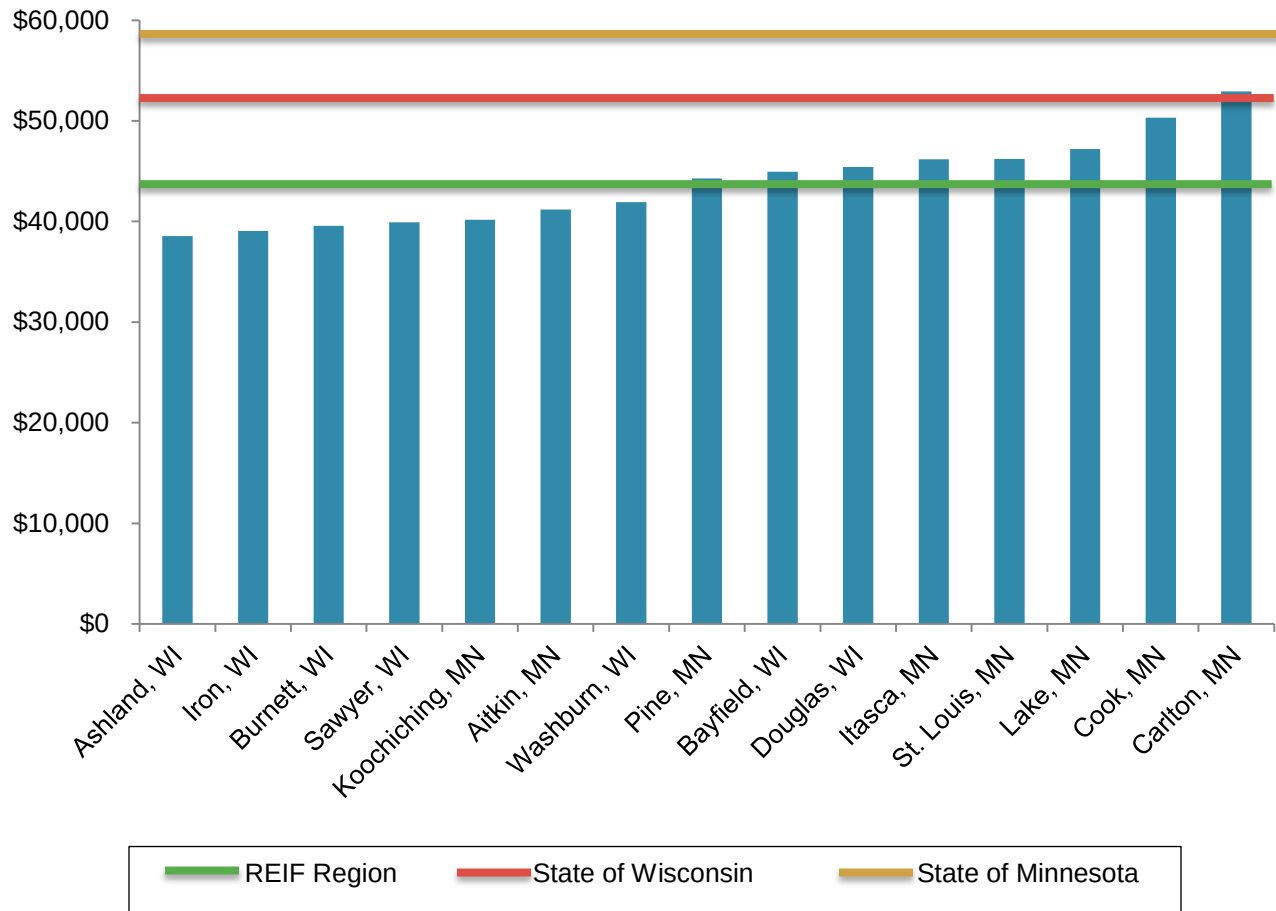
Figure 16 shows the median household income⁶ by county, as well as the median for the state of Minnesota and the state of Wisconsin, and the average for the REIF region. The REIF region's median household income is \$43,701, which is lower than the states of Minnesota and Wisconsin. The state of Minnesota's median household income is one of the highest in the nation at \$59,126 – higher than any of the REIF county averages (the highest being Carlton County, Minnesota, at \$52,943). The counties with the highest median household income include Carlton, Cook, Lake, and St. Louis (all in Minnesota), while the counties with the lowest median household income include Ashland, Iron, Burnett, and Sawyer (all in Wisconsin).

However, as Minnesota is doing well compared to the U.S., the REIF region is doing poorly comparatively to both of the state averages and the U.S. One reason for the discrepancy might be demographics. The REIF region has a population that is older than other parts of Minnesota and Wisconsin. Older adults are more likely to have lower incomes and more likely to live alone. Another explanation might be cost of living differences. According to the Minnesota Department of Employment and Economic Development's 2015 Cost of Living Report⁷, the Arrowhead Region of Minnesota does have lower monthly living expenses than the statewide average.

⁶ The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

⁷ Source: Minnesota Department of Employment and Economic Development, Minnesota Cost of Living Study 2015 Annual Report

Figure 16: Median Household Income by County (2009 to 2013)



Source: United States Census Bureau

Poverty Level



Average Poverty Rate is Higher Than States'

Description

According to the United States Census QuickFacts, poverty thresholds fluctuate by the size of each family (including individuals not in families). Poverty status is recognized by analyzing annual income and comparing that number to a set of dollar values, meaning that if the family's income (before taxes) is lower than the poverty threshold value set by the U.S. Census Bureau for that family size, then every individual in the family is considered to be in poverty.

Why is It Important?

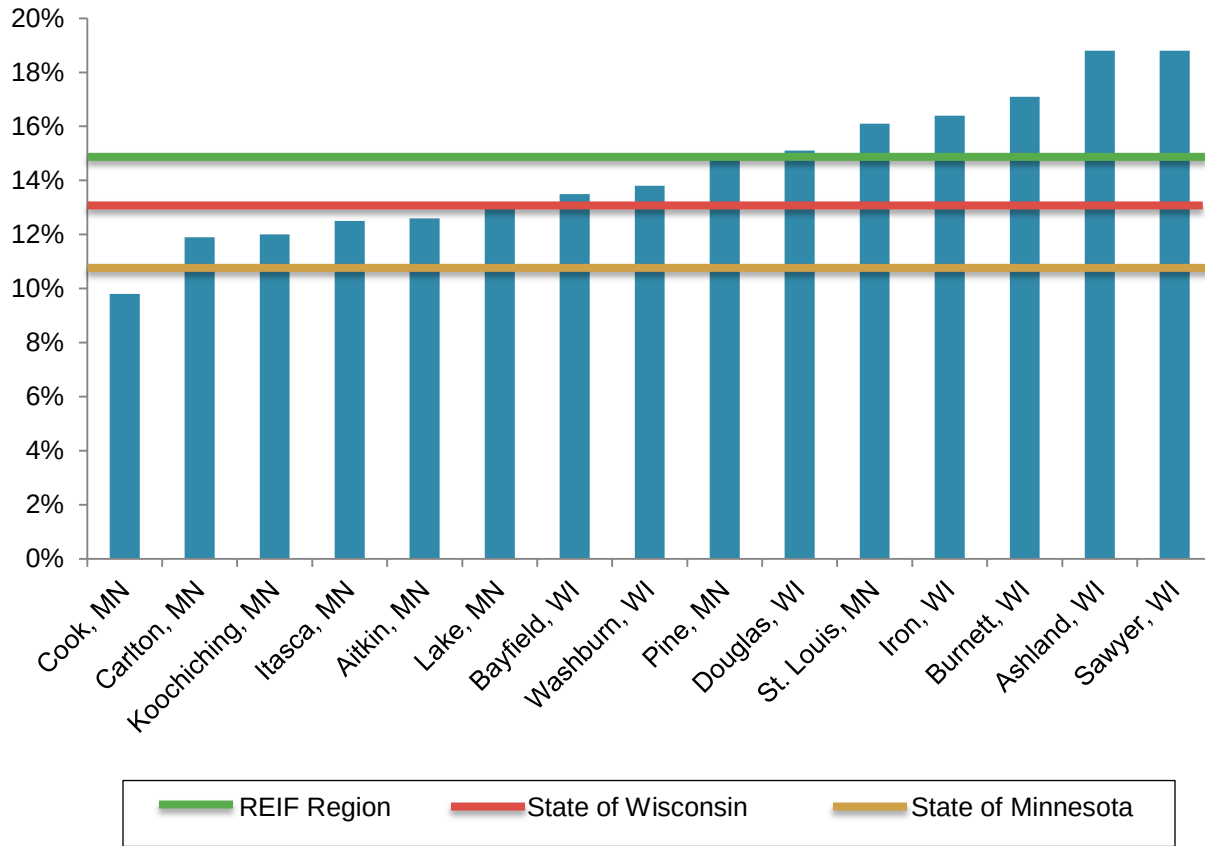
The poverty level is important in order to determine the well-being of a region. High levels of poverty negatively impact the quality of life for a county's residents and create a hindrance to the region's economy. High poverty levels are correlated with high unemployment levels and low education levels. When the amount of people living in poverty decreases, the economy typically improves, because the government can focus on promoting the economy's development rather than spending money on poverty-reduction strategies.

How is Our Region Doing?

Figure 17 shows the percentage of people living below the poverty line⁸ (poverty rate) in each of the 15 REIF counties, as well as the averages for the region, the state of Minnesota, and the state of Wisconsin. The counties are shown in order of lowest to highest poverty levels with Cook County (Minnesota) having the lowest and Sawyer County (Wisconsin) having the highest. The average poverty rate in the REIF region is higher than the average rate in Minnesota and Wisconsin. Minnesota's average is 11.2%, and Wisconsin's average is 13.0%. The lowest regional poverty levels are in six Minnesota counties: Cook, Carlton, Koochiching, Itasca, and Aitkin. The highest regional poverty levels are in four Wisconsin counties: Sawyer, Ashland, Burnett, and Iron. However, it is important to note that the REIF poverty rate (14.5%) is lower than the national average (15.4%).

⁸ The statistics in this indicator are five-year estimates from the American Community Survey (ACS), 2009-2013. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 17: Percentage of Persons Living Below the Poverty Line by County (2013)



Source: United States Census Bureau

Consumer Confidence Indicators: Predicting the Business Cycle

Indicator	Public Survey (Random)	REIF Survey (Non-random)
ICS 	Rising optimism about short-term economic outlook	Weakening short-term economic outlook
ICC 	Strong current state of the economy	Economy is slowing down
ICE 	Expectations of continued economic expansion	Expectations of future economic slowdown

Zamira Simkins, Ph.D., Assistant Professor of Economics, University of Wisconsin-Superior

Rubana Mahjabeen, Ph.D., Assistant Professor of Economics, University of Wisconsin-Superior

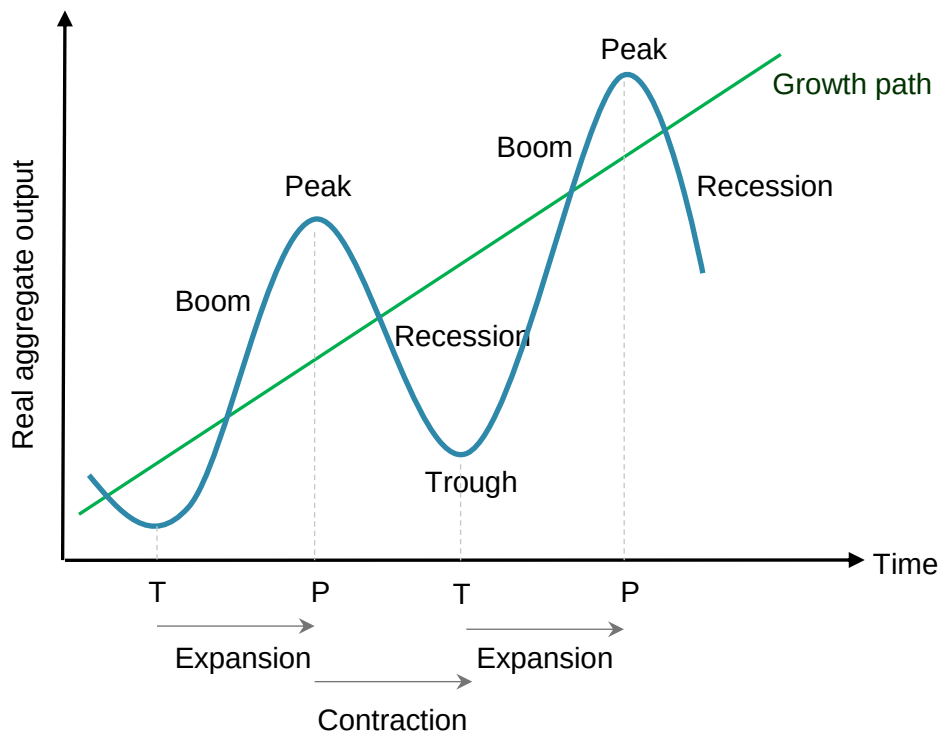
UW-S student researchers: Prashant Burlakoti, Abdisa Dawano, Caleb Hjelle, Brian Honness, Nneoma Nwobilor, Arne Nyeck, Maryam Salihu, Marquise Slay, Farida Suleiman, Yiru Wei.

Business Cycle and Consumer Confidence Indicators

“The future belongs to those who prepare for it today.” Malcolm X.

The economy-wide fluctuations in economic activity are popularly referred to as a *business cycle*. As illustrated in Figure 18, business cycle is a short-run alternation between economic downturns and economic upturns. When the economy is booming, consumers and businesses enjoy economic prosperity. When the economy is in a recession, the fortunes reverse. Thus, if a business cycle could be anticipated, its effects could be lessened or shortened. To forecast the business cycle, economists use coincident, leading and lagging economic indicators.

