



2015 Annual Report

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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 October 25 forum included the special topic of the Skills Gap. The information below summarizes the research findings.

Economic Indicators Affecting REIF Region

UMD was tasked with the responsibility of collecting and reporting on the relative 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- and region-level performance to state and national values. 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, the Bureau of Labor Statistics, 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 five years and had returned to a similar level as was seen about a decade ago as of the time of writing. This indicates that the region has largely recovered (in terms of unemployment) from the losses seen during the height of the Great Recession of 2008-2009. Meanwhile, there has been little to no change in employment growth from 2005 to 2013, and the population throughout the region has increased by approximately just 1% from 2000 to 2014. Finally, the percentage of the population in poverty throughout the REIF region remained higher than the average for the states of Minnesota and Wisconsin, an ongoing trend that should be monitored.

Also included are four indicators related to the topic of the skills gap: an Occupational Demand Forecast, Education Level, Labor Force, and Employment Location Quotient. Based on the results of these indicators, it was found that the REIF Region had a declining labor force since 2009; a high concentration of employment in Trade, Transport, and Utilities; Education and Health Services; and Leisure and Hospitality; almost three times the two states' level of employment in Mining and natural resources; a significantly lower percentage of bachelor's degree holders; and that the greatest demand for occupations in the next five years will be in service industries, especially within Healthcare.

Consumer Confidence Indicators: Predicting the Business Cycle

Consumer confidence indicators are useful tools in predicting the future economic conditions in a region. In order to construct these indicators, in fall 2015, the UWS research team surveyed randomly chosen households in 8 Minnesota and 7 Wisconsin counties as well as the previous REIF participants. Student researchers surveyed the random samples via telephone interviews,

while e-mail surveys were used for prior REIF participants. Completed surveys have sample sizes of 107 for the random sample and 117 for the REIF sample.

Using survey responses, three indices were computed: Index of Consumer Sentiment (ICS), Index of Current Conditions (ICC), and Index of Consumer Expectations (ICE). According to the random, phone survey results, all three indices declined between spring 2015 and fall 2015. This is the first negative trend in these indices since REIF consumer confidence indicators were initiated in fall 2013. According to the non-random, REIF participants' survey results, all three indices declined for the second continuous term-period in which we have experienced a downward trend. Given that both, random and non-random samples show a downward trend, this suggests that both the general population and the REIF participants, e.g., local government, business people, and academics, are growing pessimistic in their economic outlook and anticipate an economic slowdown for the region.

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 10/01/2015.

Of note, the Regional Equity Index (REI) underperforms the benchmark index and investors are more bearish than bullish on the majority of the stocks. The REI showed a large loss (-20.42%) year-to-date, the overall performance of the index is significantly below average when compared to the benchmark index return of -7.31%. The Value Line[®] Measures indicate that the stocks in the REI are consistent with market expectations of future performance or expected to perform slightly worse. Other measures of performance tend to indicate negative expectations, such as the short-ratio, while some signals are mixed.

Northland Business Confidence Survey

Since the inception of the REIF, St. Scholastica students have been in charge of creating, distributing, and analyzing business confidence in the region. Parameters for eligibility include any business with 1 or more employees and whose primary business activity occurs in the specified 15 county region in Northeastern Minnesota and Northwestern Wisconsin. Industry sectors vary greatly, including agriculture, construction, manufacturing, retail trade, wholesale trade, professional services, financial services, education, health services, real estate, government, nonprofit, leisure and hospitality, transportation and warehousing, and aviation. All respondents answer anonymously to protect the privacy of each business. In addition to the survey, St.

Scholastica students created an index, the Northland Business Confidence Index¹, to gauge overall business confidence and compare it to prior reports.

¹ The Northland Business Confidence “NBC” Index method of calculation: 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 equaling complete neutrality.

Overview

National Bank of Commerce, in cooperation with the College of St. Scholastica, University of Minnesota-Duluth and University of Wisconsin-Superior, initiated a long-term study of our area's economic indicators. The research is ongoing and focuses 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.

Project Goals

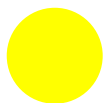
- Support business owners in their business decisions by gathering key local economic indicators and trend information
- Develop specific economic indicators for this region that are not readily available to decision makers
- Develop tools to assess our progress in economic growth. Prepare baseline measures 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 as a whole and by individual county, we can better understand what is happening throughout the region, and trends can be discovered. Knowing the economic indicators trends can also help us anticipate future economic activity in the region. The economic indicators provided in this report include unemployment rate, demographics, median household income, housing units, poverty rates, employment growth, and many more. These indicators were observed over periods ranging from a few months to more than ten years. Typically, in order to predict economic activity, economic indicators must be watched and analyzed for many months, depending on the indicator.

Population Change



Little to No Population Change Since 2000

Description

Different geographic locations in the U.S., such as states, counties, and metropolitan statistical areas, each have population estimates conducted each year. Persons who are considered to be a usual resident of that specific location are counted in the population data. According to the United States Census Bureau, a usual resident is a person who considers himself/herself to reside at a specific address for the majority of his/her time. County level population data was collected for each of the REIF counties. The percentage change of the population from the year 2000 to 2014 was calculated by subtracting the 2014 population from the 2000 population and then dividing that by the year 2000 population for each location.

Why is It Important?

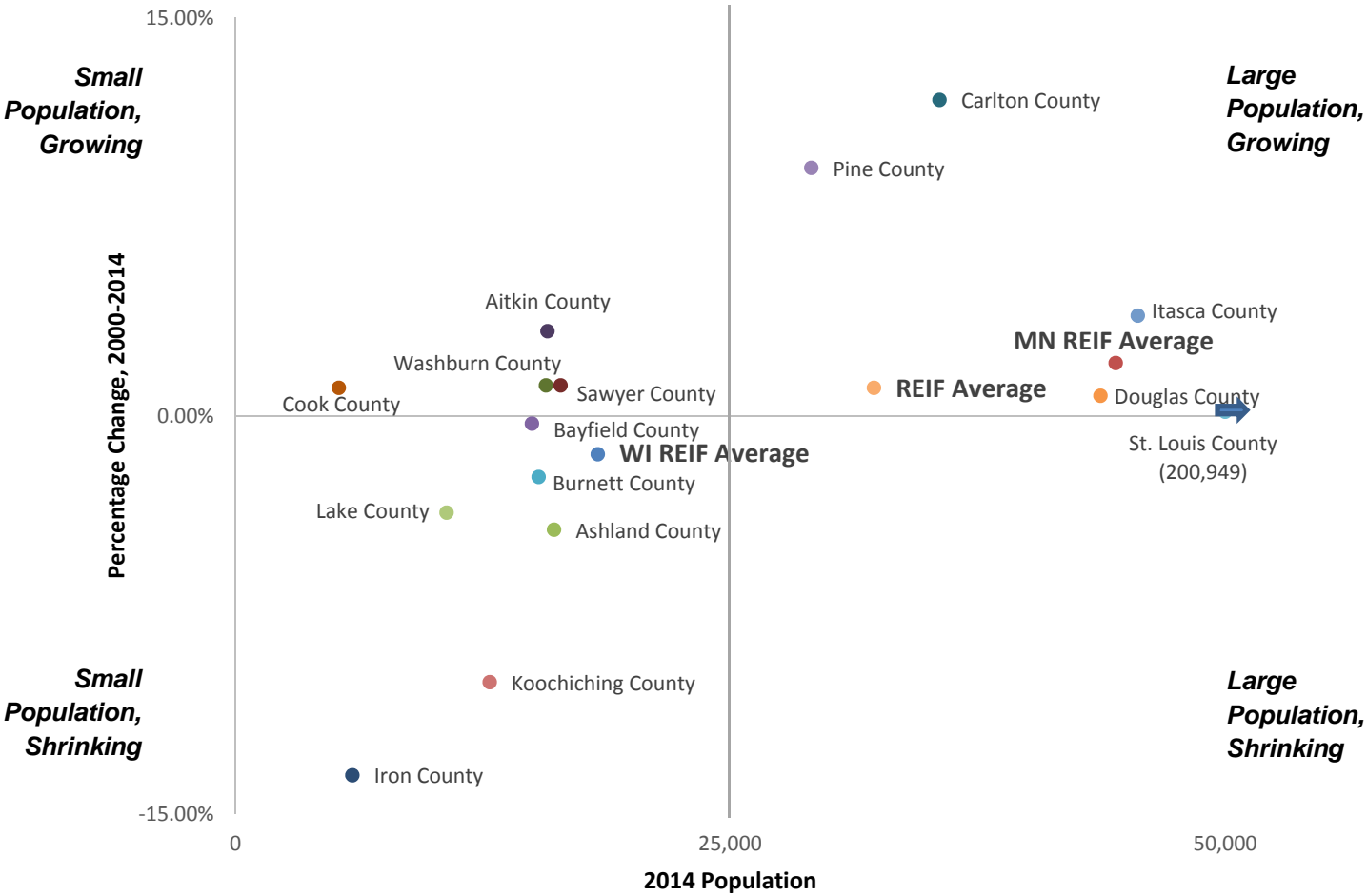
A location's population is its immediate labor source, and it is vitally connected with its economic activity and capacity for growth. While the issues associated with over population or rapid growth are often the most obvious, the opposite can be equally detrimental. The phenomenon known as human capital flight, or "brain drain," and depopulation more generally is increasingly affecting towns and whole counties across the nation as residents of rural locations move to pursue more favorable employment opportunities and accessibility in metropolitan areas. Tracking a location's population and how it changes over time can be an effective indicator for spotting such trends and gaining a better understanding of how those trends interact with other facets of the local economy.

How is Our Region Doing?

Figure 1 shows the 2014 population estimate for each county in the REIF region (horizontal axis) as well as the percentage change in population from 2000 to 2014 (vertical axis). Also included in the figure are the averages for the eight Minnesota counties, the seven Wisconsin counties, and the average for all 15 counties in the REIF region. Overall, the REIF region experienced a small positive population change (1.07%) during the 14-year period.

While the population change in 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 of Figure 1 shows that two of the biggest population changes occurred in Iron County, WI, and Koochiching County, MN, with a decrease of 13.5% and 10.0%, respectively. Compared to increases of 0.27% in Wisconsin and 10.6% in Minnesota in total, these two counties were significantly underperforming in terms of population growth. Conversely, considerable growth was seen in Carlton and Pine Counties in Minnesota at 11.9% and 9.4%, respectively. While each of the four counties mentioned have individually seen significant population changes since 2000, the net result was that the REIF region's population as a whole has been largely unmoved.

Figure 1: Population and Percentage Change in Population, by County (2000 to 2014)



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 then subdivided into smaller groups according to three different demographics: age, sex, and ethnicity.

Why is It Important?

Having a diverse population and, thus, a diverse labor force is a benefit to employers, as it increases the variety of skills, knowledge, and backgrounds available from potential employees. Diversity can include many different factors, including age groups, racial and ethnic backgrounds, and gender. By leveraging this broader range of perspectives and skill sets, diversity in the workforce can help employers move toward greater success.

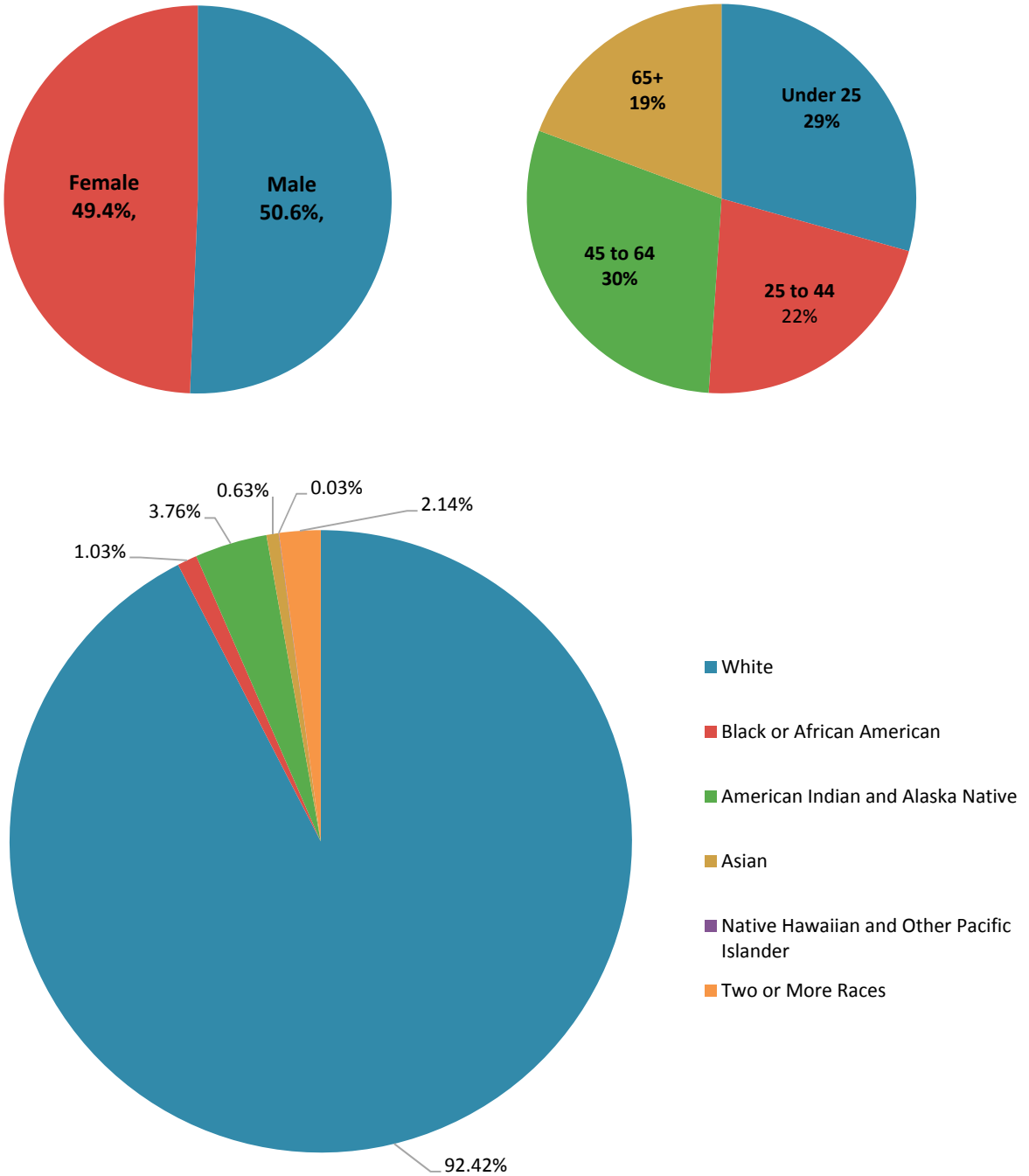
How is Our Region Doing?

Figure 2 includes demographic statistics by gender, age, and race/ethnicity for the REIF region in 2014. According to these statistics, the REIF region had slightly more men than women in its population. While this difference was quite small, it is somewhat unusual, as there are typically more females in a population due to their tendency to live longer. For example, only 49.2% of the United States' population was male compared to 50.6% in the REIF region. Furthermore, despite also having an older population (see details in the next paragraph), the percentage of males in the REIF region was still higher.

The region's largest age group was the 45 to 64 year old population, though only slightly higher than the under 25 group. As more of the Baby Boomers move into the 65+ category, this share of the population could grow significantly in coming years. Notably, over 19% of the population is already over 65, much higher than the nation as a whole at just 14.5%. About 49% of the population in the REIF region was over 45 years old compared to just under 41% nationally.

Looking at the race/ethnicity demographic, it was clear that the REIF region was relatively not racially diverse, as shown in Figure 2. The population is substantially white (including Hispanic) at over 92%, and that number was essentially unchanged since 2010, while other parts of the country have grown increasingly diverse. Compared to the percentage of the U.S. population that was white (77.4% in 2014), the REIF was significantly higher. 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 to increase racial/ethnic diversity within the region.

Figure 2: Population Demographics (2014)



Source: United States Census Bureau

Labor Force



Declining Labor Force

Description

According to the U.S. Bureau of Labor 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 recently unemployed who are at least 16 years old or older, not serving in the military, and not institutionalized.

Why is It Important?

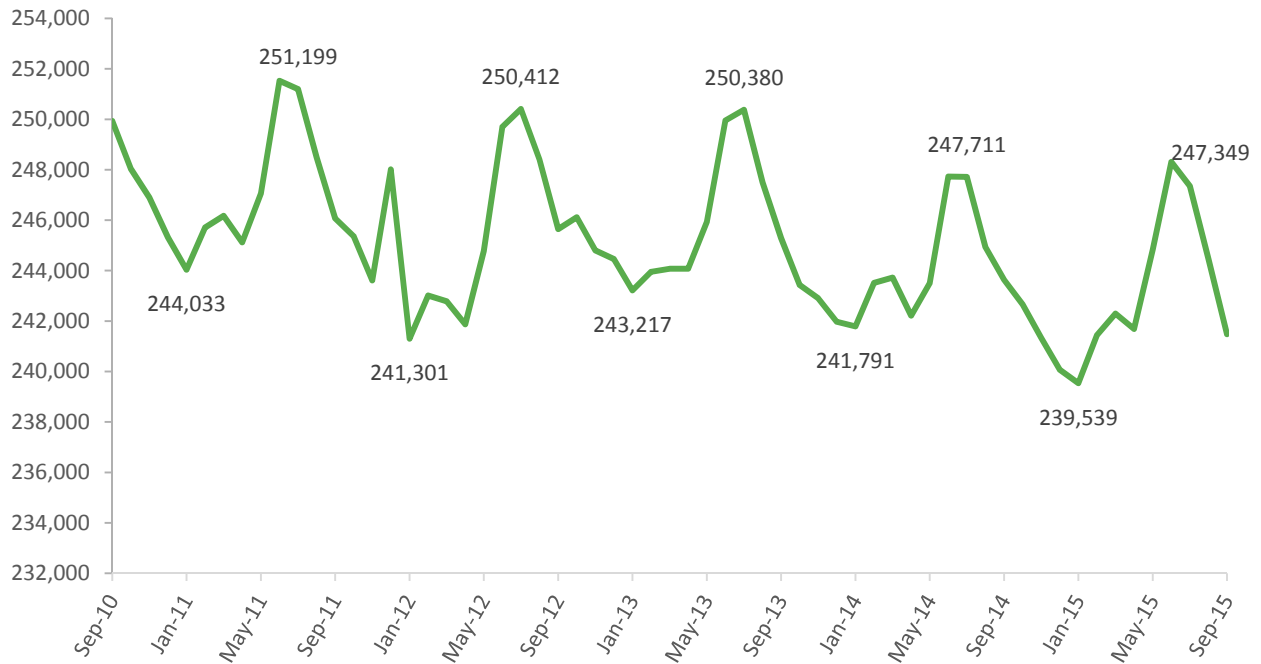
Labor force numbers are used for two very important calculations, the labor force participation rate and the unemployment rate. Because of each's substantial influence in indicating the economy strength, both the labor force participation rate and the unemployment rate are two of the most highly watched economic indicators by economists and by many people in general. Furthermore, the size of the labor force impacts the economy's capacity 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 regional economy is growing or even simply remaining steady.

How is Our Region Doing?

Figure 3 shows monthly data for the region's labor force over the last five years. The labor force of the combined counties within the REIF region exhibited a seasonal cyclic behavior— increasing into the summer and decreasing into the winter months. This pattern is not necessarily unusual though as many industries are inherently affected by things like weather, harvests, and school schedules that cause inflows and outflows of potential workers in the region. However, the broader trend in the data without the seasonal effects was to the downside in general. As mentioned previously, even a small decline in the size of the labor force can have real impacts for a region's industries looking to find and hire skilled labor.

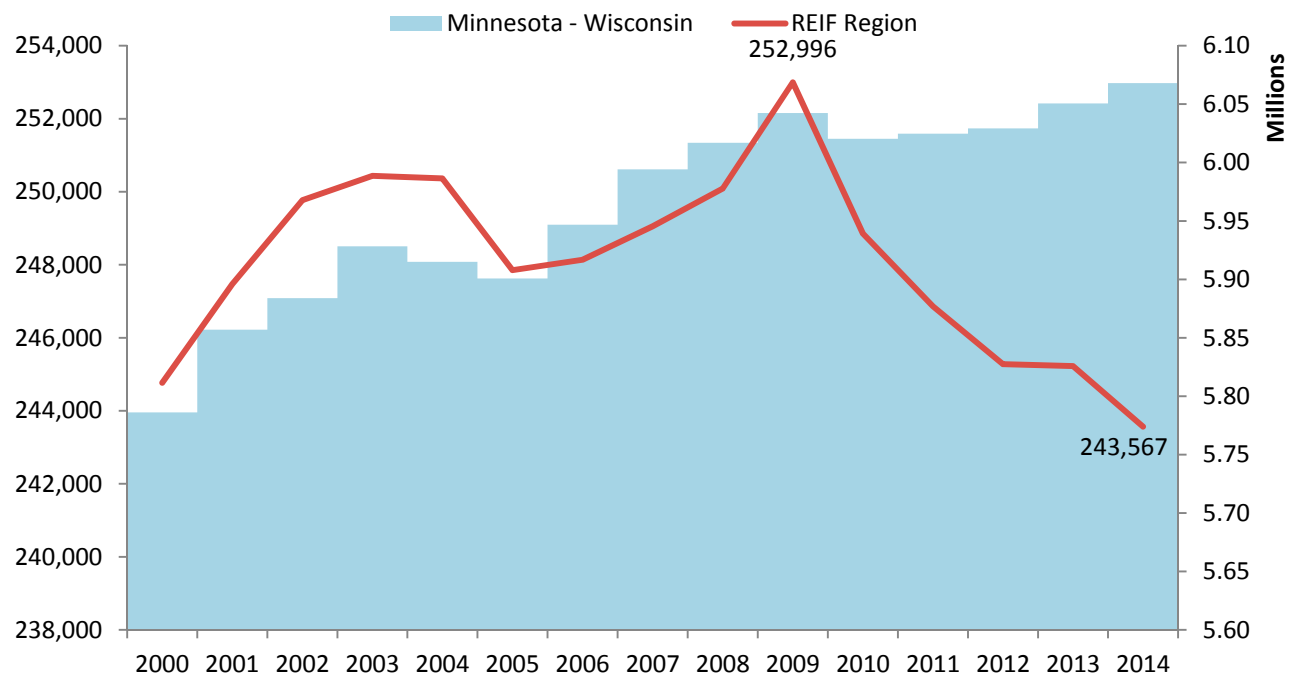
Figure 4 shows the yearly average of the REIF region's labor force and that of Minnesota and Wisconsin combined. Since 2009, the region has maintained a declining labor force while the two states as a whole have been increasing. In total, by 2014 the REIF region had lost about 3.7% of the labor force it had in 2009. The large portion of the region's population that is at or soon to be coming into the typical age of retirement (Figure 2) may very well be the early stages of an even larger decline to come if the population growth of the region continues at the low or decreasing levels currently seen in most counties (Figure 1). Over the next five to ten years as the majority of Baby Boomers are predicted to retire and exit the labor force (assuming they continue to retire between the ages of 60 and 65), the region could face significant decreases in the available pool of labor.