Figure 18: Business Cycle



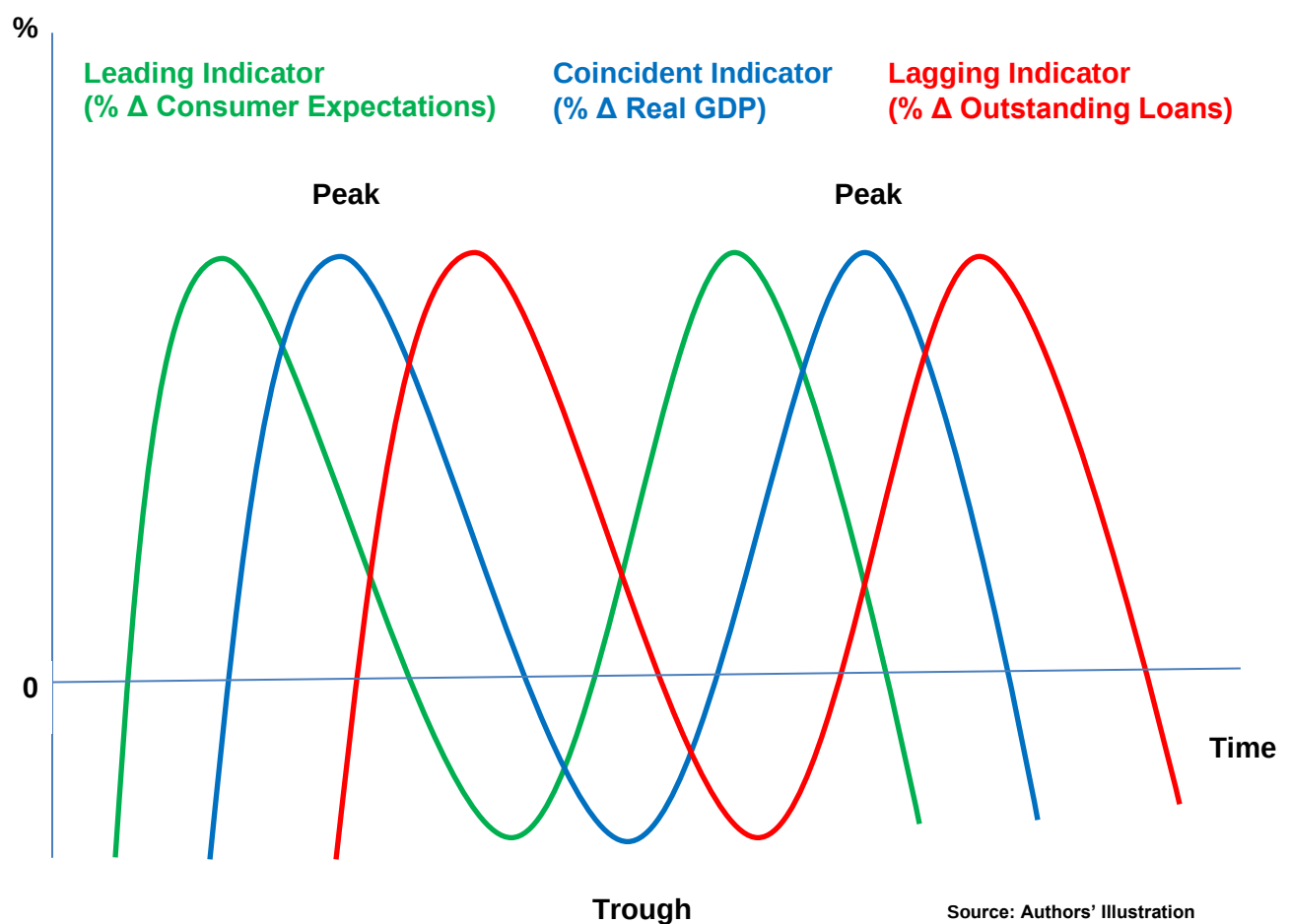
Source: Authors' Illustration

How the economy is doing today is traditionally described by a single aggregate economic indicator known as *Real Gross Domestic Product* (GDP). Formally, real GDP measures the inflation-adjusted market value of all final goods and services produced in the economy during a given year. By design, real GDP also serves as a measure of national income corrected for inflation. In other words, real GDP measures how many goods and services the economy actually produces and can afford in a given year, if prices stayed constant.

Since real GDP describes the current state of the economy, it is known as a *coincident economic indicator*. Other typical coincident economic indicators include: nonagricultural employment, industrial production, and consumption. As shown in Figure 19, significant continuous increases in coincident economic indicators signal an economic expansion. For businesses this means a growing economy, rising revenues, and economic prosperity. Unfortunately, coincident economic indicators take time to collect. To equip decision-makers with tools enabling them to anticipate the forthcoming fluctuations in the economy, economists developed so-called *leading economic indicators*. Leading economic indicators, such as the index of consumer expectations, stock prices, and housing permits, tend to move ahead of coincident economic indicators and, therefore, signal where the economy is heading in the future. As shown in Figure 19, leading economic indicators precede the coincident economic indicators. Significant continuous increases in leading economic indicators signal that the economy is about to expand, while significant continuous declines in leading economic

indicators signal that an economic contraction is about to happen. Given their ability to predict future economic conditions, leading economic indicators are closely watched by businesses and other decision-makers, as they help them plan for the future. To confirm that changes in leading and coincident economic indicators are not a fluke and represent significant changes in the economy, economists have also developed so-called *lagging economic indicators*. Lagging economic indicators, such as unemployment, inflation, nominal interest rates and outstanding loans tend to move several time-periods after the economy, or after coincident economic indicators. As shown in Figure 19, lagging economic indicators follow the coincident economic indicators.

Figure 19: Leading, Coincident and Lagging Economic Indicators



Together, these three sets of indicators are used to predict and verify turning points in the economy (i.e., peaks and troughs). When interpreting these indicators, business cycles are typically predicted using a 3-D's approach: (i) duration – changes in economic indicators that last at least several time-periods are more likely to be a result of an economic shift, as opposed

to random fluctuations, (ii) depth – the greater the percentage change in an economic indicator, the more likely it represents a significant shift in the economy, and (iii) diffusion – the greater the proportion of economic indicators signaling or pointing to the same economic shift, the more likely the economy is about to change.

In fall 2013, a research group at the University of Wisconsin-Superior (UW-S) started developing regional economic indicators for fifteen northern Minnesota and northwest Wisconsin counties, including the Index of Consumer Sentiment (ICS), Index of Current Conditions (ICC), and Index of Consumer Expectations (ICE). Generally speaking, ICS is designed to gauge consumers' attitudes towards the business environment, personal finances, and consumption spending. ICC is designed to gauge the current state of the economy, or serve as a coincident economic indicator. ICE, a leading economic indicator, is used for business cycle forecasting, as it reflects the consumers' outlook on future economic and financial conditions. This outlook in turn determines consumer spending behavior, and through a multiplier effect, the overall economic activity and prosperity in the area.

Methodology of Computing Consumer Confidence Indicators

The methodology behind these indices is based on the following:

- Target survey area: 8 Minnesota and 7 Wisconsin counties, including: Koochiching, Itasca, St. Louis, Lake, Cook, Aitkin, Carlton, Pine, Douglas, Bayfield, Ashland, Iron, Burnett, Washburn, and Sawyer county. Since most consumer spending decisions are made on a household level, household numbers were used to generate the survey samples.
- Data collection process: Randomly selected households were contacted over a phone and asked to answer 8 core survey questions: 5 questions related to three consumer confidence indicators and 3 questions related to the current events topic of housing stock (see Appendix # for details). Same questions were also asked through email surveys. These Consumer confidence survey questions were modeled after the University of Michigan consumer survey, and the last three questions were developed by UW-S researchers.
- Data samples: Starting in fall 2014, two surveys were conducted, one over a phone and another via e-mail. Phone-based surveys were conducted using a random representative sample of households residing in each county. E-mail surveys were conducted using a roster of previous REIF attendants. Responses were then compared across samples and were found to be statistically different from each other, so it was decided to track the two samples separately from each other. Sample size, response rate and margin of error for each survey and time period are documented in Table 1 below.

Table 1: Consumer Confidence Survey: Sample, Response Rate and Error

Time	Complete Phone Responses	Phone Response Rate	Margin of Error, 95% (Phone)	Complete Email Responses
Fall 2013	219	6.45%	6.62%	-
Spr. 2014	216	8.24%	6.66%	-
Fall 2014	91	21.16%	10.27%	92
Spr. 2015	187	19.44%	7%	104

Source: University of Wisconsin-Superior

- Calculation of indices: using the phone-based consumer survey data, three consumer confidence indices were calculated as follows:
 - Balance by question and county: $Q_{ij} = (\% \text{ positive}_{ij} - \% \text{ negative}_{ij}) * \text{weight}_j + 100$, where $i = 1 \dots 5$ indices question number, $j = 1 \dots 15$ indices county, and % positive and % negative stand for percentages of positive and negative responses produced within each time-period respectively. County weights were used to correct for the county non-response error to ensure that results would be representative of households residing in each county and the target area.
 - Balance by question: $Q_i = \sum_j Q_{ij} / 15$, where $j = 1 \dots 15$ counties.
 - Indices: $ICS_t = \frac{Q1_t + Q2_t + Q3_t + Q4_t + Q5_t}{Q1_b + Q2_b + Q3_b + Q4_b + Q5_b}$; $ICC_t = \frac{Q1_t + Q5_t}{Q1_b + Q5_b}$; $ICE_t = \frac{Q2_t + Q3_t + Q4_t}{Q2_b + Q3_b + Q4_b}$, where $Q1 \dots 5$ represents question number, t indices time periods, and b indicates base-year values.

Findings of Consumer Survey

The results of 15-county regional consumer confidence indices based on phone survey and email survey are presented in Table 2 and 3 respectively. National consumer confidence indicators developed by the University of Michigan are presented in Table 4. From fall months to spring months, phone survey shows that all three indices exhibited a positive trend. However, in the e-mail survey, all three indices declined. Since both results were collected during the same time period, these findings suggest that while the population in general is feeling positive about current economic performance and future economic outlook, REIF participants, e.g., local government, businessmen, and academics, are growing pessimistic and anticipate an economic slowdown.

Table 2: 15-County Regional Consumer Confidence Indicators (Phone Survey)

Time	ICS	ICS, Percent Change	ICC	ICC, Percent Change	ICE	ICE, Percent Change
Fall 2013	100.00		100.00		100.00	
Spr. 2014	100.91	0.91%	100.26	0.26%	101.36	1.36%
Fall 2014	103.83	2.89%	102.31	2.05%	104.86	3.46%
Spr. 2015	105.74	1.84%	105.21	2.83%	106.11	1.19%

Source: University of Wisconsin-Superior

Table 3: 15-County Regional Consumer Confidence Indicators (Email Survey)

Time	ICS	ICS, Percent Change	ICC	ICC, Percent Change	ICE	ICE, Percent Change
Fall 2014	100.00		100.00		100.00	
Spr. 2015	97.01	-2.99%	97.81	-2.19%	96.47	-3.53%

Source: University of Wisconsin-Superior

Table 4: National Consumer Confidence Indicators

Time	ICS	ICS, Percent Change	ICC	ICC, Percent Change	ICE	ICE, Percent Change
Aug' 13	82.1		95.2		73.7	
Sep' 13	77.5	-5.60	92.6	-2.73	67.8	-8.01
Oct' 13	73.2	-5.55	89.9	-2.92	62.5	-7.82
Nov' 13	75.1	2.60	88.0	-2.11	66.8	6.88
Dec' 13	82.5	9.85	98.6	12.05	72.1	7.93
Jan' 14	81.2	-1.58	96.8	-1.83	71.2	-1.25
Feb' 14	81.6	0.49	95.4	-1.45	72.7	2.11
Mar' 14	80	-1.96	95.7	0.31	70	-3.71
Apr' 14	84.1	5.12	98.7	3.13	74.7	6.71
May' 14	81.9	-2.62	94.5	-4.26	73.7	-1.34
June' 14	82.5	0.73	96.6	2.22	73.5	-0.27
July' 14	81.8	-0.85	97.4	0.83	71.8	-2.31
Aug' 14	82.5	0.86	99.8	2.46	71.3	-0.70
Sep' 14	84.6	2.55	98.9	-0.90	75.4	5.75
Oct' 14	86.9	2.72	98.3	-0.61	79.6	5.57
Nov' 14	88.8	2.19	102.7	4.48	79.9	0.38
Dec' 14	93.6	5.41	104.8	2.04	86.4	8.14
Jan' 15	98.1	4.81	109.3	4.29	91	5.32
Feb' 15	93.6	-4.59	106.9	-2.20	88	-3.30

Source: University of Michigan

By comparing the national and phone-based regional indicator trends, it is possible to discern that nationwide and in the 15-county area consumers generally feel that the economy has been growing stronger. However, compared to the phone-based regional indices, nationwide indices have exhibited a stronger growth, which suggests faster growing optimism about the current and future economic conditions, except for the last month of February, 2015. It is possible that the recent downturn in three national indices is reflected in the email-based regional indices, as the majority of these responses were collected in late February, 2015.

The national indices show a peak of upbeat trend of consumers during December-January month. This could be due to the seasonal effect of holiday time. Analysis of the three regional phone-based indices seems to indicate that over the last year households of the surveyed region have started feeling more positive about their own economic and financial conditions as well as those of the businesses and the nation as a whole. Percentage changes in all three regional indices show an increase from fall 2014 to spring 2015, which builds on the positive findings from spring 2014 to fall 2014. It should be noted that the percentage changes in phone-based indices of consumer sentiment and future expectations have slowed down in spring 2015.

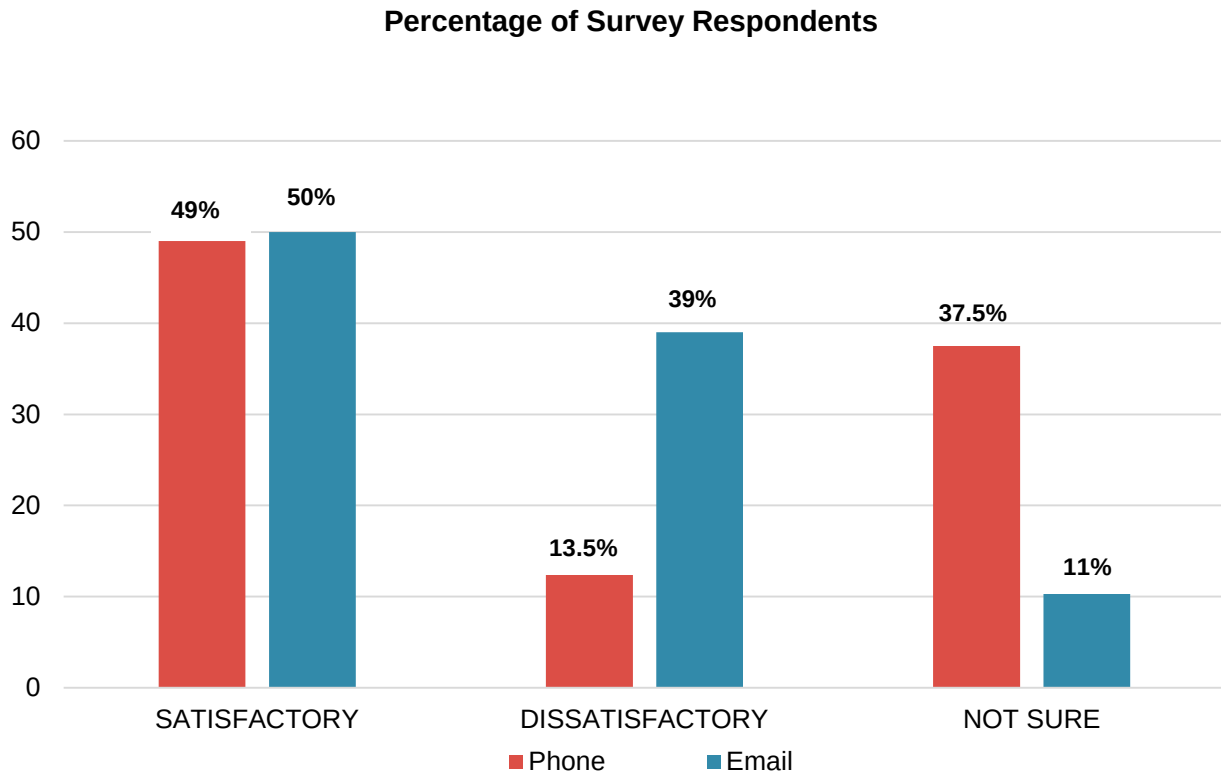
However, according to the current condition index, sampled households are still sensing a strong positive feel about their present situation.