Figure 3: Labor Force, by Month (September 2010 to September 2015)



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

Figure 4. Yearly Average Labor Force, REIF Region and MN/WI Combined (2000 to 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 U.S. Bureau of Labor Statistics, a person is considered to be unemployed when they do not currently have a job, have actively looked for work in the past four weeks, and are currently available to work. People who are temporarily laid off and waiting to be called back to their job are also counted as unemployed. Unemployment, which is reported monthly, is a measurement of the total number of people unemployed. The unemployment rate was calculated by dividing the number of people unemployed by the total number of people in the labor force.

Why is It Important?

The unemployment rate is another highly watched economic indicator, especially since the financial crisis caused it to increase to about 10% nationally in 2009. Unemployment is strongly tied to consumer spending; typically, when a person is not working, he/she spends far less money, particularly on non-essential items and services. Likewise, high unemployment corresponds to a reduced amount of production (lower GDP). A rising unemployment rate indicates weakness in the economy, whereas a falling unemployment rate indicates the economy is growing stronger.

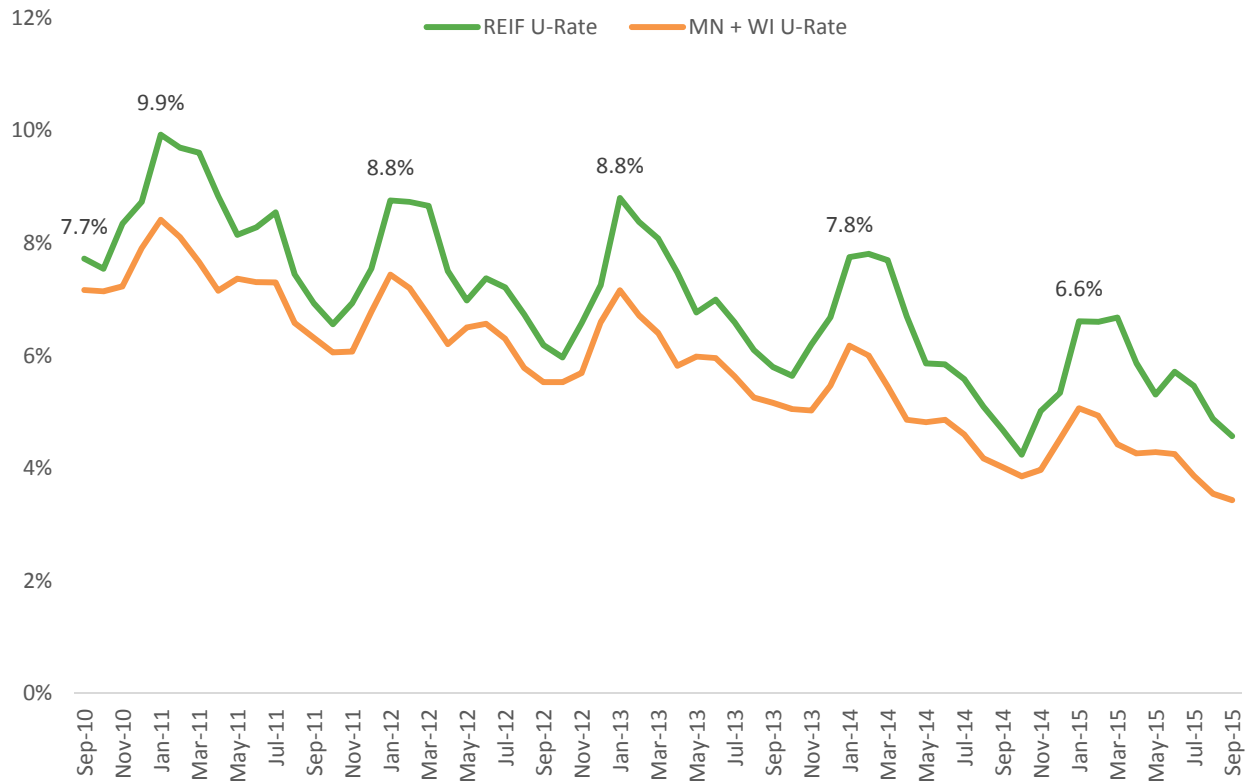
How is Our Region Doing?

Figure 5 shows the unemployment rate by month from September 2010 to September 2015. Similar to the fluctuations seen in the labor force in Figure 3, the unemployment rate over the last five years exhibited seasonal cycles of increases and decreases. The overall trend beyond the seasonal effects during this period showed a decline. Compared to the data from September 2010 (~7.7%), the unemployment rate had decreased by almost 3.2 percentage points in September 2015 (~4.6%). This decrease in the unemployment rate is a positive sign and indicated ongoing improvement in the REIF region's economy.

Compared to Minnesota and Wisconsin's combined unemployment rate, the REIF region's was consistently higher and displayed greater sensitivity to seasonal factors of unemployment. The latter was likely attributable to the region's industry mix being weighted more heavily in areas with greater subjectivity to weather and other seasonal influences, as described in the Employment Location Quotient section later. However, despite the significantly higher rates at the peak in the winter, the region's unemployment has typically progressed toward matching the broader two states' rate into the fall, usually by October. Conversely, the data for this year so far indicated that the region's unemployment rate was maintaining a near parallel relation with the states' rather than the convergence that usually occurs in the fall.

This atypical behavior was found to correspond with the timing of the ongoing mining facility layoffs started at the beginning of the summer. The monthly data did not include a breakdown by industry, so the exact cause was unavailable in the data, but the mining layoffs were a probable explanation considering the significant role the industry has in the region's economy (see Figures 6 and 7).

Figure 5: Unemployment Rate, by Month (Sep 2010 to Sep 2015)



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

Employment Location Quotient



Natural Resources and Mining More Concentrated in Region Than in States

Description

According to the U.S. Bureau of Labor Statistics, a location quotient can be described as a ratio that allows the distribution of employment by industry of one area to be compared to another reference or base area's distribution across the same industries. By quantifying the level of industry concentration in this way, a point of equal comparison can be made between two different regions. The REIF counties were compared to a base region consisting of the combined states of Minnesota and Wisconsin.

Why is It Important?

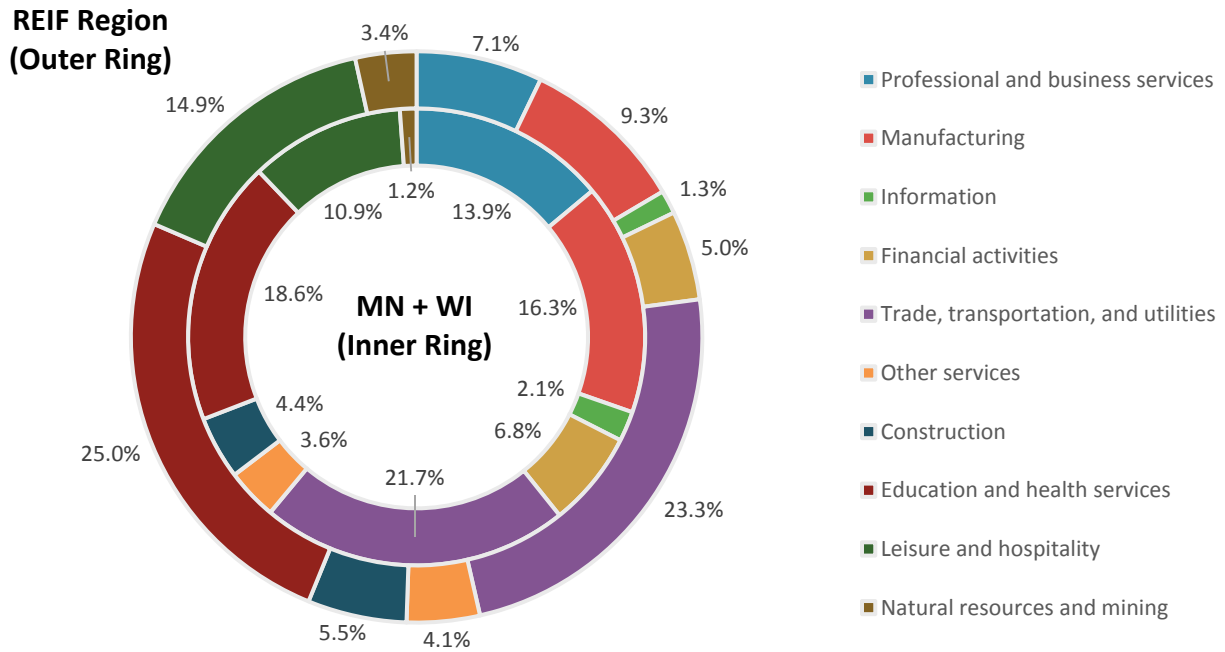
Examining the relative concentration of employment by industry can be a useful tool to understanding which industries contribute the most to a region's employment and ostensibly its economy more broadly as well. Comparing those percentages of employment by industry within one specific region to those in another region can reveal the particular subtleties in the composition of a region's economy, or in other words, what makes that region unique from another. Knowing which industries more heavily weight a region's employment compared to another region can provide valuable insight into where that region excels and where it could improve.

How is Our Region Doing?

Figure 6 shows the percentage of the population employed in each of the different industries in the REIF region (outer ring) and in the broader region of Minnesota and Wisconsin combined (inner ring). As seen in the figure, the largest industries in the REIF region were Trade, Transport, and Utilities, Education and Health Services, and Leisure and Hospitality, making up over 63% of total employment combined. The smallest industries were Information and Natural Resources and Mining at less than 5% of total employment. It is important to consider each of the industries within the region in terms of its weight in the broader two-state region. From this perspective, the REIF region had a greater concentration in Natural Resources and Mining and Leisure and Hospitality, and a lesser concentration in Professional and Business Services and Manufacturing.

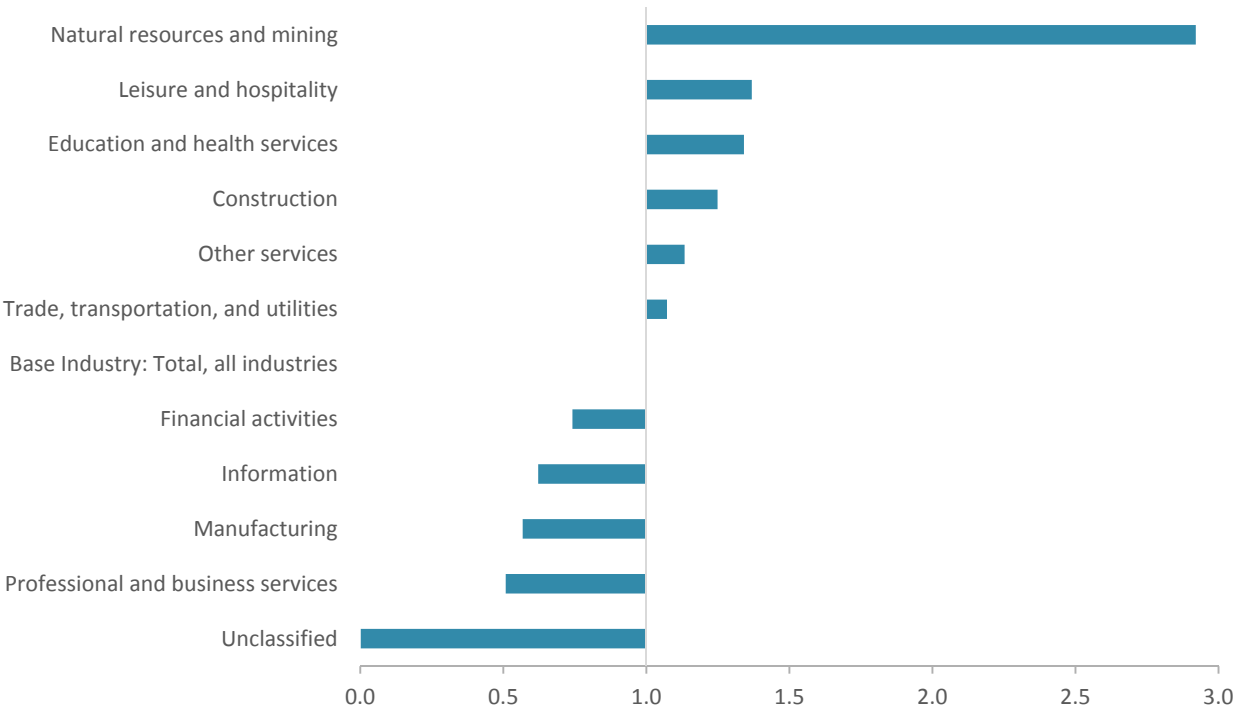
By dividing the percentage employed within the region for one industry by the percentage employed in the same industry in the two-state region, the location quotient was determined (Figure 7). For example, 3.4% of employment in the REIF region was in Natural Resources and Mining, while only 1.2% was in that industry in Minnesota and Wisconsin as a whole, resulting in the location quotient of almost 3 seen in Figure 7 ($3.4/1.2 = 2.92$). This industry was found to have the greatest location quotient, meaning that within the region, there were significantly more people employed in Natural Resources and Mining than were in the broader statewide region.

Figure 6: Percentage Employment, by Industry (2014)



Source: United States Bureau of Labor Statistics

Figure 7: REIF Region Employment Location Quotient, by Industry (2014)



Source: United States Bureau of Labor Statistics

Long-Term Employment Change



Health Care Adds Most, Accommodation and Food Services Loses Most, Small Gains Overall

Description

According to the U.S. Bureau of Labor Statistics, employment data is recorded monthly. This data 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?

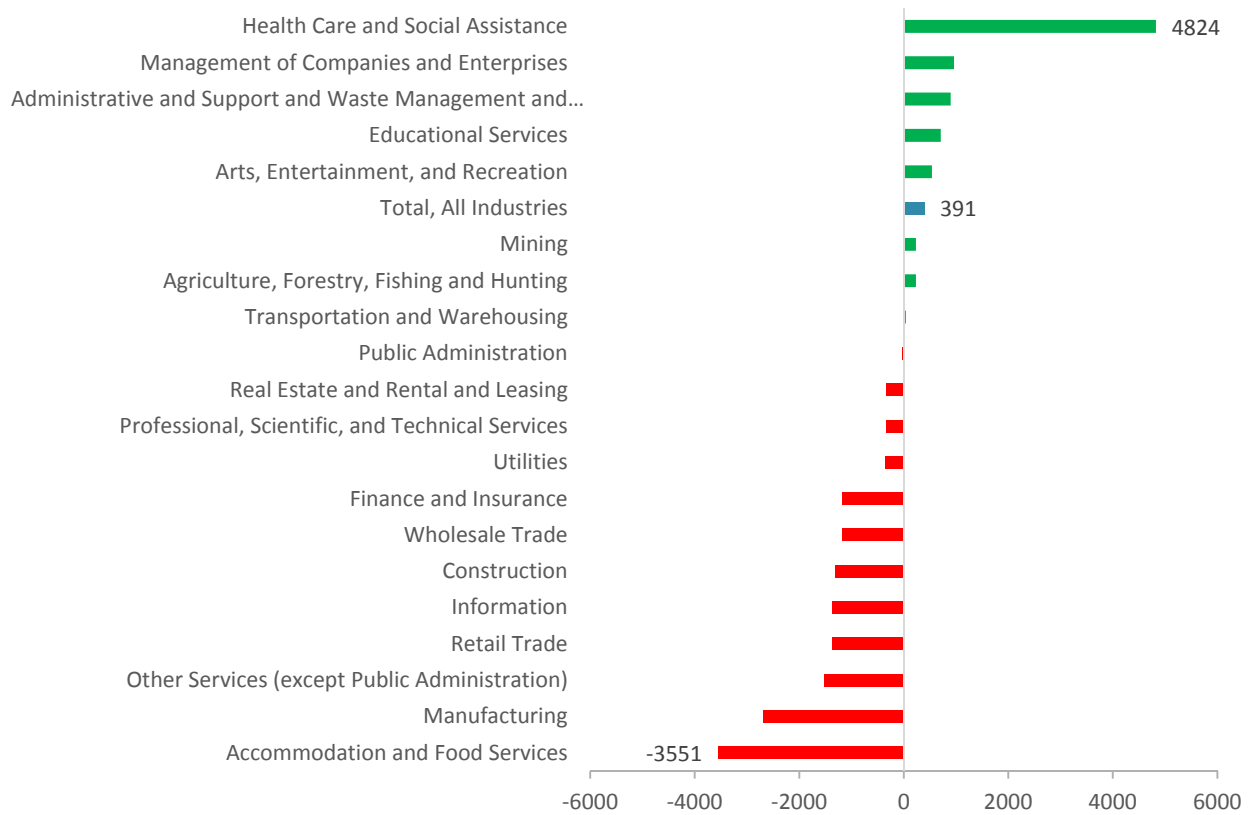
Examining the change in employment over a five to ten year period can provide meaningful insight as an indicator of whether or not the economy is changing within a region. Knowing which industries have increased in number of employees and which have declined in employment can also assist the population in general toward understanding which types of jobs to pursue in their region and which might be more fruitful elsewhere.

How is Our Region Doing?

Figure 8 shows the change in employment (measured in number of employees) by industry from 2005 to 2013. The graph highlights which sectors have expanded throughout the REIF region and which have experienced a decline. The largest increase in new employment in the region occurred in the Health Care and Social Assistance industry, by a large margin, adding nearly 5,000 employees over the eight-year period. The second largest increase in the region was in the Management of Companies and Enterprises industry at almost 1,000. This increase could be attributed to growth in new businesses and entrepreneurship in the region. Tourism is a significant contributor to the regional economy, and the increase seen in the Arts, Entertainment, and Recreation sector is an indication that tourism has remained strong.

The industries that experienced the largest declines in employment included Accommodation and Food Services, Manufacturing, and Other Services. Eight of the twelve industries that saw declines in the region also had declined in the two states as a whole. A slight increase in total employment in the region can be seen in the bar labeled Total, All Industries (highlighted in blue) in Figure 8. While an increase in total employment is a good sign, the additional jobs represented an increase of just 0.2% over that in 2005. Considering that the region's population increased by about 1,000 more than did the number of jobs over the same period, new employment was not keeping up with the faster growing population. This could have been due to the offsetting effect of the region's declining labor force.

Figure 8: Employment Change, by Industry (2005 to 2013)



Source: United States Census Bureau, County Business Patterns

Long-Term Employment Growth Rate



Employment Growth Indicates Little to No Change Over Nine-Year Period

Description

According to the U. S. Bureau of Labor 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 or labor force growth continually increases, but employment growth stays the same, unemployment can rise. Furthermore, although the population growth rate has been low in recent years (about 0.75%), the employment growth rate must at least keep up in order to mitigate the effects of the new employees entering the work force and avoid increasing unemployment.

How is Our Region Doing?

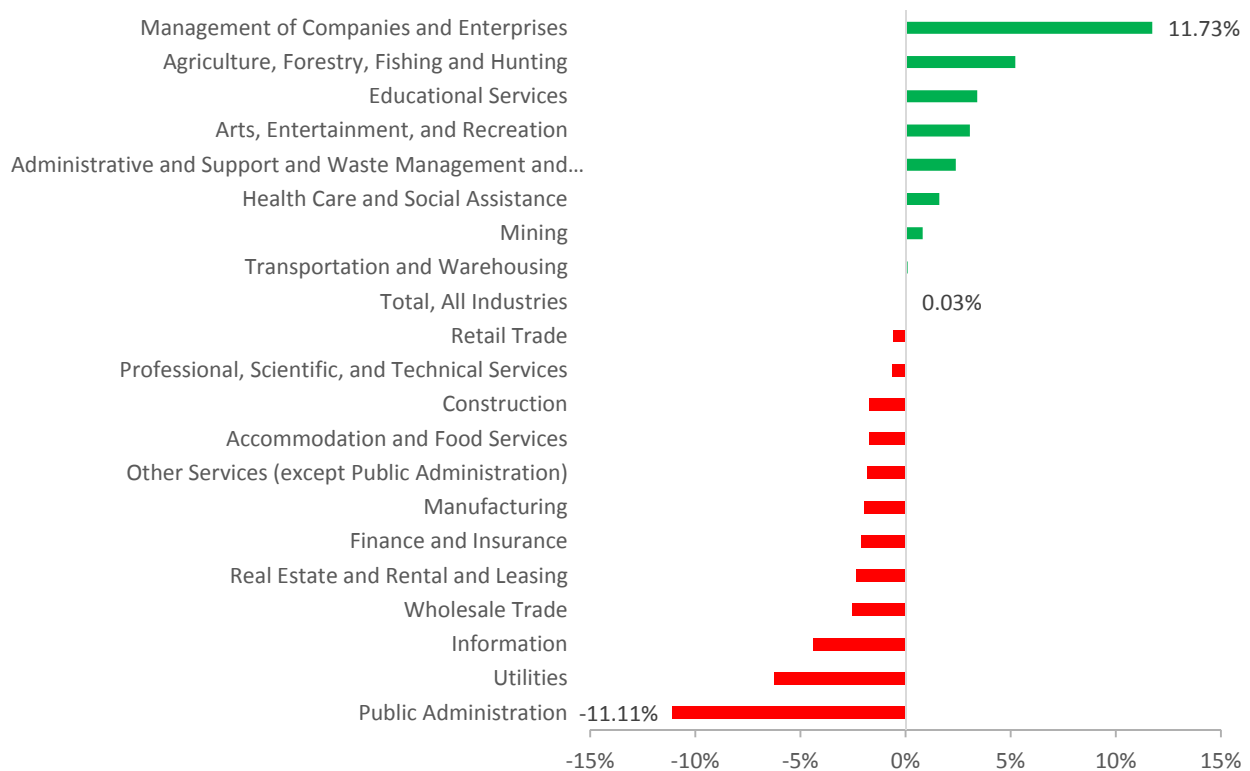
Figure 9 shows the annualized average growth rate in employment over the nine-year period (2005-2013) for each of the industries in the region as well as for the total of all industries combined. The percentage seen for each industry represents the average percentage increase (or decrease) each year, meaning that, for example, a 10% average annual growth rate over nine years corresponds to a 90% increase over the 2005 levels. A positive rate indicates the industry has grown (by employment) throughout the region, and a negative rate is a sign of shrinking employment within that industry.