Special Report: Housing Issue

As was noted before, the current events topic for this Regional Economic Indicator Forum was housing. Three separate questions were included in our surveys about the housing topic. Specifically, the questions asked whether respondents were satisfied with the current housing stock in the region and what the respondents thought about the most effective solutions to improving the quantity and quality of housing in the region. In this respect, our work significantly adds to the existing literature on this topic, as not only we study the extent of the housing challenges but also identify most effective solutions to improving the housing stocks.

Survey questions related to the housing topic are listed in the Appendix. According to survey results, eighty to ninety percent of survey respondents, both phone-based and email based, are home owners. The rest live in mainly rental housing. Figure 20 shows households' perception about the quality and quantity of the housing stock in their respective area. It can be seen that almost fifty percent of both type of survey respondents believe that the quality and the quantity of the existing housing stock are satisfactory. The difference between the phone-based and email-based survey becomes clear when it comes to the dissatisfaction with the housing stock. REIF participants are almost three times more dissatisfied with the existing housing stock in their area compared to the general population.

Figure 20: Perception About Existing Housing Quality and Quantity



Source: University of Wisconsin-Superior

Interesting part of the finding is even though both types of survey respondents are mostly satisfied with the existing housing stock in their respective areas, everyone chose one or more policies to improve housing in the area. There are some similarities in the responses of the random/phone-based and non-random/email-based surveys. When asked which policy would be most effective in improving the quality and quantity of housing stock, two policies were ranked the highest. Households believe that if the government reduces red tape and bureaucracy concerning home building and improvement and provides incentives for rehabilitation and renovations of existing homes, then these approaches will help improve the housing stock in their area. Table 5 shows solutions chosen by most households from the given policy options.

Table 5: Chosen Policy Solutions to Improve Housing Stock
Ranked by Votes

Phone Survey	Email Survey
1 Reduction in government red tape (e.g., permits) related to home improvement projects	1 Government incentives for rehabilitation and renovation of existing homes
2 Government incentives to homeowners and builders to improve housing	2 Reduction in government red tape (e.g., permits) related to home improvement projects
3 Government enforcement of property maintenance requirements on property owners	3 Government rebates or other financial incentives to improve parts of property (e.g., energy efficient heating system rebate)
4 Government buyout and redevelopment of existing properties	4 Lower property taxes

Source: University of Wisconsin-Superior

When survey respondents were asked to provide their own solutions to the housing issue a number of interesting suggestions were provided. These are documented from both phone and email surveys. Table 6 lists the top six suggested solutions.

Table 6: Top Six Housing Solutions Suggested by Survey Respondents

Ranked by Votes

-
1. Incentives for creating more affordable housing and rental housing for low and middle income families
 - Decent and modern options: condos, townhouses, duplexes, etc.
 2. Incentives for creating mid-range price housing (\$130,000-\$250,000), as there are fewer options in this range
 3. Public and private sector need to create more better paying jobs, as low quality housing is the result of low paying jobs
 4. Developing infrastructure and promoting city's well-being
 - Governmental: sewer, water, roads, education, parks, etc.
 - Economic development: business incubators
 5. Zoning issue: avoid 'mix-use'; based on lot size and septic needs
 6. Removal of county-specific costly barriers on home builders

Source: University of Wisconsin-Superior

A major theme of these suggestions is that there is a clear need for more incentives for building affordable and decent housing for low and middle income households. Survey respondents also pointed to the fact that there is a lack of mid-range price housing and better paying jobs in the 15-county REIF region. Hence, focusing on these issues will help solve the housing challenges.

Regional Equity Index: An Analysis of the Equity Performance of Stocks of Local Interest



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University of Wisconsin-Superior Student Researchers: Chris Bishop, Kascie Gondik, Aubrey Knox, Jason Ojala

The purpose of this research is to provide information and a financial analysis on the equity performance of companies of local interest in the fifteen counties surrounding the Twin Ports area. This is the third report of an ongoing research project that will track the equity performance of these companies, create an index of local stocks as a way to measure economic activity in the region, examine measures of future performance, and make comparisons to industry averages and market indices.

The first report covered the performance of the index and individual stocks that make up the index over a five year period from January 2, 2009 through December 31, 2013. The second report extended the study period through September 30, 2014, in which the REI index outperformed the benchmark, but investors were more bearish than bullish. This report extends the study period through February 28, 2015 and provides a look into the future by examining measures that provide forecasts of future performance; in this report, the REI outperforms the index and investors are more bullish than bearish on the majority of the stocks.

Construction of the Index and Index Components

The Regional Equity Index (REI) was constructed using publicly traded stocks of companies located in the fifteen counties surrounding the Twin Ports. The initial criteria for inclusion in the REI required that the stock be publicly traded with the firm's headquarters located within the fifteen county area of the study. ReferenceUSA, a business database, was utilized to identify companies that meet the initial criteria. Only two companies located within the fifteen-county region met the criteria requiring that the firm's headquarters be located in the region. In order to construct an index that is relevant, additional stocks needed to be included. To increase the size of the index, the criteria was relaxed to include firms who had a significant presence in the region as indicated by the number of employees locally or the significance of regional activity to the overall contribution to the firm. The firms identified using these criteria include the following:

Allete
Ascena Retail Group
Calumet
Canadian National Railway
Cliffs Natural Resources
Enbridge Energy Partners

Ikonics
Louisiana-Pacific
Polymet
Sappi Limited
UnitedHealth Group
US Steel

A brief profile of each of the companies and a graph illustrating their equity performance over the study period is provided in Appendix D. Of the twelve firms that make up the index, eight of the stocks trade on the NYSE, three trade on NASDAQ, and one trades OTCBK. UnitedHealth Group and Canadian National Railway are considered large-cap firms, Polymet is a small-cap firm, Ikonics is a micro-cap firm, and the remaining eight stocks in the index are mid-cap firms.

The REI is an equally weighted equity index. An equally weighted index treats each stock equally regardless of its market capitalization or economic size. It is assumed that an equal dollar investment is made in each stock at the beginning of the measurement period. Monthly returns for each stock are calculated over the study period beginning January 2, 2009 and ending February 28, 2015. For each month of the study period, returns are calculated by taking the change in the price from one month to the next, divided by the price at the beginning of the month. The prices used to calculate returns are the historical adjusted prices listed on Yahoo! Finance. Adjusted prices are used because these prices reflect any dividends paid or stock splits that may have occurred during the period. Therefore, the adjusted price is a more accurate representation of the true total return to an investor.

Since the REI is composed primarily of mid-cap firms, the index is compared to a benchmark index consisting of the average return of six popular mid-cap equity indices. Using standard benchmarks such as the S&P 500 or DJIA would not provide a reliable comparison since these indices are constructed using large-cap firms. The benchmark index used for comparison purposes for years 2005-2009 is the average of the CRSP, Dow Jones, Morningstar, MSCI, Russell, and S&P mid-cap equity indices. The benchmark index for 2015 year-to-date is the S&P 400 index.

Stock Performance

Table 7 shows the annual returns for each component of the REI over the study period ending February 28, 2015, the average and median returns for the REI, and the annual returns of the benchmark index.

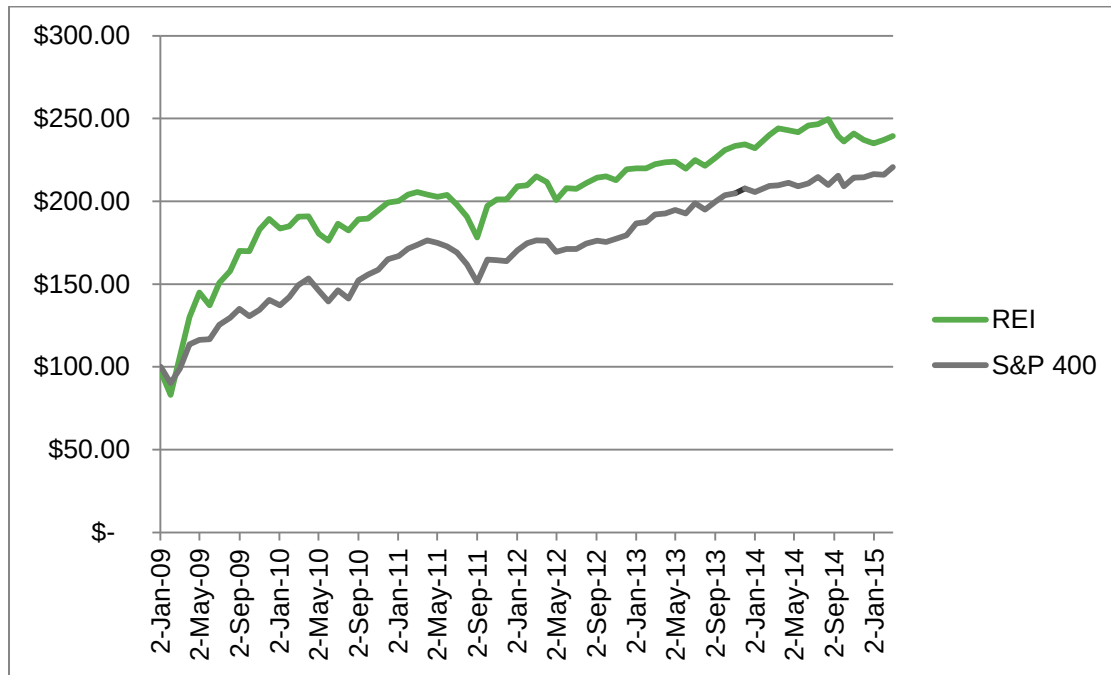
The performance of the REI components relative to the benchmark index shows the overall performance of the index to be comparable to the market. The average return for the REI exceeded the performance of the benchmark in 2009, 2012, 2014 and 2015. In 2010, 2011, and 2013 the index underperformed relative to the benchmark index. However, the trend of the REI is consistent with the trend observed for the market.

Table 7: Annual Returns for REI Components and Benchmark Index, ending 2/28/2015

REI	2009	2010	2011	2012	2013	2014	2015
Allete (ALE)	6.59%	18.91%	16.45%	15.50%	22.93%	12.00%	-1.25%
Ascena Retail Group (ASNA)	115.49%	12.52%	12.24%	23.22%	19.82%	-35.07%	10.02%
Calumet (CLMT)	136.31%	25.41%	2.97%	64.90%	-11.49%	-19.02%	18.27%
Canadian National Railway (CNI)	46.32%	23.34%	18.86%	17.40%	25.59%	27.48%	1.38%
Cliffs Natural Resources (CLF)	57.62%	63.28%	-23%	-38.73%	-30.86%	-63.37%	-2.70%
Enbridge Energy Partners (EEP)	113.93%	22.99%	11.99%	-9.36%	11.03%	40.70%	-3.35%
Ikonics (IKNX)	9.78%	14.97%	1.05%	19.44%	77.71%	-10.63%	10.00%
Louisiana-Pacific (LPX)	328.22%	29.95%	-17.23%	134.47%	-6.04%	-5.65%	1.75%
Polymet (PLM)	286.96%	-26.41%	-55.39%	-16.67%	12.35%	-0.93%	2.80%
Sappi Limited (SPPJY)	14.70%	6.19%	-44.89%	25.68%	-18.28%	18.67%	16.01%
UnitedHealth Group (UNH)	10.63%	15.89%	38.28%	6.91%	40.28%	39.43%	12.75%
US Steel (X)	41.32%	1.30%	-55.84%	-14.66%	15%	2.03%	-9.93%
Median	51.97%	17.40%	2.01%	16.45%	13.68%	0.55%	2.28%
Average	97.32%	17.36%	-7.88%	19.01%	13.17%	0.47%	4.65%
Benchmark	39.81%	25.72%	-1.41%	17.09%	35.44%	10.53%	4.21%

Figure 21 illustrates the growth of \$100 invested in the REI on January 2, 2009 and held until February 28, 2015. The growth trend of the \$100 investment in the REI is compared to the trend of \$100 invested in the S&P 400 over the same period of time. The S&P 400 is chosen because it is a mid-cap index, which provides the most meaningful comparison to the REI, and monthly data was available to calculate the returns for the S&P 400 over the five-year study period. The ending value of the REI is \$239.52 and the ending value of the S&P 400 is \$220.59. The trend for the REI closely mirrors the market and slightly outperforms the S&P 400.

Figure 21: Growth of \$100 Invested in the REI and the S&P Index



Measures of Future Expectations

Predicting future stock price performance accurately and consistently is an impossible task. However, research has shown that certain measures are more effective in predicting future performance than others. Two companies, Value Line® and Morningstar®, are well known for providing measures that are useful in predicting the future performance of firms. This study makes use of data from both of these sources.

Valueline® Measures

Timeliness and Performance Rank

The Timeliness Rank provides a measure of predicted stock price performance relative to the market over the next year. The measure is based on historical price and earnings data, recent price and earnings trends, and recent unexpected earnings events. The highest possible rank is 1 and the lowest is 5. Stocks ranked 1 and 2 are expected to outperform the market, stocks ranked 3 are expected to mirror the market, and stocks ranked 4 and 5 are expected to underperform the market. The Performance Rank is similar to the Timeliness Rank but is

typically used for smaller capitalization firms. As can be seen in Table 8, the average Timeliness/Performance Rank for the REI is slightly above average at 2.9. This suggests that on average the price performance of the REI should do slightly better than the market over the next year. Canadian National Railway has a rank of 1 indicating it is expected to outperform the market. US Steel has a rank of 2, indicating it is expected to do above-average relative to the market. Canadian National Railway (CNI) showed improvement in rank from the previous study period (CNI rank was 3 in the September 30 report). Calumet, Ikonics, US Steel and Louisiana-Pacific all showed a decline in rank with Louisiana-Pacific expected to have below-average performance based on a rank of 5. Value Line® did not provide any measures for Sappi Limited.

Safety Rank

The Safety Rank measures the potential risk of an individual stock. It is based on the stability of the stock price over time and the financial strength of the firm. The highest possible Safety Rank is 1 and the lowest is 5. A conservative investor, who is mainly concerned with safety, would typically invest in stocks with a rank of 1 or 2.

As illustrated in Table 8, the Safety Rank for the REI is 3.2, which makes the REI average in terms of potential risk. UnitedHealth Group has a rank of 1. Allele, Canadian National Railway both have a rank of 2, which indicates above average safety. Ikonics, Louisiana-Pacific, Polymet, and US Steel have a rank of 4, which indicates a below average level of safety. Cliffs Natural Resources has a rank of 5, which indicates low average level of safety.

Technical Rank

The Technical Rank provides an estimation of stock price performance relative to the market over the next three to six months. Unlike the Timeliness and Performance Ranks, which provide a longer term estimate, the Technical Rank is focused on short term price estimates. The measure is based on the stock's price performance during the past year relative to the market. Stocks ranked 1 and 2 are expected to outperform the market over the next three to six months. Stocks ranked three are expected to mirror the market over the short term and stocks ranked 4 and 5 are expected to underperform the market over the short term.