The same industries as in Figure 8 were again either positive or negative, however, on a percentage change basis, the magnitude of employment gains and losses was quite different. The sector with the largest average percentage increase in employment was Management of Companies and Enterprises, whereas by number as in the previous figure the Healthcare industry was first. The Management industry increased by over 100% during the time period, more than doubling its employment from 2005. These changes were largely a function of the industry's existing size within the region— Healthcare was one of the largest single industries, so the nominally large increase in employment actually represented only a small change by percentage; just the opposite was true of Management.

The total change in employment for all industries combined remained consistently flat over the nine-year period. The Total, All Industries category in Figure 9 shows that on average, overall employment grew by just 0.03% each year for the REIF region. During the same period, the total

employment for all industries in the combined states of Wisconsin and Minnesota averaged annualized growth of 0.09%. This means that employment growth within the REIF region was underperforming the broader two states by a factor of three. As mentioned earlier, the relationship between employment growth and population growth is important. If real growth in the number of jobs in a region does not keep pace with the growth of the population, people will be compelled to leave for employment elsewhere.

Figure 9: Average Annual Percentage Change in Employment, by Industry (2005 to 2013)



Source: United States Census Bureau, County Business Patterns

Long-Term Establishment Growth Rate



Establishment Growth Consistently Negative Over Nine-Year Period

Description

According to the U. S. 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 based on its major activity.

Why is It Important?

Usually, with new establishments comes new jobs for the region, whether directly employed by the new establishment or indirectly employed elsewhere as a result of the new establishment's addition to the economy. As a new establishment grows, it typically leads to a growing demand for more employees and greater benefit to the local economy. Of course, just the opposite can happen as well. Naturally, the larger the establishment that goes out of business or shrinks, the greater the number of people whom can become unemployed. The survival rates of a business fluctuate depending on the specific industries in which they operate. According to the BLS, 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.

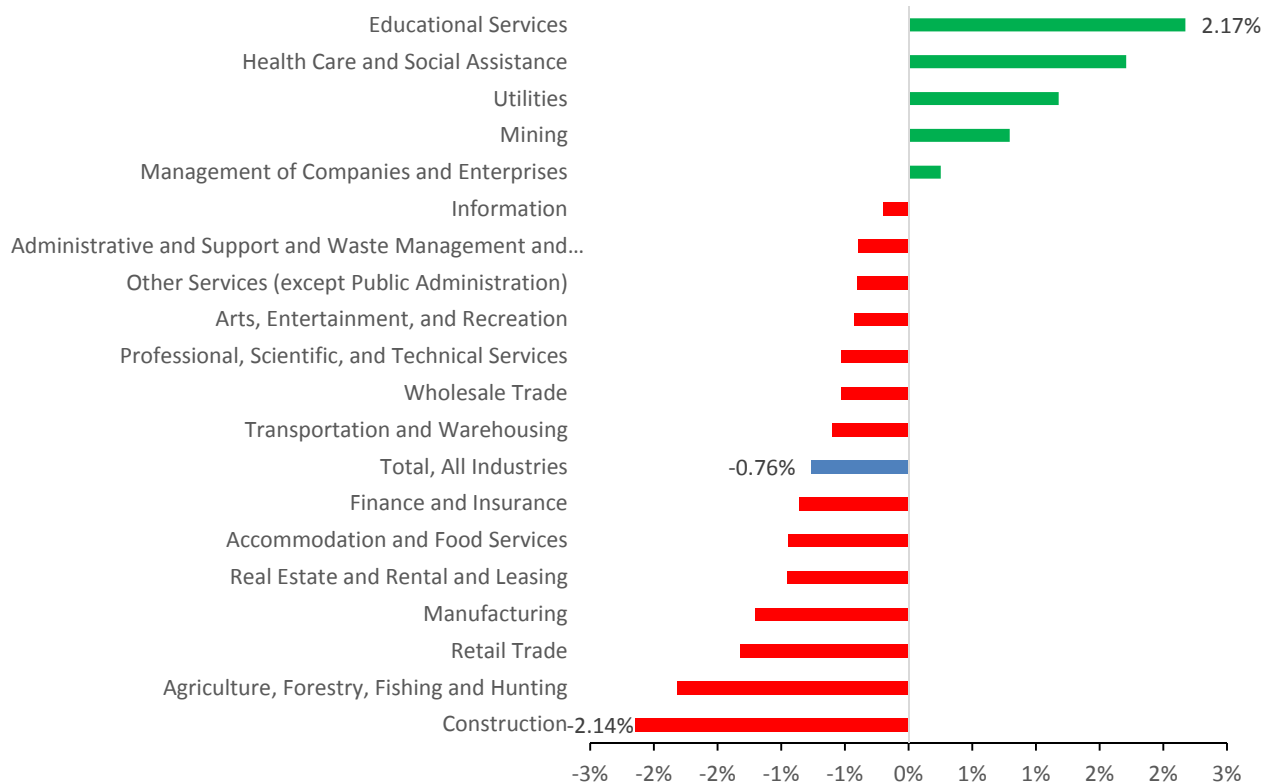
How is Our Region Doing?

Using the same methodology and explanation from the previous figure, though with data on the number of establishments, Figure 10 shows the annual average percentage change in establishments (i.e. the establishment growth rate) by industry from the year 2005 through 2013. All but five of the industries represented in the region experienced negative growth throughout the time period, meaning an ongoing reduction in the number of establishments occurred in the majority of the region's industries.

Similarly to what was seen in employment, positive establishment growth was noted for Education Services, Health Care and Social Assistance, Mining, and Management in addition to Utilities. Education was the single largest gainer over the nine years, increasing almost 20% over the 2005 level, though the industry remained quite small by number. The exact reverse was true of Construction, which declined over 19% in total across the nine years. Considering its place as the fourth largest industry by number of establishments in the region, this loss was quite significant and was nominally the largest change of all the various industries.

The Total, All Industries category in Figure 10 is highlighted in blue and indicates the overall average yearly percentage change in establishment growth. Over the full period represented (2005 to 2013), the total number of establishments throughout the REIF region declined by nearly 7%. Additionally, considering the slightly positive growth seen in total employment from Figure 9, this situation likely indicates significant consolidation within the region's industries, meaning that a smaller number of larger establishments had displaced a large number of small establishments, thus, reducing the number while maintaining a consistent amount of employment.

Figure 10: Percentage Change in Establishments, by Industry (2005 to 2013)



Source: United States Census Bureau, County Business Patterns

One Year Employment Growth Rate



Individual Industries Mixed, Overall Positive for One-Year Period

Description

Quarterly employment numbers are reported by the Minnesota Department of Employment and Economic Development and the Wisconsin Department of Workforce Development. These statistics provide data on 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, and March are Q1).

Why is It Important?

Understanding which industries have added employees and which industries have been declining in employment over the previous year is particularly helpful in identifying a region's more recent economic developments. The one-year employment growth rate (e.g. Q1 2014 to Q1 2015) can highlight the impact of recent events, such as commodity price changes and plant closures as well as serve as a leading indicator of more long-term trends to come. Comparing the one-year change in employment to the long-term average growth can give a region insight into the direction the economy might be taking relative to its past and which industries are contributing most to it.

How is Our Region Doing?

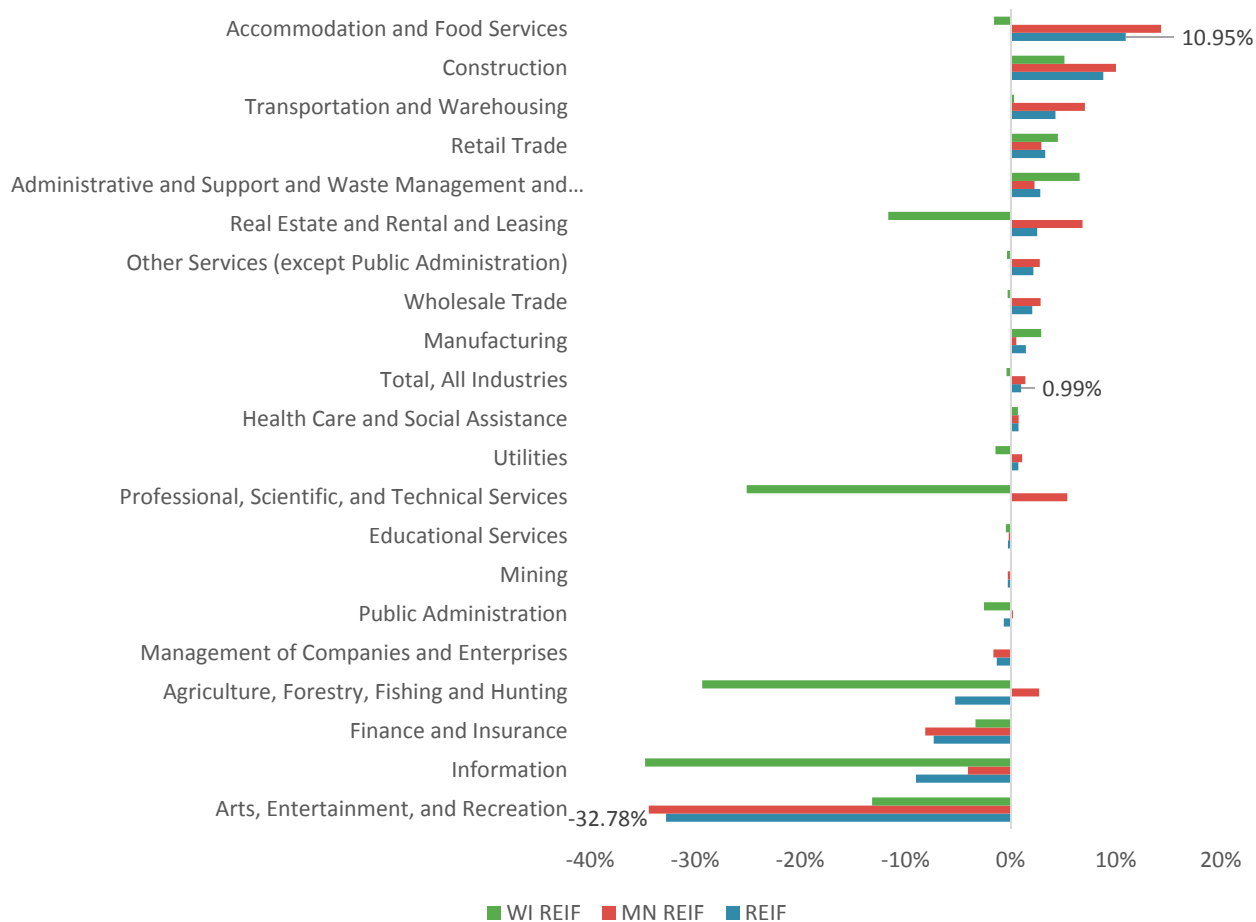
Figure 11 shows the percentage change in employment (i.e. employment growth rate) by industry for one year (Q1 2014 to Q1 2015). Overall, the REIF region saw gains of just about 1% over the same period one year prior across all industries. As the figure shows, the Wisconsin counties actually suffered a small loss, though for the whole region this was offset by the roughly 1.4% increase among the Minnesota counties.

More than half of the industries experienced positive year-over-year employment growth during the one-year period. Interestingly, many of the industries that came in at the top of the list with the largest gains in this most recent one-year period were among those that have seen substantial declines in the long-term period from Figure 9. The sector with the largest gain for the REIF region was Accommodations and Food Services at almost 11%, again with losses among Wisconsin counties and increases in Minnesota counties. The large declines seen in all five of the industries at the bottom end of the figure considerably outpaced each's corresponding long-term growth rate. In other words, this means that each of those five industries had declined at a much faster rate in the most recent one year period than each had on average over the last nine years.

It is most relevant to use these results in combination with the Long-Term Employment Growth Rate and the Quarterly Employment Growth Rate in order to gain a more complete picture of what has been happening throughout the economy in terms of employment. Accordingly, as compared

to the Long-Term Employment Growth Rate results for all industries in the region of just 0.03%, the nearly 1% increase seen in the most recent one-year period is a positive sign for the employment outlook across the region.

Figure 11: Percentage Change in Employment by Industry (Q1 2014 to Q1 2015)



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

Quarterly Employment Growth Rate



Quarterly Employment Negative, Consistent with Past Findings

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, and March are Q1).

Why is It Important?

Understanding which industries have added employees and which industries have been declining in employment over the previous quarter is particularly helpful in identifying a region's most recent economic developments. The quarterly employment growth rate (e.g. Q4 2014 to Q1 2015) can highlight the impact of the most recent (and particularly seasonal) events, such as cyclical demand impacts and periodic layoffs, and serve as a leading indicator of more long-term trends to come. Comparing the quarterly change in employment to the one-year and the long-term average growth can give a region insight into the direction the economy might be taking relative to its past and which industries are contributing most to it.

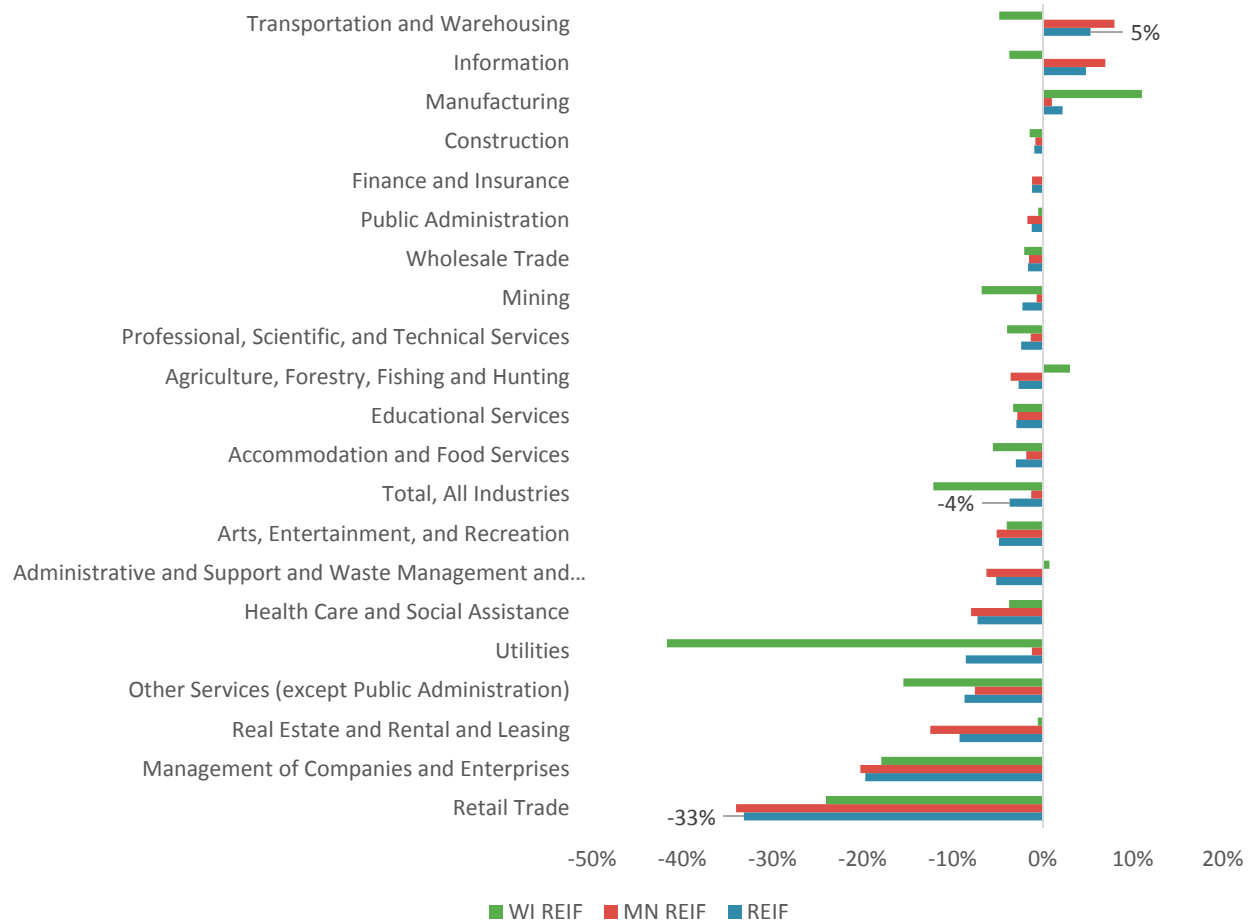
How is Our Region Doing?

Figure 12 shows the percentage change in employment (i.e. employment growth rate) by industry from one quarter to the next (Q4 2014 to Q1 2015). All but three industries experienced negative growth between the last quarter of 2014 and the first quarter of 2015. Without the proper context, this could indicate that the economy was weakening between the two quarters. However, there are several important considerations that help explain this. As mentioned previously, the REIF region has typically seen significant seasonal effects on its unemployment level; many of its most prevalent industries are inherently weather and seasonally dependent; and past findings have consistently maintained similar results.

The Retail Trade industry, for example, showed the greatest decline in employment of about 33%. This can be explained as follows. The last quarter of the year includes the biggest months in retail with huge Black Friday sales, holiday gift shopping, and more. Thus, many stores take on extra temporary staff during the last quarter to meet the increased business. However, after the holidays, many of those temporary positions are ended as demand drops off in the new year (Q1). The seasonal effects of things like the holidays, increased shopping, bonuses, and vacations throughout the last months of the year typically leads to a boon for demand across the board in Q4. In the absence of many of these factors, Q1 often shows marked declines by comparison.

The quarterly growth rate, particularly the Q4 to Q1 growth rate, can be very useful in determining a region's and specific industries' sensitivity to seasonal economic dynamics. However, because of the impact seasonality can have, the quarterly growth rate is not necessarily indicative of weakness, so long as it remains consistent with past performance and seasonal context.

Figure 12: Percentage Change in Employment by Industry (Q4 2014 to Q1 2015)



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

Education Level: High School Graduate or Higher



Over 91% of Population Considered High School Graduates

Description

According to the U.S. Census QuickFacts, any individual who has obtained a high school diploma or its equivalent is considered a high school graduate. Percentages are calculated by dividing the amount of high school graduates by the total population 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 the modern work world. Attaining a high school diploma will likely become increasingly important in acquiring a job as the global workplace progresses into a more technological and interconnected future. In an environment where many employers already perceive a gap in the skills available in the workforce and those they require, maintaining a high percentage of high school graduates can be a first step to bridging that gap.

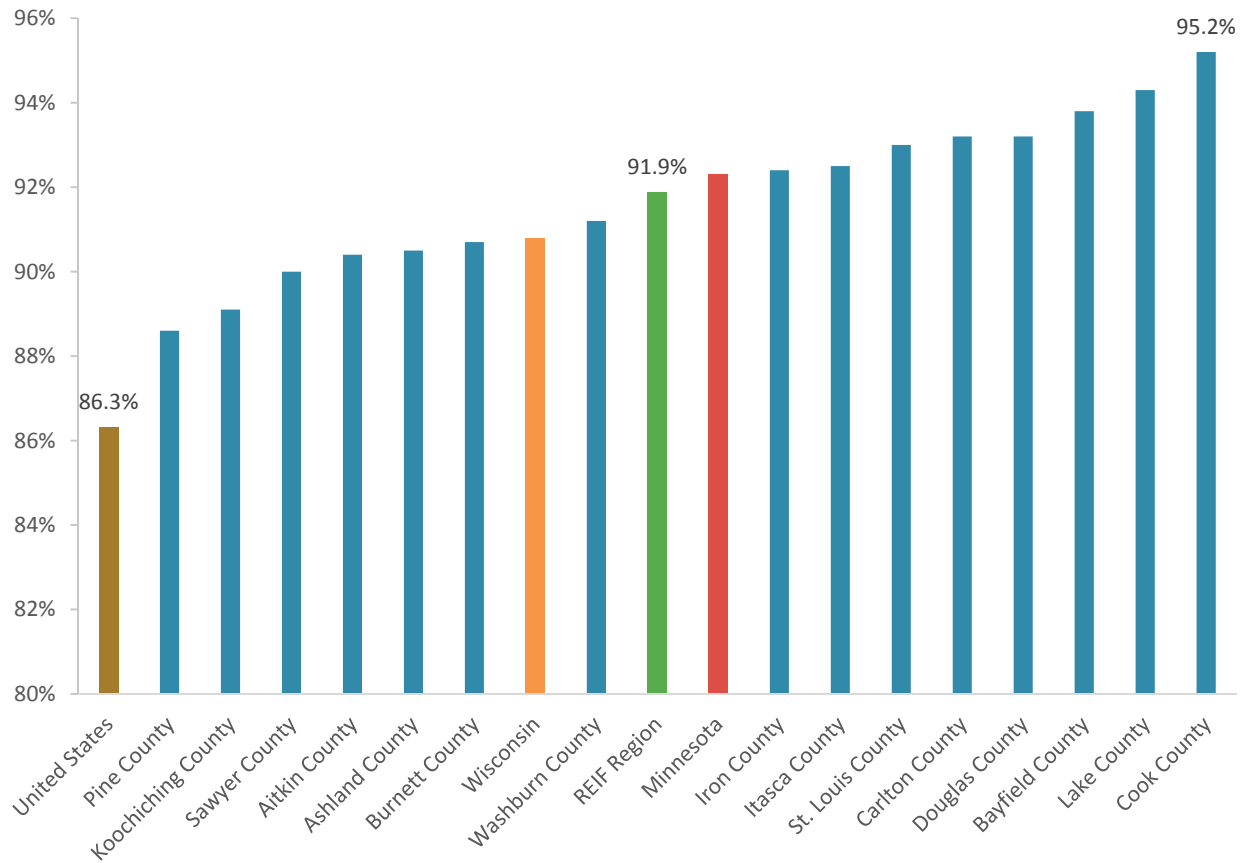
According to BLS 2012 data, 26% of occupations did not require a high school diploma. However, by the year 2022, only 11% of occupations were projected to require less than a high school diploma. Moreover, these occupations (requiring less than a high school diploma) averaged just \$20,110 per year, which was \$3,382 less than the average poverty threshold in 2012 for a family of four. The 2012 data from the BLS also stated that the median annual wage for an individual who did have a high school diploma was \$35,170 per year. According to this information then, a high school diploma is worth about \$15,000 per year and can mean the difference between poverty and prosperity.