The average Technical Rank for the REI is 2.5, indicating that the index is expected to have slightly better performance than the market over the next three to six months. Louisiana-Pacific and US Steel have a rank of 2, indicating they are expected to outperform the market over the short term. US Steel showed improvement in the Technical Rank from the previous study period

Based on the Timeliness Rank and the Technical Rank, Ascena Retail Group, Cliffs Natural Resources, US Steel, and Louisiana-Pacific are expected to have better performance over the short term with a slight decline in performance the rest of the year. Stock Price Stability

Stock Price Stability measures the weekly volatility of the stock price relative to the stock's volatility over the past five years. The ranks range from 100 (highest stability) to 5 (lowest stability).

The average Price Stability for the REI is 43.2, which is slightly below average. Allele and Canadian National Railway had the highest price stability, with ranks ranging from 90 to 95, indicating a relatively low level of risk. Cliffs Natural Resources, Ikonics, Louisiana-Pacific, Polymet, and US Steel had the lowest price stability, with ranks ranging from 5 to 15, indicating a high level of risk. The Price Stability rank for these firms is consistent with the volatility of the returns shown in Table 24 over the study period.

Price Growth Persistence

Price Growth Persistence is a measure of the historical stock growth trend of an individual stock relative to the price growth trend of the market. In other words, it measures the tendency of a stock to show persistent growth. The ratings range from 100 (highest) to 5 (lowest).

The Price Growth Persistence average for the REI is 47.7, indicating it is slightly below average in terms of consistent price growth. Ascena Retail Group, Canadian National Railway and Ikonics showed above average persistence in price growth, while Louisiana-Pacific, Polymet, and US Steel are well below average. Three of the firms, Allele, UnitedHealth Group and Ascena Retail Group, in the REI Index showed a decline in the Price Growth Persistence measure.

Table 8: Value Line Measures

REI	Timeliness/ Performance	Safety	Technical	Price Stability	Price Growth Persistence
Allete (ALE)	3	2	4	95	35
Ascena Retail Group (ASNA)	3	3	1	45	70
Calumet (CLMT)	3	3	3	40	40
Canadian National Railway (CNI)	1	2	3	90	100
Cliffs Natural Resources (CLF)	3	5	1	5	40
Enbridge Energy Partners (EEP)	3	3	3	80	60
Ikonics (IKNX)	3	4	3	15	85
Louisiana-Pacific (LPX)	5	4	2	15	25
Polymet (PLM)	3	4	3	5	5
Sappi Limited (SPPJY)	*	*	*	*	*
United Health Group (UNH)	3	1	3	75	50
US Steel (X)	2	4	2	10	15
Average	2.9	3.2	2.5	43.2	47.7

Morningstar® Measures

Financial statements can be useful in predicting future earnings, dividends, cash flows, and a variety of other factors. They can be used as a way to anticipate future conditions, identify strengths and weaknesses, provide information about past performance, and forecast future performance. Financial ratios are a convenient way to summarize large quantities of financial data into a single number that can be used to measure performance. The use of ratio analysis allows you to put financial statement figures into perspective. However, the ratios by themselves are meaningless unless compared to some standard. Ratios are typically compared to an industry average or to the trend of the firm. A cross-sectional analysis compares the ratios of the firm to some standard at a specific point in time. The objective is to look for deviations from the norm. A time-series analysis compares the ratios of a single firm to itself over time. The objective is to look for trends to determine whether performance is improving or deteriorating.

Price ratios are often used to measure investors' expectations of future stock price performance.

They are typically compared to the industry average. A higher price ratio is generally considered better. A higher ratio typically means that investors' expect future performance will be better.

Price-to-Earnings

The Price-to-Earnings ratio is calculated by dividing of the firm's current stock price by its earnings per share. A high P/E ratio usually indicates investors are expecting high earnings growth in the future. As an investor, this is generally good news. However, a high P/E ratio can be the result of a high price or the result of low earnings per share. The average market P/E ratio is 20 to 25 times earnings. It is most useful to compare the ratio to the industry average or to the firm's historical P/E ratios. Although it is mathematically possible to have a negative P/E ratio, the ratio is generally not reported if earnings are negative.

The P/E ratios reported by Morningstar® show that Canadian National Railway, Ikonics and US Steel compare favorably to their industry averages. Ascena Retail Group and Sappi Limited have ratios that are significantly below their industry average. Ikonics and US Steel have P/E ratios that are significantly higher than the industry average. Although high P/E ratios are generally considered better, the Ikonics and US Steel ratios may be an indication that the stock is currently overpriced.

The P/E ratio for the REI is 25.69, which is comparable to the average market P/E ratio. When dropping Ikonics and US Steel ratios, the calculation is 22.45, which is still comparable to the average mark

Table 9: Price Ratio Measures

REI	Price-to-Earnings		Forward	PEG	PEG	Short	Shares
	Firm	Industry	Price/Earnings	Ratio	Payback	Ratio	Short % Change
Allete (ALE)	18.9	20.8	15.2	2.5	10.1	4.12	-60.56
Ascena Retail Group (ASNA)	15.7	25.4	16.6	0.8	7	4.34	1.50
Calumet (CLMT)	*	12.1	32.9	1.4	9.4	3.40	3.37
Canadian National Railway (CNI)	24.1	19.8	17.9	1.4	8.8	2.86	-5.67
Cliffs Natural Resources (CLF)	*	-9.2	11.7	0	*	5.51	-9.75
Enbridge Energy Partners (EEP)	40	40	27.5	4.5	15.5	9.25	-0.88
Ikonics (IKNX)	35.1	18.7	*	*	*	1.00	71.25
Louisiana-Pacific (LPX)	*	62.9	27.4	5.5	16.7	8.44	-4.26
Polymet (PLM)	*	-9.4	*	*	*	25.65	-1.73
Sappi Limited (SPPJY)	16.1	36	32.5	*	*	1.03	-9.21
United Health Group (UNH)	19.9	21.3	21.3	1.8	9.5	2.53	-5.88
US Steel (X)	35.7	27.3	8.8	1.1	6	3.20	-4.12
Average	25.69	22.14	20.68	2.11	10.38	5.94	-2.16

Forward Price-to-Earnings

The Forward Price-to-Earnings ratio is calculated by dividing the firm's current market price per share by the expected earnings per share. It is a way to compare current earnings to estimated future earnings. If earnings are expected to grow, the Forward P/E ratio will be lower than the current P/E ratio. Therefore, a low Forward P/E ratio relative to the current P/E ratio is considered better.

Of the ten companies that had data on Morningstar® for the current P/E and the Forward P/E ratios, all of them showed a lower Forward P/E ratio than their current P/E ratio. This indicates future earnings are expected to grow for these companies.

Price-to-Earnings-to-Growth (PEG)

The PEG ratio is calculated by dividing the P/E ratio by the growth rate of the firm's annual earnings per share. It is considered a better measure of expected price performance than the P/E ratio because it considers the firm's growth in earnings. A high P/E ratio may look attractive

to an investor, but when the firm's growth rate is considered, it may not look as appealing. A lower PEG ratio generally indicates the stock may be undervalued. However, the relationship between the PEG ratio and valuation varies from industry to industry.

A general rule of thumb is that a PEG ratio close to 1 is considered desirable. A PEG ratio equal to one indicates that the stock is fairly priced, a PEG ratio greater than one indicates the stock is overvalued, and a PEG ratio less than one indicates the stock is undervalued.

Louisiana-Pacific has a PEG ratio of 5.5, indicating it is overvalued. Allele, with a PEG ratio of 2.5, and Enbridge, with a PEG ratio of 4.5, also seem to be overvalued. Calumet, Canadian National Railway, and United Health Group are slightly overvalued, with PEG ratios ranging from 1.4 to 1.8. Ascena Retail Group and Cliffs Natural Resources are slightly undervalued, with PEG ratios ranging from 0.0 to 0.8.

PEG Payback Period

The PEG payback period is the amount of time it would take an investor to double their money in a stock investment. A longer PEG payback period indicates the investment is riskier. All of the PEG payback ratios calculated for the REI components appear to be in a reasonable range except for Enbridge with a PEG Payback of 15.5 and Louisiana-Pacific with a PEG Payback of 16.7. All of the PEG Payback periods for the firms, except Canadian National Railway and Louisiana-Pacific, increased from the last study period, indicating an increased level of risk to investors.

Short Interest Ratio

Short selling allows an investor to profit from declining stock values. A short sale is the opposite of taking a long position in stocks. When an investor buys a stock with the hope that the price will rise, they are taking a long position. If an investor feels that the price of a stock is going to fall, they can take a short position. In a short sale the investor borrows the stock from a broker and sells the stock at the current market price. If the price declines, the investor can cover their position by buying the stock in the open market at the lower price, repaying the broker, and realizing a gain.

Short interest is the total number of shares of stock that have been sold short by investors but have not yet been covered. Short interest is an indicator of investor sentiment in the market for a specific stock. A large change in a stock's short interest from month to month can be a very telling indicator of investor sentiment. If short interest increases, it means there are more investors who believe the stock price will decline.

The short interest ratio is the number of shares sold short (short interest) divided by the average daily volume. The ratio reflects the number of days it would take short sellers to cover their positions. The higher the ratio, the longer it will take to buy back the borrowed shares. A short

interest ratio of five or greater is considered a bearish signal and a ratio below five would be considered a bullish signal.

Four of the firms in the REI Index have short interest ratios ranging from 5.51 to 25.65, indicating investors are not very confident the stock price will increase over the short term. Eight of the firms in the REI have ratios below 5.0, indicating investors are bullish on these stocks. The average short interest ratio for the REI Index is 5.94, a 2.31 decrease since the last report, still indicating a bearish sentiment by investors, but moving in the direction of a bullish signal.

The percentage change in short interest shows a significant change in investor sentiment for Allele in a positive direction, indicating many investors believe the stock price will rise in the short term. Ikonics showed an increase of 71.25% in short interest indicating many investors believe the stock is overvalued and expect values to decline. The percentage change in short interest for the remainder of the stocks in the REI was relatively small, with eight of the firms showing a slight improvement in investor sentiment and two firms showing a lack of investor confidence.

Northland Business Confidence Survey



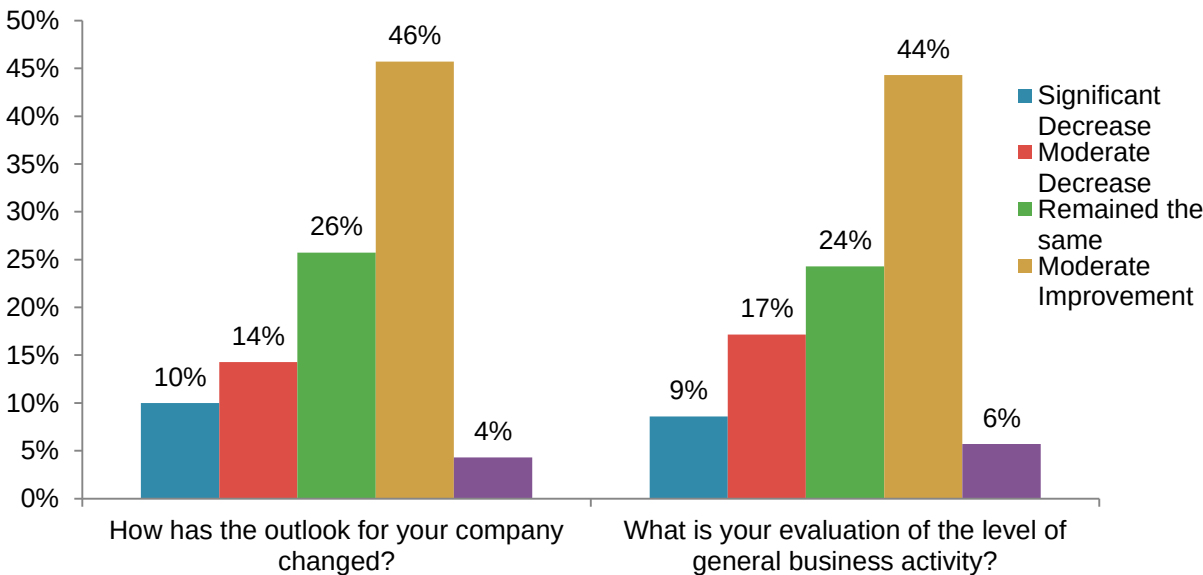
Jennifer Pilon, Assistant Professor, School of Business and Technology, College of St. Scholastica. Bob Hoffman, Assistant Professor, School of Business and Technology, College of St. Scholastica. Student Researchers: Sam Hoffman, Eric Fryc, Cassidy Jayne, Kailee Ogden.

Northland Business Confidence Survey: Findings and Analysis

The region’s business confidence continues to sit at a positive level. The Northland Business Confidence Index registered a reading of 108, where any reading above 100 indicates optimism. This was a small decline from the fall reading of 110 and spring reading of 111. While business activity over the previous six months was positive, it failed to meet the expectations businesses had reported in the last survey. This theme has been present since the survey’s inception, as businesses have consistently reported results lower than their previous expectations.

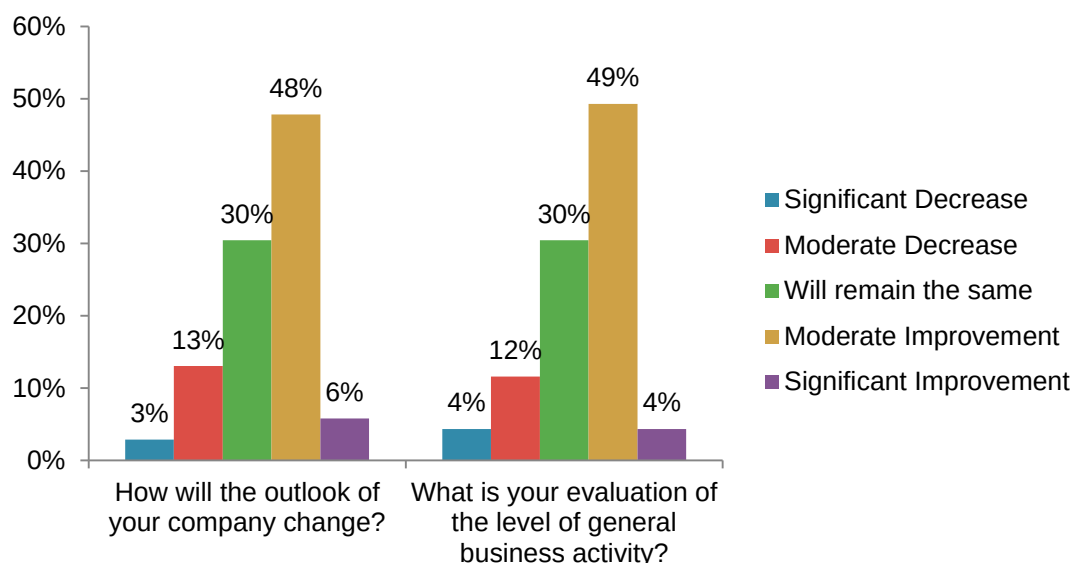
During the previous six months, 50 percent of businesses reported an improvement in their company outlook, and 50 percent reported an improved assessment of general business activity, as shown below in Table 10. However, a larger than expected proportion of businesses reported a decrease in both outlook and general business activity. Approximately 14 percent of businesses reported a moderate decline in their company outlook, while another 10 percent reported a significant decline. Moderate declines in general business activity occurred for 17 percent of businesses, and significant declines were reported by an additional 9 percent.

Table 10: General Business Conditions (Previous Six Months)



As shown in Table 11 below, there was a wider consensus among businesses that conditions would improve over the next six months. 54 percent of businesses projected an increase in company outlook, while a mere 16 percent anticipate a decline. General business activity projections match closely, with 53 percent projecting an uptick, and 16 percent expecting a decline.

Table 11: General Business Conditions (Next Six Months)



Turning to specific business indicators, the overall results are largely positive, although more variance exists than businesses expected at the time of the last survey. Average hours worked outperformed expectations and increased moderately for over a quarter of businesses and significantly for another 13 percent. In the coming six months, 36 percent project an increase in average hours worked, continuing a relatively strong trend, while 15 percent expect a decrease.

The number of employees fell moderately in 26 percent of businesses, a much higher proportion than expected. 23 percent of businesses reported an increase in the number of employees, the vast majority of which were moderate. The next six months are expected to be better, with only 13 percent of respondents expecting a decrease in their number of employees and 24 percent reporting an increase. Over 60 percent of respondents do not expect their number of employees to change.

Selling prices were mostly stagnant with approximately 65 percent of businesses reporting no change. For those that reported changes, the majority indicated price increases most frequently. However, a total of 35 percent of respondents anticipate a rise in prices in the coming six months. This suggests that, while the region may not be experiencing the levels of inflation desired by financial regulators and authorities, the region is avoiding most of the deflationary pressures that other areas of the country have recently encountered. Capital expenditures were very strong over the past six months, with over 30 percent of businesses reporting moderate increases, and 10 percent reporting significant increases. The next six months are not expected

to be quite as strong, with slightly less than 30 percent of businesses projecting any sort of increase. 16 percent expect a decline in their capital expenditures, the only indicator businesses have consistently reported as higher than expected.

Sales revenue and profits were mostly positive but experienced the most variance among the indicators. Roughly 45 percent of businesses reported an increase in sales revenue, but a total of 26 percent reported some level of decrease. These sales did not appear to translate into profits for all businesses, as less than 40 percent reported an increase in profits. Over 30 percent reported a decline. The upcoming six months are expected to bring much stronger gains in sales and profits. Approximately 47 percent of respondents expect their sales revenue to moderately increase, while an additional 12 percent expect them to increase significantly. Moderate increases in profits are expected by 38 percent of businesses and significant increases by an additional 10 percent.

Table 12: Business Indicators (Previous Six Months)

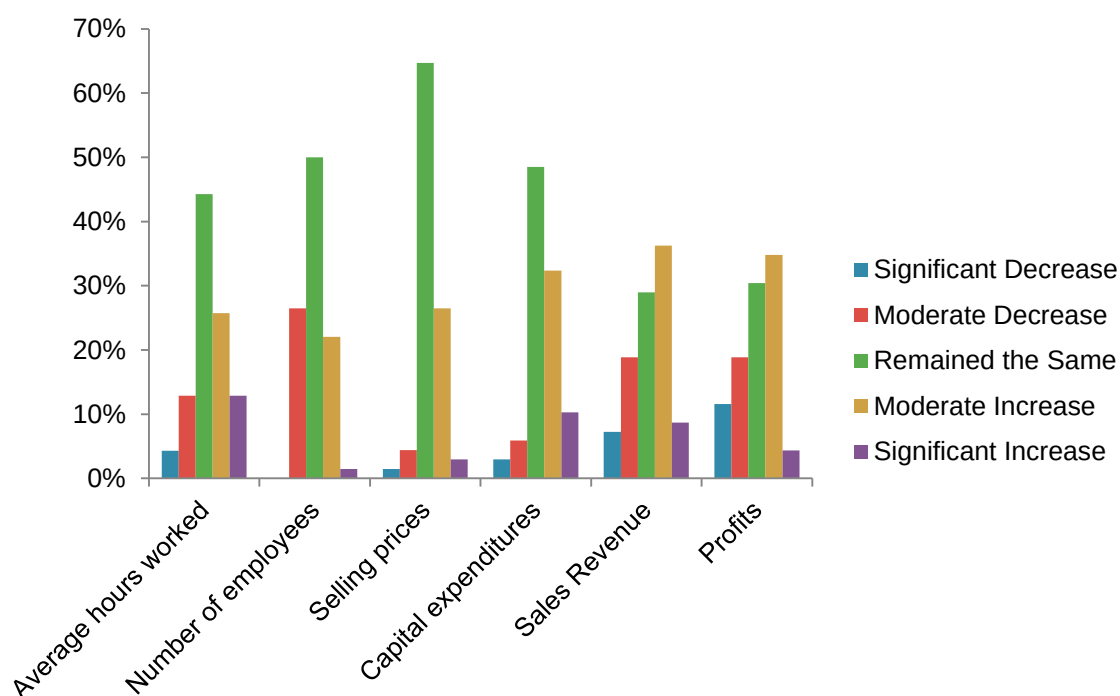
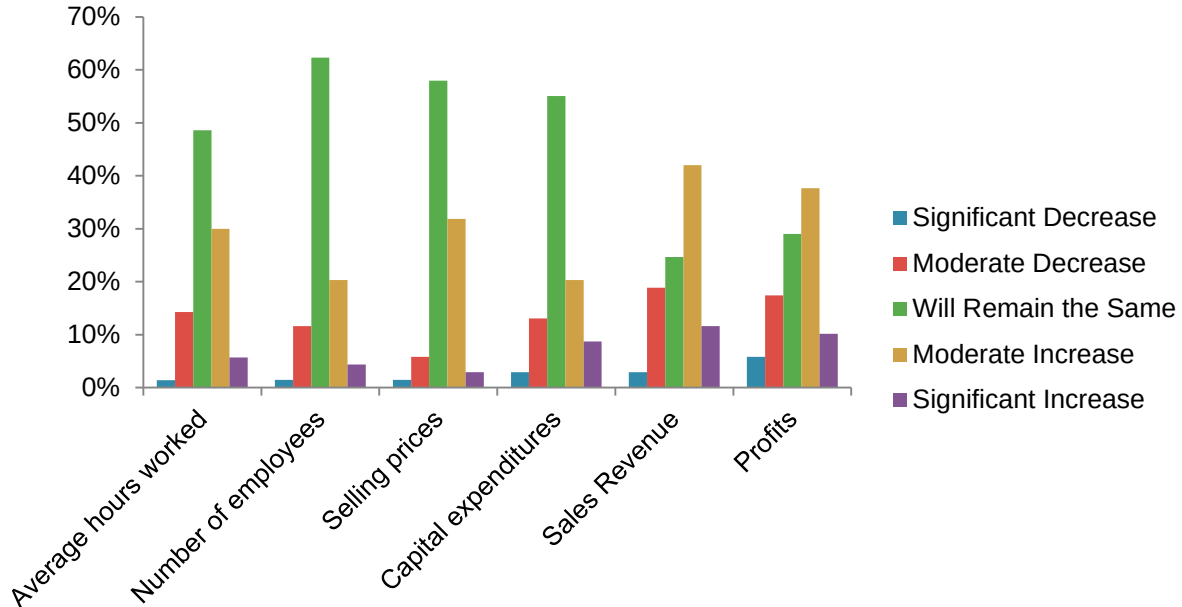
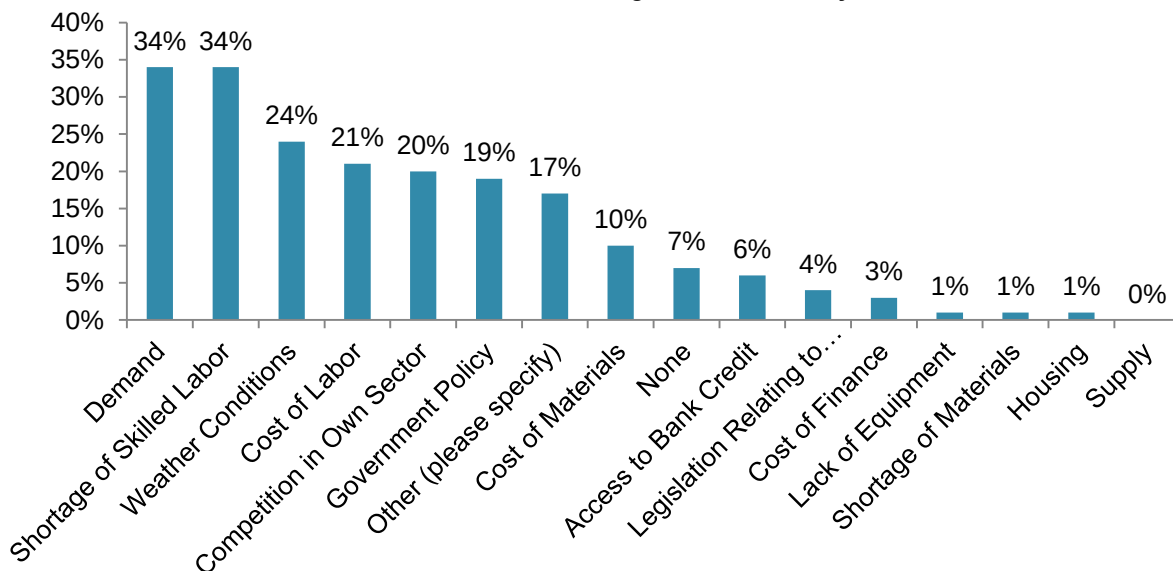


Table 13: Business Indicators (Next Six Months)



When prompted to select the three factors most limiting business activity in the region, demand and skilled labor tied as the frontrunners at 34 percent each, as shown in Table 14 below. Weather conditions (24 percent) and cost of labor (20 percent) were also reported as top inhibitors. Shortage of skilled labor seems to be a growing concern among businesses; the percentage has steadily increased from 19 percent a year ago, and 25 percent six months ago, to 34 percent. Cost of labor appears to be less of a concern, experiencing a notable decline of 13 percent since the survey was conducted last fall.

Table 14: Factors Limiting Business Activity

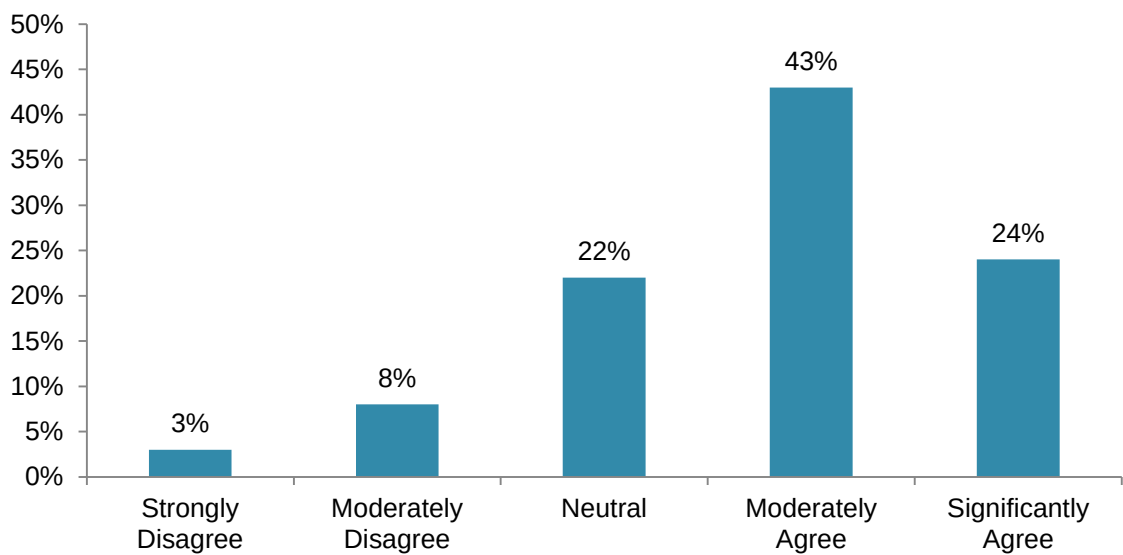


Special Report: Housing

This report’s special focus is housing. Respondents were asked to answer three questions related to housing. The first question asked whether or not the respondent believed the region has a lack of housing. If the respondent believed the region indeed had a lack of housing, they were asked if the shortage served as a barrier to economic growth. The final question asked of the respondents was to evaluate the effect of the region’s housing over the next five years through a variety of economic indicators.

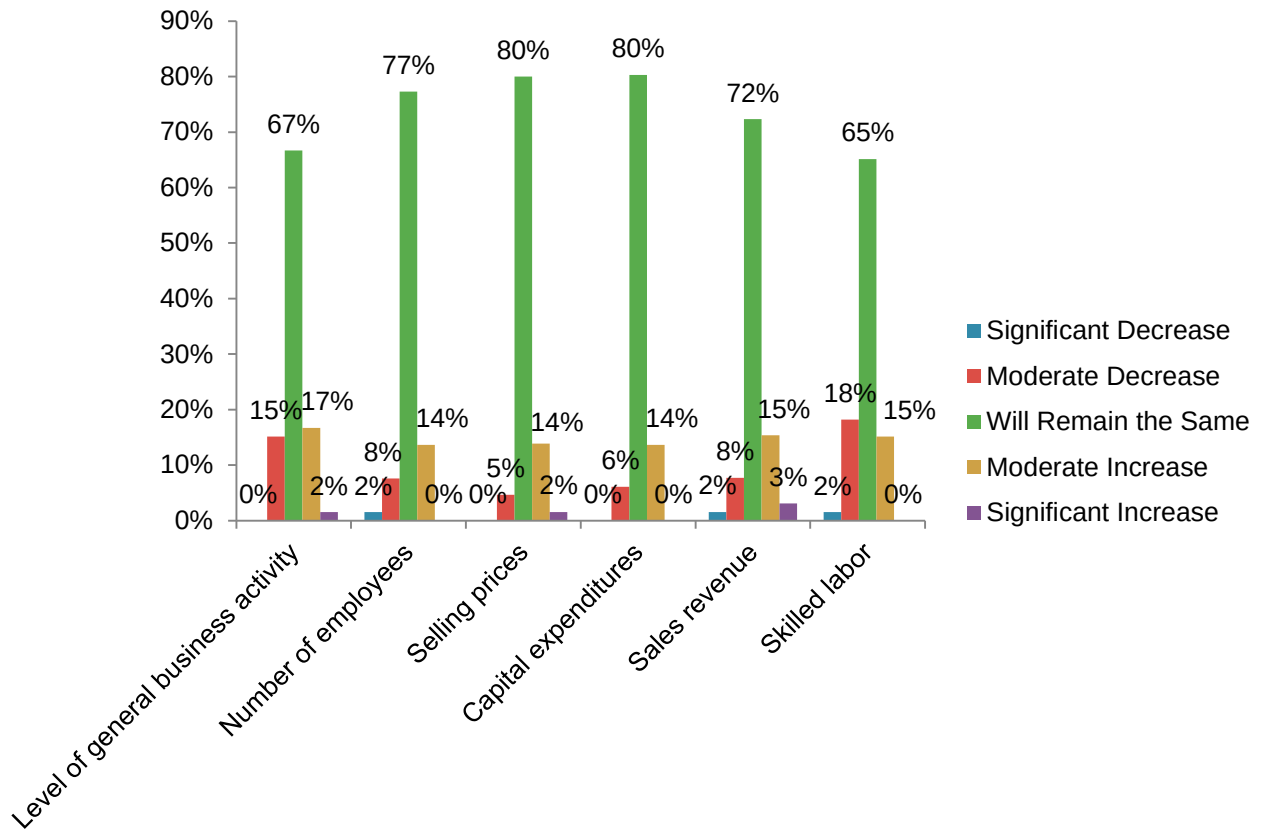
Respondents were split almost evenly over whether the region has a lack of housing. 51 percent reported a shortage, whereas 49 percent did not. For those who recognized a lack of housing, 67 percent saw it as a barrier to economic growth, as shown in Table 15 below.