How is Our Region Doing?

Figure 13 shows that on average, about 91.9% of the REIF population has a high school diploma or higher². This average was slightly lower than the average for the state of Minnesota (92.3%) and slightly higher than the average for the state of Wisconsin (90.8%), and it compared very favorably with the U.S. average of just 86.3%. The counties with the highest portion of high school graduates included Cook, Lake, Carlton, and St. Louis in Minnesota and Bayfield and Douglas in Wisconsin. While still notably higher than the national average, the counties with the lowest percentage of high school graduates in the REIF region included Pine, Koochiching, and Aitkin in Minnesota and Ashland and Sawyer in Wisconsin. Compared to the United States, the REIF region is doing well in terms of the overall percentage of people who have obtained a high school diploma or higher.

² The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 13: Percentage of High School Graduates or Higher, by County (2010 to 2014)



Source: United States Census Bureau

Education Level: Bachelor's Degree or Higher



Region Lags Behind Both States and U.S. by Percentage of Population

Description

According to the U.S. Census QuickFacts, a person is counted as having a bachelor's degree or higher if they have obtained a minimum of a bachelor's degree from an accredited institution. Data included people age 25 and older. Percentages were calculated by dividing the amount of people who had obtained a bachelor's degree or higher by the total number of people 25 years of age or older in the population.

Why is It Important?

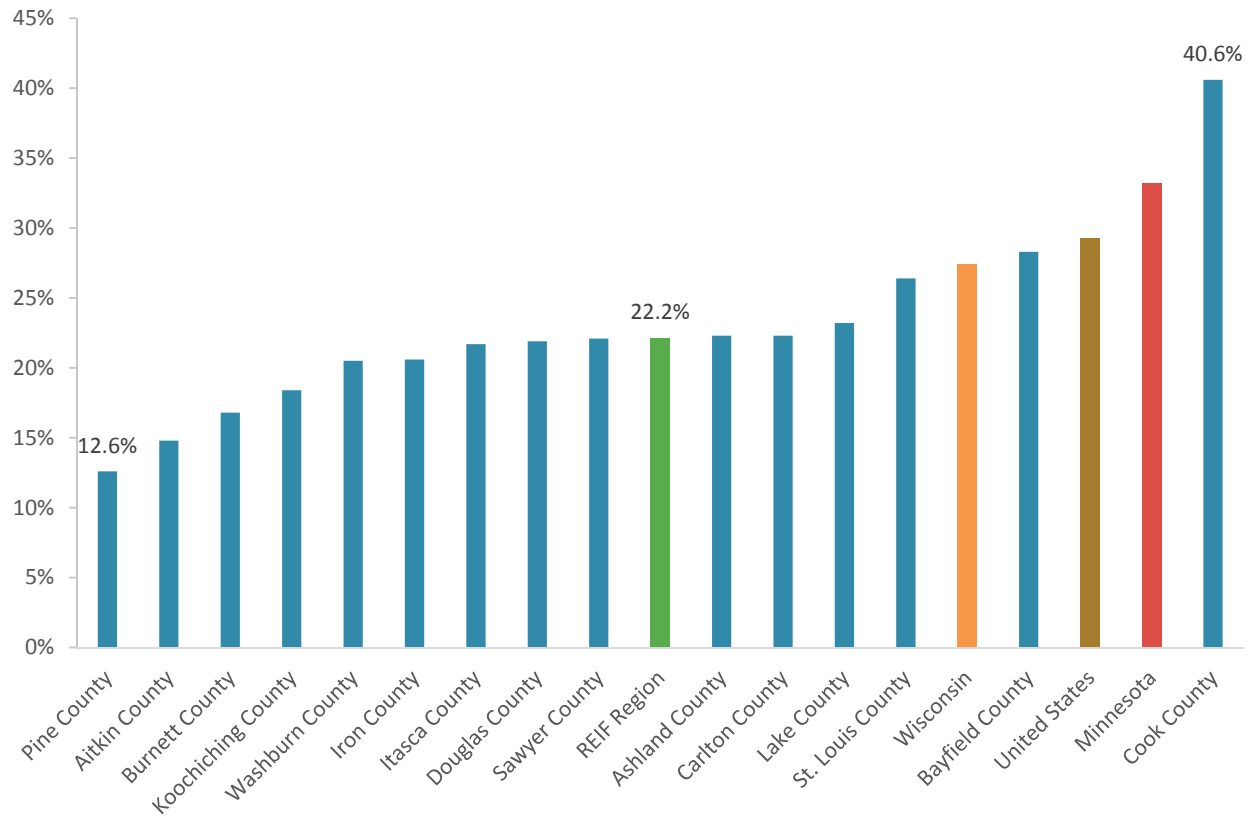
Historically, a college degree was not necessarily a requirement to making a living or finding a rewarding career. However, in the ultra-competitive, high tech, and demanding global workplace, a college degree has become a minimum cost of admission, so to speak, in much of the modern economy. Approximately one-third of the jobs available in the United States already required a post-secondary education according to 2012 data from the BLS. Additionally, the BLS predicted that by 2022, the percentage of positions requiring a post-secondary degree will continue to grow—an approximately 12.1% increase among those requiring a bachelor's degree, an 18.4% increase among those requiring a master's degree, and a 16.0% increase among occupations requiring a doctorate or professional degree. These numbers are a critical portrayal of how important post-secondary education has become and the importance of maintaining a competitive population of degree-holders in the workforce.

How is Our Region Doing?

Figure 14 shows the percentage of the REIF population with a bachelor's degree or higher by county³. Counties with the lowest levels of post-secondary educational attainment are on the left, and counties with the highest levels are on the right. The averages for the combined REIF region, Minnesota, Wisconsin, and the United States were also included. As the graph indicates, the REIF region had fewer post-secondary degrees as a percentage of the population than either of the states at just 22.2%. The percentage of the total U.S. population with a bachelor's degrees or higher was also higher than in the REIF region, coming in nationally at 29.3%—just under the average for Minnesota (33.2%) and just above Wisconsin (27.4%). Referring to Figure 14, only Cook, Bayfield, and St. Louis counties had significantly above average percentages of advanced degrees, while Pine, Aitkin, Burnett, and Koochiching counties had the lowest; Cook County was the only REIF county to exceed the national average.

³ The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 14: Percentage of Persons with a Bachelor's Degree or Higher, by County (2010 to 2014)



Source: United States Census Bureau

Housing Units



Region Maintains Fewer Housing Units on Average Than MN and WI

Description

According to the U.S. Census QuickFacts, a housing unit is identified as a separate living quarters, such as a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (it can be vacant as long as 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 off fully.

Why is It Important?

The number of housing units throughout a region can be an indication of the general strength of the economy. Occupied housing units show the commitment of the people to the region, as they are establishing residence and contributing to the local community and economy. Additional filled housing units typically equates to more contributors to the economy through the labor, production, and spending they provide. This number can fluctuate as renters and other transient population groups tend to move more frequently.

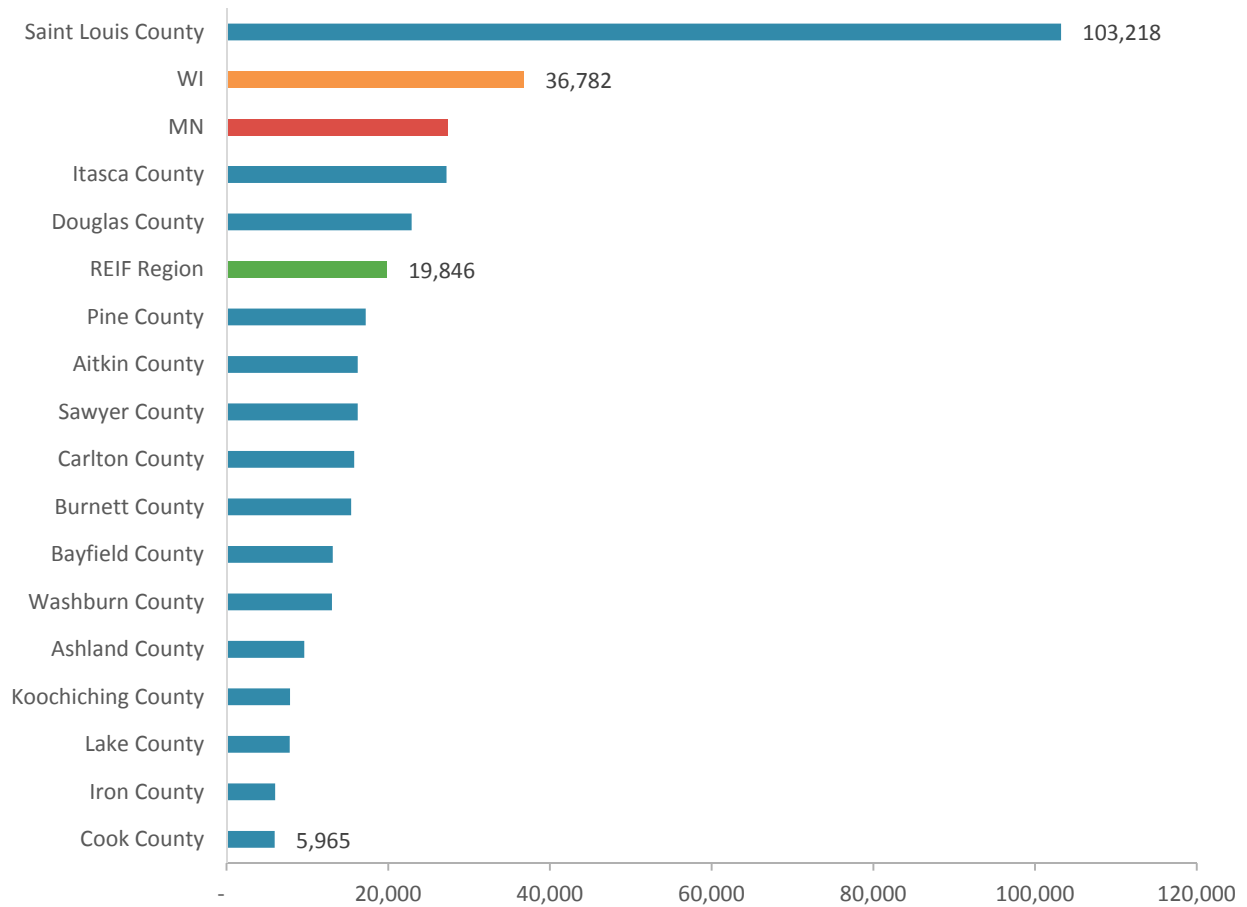
How is Our Region Doing?

Figure 15 shows the number of housing units in each of the region's counties as compared to the average for all REIF counties, Minnesota, and Wisconsin. St. Louis County, MN, had the largest number of housing units in the region by a large margin. Despite the relatively large number of units in St. Louis County, the REIF region as a whole still had fewer housing units, on average, than the average Minnesota or Wisconsin county.

The REIF region exhibits a unique situation with regard to the number of housing units and population, in that some counties had more housing units than people. In 2014, Cook and Aitkin counties (Minnesota) and Iron and Burnett counties (Wisconsin) each had more housing units than people in each county's population. This was likely because of the prevalence of second homes and vacation properties in those counties; tourism plays a significant role throughout the 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 about 14% more houses (5,965) than there were residents (5,233) in 2014.

It is relevant to compare Figure 15, showing the total number of housing units for each county, to Figure 16, the percentage change in building permits (2013-2014) by county. This highlights which counties within the REIF region added new housing units, and it provides some context in terms of what already existed in the counties' concurrent housing stock.

Figure 15: Total Housing Units, by County (2014)



Source: United States Census Bureau

One-Year Building Permit Growth Rate



Region Outperforms MN and WI in Issuance of Building Permits from 2013 to 2014

Description

According to the U.S. Census QuickFacts, building permits are defined 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 paid for fully.

Why is It Important?

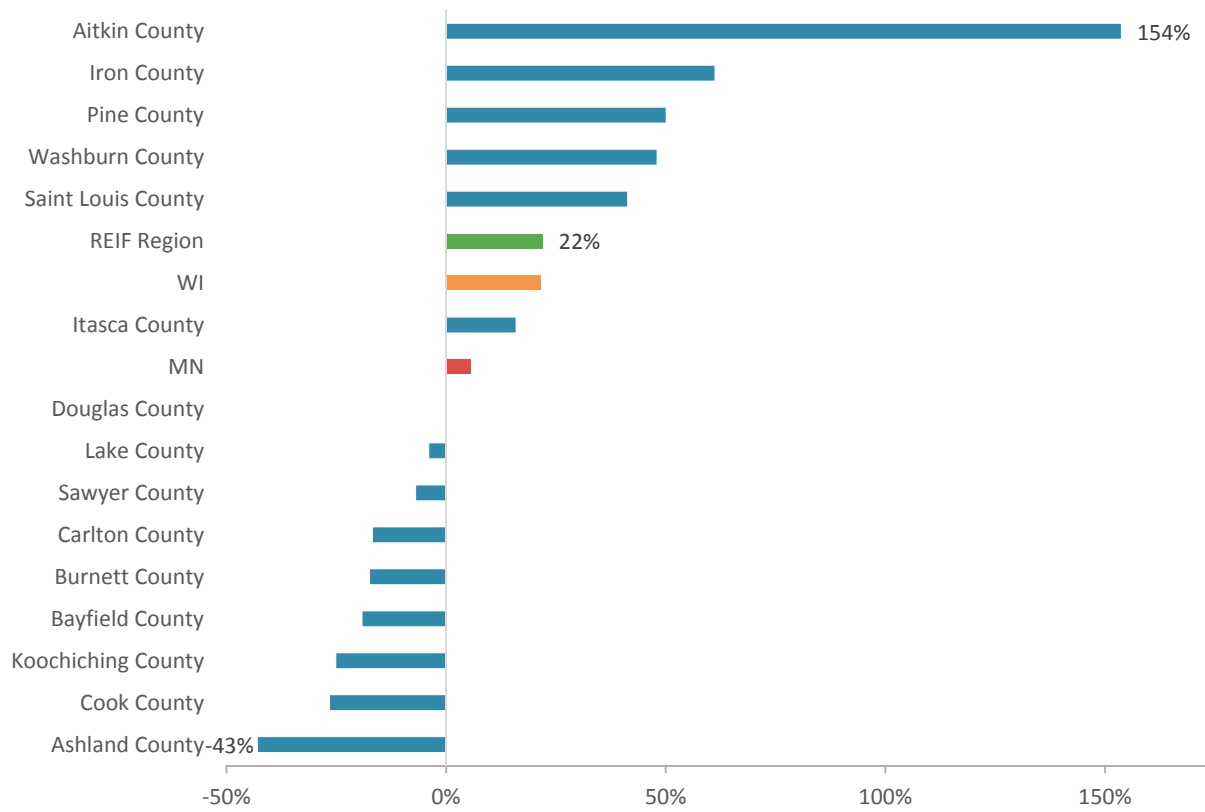
New housing starts represent approximately 4% of the annual gross domestic product (GDP) of the United States. An increase in new housing is a key indicator that the economy is strengthening. During the recent recession for example, the annual number of building permits issued nationally in 2009 was down just over 58% from that of 2007. Furthermore, from 2005 to 2007, before the onset of the recession, this same measurement, the annual number of building permits issued, had already begun to decline quite rapidly—evidence of this figure's value as a leading indicator of the economic situation to come.

How is Our Region Doing?

Figure 16 shows the percentage change in the issuance of building permits by county over the period of 2013 to 2014. The average growth rate for the REIF region over that period was 22%, meaning that the number of building permits issued overall increased from 2013 (1,105 permits) to 2014 (1,348 permits). That increase was greater than the increase seen for the state of Minnesota (5.6%) or the state of Wisconsin (21.4%). By percentage, the REIF region outperformed both states in terms of new housing starts, a positive sign for the economy in general.

Aitkin County realized the greatest increase in building permits issued from 2013 to 2014, increasing by more than double. This increase was also nominally significant, adding 106 new housing starts over the previous year, a year-over-year increase that was second only to St. Louis County with 136 new starts. By percentage, Ashland County saw a significant decline in the number of new permits issued. However, this county had a relatively low number issued in 2013, so the small drop in nominal terms was exaggerated in appearance when viewed in percentage terms. Overall, the continued growth in the number of issued permits throughout the region is a positive indication of a strengthening economy. As mentioned previously, this indicator is most useful when evaluated in combination with other trends, such as the number of housing units as seen in Figure 16.

Figure 16: Percentage Change in Building Permits by County (2013 to 2014)



Source: United States Census Bureau

Homeownership Rate



Homeownership Rate Higher than that of States and U.S.

Description

According to the U.S. Census QuickFacts, the homeownership rate is calculated by dividing the number of owner-occupied units by the number of housing units occupied by people within that region. A housing unit is identified as a separate living quarters, such as a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (it can be vacant as long as 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?

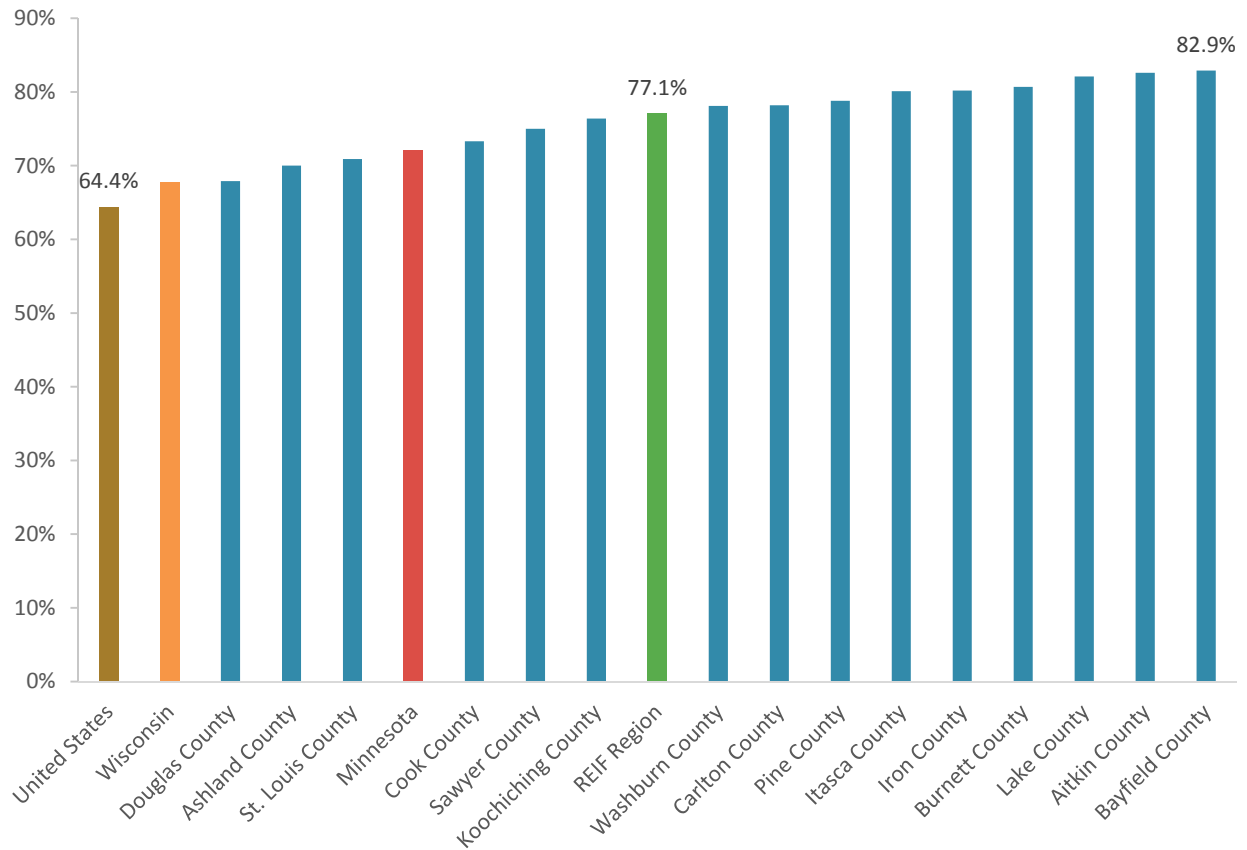
Owner occupied housing shows a commitment to the community by its residents. Those living in their purchased homes typically contribute to the community's economy, intend to remain in residency for a longer-term, and have a vested interest in the region. Thus, a higher homeownership rate is typically a good sign for the economy in a broader sense. Conversely, a very high homeownership rate can also be a hindrance to economic growth by leading to lower levels of labor mobility and less availability for new entrants to the labor market, plus it can indicate a weak rental market.

How is Our Region Doing?

Figure 17 shows the homeownership rate by county⁴ as well as the average rate for the combined REIF region, Minnesota, Wisconsin, and the United States. As seen in the figure, the homeownership rate throughout the REIF region was higher than the states of Minnesota and Wisconsin in all but three counties. In 2014, the region had an average homeownership rate of about 77.1% across the 15 counties, while Minnesota's average rate was 72.1%, and Wisconsin's was 67.7%. The average for the United States was just 64.4%. The generally high level of homeownership in the REIF region is likely related to the older, more stable population present as discussed previously, a lack of rental options due to the rural nature of much of the region, and the relatively low cost of homes discussed in the following section. The counties with the highest rates of homeownership included Aitkin and Lake in Minnesota and Bayfield and Burnett in Wisconsin. The counties with the lowest rates of homeownership included Douglas and Ashland in Wisconsin and St. Louis in Minnesota, though each remained well over the national average.

⁴ The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Figure 17: Homeownership Rate by County (2010 to 2014)



Source: United States Census Bureau

Median Home Value



Median Home Value Within Region Less Than MN, WI, and US

Description

According to the U.S. Census Bureau QuickFacts, respondents to 2010-2014 American Consumer Survey (ACS) were asked to estimate the selling price of their housing unit and lot, if they were to sell their property at that time. The data includes owner-occupied, single-family homes on less than 10 acres of land⁵.

Why is It Important?

The median value of owner-occupied housing units is an important economic indicator, because for many people, the value of their home represents a substantial portion of their overall net worth. Having an accurate estimate of that value can provide a region with important information related to personal wealth within its population, property values, and expected tax revenues. It is also a crucial tool in determining the general level of demand and supply of houses within a region that can be indicative of whether or not people desire and value homes there.

How is Our Region Doing?

Figure 18 shows the median home value by county⁶, as well as the median value for the state of Minnesota, the state of Wisconsin, the United States, and the average for the REIF region. The median value of owner-occupied housing throughout the REIF region was lower than the median for Wisconsin, Minnesota, and the United States, coming in at an average of just \$146,913. Although this was much lower than Minnesota (\$185,200) and Wisconsin (\$165,900), it was still higher compared to some other Midwest states, including Michigan (\$120,200), Iowa (\$126,300), North Dakota (\$142,000), South Dakota (\$135,700), Indiana (\$122,700), and Ohio (\$129,600). Generally, the Midwest has not been known historically for having the highest property values, which could be seen as a boon for the region's economy for attracting people who would otherwise stay on the coasts where median values were around double what they were in the Midwest. However, the fact that the REIF region remained above these other states is a positive indication that there was demand in and value placed on the region.

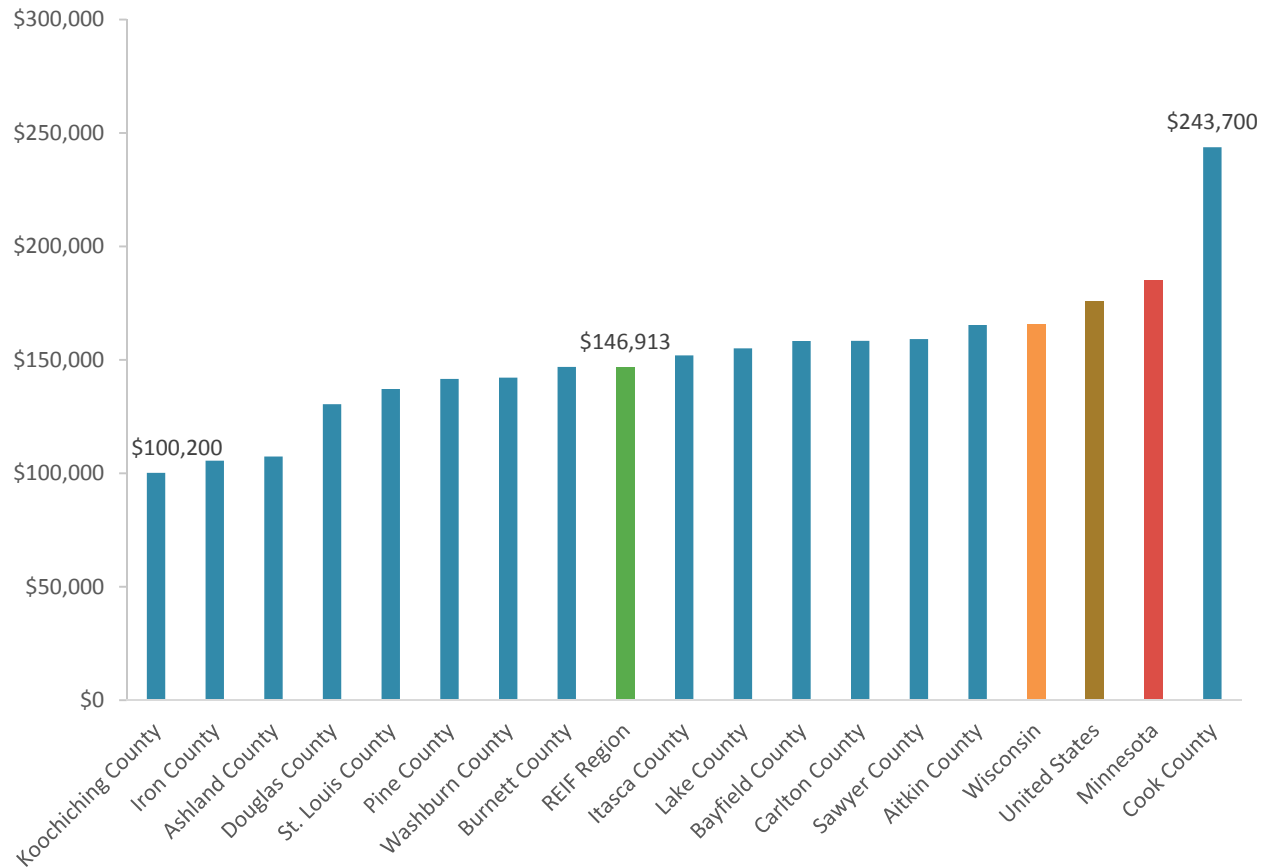
As can be seen in the figure, Cook County in Minnesota had the highest median home value in the region and by a considerable margin. Counties with the lowest median home values included

⁵ Mobile homes, houses with a business or medical office, houses on 10 acres or more, and housing units that are in multi-unit structures were not included in this data.

⁶ The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

Koochiching County in Minnesota and Ashland and Iron Counties in Wisconsin, all hovering just above the \$100,000 mark.

Figure 18: Median Home Value, by County (2010 to 2014)



Source: United States Census Bureau

Median Household Income



Median Household Income Within Region Lower than MN, WI, and US

Description

According to the U. S. 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 same household. This can include persons who are related to the householder but do not necessarily have to be. Income is calculated by including not only the individuals' wages or salaries but also other forms of alternative income such as investments, bonuses, etc.

Why is It Important?

Median household income is a common representation of the typical individual's wealth within a population or region. It can help highlight which regions might be struggling and which regions excel. Median household income is often most useful when compared with other indicators for the same region, such as gross domestic product, median home value, and employment by industry.

How is Our Region Doing?

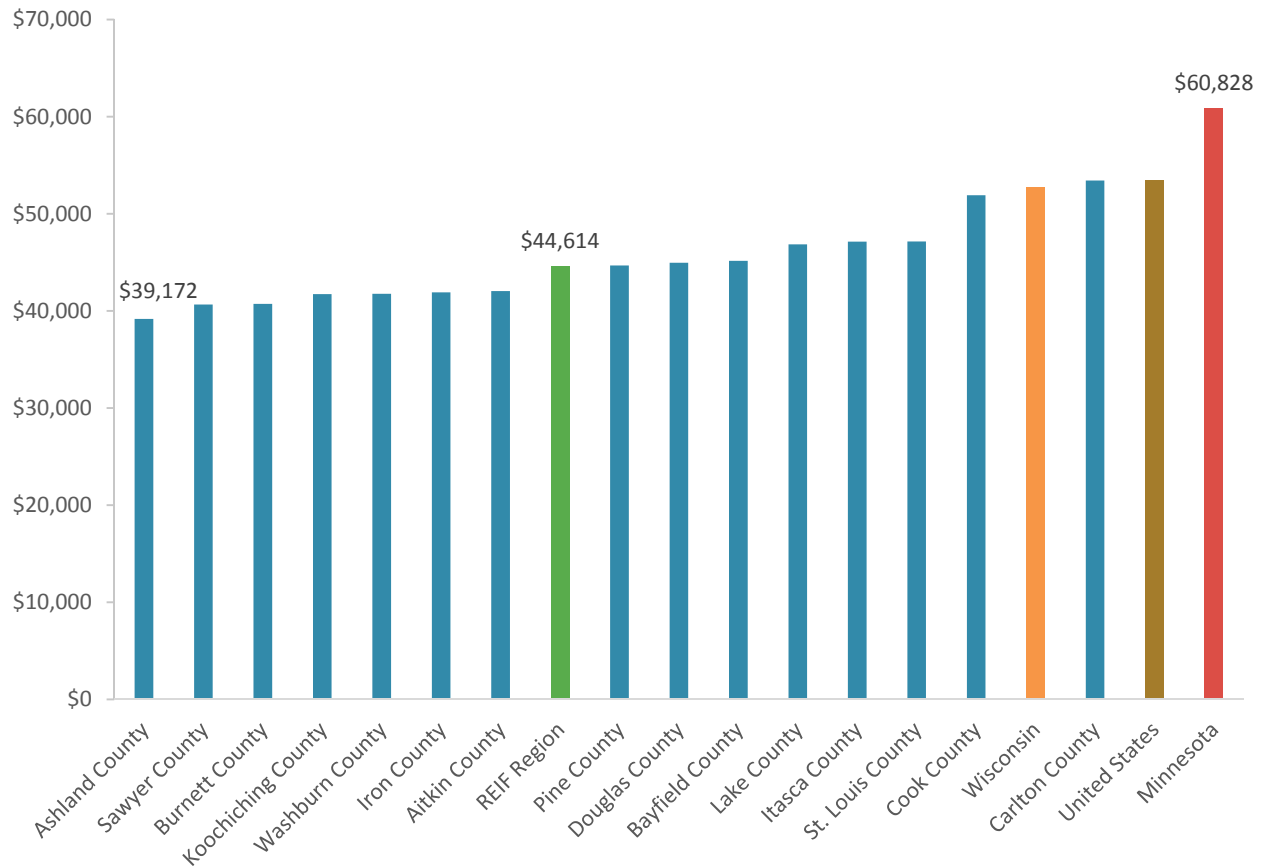
Figure 19 shows the median household income⁷ by county, as well as the median for Minnesota, Wisconsin, the United States, and the average for the REIF region. All of the dollar amounts given were calculated as 2014 dollars. The REIF region's median household income was \$44,614, which was much lower than Minnesota's and somewhat lower than Wisconsin's and the United States'. The state of Minnesota's median household income was one of the highest in the nation at almost \$61,000— higher than any of the REIF counties' (the highest was Carlton County, Minnesota at \$53,429). Other counties with the highest median household incomes included Cook, St. Louis, Itasca, and Lake (all in Minnesota), while the counties with the lowest median household incomes included Ashland, Sawyer, and Burnett (all in Wisconsin).

Regardless of how much higher Minnesota's median household income was compared to most of the rest of the U.S., the REIF region was still relatively low compared to the United States and other Midwest states. One reason for the discrepancy might have been demographics. The REIF region had an older population than elsewhere in Minnesota and Wisconsin. A higher percentage of people beyond their primary earning years could produce the lower median income seen in the region. This should also be considered in terms of the average living expenses, median home values, and other situational factors that can impact the real value of a household's income beyond just the number given. For example, with the lower median home value discussed

⁷ The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

previously, the lower median household income seen in the region was about proportionately smaller, as would be expected.

Figure 19: Median Household Income, by County (2010 to 2014)



Source: United States Census Bureau

Poverty Level



Average Regional Poverty Rate Higher Than States'

Description

According to the U.S. 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. This means that if the family's income (before taxes) is lower than the poverty threshold value set by the U.S. Census Bureau for that size of family, then every individual in the family is considered to be in poverty.

Why is It Important?

The poverty rate is important in determining the social and economic well-being of a region. High levels of poverty negatively impact the quality of life for a county's residents and can be a burden on the region's economy. High poverty levels have been correlated with high unemployment levels and low education levels. As an indicator, when the percentage of people living in poverty decreases, the economy typically improves as a result of the government being able to focus spending on promoting industry and developing the economy rather than allocating that money on less productive assistance programs.

How is Our Region Doing?

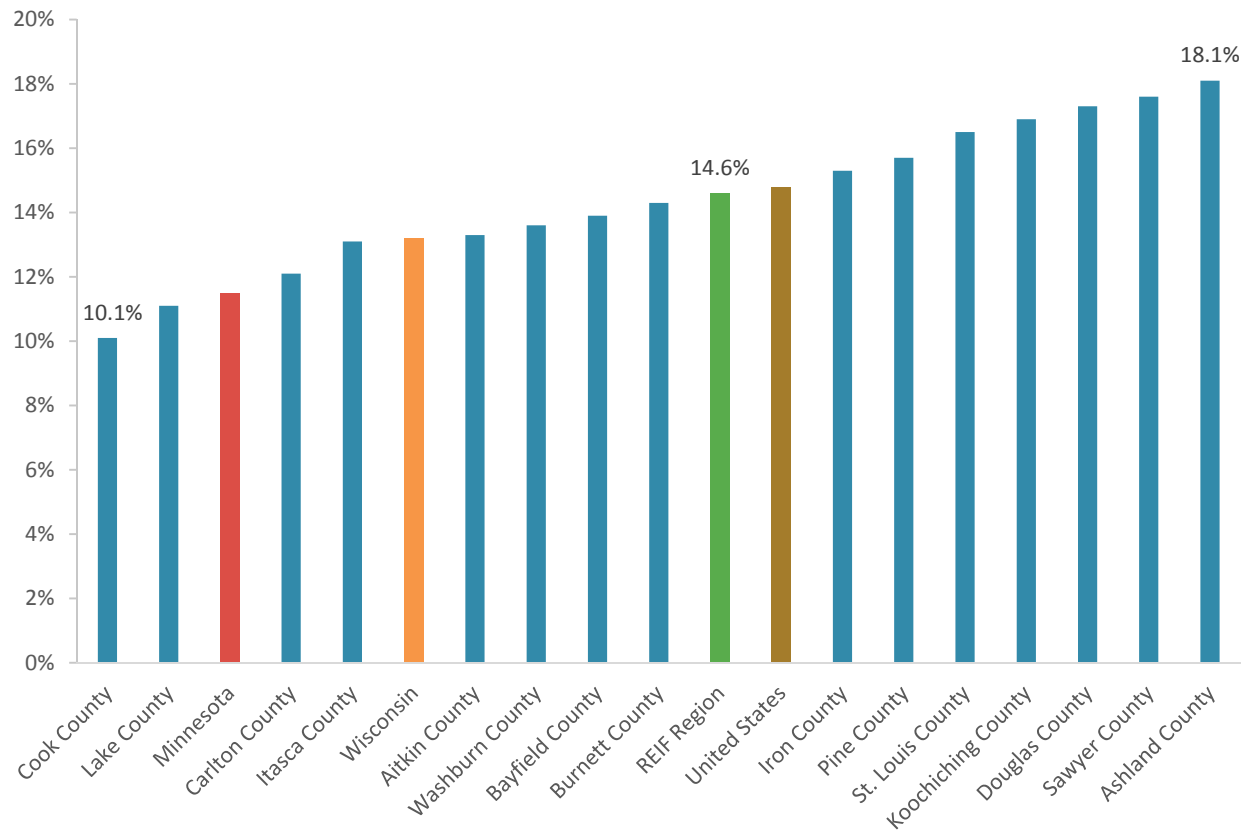
Figure 20 shows the percentage of people living in poverty⁸ (the poverty rate) in each of the 15 REIF counties, as well as the averages for the region, Minnesota, Wisconsin, and the United States. In this chart, lower values, those further to the left, were considered to be advantageous to higher values, or those to the right. Compared to the national average of 14.8%, the REIF region was found to have a similar, but slightly lower, poverty rate at 14.6%. This was over 2% higher than the average of the two states' rates though. Cook, Lake, and Carlton Counties in Minnesota were the only ones within the region to have a "better" poverty rate than the states'. The majority were higher though, with Douglas, Sawyer, and Ashland Counties in Wisconsin all coming in at over 17%, or nearly 1 in 5 people.

Using Ashland County (Wisconsin) as an example, it becomes apparent how many indicators intersect and relate to one another. Ashland County had the highest poverty rate at just over 18%, the lowest median household income of just about \$39,000, one of the lowest median home values at a little more than \$107,000, and one of the lowest homeownership rates at only 70%. It showed the greatest decline in new building permits, had below average high school graduation rates, and showed one of the largest percentage declines in population. Clearly, each indicator is

⁸ The statistics in this indicator were five-year estimates from the American Community Survey (ACS), 2010-2014. The ACS is a mandatory, ongoing statistical survey that samples a small percentage of the population every year.

related and not only indicative of the economic state of the region but also of what to expect in the results of other indicators in the future.

Figure 20: Percentage of Persons in Poverty by County (2010 to 2014)



Source: United States Census Bureau

Occupational Demand Forecast



Average Regional Poverty Rate Higher Than States'

Description

According to Economic Modeling Specialists International (EMSI), the highest ranked occupations within a region can be determined by analyzing current employment, earnings, job growth (or decline), shift share, and location quotient for each individual occupation. This data can then be grouped according to its corresponding Standard Occupational Classification (SOC) code to examine which industries will be most in demand in the future. EMSI's data is a slightly modified form of the Bureau of Labor Statistics' Quarterly Census of Employment and Wages.

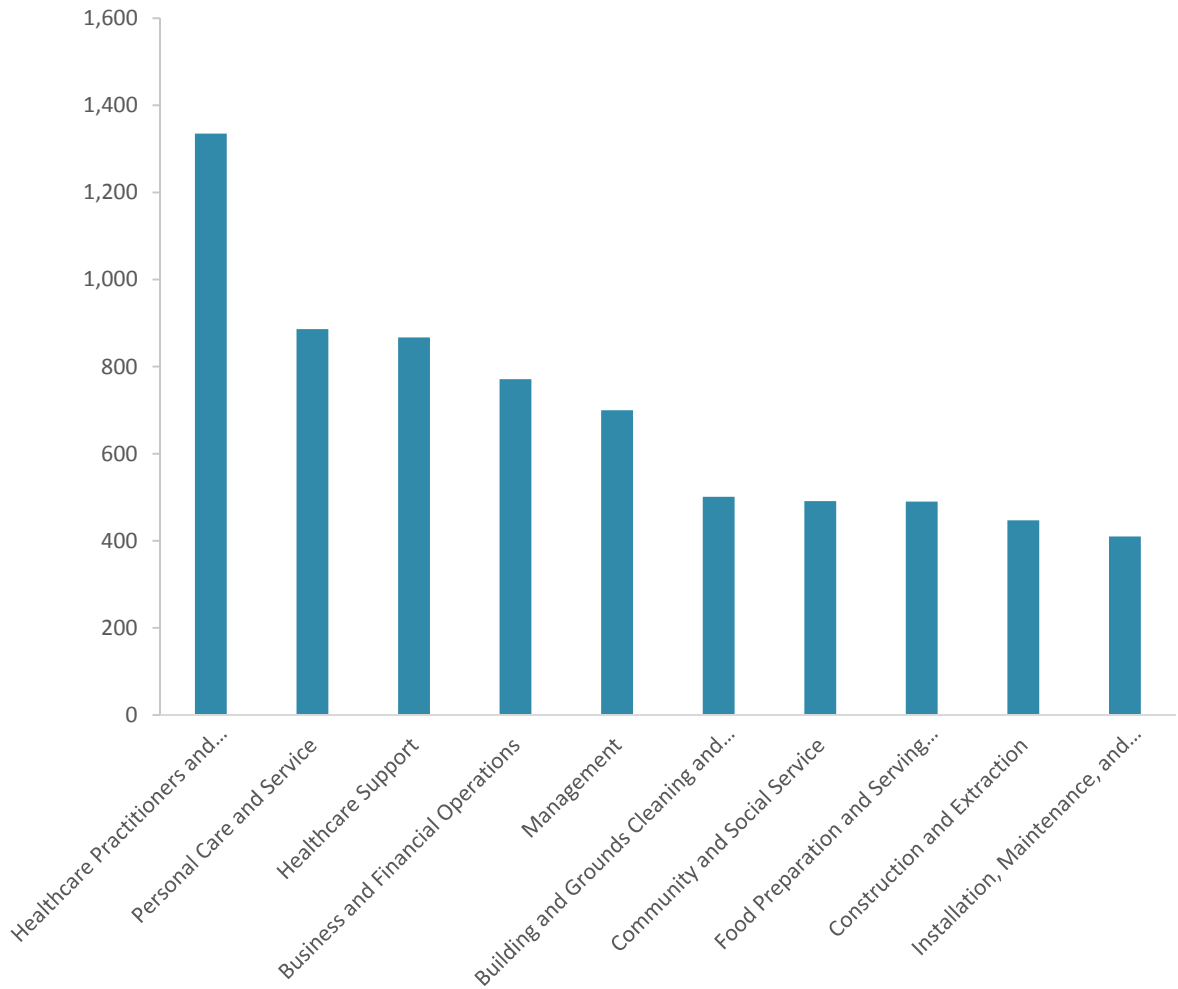
Why is It Important?

Understanding which industries or particular occupations will be most in demand over the next five to ten years can be very useful for both potential employees and economic developers and planners. For students trying to decide on a career path, people looking to move into a new line of work, or people looking to move into the region, looking at employment forecasts can be the first step to making that big decision. For economic developers and employers looking ahead to the region's future economy, such forecasts can be an impetus for change and insight into an evolving market.

How is Our Region Doing?




Figure 21 shows the top ten fastest growing occupations by two-digit SOC industry codes from 2015 to 2020 based on EMSI's forecast. Healthcare Practitioners and Technicians, Personal Care and Support, and Healthcare Support were the top three areas projected to be the most in demand over the next five years. Considering the large percentage of total employment and the growth the Healthcare industry had (see Figure 6, 8, 9, and 10), the projection of further high demand in this area was consistent. The areas of Business and Financial Operations and Management also scored high in the projection. Like Healthcare, these were also noted for significant growth over recent years (see Figure 9, Management of Companies and Enterprises), though they were represented in a relatively smaller industry in the region (see Figure 6, Professional and Business Services). Overall, all but one of the top ten occupations in the forecast were service-related industries (with Construction and Extraction as the exception). This could be indicative of a continued shift in the region's economy from a basis of primary and secondary industries to a primarily service-based economy, much like the United States overall.