Table 15: Response to: “Do you Agree with the Statement that a Lack of Housing is a Barrier to Economic Growth in the Region?”



The majority of respondents believe the housing market will have not affect the indicators listed below over the next five years. However, it is worth noting that 14 percent reported expecting an increase in the number of employees, while 10 percent expect a reduction. 18 percent anticipate an increase in sales revenue, while 9 percent expect a decrease. Although the anticipated impacts reported were generally positive, 20 percent of businesses predict a reduction in skilled labor.

Table 16: Response to: “What Impact do you Believe the Region’s Housing Will Have on your Business’s Following Indicators Over the Next Five Years?”



Northland Business Confidence Survey Methodology

The Northland Business Confidence Survey was constructed using the following seven questions:

1. What sector is your business in?
2. What is your number of employees?
3. Excluding season changes, evaluate the business indicators [Average Hours Worked, Number of Employees, Selling Prices, Capital Expenditures, Sales Revenue, Profits] relating to the current state of your business relative to the past six months?
4. Excluding normal seasonal changes, evaluate the business indicators [Average Hours Worked, Number of Employees, Selling Prices, Capital Expenditures, Sales Revenue, Profits] relating to your company for the next six months?
5. (2 questions examining general business conditions in previous six months): How has the outlook for your company changed? What is your evaluation of the level of general business activity?
6. (2 questions examining general business conditions in future six months): How will the outlook of your company change? What is your evaluation of the level of general business activity?
7. What factors are limiting your ability to increase business activity? Please check up to three.

The questions were created by the CSS Economic Research Team after reviewing numerous business confidence surveys administered by a wide variety of institutions to determine the basic framework for manufacturing such a survey. It was determined that the indicators selected were the most important and valuable factors that can be used to gauge business activity.

The survey was distributed via email to the following chambers in late September and early October: Cable Chamber of Commerce; Chisholm Chamber of Commerce; Cloquet Chamber of Commerce; Duluth Chamber of Commerce; Hayward Chamber of Commerce, Hermantown Chamber of Commerce; Hibbing Chamber of Commerce; Rice Lake Chamber of Commerce; Superior Chamber of Commerce; and the Two Harbors Chamber of Commerce.

Construction of Index:

All questions have five possible answers: significantly decrease, moderately decrease, no change, moderately increase, and significantly increase. Each option is numbered 1-5 from least pessimistic to most optimistic. For example, a 5 would indicate a significant increase and a 2 would indicate a moderate decrease. A mean is determined for every question based on this

system. The mean of each question is then added together and divided by the total number of questions to derive the mean of the survey as a whole. This number is then divided by 3 since 3 would indicate no change or complete neutrality. The number derived from this equation is then multiplied by 100 to give us an index reading with 100 equalling complete neutrality.

Appendix

Consumer Survey Questions: Phone and Email

Q1: "First, we would like to know how you are doing financially these days. Would you say that you (and your family living there) are currently better off or worse off financially than you were a year ago?"

Better now About the same Worse now Do not know

Q2: "Now looking ahead, do you think that one year from now you (and your family living there) will be better off financially, worse off, or just about the same as now?"

Will be better off About the same Will be worse off Do not know

Q3: "Now turning to business conditions in the country as a whole, do you think that during the next twelve months we'll have good times financially, bad times, or what?"

Good Bad Good and bad Do not know

Q4: "Looking ahead, which would you say is more likely during the next five years or so - that in the country as a whole we'll have continuous good times, or bad times with periods of widespread unemployment?"

Good Bad Do not know

Q5: "Generally speaking, do you think now is a good or bad time for people to buy major household items, such as furniture, refrigerator, TV and things like that?"

Good Bad Good and bad Do not know

Housing Questions: Phone Survey

Q6: "Does your household currently own or rent the house in which you live in?"

Own Rent

Q7: "Thinking about houses in your town in general, how would you rate the quality and quantity of homes in your town?"

Mostly satisfactory Mostly dissatisfactory Not sure

Q8: "In your opinion, which of the following measures would be most effective in improving the quality and quantity of homes in your town? Choose all that apply."

- Government incentives to homeowners and builders to improve housing
- Government enforcement of property maintenance requirements on property owners

- Reduction in government red tape (e.g., permits) related to home improvement projects
- Government buyout and redevelopment of existing properties
- Other (specify)

Housing Questions: Email Survey

Q6: "Does your household currently own or rent the house in which you live in?"

Own

Rent

Other

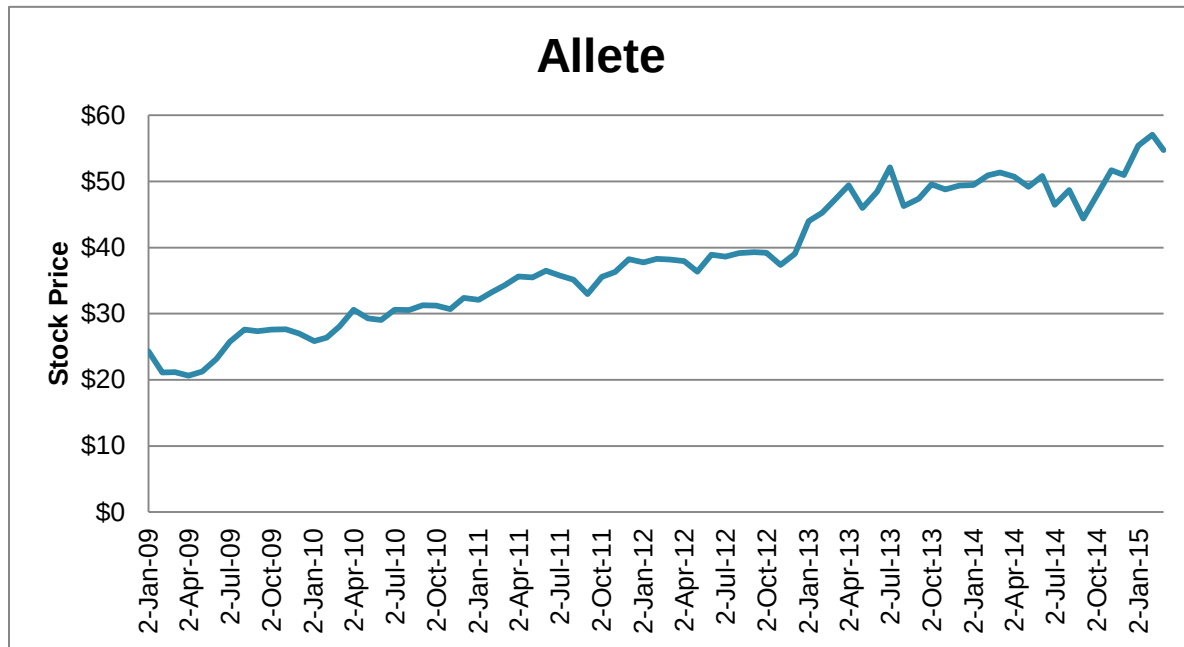
Q7: "Thinking about houses in your town in general, how would you rate the quality and quantity of homes in your town?"

Mostly satisfactory Somewhat satisfactory Somewhat dissatisfactory Mostly dissatisfactory Not sure

Q8: "In your opinion, which of the following measures would be most effective in improving the quality and quantity of homes in your town? Choose all that apply."

- Lower property taxes
- Government rebates or other financial incentives to improve parts of property (e.g., energy efficient heating system rebate)
- Government incentives for rehabilitation and renovation of existing homes (e.g., home rehabilitation loans, grants, or income tax credit to 20% of qualified home renovation costs)
- Government incentives for building new homes (e.g., new home loan programs for homeowners or tax credits for builders)
- Government enforcement of property maintenance requirements on property owners (e.g., cutting down the number and cost of permits required for home improvement)
- Reduction in government red tape (e.g., permits) related to home improvement projects (e.g., cutting down the number and cost of permits required for home improvement)
- Demolition of older houses
- Combining of smaller lots to allow construction of larger homes
- Other (specify)

Stock and Historical Return Information



Company: **Allete Inc.**

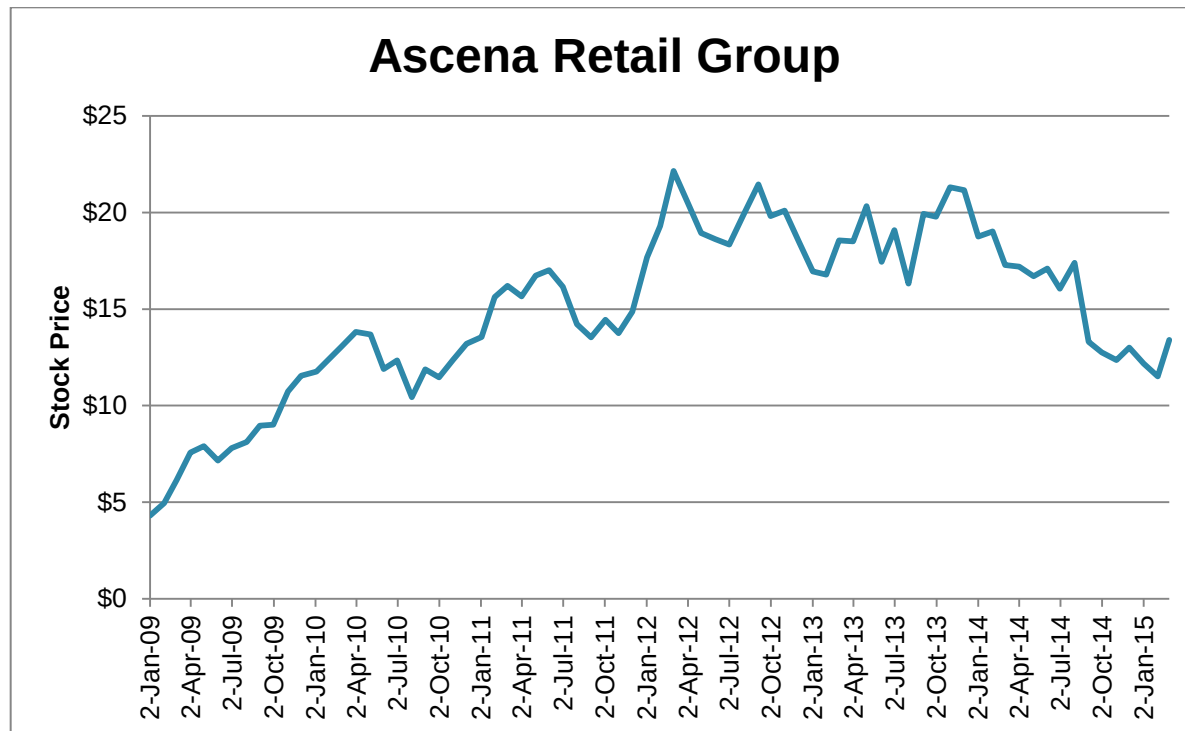
Ticker: ALE

Exchange: NYSE

Market Cap: \$18.9 Billion

Industry: Utilities- Regulated Electric

Description: Generates, and distributes electric power in the United States. The Company's business segments are comprised of Regulated Operations and Investments and Other.



Company: **Ascena Retail Group Inc.**

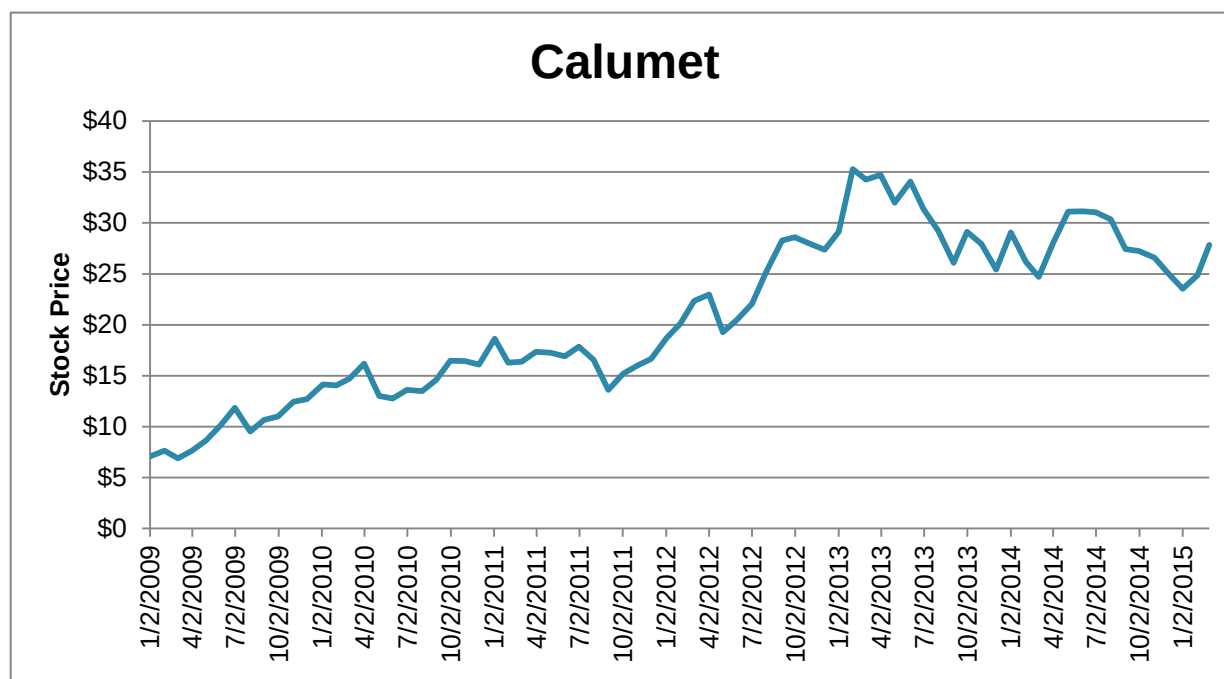
Ticker: ASNA

Exchange: NASDAQ

Market Cap: \$2.16B

Industry: Apparel Stores

Description: Ascena Retail Group, Inc., through its subsidiaries operates as a specialty retailer of apparel for women and tween girls. The company offers apparel, accessories, footwear, and lifestyle products, such as bedroom furnishings and electronics.



Company: **Calumet Specialty Products Partners LP**

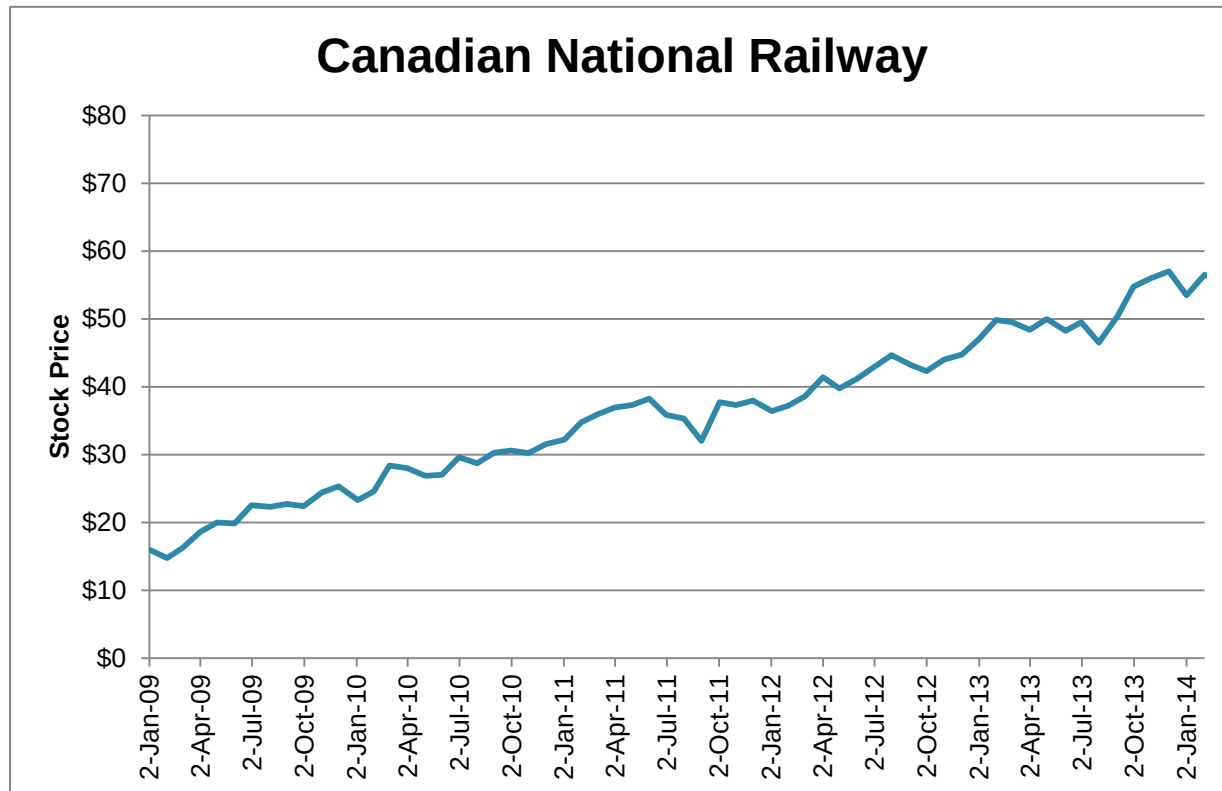
Ticker: CL

Exchange: NASDAQ

Market Cap: \$1.93B

Industry: Energy- Oil & Gas Refining &

Description: Calumet Specialty Products Partners LP is a producer of hydrocarbon products in North America. It operates in two segments: specialty products and fuel products; and owns plants located in Louisiana, Wisconsin, Montana, Texas, Pennsylvania and New Jersey.



Company: **Canadian National Railway Company**

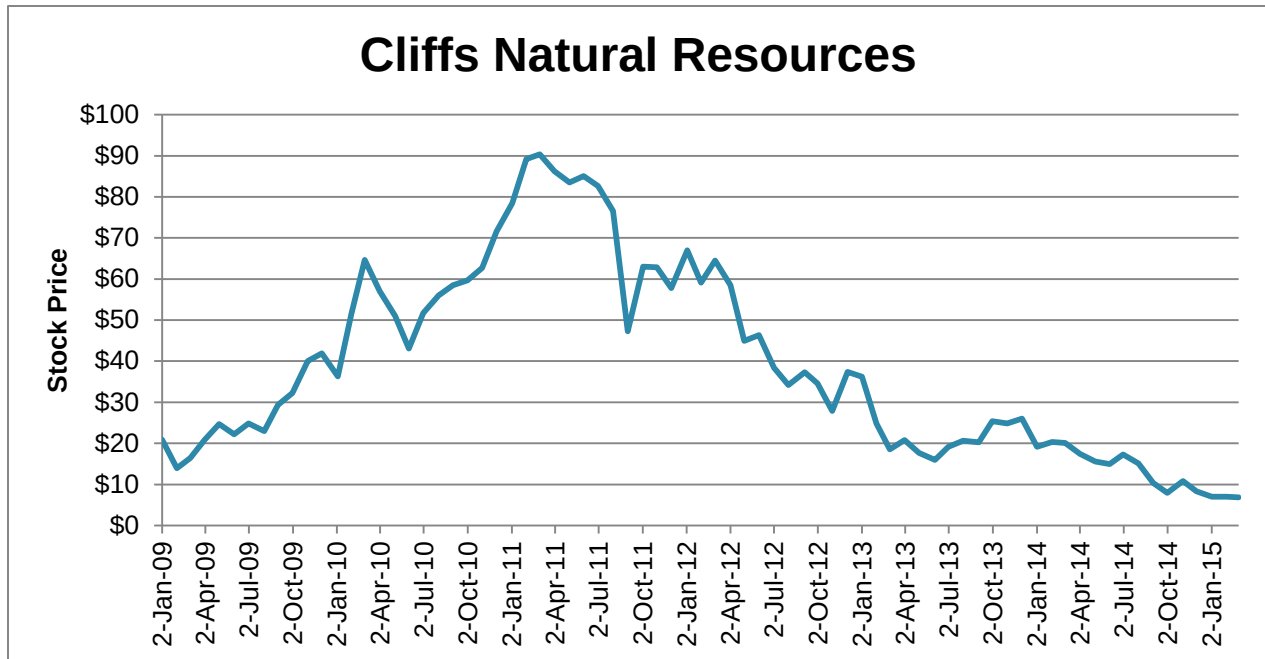
Ticker: CNI

Exchange: NYSE

Market Cap: \$55.92B

Industry: Railroads

Description: Canadian National Railway Co is engaged in the rail and related transportation business. It transports goods for business sectors, ranging from resource products to manufactured products to consumer goods.



Company: **Cliffs Natural Resources**

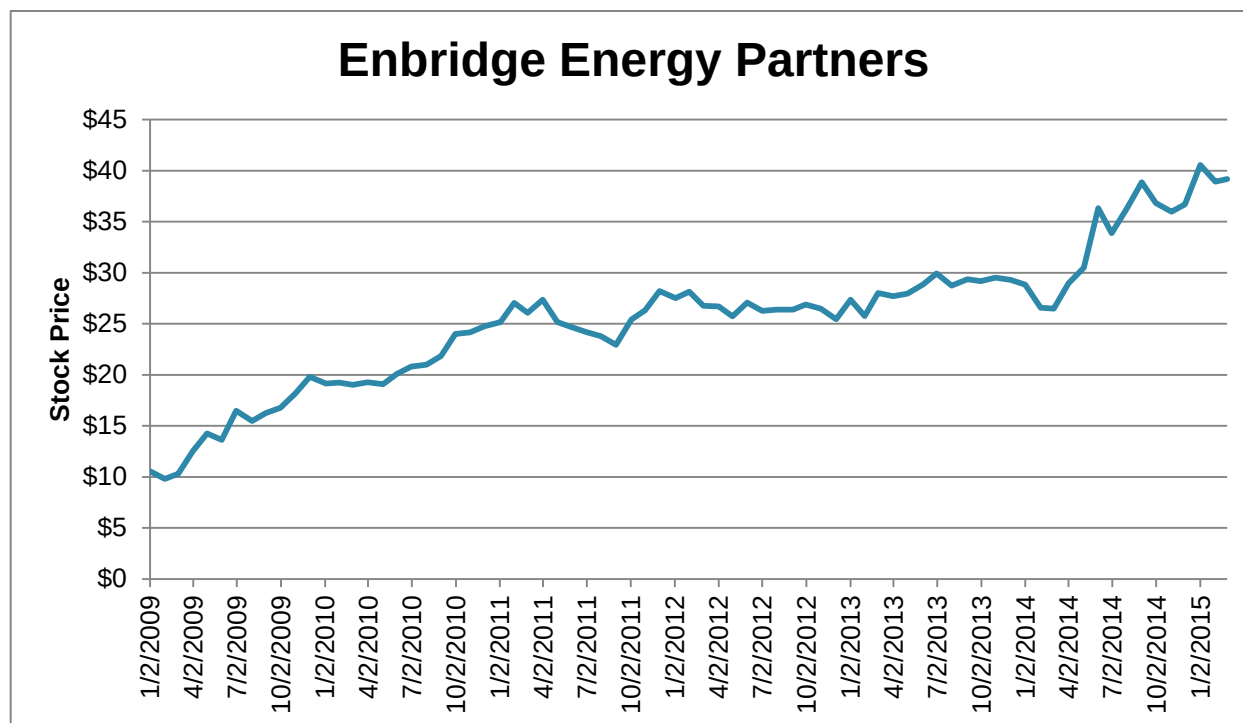
Ticker: CLF

Exchange: NYSE

Market Cap: \$1.05 B

Industry: Industrial Metals & Minerals

Description: Cliffs Natural Resources Inc. is a mining & natural resources company. It produces iron ore pellets, fines and lump ore, and metallurgical coal.



Company: **Enbridge**

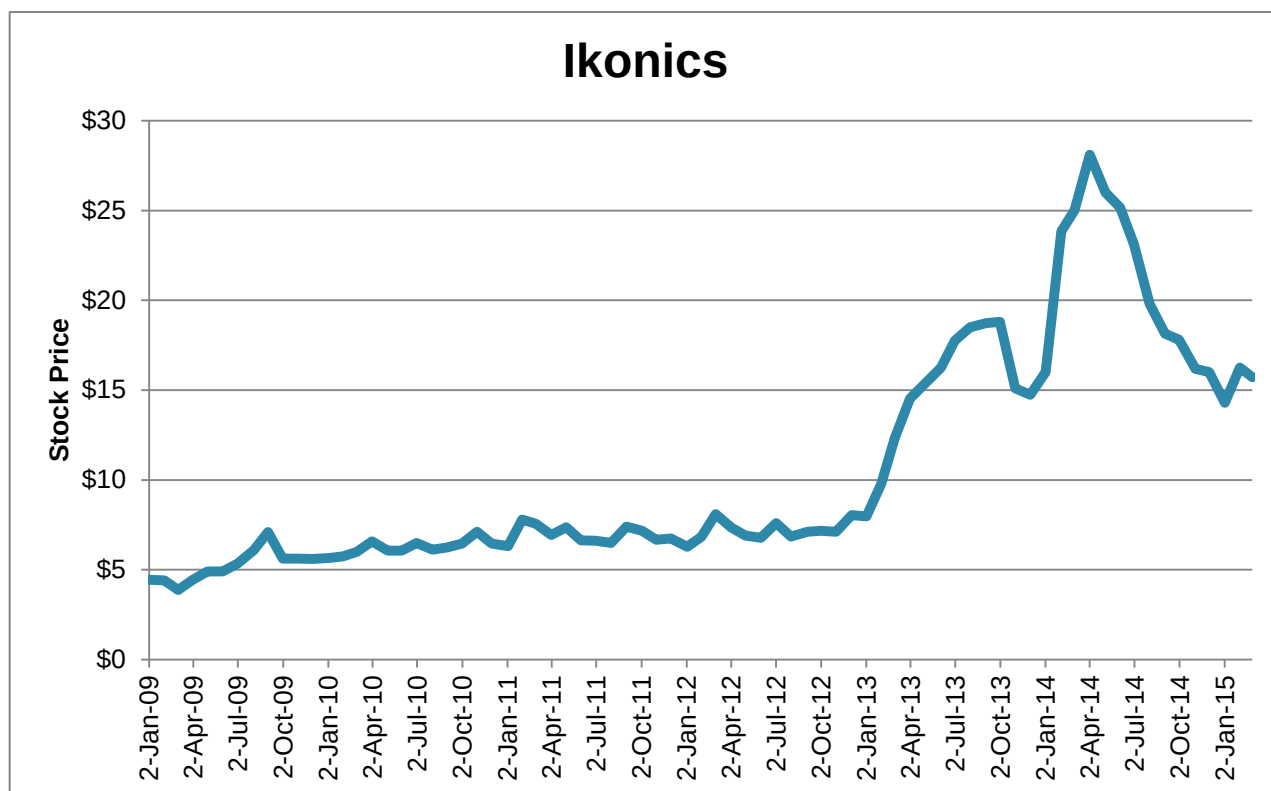
Ticker: EEP

Exchange: NYSE

Market Cap: \$12.95B

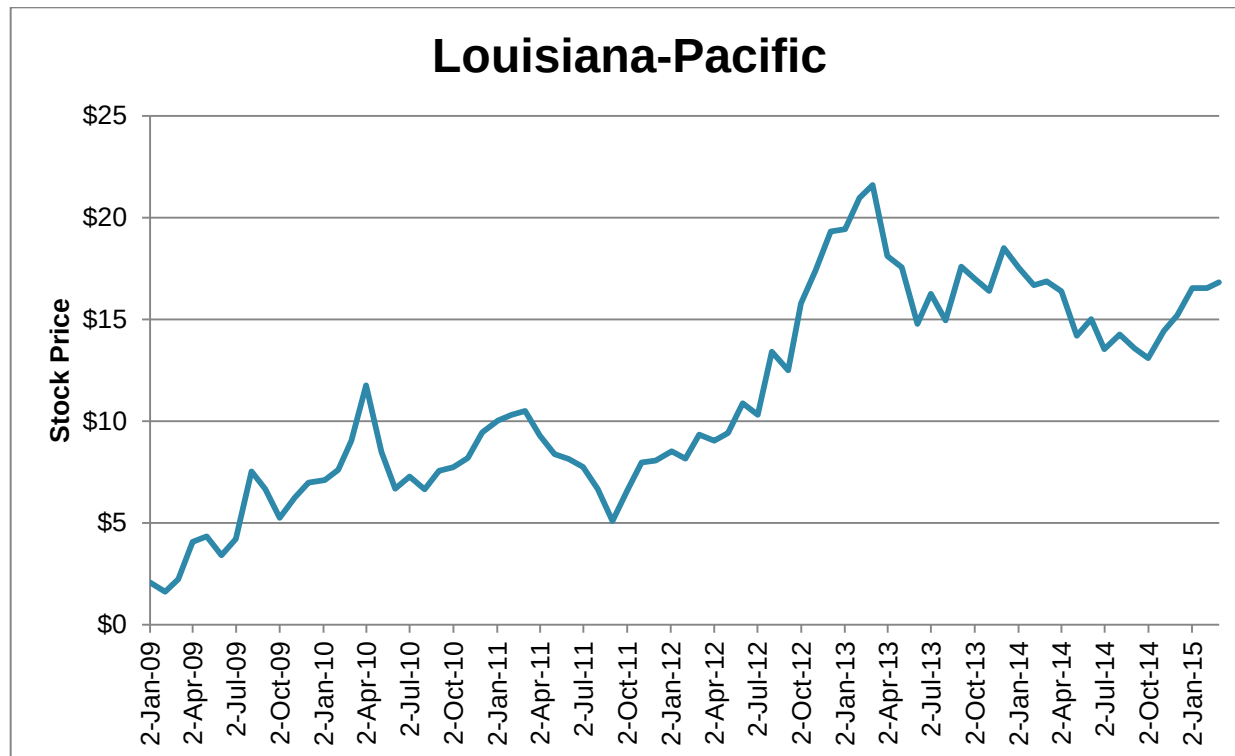
Industry: Energy- Oil & Gas Midstream

Description: Enbridge Energy Partners LP is engaged in the ownership and operation of crude oil and liquid petroleum transportation and storage assets, natural gas gathering, treating, processing, and transmission assets and marketing assets in USA.