Figure 21: Fastest Growing Occupations (2015 to 2020)



Source: Economic Modeling Specialists International (EMSI)

Consumer Confidence Indicators: Predicting the Business Cycle

Indicator		Public Survey (Random)	REIF Survey (Non-random)
ICS		Weakening short-term economic outlook	Weakening short-term economic outlook
ICC		Economy is slowing down	Economy is slowing down
ICE		Expectations of future economic slowdown	Expectations of future economic slowdown

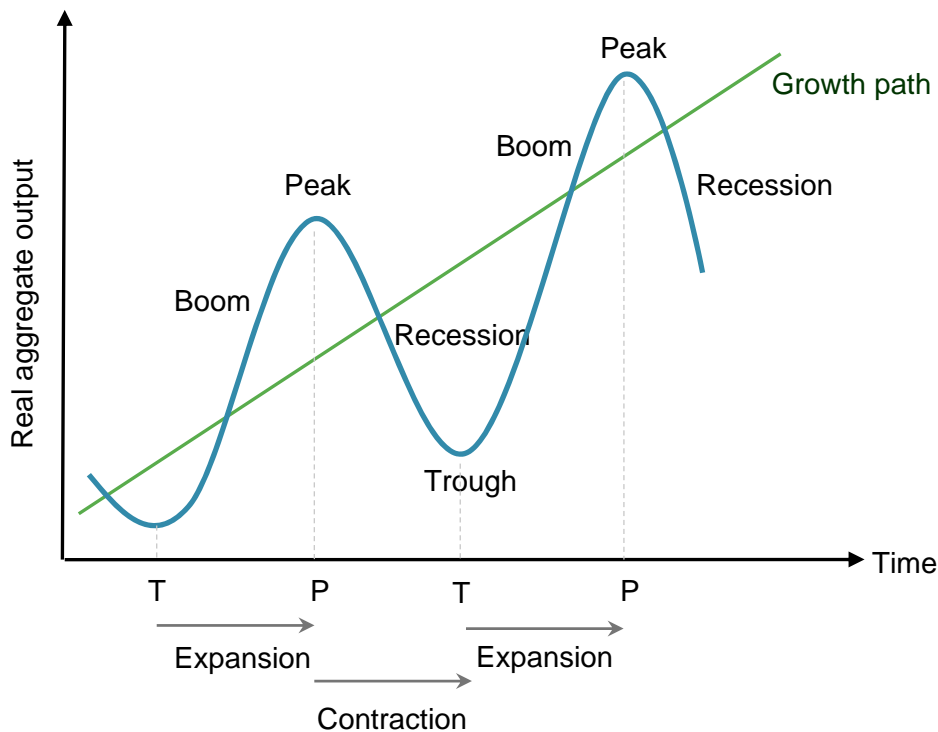
Rubana Mahjabeen, Ph.D., Assistant Professor of Economics, University of Wisconsin-Superior
Zamira Simkins, Ph.D., Assistant Professor of Economics, University of Wisconsin-Superior
UW-S student researchers: Prashant Burlakoti, Abdisa Dawano, Jenna Farmer, Caleb Hjelle, Brian Honness, Naho Miyachi, Nneoma Nwobilor, Arne Nyeck, Marquise Slay, Farida Suleiman, Armel Gilles Fetue Wafo, Tsetsen-Ujin Zagdsuren.

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 22, 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 22: Business Cycle



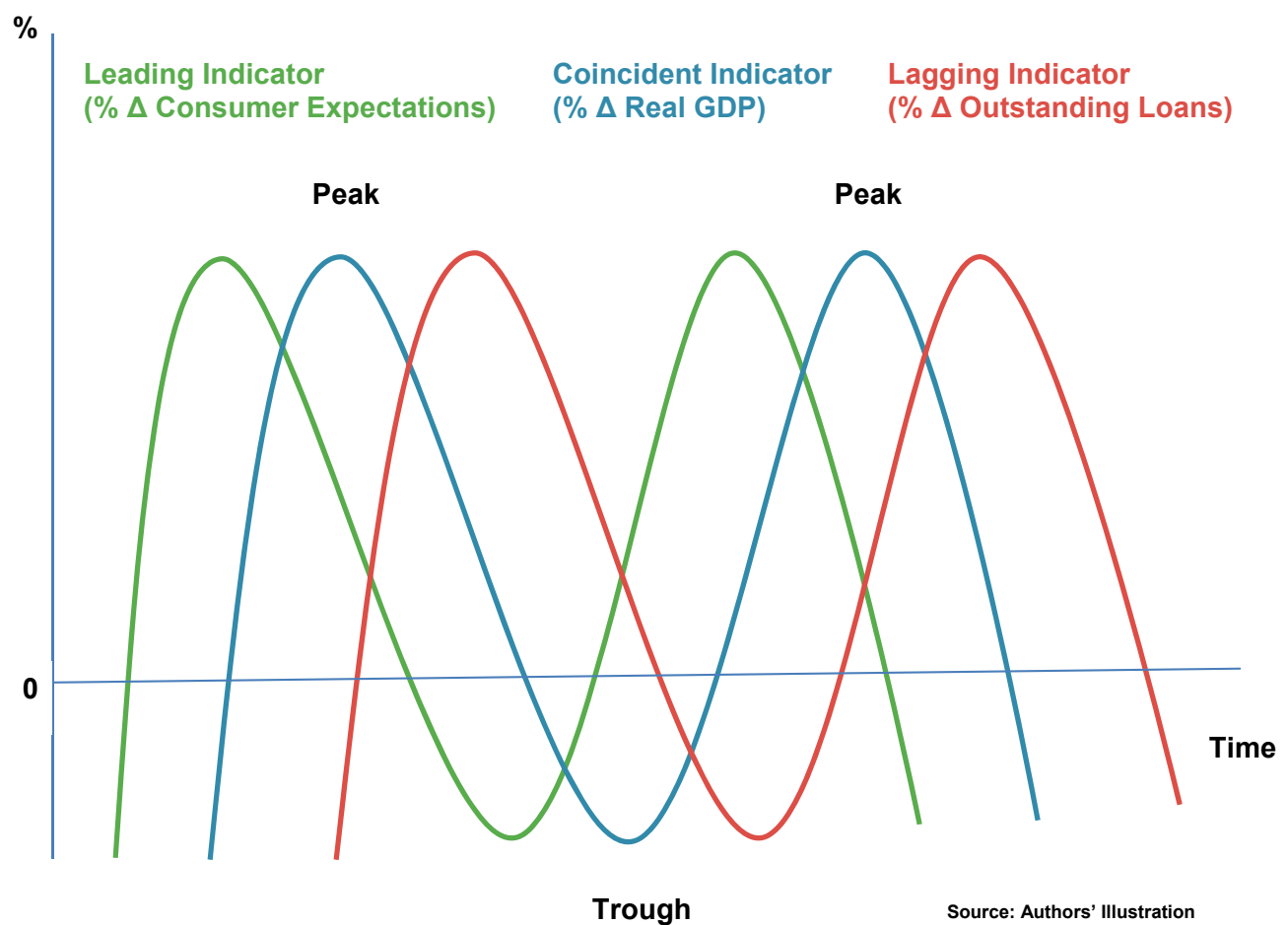
Source: Authors' Illustration

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 23, 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 23, 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 23, lagging economic indicators follow the coincident economic indicators.

Figure 23: 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 5 core survey questions related to three consumer confidence indicators (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.
- 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
Fall 2015	107	16.41%	9.35%	117

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 spring months to fall months, phone survey shows that all three indices exhibited a negative trend. This is the first time that the phone survey results have shown a negative trend since the data collection started in fall 2013. The negative trend is paralleled in the e-mail survey, where all three indices declined. Since both results were collected during the same time period, these findings suggest that both the general population and the REIF participants, e.g., local government, business people, 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%
Fall 2015	103.23	-2.37%	104.71	-0.48%	102.23	-3.66%

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%
Fall 2015	95.77	-1.28%	96.72	-1.11%	95.13	-1.39%

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' 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
Mar' 15	93	-0.64	105	-1.78	85.3	-3.07
Apr' 15	95.9	3.12	107	1.91	88.8	4.10
May' 15	90.7	-5.42	100.8	-5.79	84.2	-5.18
June' 15	96.1	5.96	108.9	8.04	87.8	4.28
July' 15	93.1	3.12	107.2	-1.56	84.1	-4.21
Aug' 15	91.9	-1.29	105.1	-1.96	83.4	-0.83
Sep' 15	87.2	-5.11	101.2	-3.71	78.2	-6.24
Oct'15	92.1	5.62	106.7	5.44	82.7	5.75

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 weaker. This is also reflected in the phone-based regional indices. These findings suggest that there is a growing pessimism about the current and future economic conditions. The national survey did show a few months where there was a positive trend, but overall, the indices are trending downward.

The national ICS indices alternate between an upward and downward trend for March–August, where August and September is the first continuous two-month span when the indices trended downward. The ICC and the ICE parallel in trends, with the majority of months trending downward. Both indices have been trending downward for the past three months and for four of the past five months. 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 pessimistic 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 a decrease from spring 2015 to fall 2015, this is opposite to the trends that were established in fall 2014 through

spring 2015. It should be noted that this is the first time that we have seen a negative trend in the indices, which implies that consumers are pessimistic about economic conditions in our 15-county region. During this time, the ICE had the largest drop, meaning that consumers of our 15-county region are most pessimistic about the economy's future. This parallels the national data that also exhibited a downward trend.

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



Sakib Mahmud, Ph.D., Assistant Professor of Sustainable Management and Economics, University of Wisconsin-Superior

University of Wisconsin-Superior Student Researchers: Donald Simmons, Daniel Manion, Brian Honness, Paige Ford, Leah Boedigheimer, Kylie Kruger, and Cody Lind

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 fourth 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, and the third report through February 28, 2015. The fourth report extends the study through October 1, 2015; during this period the REI underperformed relative to the benchmark index, and investors were more bearish than bullish on the majority of the stocks in the index.

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 October 1, 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 2009 to 2015 is the S&P MidCap 400® Equal Weight Index.

Stock Performance

Table 5 shows the annual returns for each component of the REI over the study period ending October 1, 2015, the average and median returns for the REI components, and the annual returns of the benchmark index.

Historically, the performance of the REI components relative to the benchmark index shows the overall performance of the index to be below the market. The average return for the REI exceeded the performance of the benchmark in 2009 and 2010. Between 2011 through 2015, the index underperformed relative to the benchmark index. However, the general trend of the REI in a positive or negative direction is consistent with the trend observed for the market.

Table 5: Annual Returns for REI Components and Benchmark Index, ending 2/28/2015

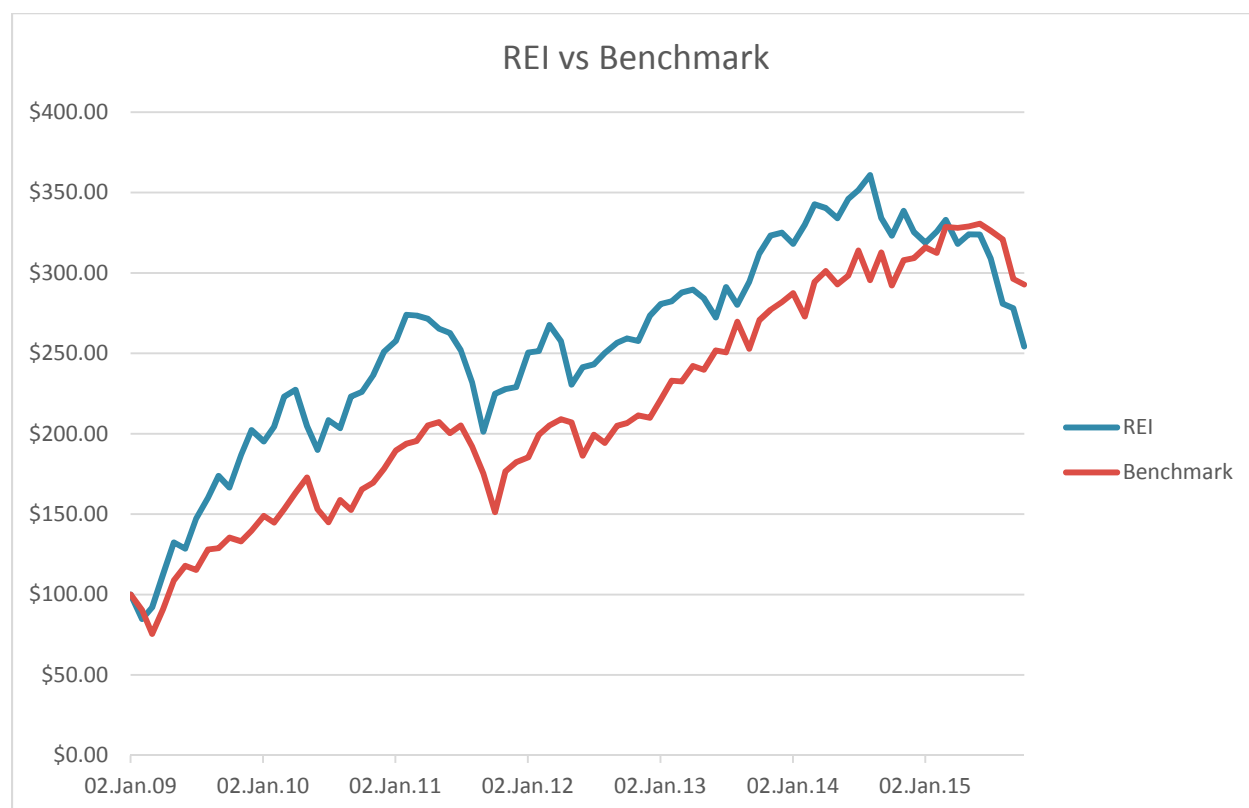
REI	2010	2011	2012	2013	2014	2015
Allete	24.05%	17.64%	16.51%	12.53%	12.00%	-9.94%
Ascena Retail Group	15.21%	30.38%	-4.13%	10.68%	-35.07%	13.30%
Calumet	31.64%	0.32%	55.88%	-0.27%	-19.02%	5.18%
Canadian National Railway	38.37%	13.06%	29.14%	13.66%	27.48%	-16.48%
Cliffs Natural Resources	115.83%	-14.54%	-45.98%	-46.99%	-63.37%	-66.43%
Enbridge Energy Partners	31.42%	9.33%	-0.65%	5.37%	40.70%	-35.22%
Ikonic	11.68%	-0.48%	27.07%	100.50%	-10.63%	-19.51%
Louisiana-Pacific	41.21%	-15.14%	128.05%	-9.78%	-5.65%	-13.24%
Polymet	-29.25%	-26.82%	-24.43%	9.09%	-0.93%	-42.99%
Sappi Limited	23.37%	-36.13%	4.28%	-12.02%	18.67%	-12.64%
UnitedHealth Group	25.88%	27.84%	8.16%	33.01%	39.43%	15.71%
US Steel	30.35%	-47.38%	-25.36%	17.92%	2.03%	-62.73%
Median	28.11%	-0.08%	6.22%	9.88%	0.55%	-14.86%
Average	29.98%	-3.49%	14.04%	11.14%	0.47%	-20.42%
Benchmark	27.34%	-2.27%	19.36%	29.89%	9.92%	-7.31%

Figure 24 illustrates the growth of \$100 invested in the REI on January 2, 2009 and held until October 1, 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 \$254.29, down from \$325.77 at the end of February 2015. The ending value of the S&P 400 is \$292.82, down from \$312.51 at the end of February 2015.

The REI trends somewhat with the market, but has significantly underperformed relative to the S&P 400 during the fourth study period; while both the REI and S&P 400 were down during the period, the REI is down 21.94% from the last report, which is more than thrice as much as the loss experienced by the S&P 400, which is down 6.3%.

Looking at the components of the REI individually, only three of the nine stocks in the composite index have outperformed the benchmark this year to date. Ascena Retail Group, Calumet, and UnitedHealth Group have returns ranging from 5.18% to 15.71%, while the other components have returns ranging from -9.94% to -66.43%.

Figure 24: Growth of \$100 Invested in the REI and the S&P Index



Another way to evaluate the the performance this year of the REI and its components is to compare YTD returns to average annual returns. Table 8 shows the year-to-date return for each REI component, the average annual return for each REI component, and the difference between the year-to-date return and average annual return for each REI component. All twelve components of the REI are underperforming this year relative the average annual return. Louisiana-Pacific, Cliffs Natural Resources, and US Steel underperformed the most, between 76.66% and 67.30% relative to their average yearly return; UnitedHealth Group, Ascena Retail Group, and Calumet underperformed the least, between 9.46% and 18.39% relative to their average yearly return.

Table 6: Year-to-date (YTD) and Average Annual Return for each REI Component, ending 10/1/2015

REI	Returns		
	YTD	Average Yearly	Difference (YTD - Average Yearly)
Allete	-9.94%	14.87%	-24.82%
Ascena Retail Group	13.30%	31.69%	-18.39%
Calumet	5.18%	28.09%	-22.91%
Canadian National Railway	-16.48%	27.89%	-44.37%
Cliffs Natural Resources	-66.43%	3.14%	-69.57%
Enbridge Energy Partners	-35.22%	27.91%	-63.12%
Ikonics	-19.51%	25.85%	-45.36%
Louisiana-Pacific	-13.24%	63.42%	-76.66%
Polymet	-42.99%	29.04%	-72.03%
Sappi Limited	-12.64%	4.85%	-17.49%
UnitedHealth Group	15.71%	25.16%	-9.46%
US Steel	-62.73%	4.57%	-67.30%

This evaluation changes slightly when comparing the average return year-to-date with the year-to-date return for 2015. UnitedHealth Group performed slightly better than its year-to-date average, calculated at the end of the fourth study period. However, the other eleven components of the REI are still underperforming relative to their average year-to-date performance.

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 7, the average Timeliness/Performance Rank for the REI is at 3.5. This suggests that on average the price performance of the REI should do slightly worse than the market over the next year.

Polymet, UnitedHealth Group, and Canadian National Railway have a rank of 2, indicating they are expected to outperform the market. Polymet and UnitedHealth Group both showed improvement from the previous study period, going from a rank of 3 to a rank of 2. Canadian National Railway declined from a rank of 1 to a rank of 2. Allele, Calumet, and Louisiana-Pacific each had a rank of 3, indicating they are expected to perform as well as the market. For Louisiana-Pacific this is an improvement from the last study period, when it had a rank of 5; Allele and Calumet are unchanged from the last study period.

Ascena Retail Group had a rank of 4, while Cliffs Natural Resources, Enbridge Energy Partners, Ikonics, and US Steel had a rank of 5. These ranks represent a decline over the last study period for each of the four companies, and indicate an expectation of below market-average performance over the next year.

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 7, the Safety Rank for the REI is 3.2, which makes the REI slightly above average in terms of potential risk. UnitedHealth Group has a rank of 1, as it did last study period. Allele, Canadian National Railway, and Polymet have a rank of 2, which indicates above average safety. Ascena Retail Group has a rank of 3, indicating average risk potential. Enbridge Energy Partners, Ikonics, Louisiana-Pacific, 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 3.2 and indicates that the index is expected to have slightly worse performance than the market over the next three to six months. Ascena Retail Group has a rank of 1, indicating the company is expected to outperform the market over the short term. Allele, Calumet, Enbridge Energy Partners, Louisiana-Pacific, UnitedHealth Group, and US Steel have a rank of 3; this indicates they are expected to do as well as the market over the short term. Canadian National Railway and Ikonics have a rank of 4, and Cliffs Natural Resources has a rank of 5, indicating these companies are expected to perform worse than the market for the short term. This is a decline for Canadian National, and Ikonics, as well as Cliffs Natural Resources which went from a 1 at the end of the period for the last report, to a 5 at the end of the period for this report.

Based on the Timeliness Rank and Technical Rank, Ascena Retail Group is expected to outperform the market in the short term, with a dip in the expectations to underperformance for the rest of the year. US Steel and Enbridge Energy Partners are expected to have average performances over the short term, with declines in performance the rest of the year. Allele, Calumet, and Louisiana-Pacific are expected to perform as well as average in the short term, and to continue this average performance the rest over time. Canadian National Railway and UnitedHealth Group are expected to have an improvement in performance following a below average and average short-term performance respectively. Ikonics and Cliffs Natural Resources are expected to have below average performance in the short term that will continue for the rest of the year.

Price Stability Rank

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 42.7, which is both slightly below average and lower than the average in the previous report. Ascena Retail Group, Calumet, and Enbridge Energy Partners saw declines in stability rank. Louisiana-Pacific and Polymet saw increases in stability rank. The other companies in the REI remained unchanged from the previous report.

Cliffs Natural Resources, Polymet, US Steel, and Louisiana-Pacific scored the lowest in price stability with values ranging from 5 to 20, indicating a high level of risk. Enbridge Energy Partners, Canadian National Railway, and Allele scored the highest in price stability, with values

ranging from 75 to 95. Also noteworthy is that seven of the twelve companies in the REI have price stability ratings at or below 40.

The Price Stability rank for these firms is consistent with the volatility of the returns shown in Table 7 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 42.3, indicating it is below average in terms of consistent price growth. Ascena Retail Group, Canadian National Railway, and UnitedHealth Group showed above average persistence in price growth, with measures ranging from 55 to 100. Allele, Calumet, Cliffs Natural Energy Resources, Enbridge Energy Partners, Louisiana-Pacific, Polymet, and US Steel all showed below average persistence in price growth, with measures ranging from 5 to 45. Compared to the previous report, two companies, Louisiana-Pacific and UnitedHealth Group, reveal their price growth persistence measure increase, while six of the companies saw the price growth persistence measure decrease. For Allele, Canadian National Railway, and Polymet, there is no change in price growth persistence measure. As mentioned before, there is no reporting of price growth persistence and other measures for Sappi Limited under the Value Line® measures.