Company: **Ikonics**
 Ticker: **IKNX**
 Exchange: **NASDAQ**
 Market Cap: **\$31.74M**
 Industry: **Specialty Chemicals**

Description: IKONICS Corporation is engaged in development, manufacturing and selling of photosensitive liquids ("emulsions") and films for the screen printing and awards and recognition industries.



Company: **Louisiana- Pacific**

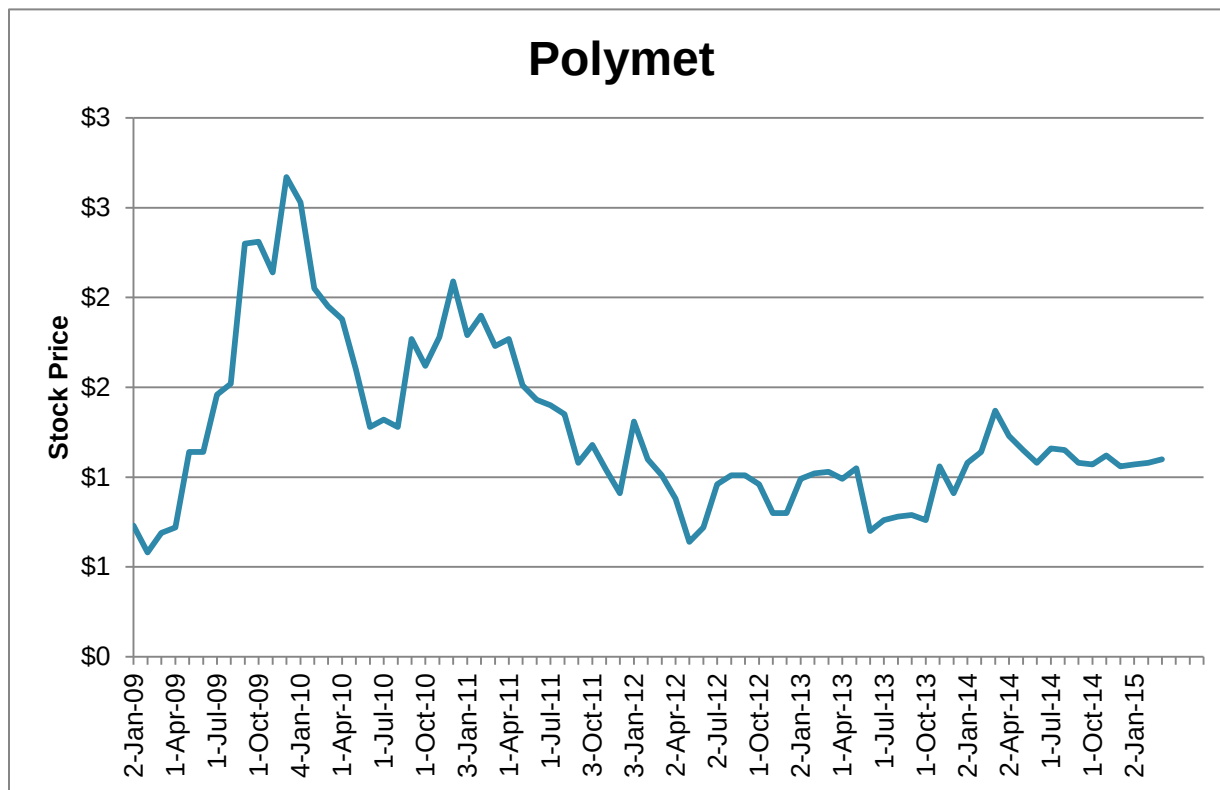
Ticker: LPX

Exchange: NYSE

Market Cap: \$2.38B

Industry: Building Materials

Description: Louisiana-Pacific Corp. is engaged in the manufacture of building products. It operates in four segments: North America Oriented Strand Board (OSB); Siding; Engineered Wood Products (EWP); and South America.



Company: **Polymet**

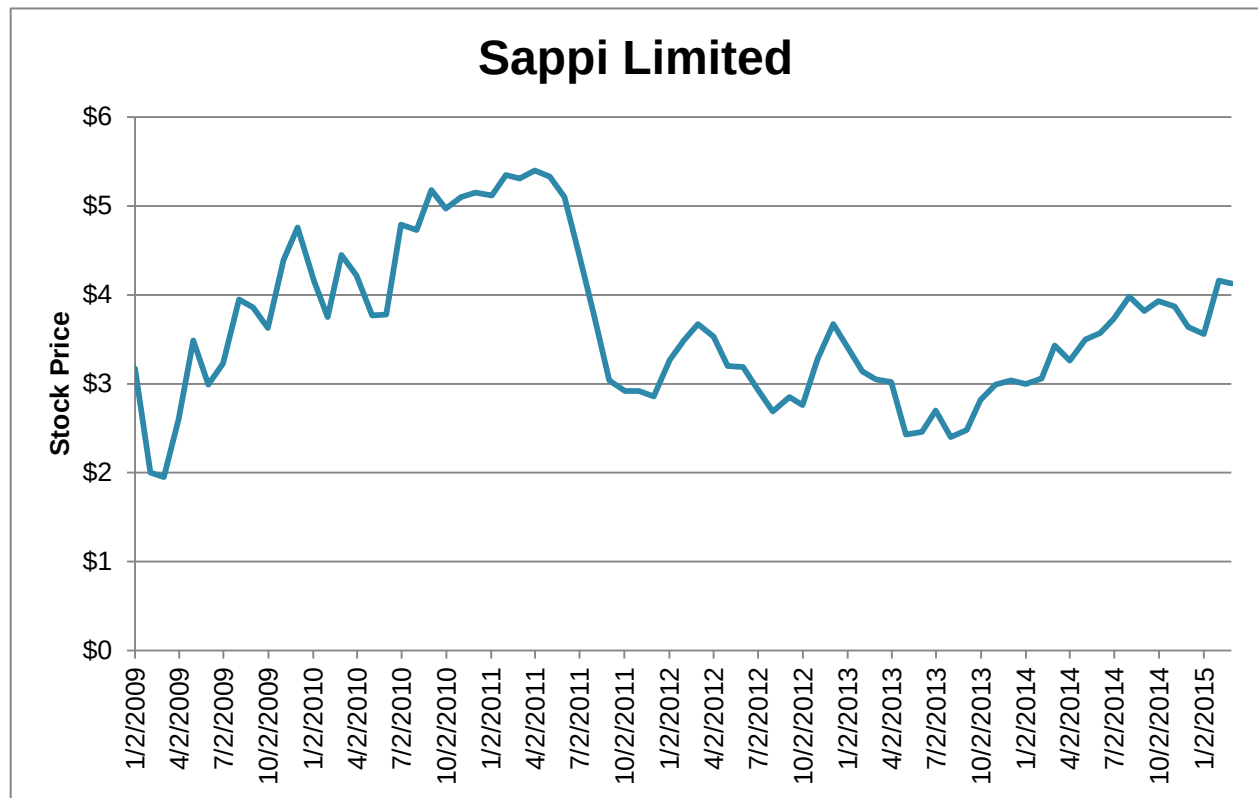
Ticker: PLM

Exchange: NYSE

Market Cap: \$303.39M

Industry: Industrial Metals & Minerals

Description: Canadian mine development company focused on the NorthMet copper-nickel-precious metals project through its wholly owned subsidiary, PolyMet Mining, Inc., a Minnesota corporation.



Company: **Sappi Limited**

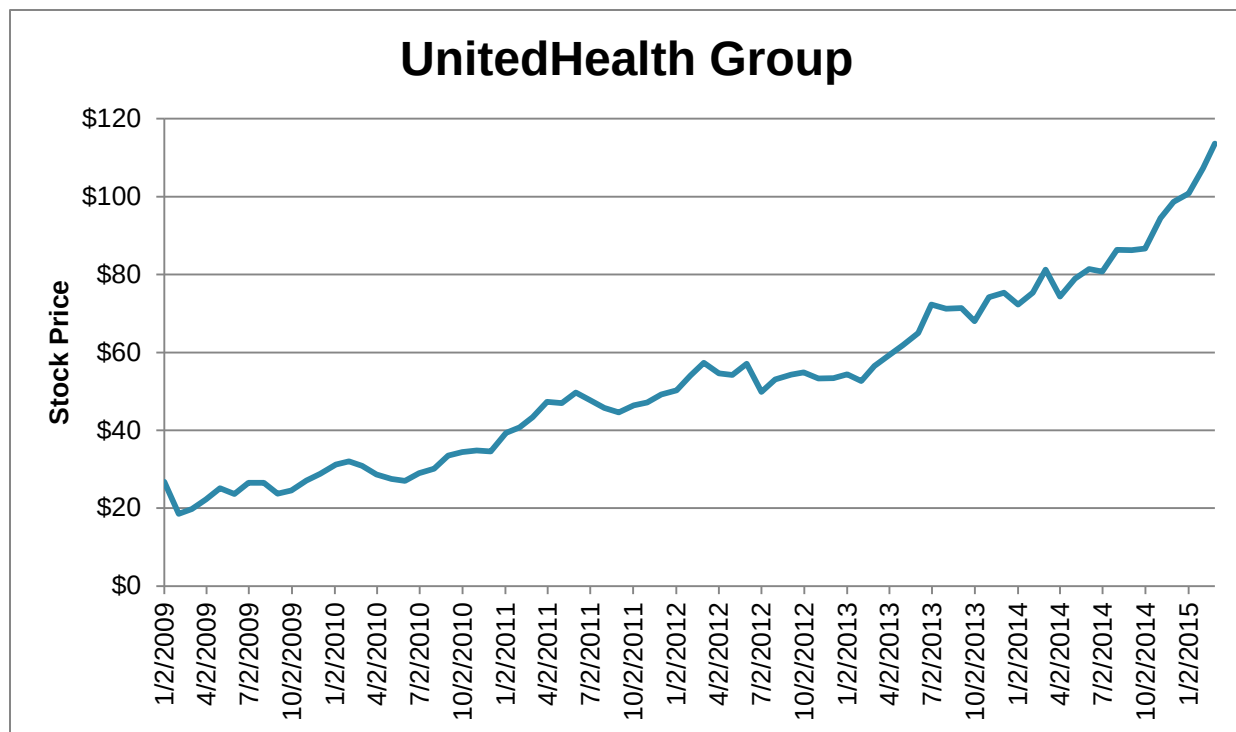
Ticker: SPPJY

Exchange: OTC PK

Market Cap: \$2.2B

Industry: Paper & Paper Products

Description: Sappi, Ltd. is a paper and pulp group. The Company is a producer of coated fine paper used in books, brochures, magazines, catalogues and many other print applications.



Company: **UnitedHealth Group**

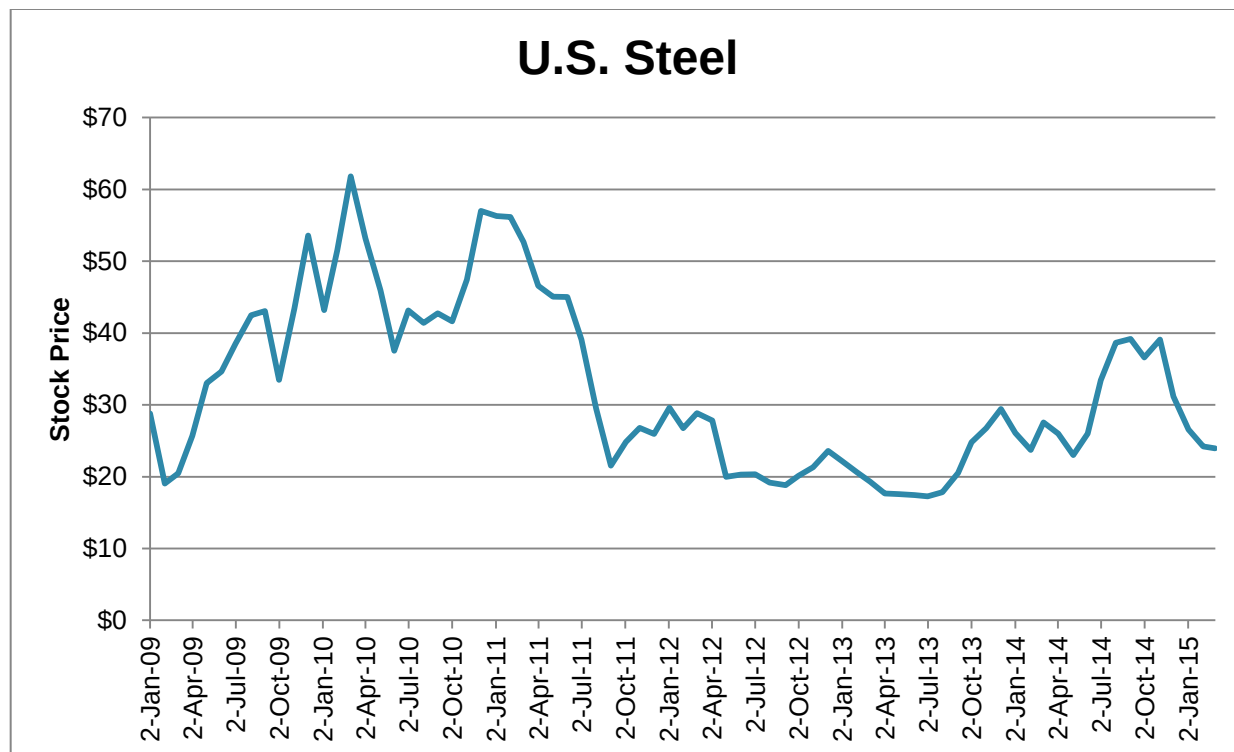
Ticker: UNH

Exchange: NYSE

Market Cap: \$108.4B

Industry: Health Care Plans

Description: UnitedHealth Group Inc. designs products, provides services and applies technologies that improve access to health and well-being services, simplify the health care experience and make health care more affordable.



Company: **US Steel**

Ticker: X

Exchange: NYSE

Market Cap: \$3.49B

Industry: Basic Materials- Steel

Description: United States Steel Corporation is an integrated steel producer of flat-rolled and tubular products with major production operations in North America and Europe.

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