Table 7: Value Line Measures

REI	Timeliness/ Performance	Safety	Technical	Price Stability	Price Growth Persistence
Allele	3	2	3	95	35
Ascena Retail Group	4	3	1	40	55
Calumet	3	4	3	35	25
Canadian National Railway	2	2	4	90	100
Cliffs Natural Resources	5	5	5	5	25
Enbridge Energy Partners	5	4	3	75	45
Ikonics	5	4	4	15	60
Louisiana-Pacific	3	4	3	20	35
Polymet	2	2	*	10	5
Sappi Limited	*	*	*	*	*
UnitedHealth Group	2	1	3	75	70
US Steel	5	4	3	10	10
Average	3.5	3.2	3.2	42.7	42.3
MEDIAN	3	4	3	35	35

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, Enbridge Energy Partners, and Ikonics compare favorably to their industry averages. Sappi Limited has a P/E ratio significantly lower than the industry average, 10.5 and 36.3 respectively. UnitedHealth Group and Allele both have P/E ratios slightly below the industry average.

Both Ikonics, with a P/E ratio of 526.5, and Enbridge Energy Partners, with a P/E ratio of 98.8, have ratios well above the industry average; this may be an indication that the stocks are currently overpriced.

The average P/E ratio for the REI is 113.95, which is well above the average market P/E ratio. When Ikonics is dropped, the REI average P/E ratio drops to 31.44 which is still well above the average market P/E ratio. The median P/E ratio for the REI, including all companies for which data was available, is 18.05 and relatively close to the average market P/E ratio.

Table 8: Price Ratio Measures

REI	Price to-Earnings Firm	Industry	Forward Price/Earnings	PEG Ratio	PEG Payback	Short Ratio	Shares Short % Change
Allete (ALE)	17	17.3	14.6	2.4	9.8	9.13	-60.56
Ascena Retail Group (ASNA)	*	23.6	16.6	0.8	7	4.69	21.44
Calumet (CLMT)	*	10.8	*	0	*	2.65	2.03
Canadian National Railway (CNI)	19.1	15.5	16.5	0	*	2.66	-6.99
Cliffs Natural Resources (CLF)	*	*	*	0	*	10.82	-7.22
Enbridge Energy Partners (EEP)	98.9	33.5	18.1	0	*	4.44	3.58
Ikonic (IKNX)	526.5	20.2	*	*	*	1.00	67.92
Louisiana-Pacific (LPX)	*	38.9	55.9	11.2	26.4	9.65	-1.46
Polymet (PLM)	*	*	*	*	*	25.65	-1.73
Sappi Limited (SPPJY)	10.5	36.3	*	0	*	1.03	-9.21
United Health Group (UNH)	11.8	19.9	16.4	1.4	8.6	3.4	3.1
US Steel (X)	*	*	12.3	0	*	5.04	8.22
Average	113.95	24.00	21.49	1.58	12.95	6.8	1.59

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. However, one can also argue that when both current market price per share is relatively falling faster than expected earnings per share, the Forward Price-to-Earnings ratio could fall though such outcome should not be considered favorable for an investor when a company facing drop in both its current and expected future earnings.

Of the companies that had data on Morningstar® for the current P/E and the Forward P/E ratios, three had a lower Forward P/E ratio than current P/E ratio.

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 11.2, indicating it is overvalued. Allele, with a PEG ratio of 2.4, and UnitedHealth Group, with a PEG ratio of 1.4, also seem to be slightly overvalued. All other companies in the REI for which Morningstar® had data on PEG ratio appear to be undervalued based on this measure.

PEG Payback Period

The PEG payback period is the time it would take an investor to double his/her 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 Louisiana-Pacific with a PEG Payback period of 26.4. However, information on Peg Payback Period is available only for four companies out of twelve REI companies of the REIF region.

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, he/she is taking a long position. If an investor feels that the stock's price is going to fall, he/she can take a short position. In a short sale, the investor borrows the stock from a broker and sells it at the current market price. If the price declines, the investor can cover his/her 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.

Five of the firms in the REI have short interest ratios ranging from 5.04 to 25.65, indicating investors are fairly confident the stock will not increase over the short term. Seven of the firms in the REI have short interest ratios below 5.0, indicating that investors are bullish on these stocks. The average short interest ratio for the REI Index is 6.68, a 12.5% increase in the average short interest ratio since the last report. This indicates that the bearish sentiment of investors has become more bearish.

Northland Business Confidence Survey



Bob Hoffman, Assistant Professor, School of Business and Technology, College of St. Scholastica. Student Researchers: Ana Maria Camelo Vega, James Hinrichs, Cassidy Jayne.

To provide a cohesive analysis for all of 2015, the following report includes data, points of interest, and themes from St. Scholastica's findings from the Spring 2015 REIF and most recent Fall 2015 REIF analyses. The following sections are organized as such:

Spring 2015 Business Confidence Analysis

- Overall state of confidence and NBC index reading
- General business confidence indicators
- Specific business indicators
- Factors limiting business activity
- Housing in the REIF region
- Data limitations

Fall 2015 Business Confidence Analysis

- Overall state of confidence and NBC index reading
- General business confidence indicators
- Specific business indicators
- Factors limiting business activity
- Skills Gap in the REIF region
- Analysis of small businesses - businesses with 1-49 employees

Contributing Themes

- Evaluation of education in the region and the perceived skills gap
- Drawn conclusions regarding responses to the cost of labor, number of employees, and number of skilled laborers as factors limiting business activity in the region
- Comparison to national averages: Beige Book data and National business confidence surveys

Northland Business Confidence Survey Methodology

Spring 2015 Business Confidence Analysis

Spring 2015 Overall State of Confidence and NBC Index Reading

Spring 2015 yielded overall confidence at a positive NBC reading of 108, where any reading above 100 indicates confidence. The 108 was down slightly from Fall 2014's reading of 111.

Spring 2015 General Business Confidence Indicators

Respondents are first asked to address their general level of business confidence⁹ during the previous six months. Roughly half reported both their company outlook and level of business activity had increased.

Immediately following, businesses are asked to gauge their expectations for general confidence for the next six months¹⁰. Again, about 50% of respondents expected their company outlook and level of business activity to increase in the coming six months. This indicates that the majority of businesses in the region are confident on a general level.

Spring 2015 Specific Business Indicators

After evaluating business confidence on a general level, we asked respondents about more specific indicators. We asked what happened to the business' employee(s) average hours worked, number of employees, selling prices, capital expenditures, sales revenue, and profits over the previous six months. Our findings reflect moderate increases in all indicators, with the exception of number of employees where 26% of respondents reported a decrease.

Expectations for the next six months reflected all of the indicators were expected to increase. Notable indicators included sales revenue and profits, where 54% and 48% of respondents expected increases, respectively.

Spring 2015 Factors Limiting Business Activity

We then asked businesses to select up to three factors that are limiting their general business activities. Demand and shortage of skilled labor were selected by 34% of respondents. Weather conditions, cost of labor, competition within sector, and government policy were other frequently selected limiting factors.

⁹ Section 4 "Northland Business Confidence Survey Methodology" contains the survey and available choice options for reference. This analysis highlights only the indicators (in quotations) that were chosen by the majority of respondents.

¹⁰ It should be noted that business expectations in spring 2015 for the "next six months" can, and should, be compared to Fall 2015's questions regarding the "previous 6 months." That is, were businesses' predictions from Spring actualized in Fall.

In keeping with the theme of the Spring 2015 forum, we included housing as one of the available options for a limiting factor. Only 1% of respondents reported that housing was a limiting factor in their business activity.

Spring 2015 Housing in the REIF Region

The final two questions in the Spring 2015 survey sought to discover businesses' opinions on housing in the region. The first question asked, Do you believe the region has a lack of housing? Respondents were split nearly even regarding whether or not they thought the region has a lack of housing.

We then asked, Do you agree with the statement, 'the lack of housing is a barrier to economic growth in the region?' 43% moderately agreed and 24% strongly agreed.

Finally, we asked, What impact will the region's housing have on overall business activity over the next 5 years? The vast majority indicated that they did not believe housing would have an effect on their business activity.

Spring 2015 Data Limitations

Spring 2015 yielded fewer responses than expected, which prevented our team's ability to break down the results by size and sector.

Fall 2015 Business Confidence Analysis

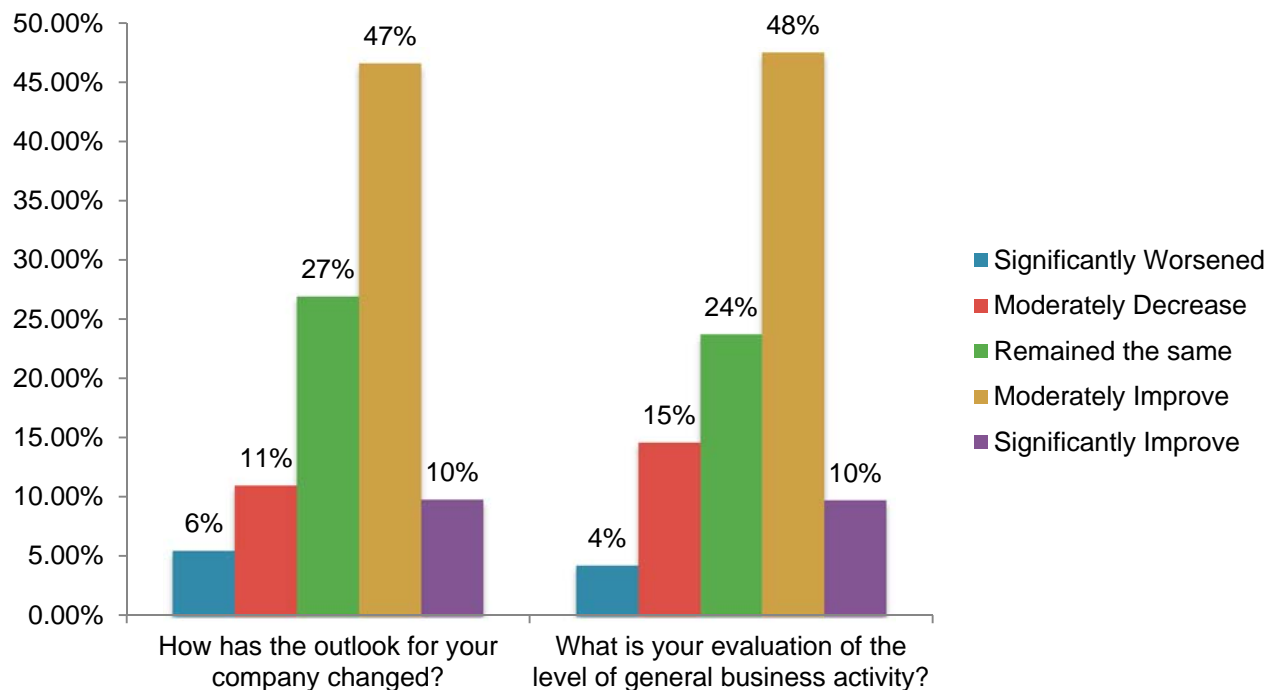
Fall 2015 Overall State of Confidence and NBC Index Reading

Overall, the region's business confidence continues to sit at a positive level. The Northland Business Confidence Index, where optimism is reflected on a reading above 100, registered 108 for Fall 2015. This was a small decline from one year ago, when in the Fall 2014 it read of 110. Nonetheless, it remained stable as of last semester, where it registered 108 as well. It was seen throughout the region that the businesses' expectations were successfully met, as in last semester 48% reported to expect a moderate improvement and in Fall 2015, nearly 50% of respondents reported a moderate improvement in their businesses.

Fall 2015 General Business Confidence Indicators

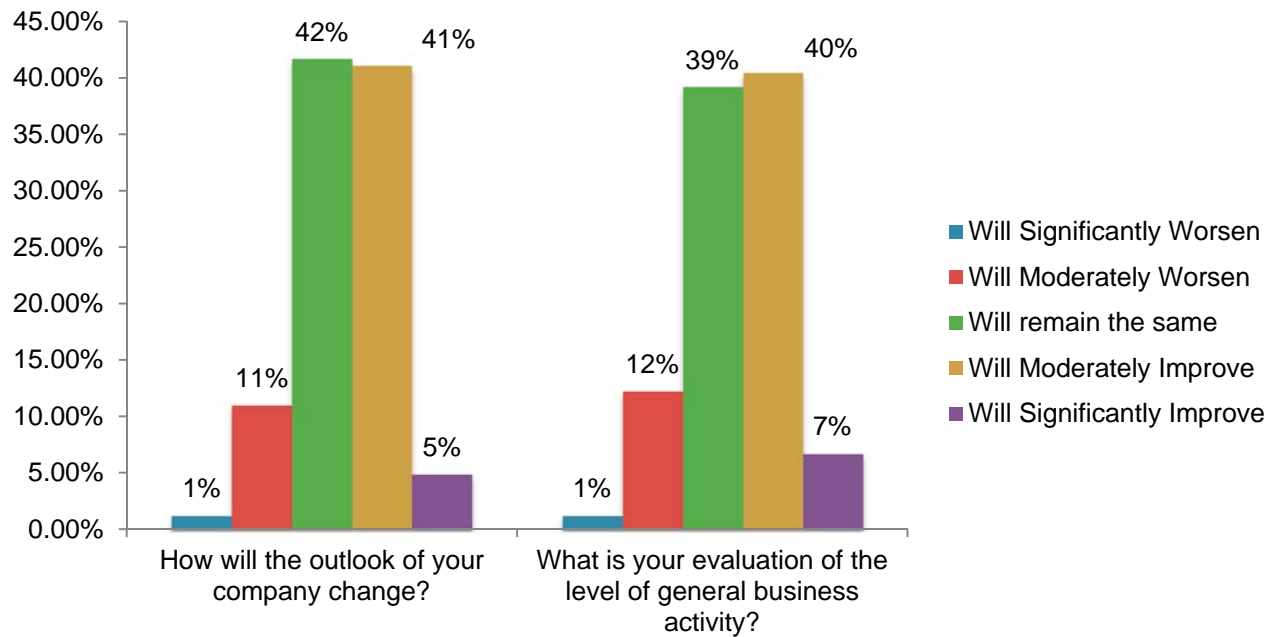
During the past six months, 47% of total responses indicated that both the general outlook and the business activity of companies in the region has improved in a moderate way. On the other side, a significant percentage reported no change at 27%. Only 8% of them have improved in a truly significant way. Figure 25 depicts the results from businesses' reflections of the past six months.

Figure 25: General Business Confidence Indicators, past 6 months



Based on different factors, the future expectations for businesses and companies are mostly positive. Of the businesses surveyed, 42% expect no change in their general outlook and 41% expect no change in their business activity. At the same time, 41% expect a moderate improvement of their general outlook and 39% expect a moderate improvement of their business activity for the next six months. Figure 26 depicts businesses' expectations for the next six months.

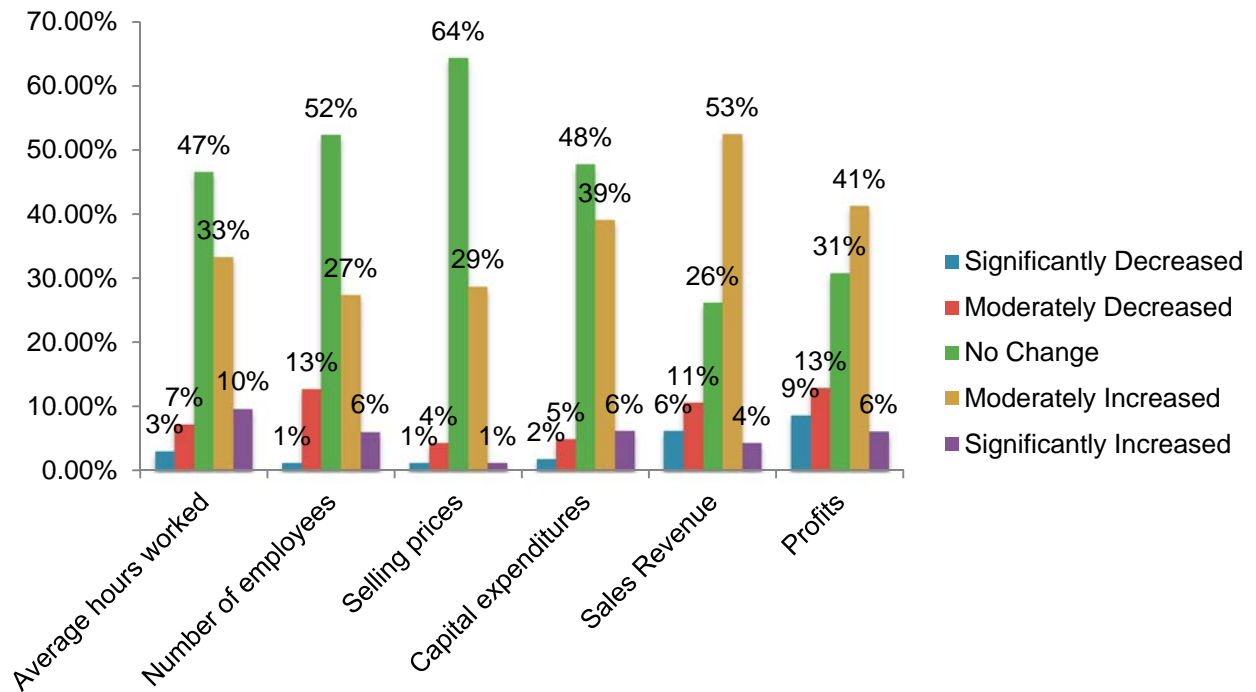
Figure 26: General Business Confidence Indicators, next 6 months



Fall 2015 Specific Business Indicators

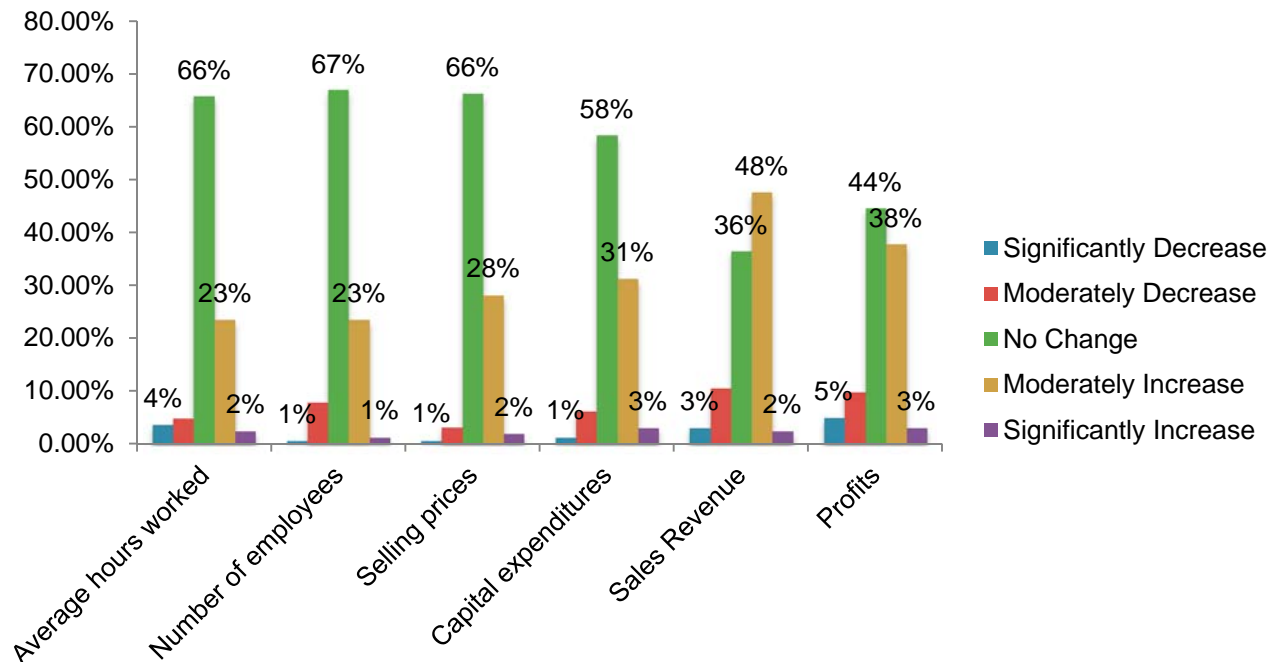
During the past six months, most of the businesses and companies in the region did not report a significant change in average hours worked, capital expenditures, number of employees, and selling prices. However, there was a moderate increase in profits and sales revenue. Around 30% of businesses reported a moderate increase in all business indicators. Figure 27 depicts results for specific business indicators over the past six months.

Figure 27: Specific Business Indicators, past 6 months



For the next six months, around 67% of businesses in the region report no change expected in all business indicators except for sales revenue and profit. Around 20% of them expect a moderate increase in the average hours worked, number of employees, selling prices, and capital expenditures. Of the businesses surveyed, 47% expect a moderate increase in sales revenue and 36% expect profits to increase moderately as well. Figure 28 depicts results for specific business indicators for the next six months.

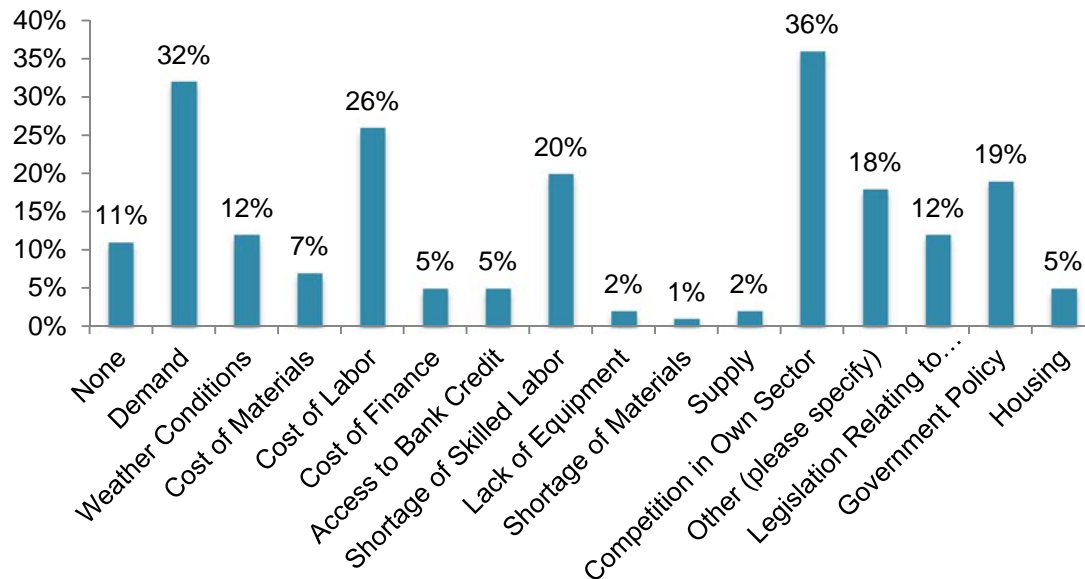
Figure 28: Specific Business Indicators, next 6 months



Fall 2015 Factors Limiting business activity

When asked to select up to three factors limiting their limiting the ability of their business to increase its level of activity, the two most reported factors were competition in own sector and demand at 36% and 32% respectively. Cost of labor (26 %) and the closely related shortage of skilled labor (20%) ranked 3 and 4 in the top limiting factors to businesses. Interestingly, a much larger percentage (42%) of businesses in the manufacturing sector reported shortage of skilled labor as a factor limiting business activity. Only 14 % of the 28 businesses in the professional services sector cited shortage of skilled labor as a limiting factor. Figure 29 depicts the most commonly selected factors limiting business activity.

Figure 29: Factors Limiting Business Activity, 11 selected options



Note: Only factors reported by one or more respondents were included in graph. Factors not reported by any respondents and excluded from graph include Access to bank credit, Cost of finance, Shortage of materials, Lack of equipment, and Supply.

Fall 2015 Skills Gap in the REIF Region

The special focus of this report is the skills gap and the effect of the skills gap on businesses in the region. Respondents were asked to answer two questions relating specifically to the effect of the level of skilled labor in the region on business activity. The first question asked respondents if they believed that the level of skilled labor in the region has affected the activity of their business, with the option to answer yes or no. The second question went further in depth, asking respondents what specific effects they believed the level of skilled workers in the region will have on their business in the next five years.

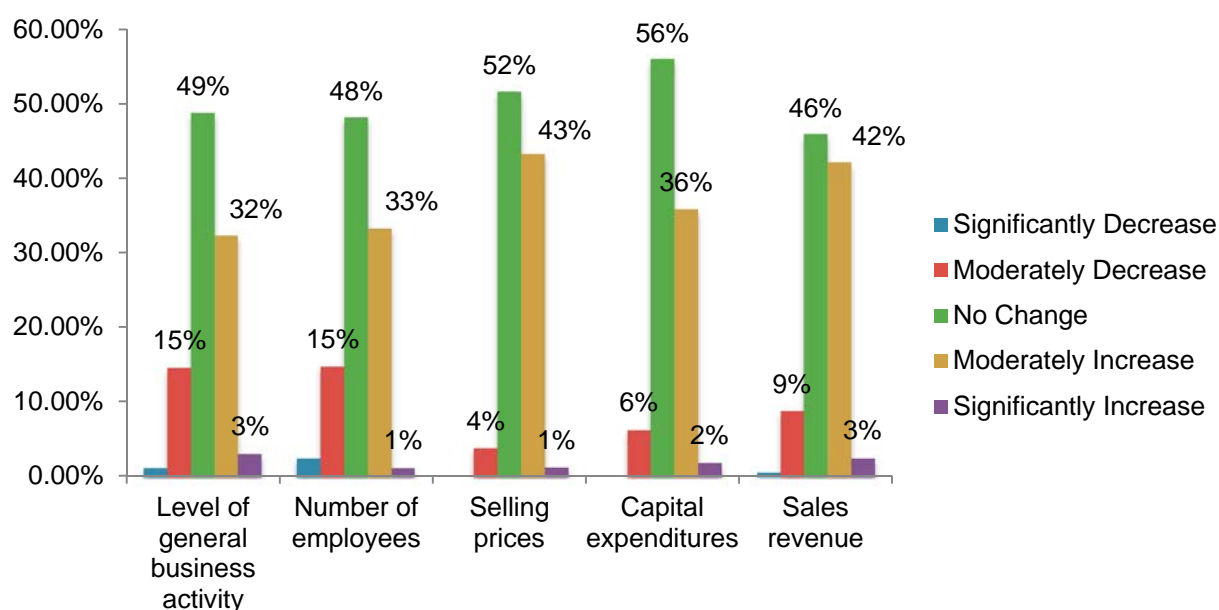
Question 1: Do you believe that the number of skilled workers in the region had affected the activity of your business?

In response to the first question, respondents were split nearly evenly over whether the level of skilled labor in the region has affected their businesses. 52% of respondents (85 businesses) reported that the level of skilled labor in the region has affected the activity of their business with 48% of respondents (80 businesses) answering no. Of businesses in specific sectors, 81% of respondents in the Leisure and hospitality sector answered yes, while only 35% of respondents in the financial services sector answered yes to the same question.

Question 2. What impact do you believe the number of skilled workers in the region will have on your business in the next 5 years?

In the second question, respondents were asked what effect they believed the level of skilled labor in the region would have on different business factors in the next five years. The factors included were: level of general business activity, number of employees, selling prices, capital expenditures, and sales revenue. Figure 30 depicts the responses to what effected the listed factors of business activity would have in the next 5 years.

Figure 30: Impact of Skilled Workers on Your Business in the Next Five Years



Note: For clarity, only respondents that answered yes to the first question on skilled labor are included in this graph.

Fall 2015 Specific Analysis of Small Businesses (1-49 employees)

The following section will analyze businesses with 1-49 employees, as determined by the CSS research team to be small businesses. Of the 167 businesses surveyed, 70% had between 1 and 49 employees. Of that group, 54% (91 businesses) had 19 or fewer employees, while 19% had greater than 100, the majority of which had between 100 and 249 employees. Only 9% of the businesses surveyed had a number of employees greater than 250.

First, we looked at the specific business confidence indicators for small businesses with 1-49 employees. The factors limiting business activity were notably different from the group as a whole. While a small majority (52%) of all the businesses surveyed believed that the level of skilled labor had an impact on their ability to increase business activity, only 47% of small business answered the same way.

For businesses with 1-19 employees we then looked at the factors limiting their business activity. The top three factors limiting business activity were demand (30% of respondents)

competition in own sector (28%) and cost of labor (22%). For businesses with 20-49 employees, the top three factors limiting business activity were competition in own sector (46%), demand (35%) and other factors not listed as options (31%).

The 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 CSS Economic Research Team created the questions 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 of 2015: 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. If you'd like your business to participate in the research surveys, please send an email to nbcbanking.com, and you will be added to the list.

Appendix

Consumer Survey Questions: Phone and Email Surveys

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

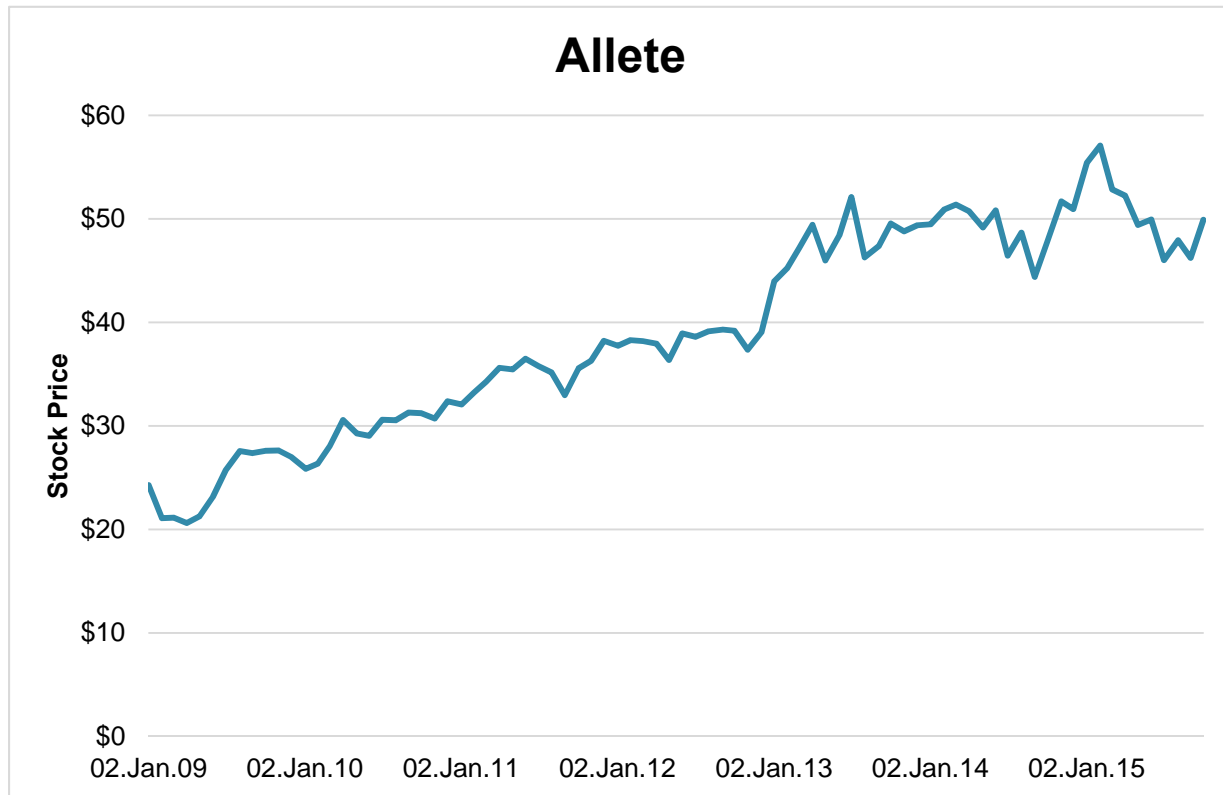
Q4: "Looking ahead, which would you say is more likely during the next five years or so - that in the country as a whole we'll have continuous good times, or bad times with periods of widespread unemployment?"

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

Stock and Historical Return Information



Company: **Allete Inc.**

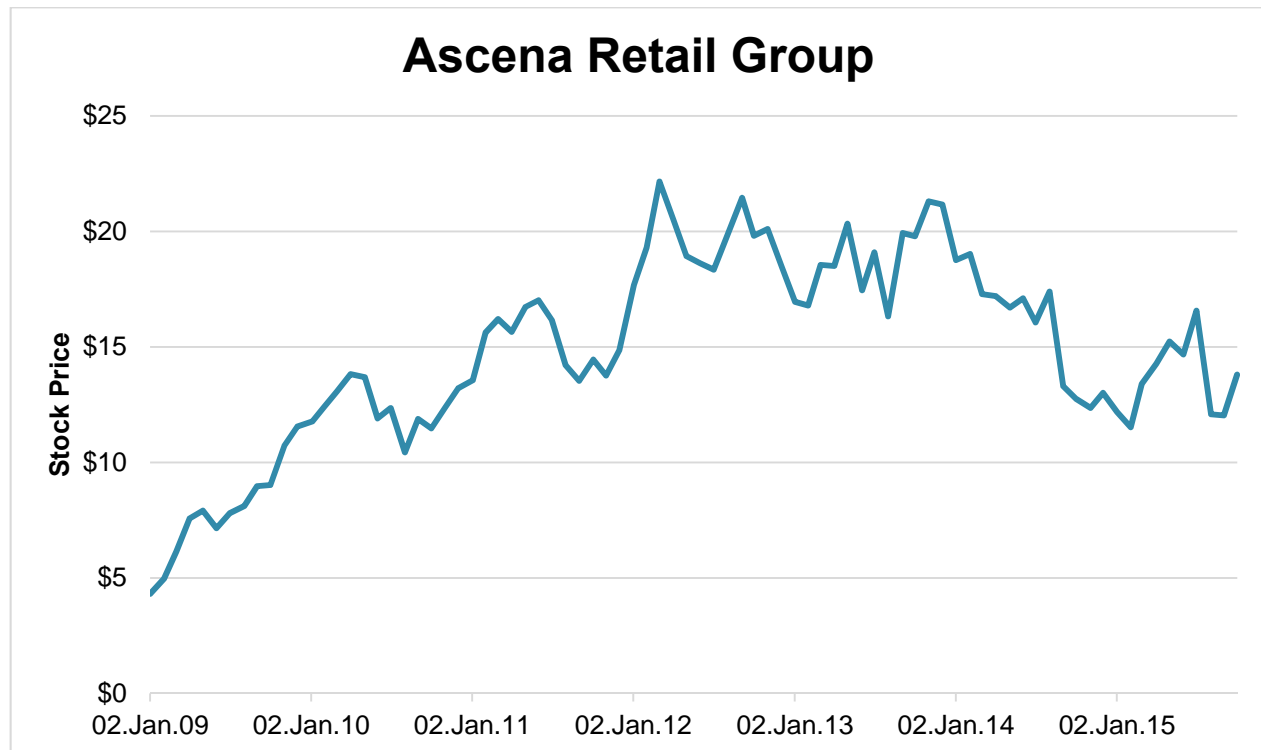
Ticker: ALE

Exchange: NYSE

Market Cap: \$2.45B

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.**

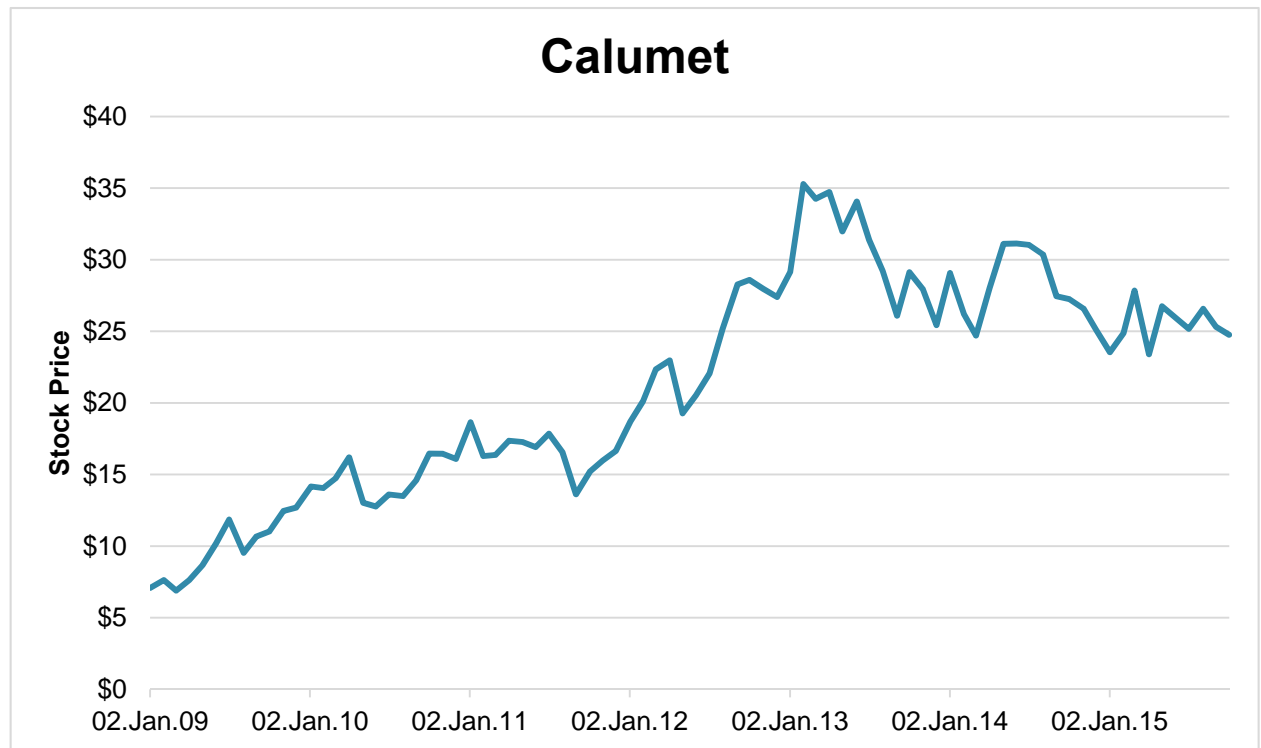
Ticker: ASNA

Exchange: NASDAQ

Market Cap: \$2.04B

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**

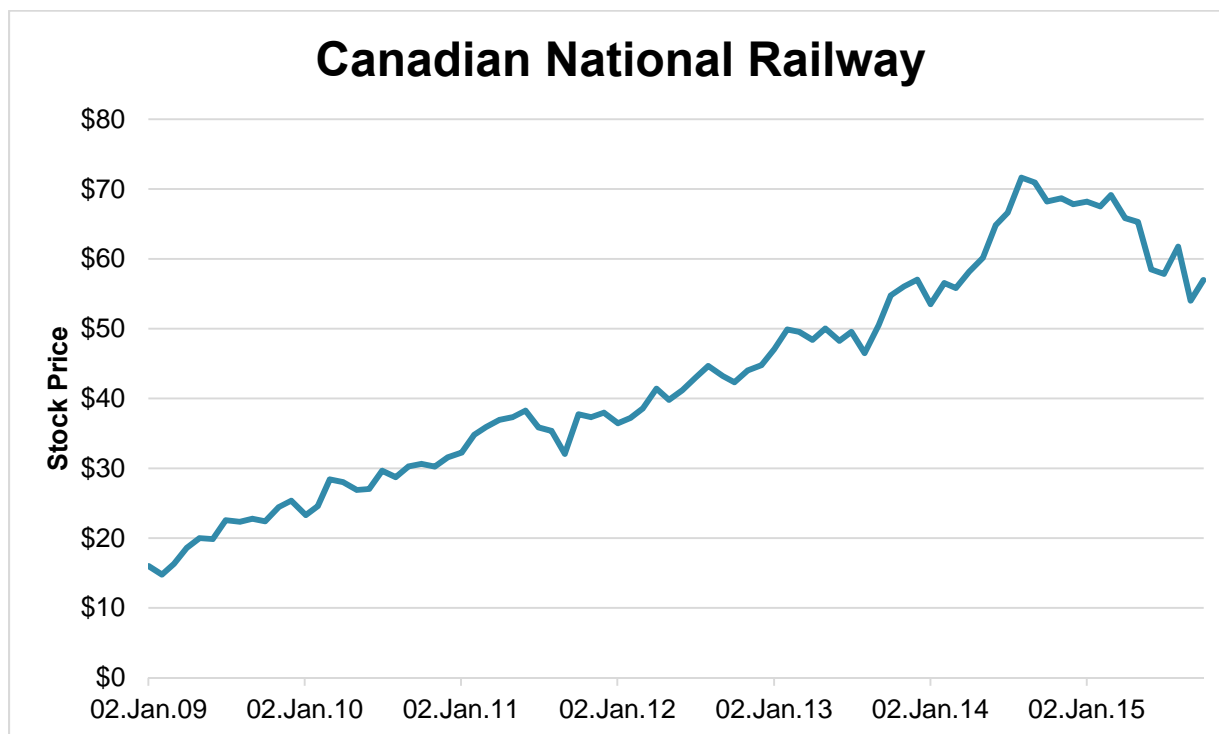
Ticker: CLMT

Exchange: NASDAQ

Market Cap: \$1.75B

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**

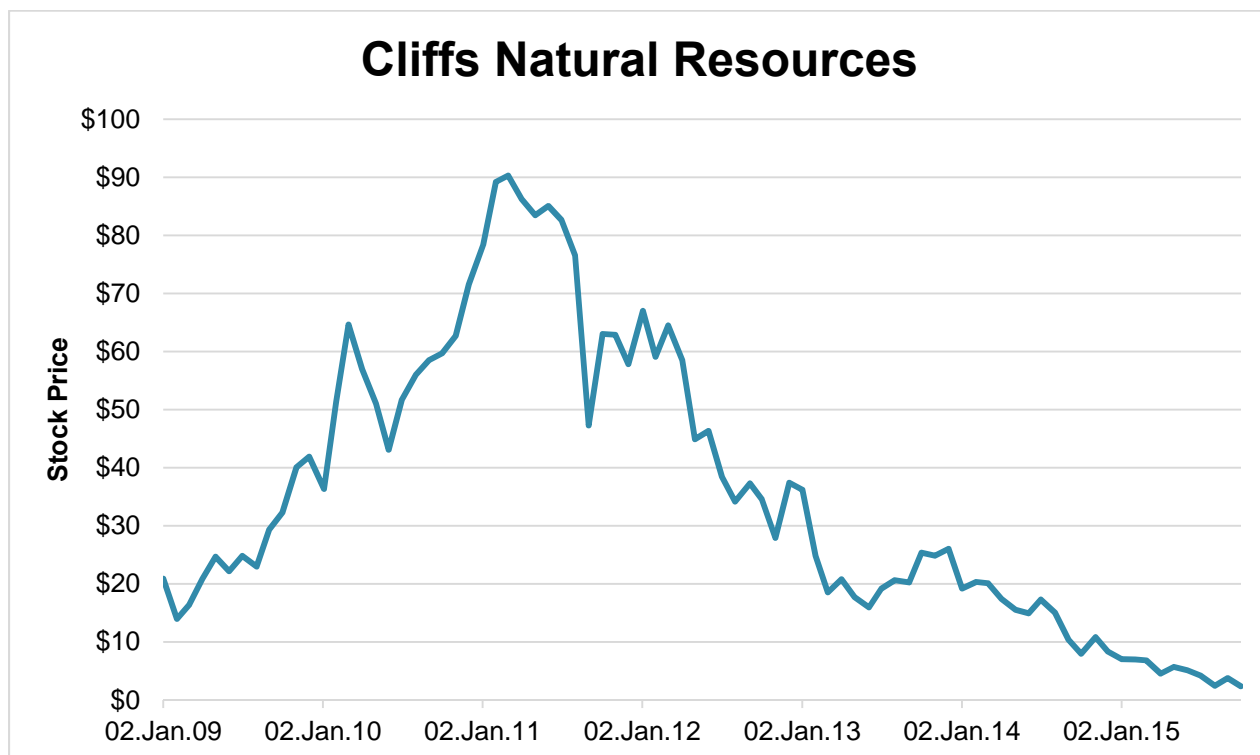
Ticker: CNI

Exchange: NYSE

Market Cap: \$42.44B

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**

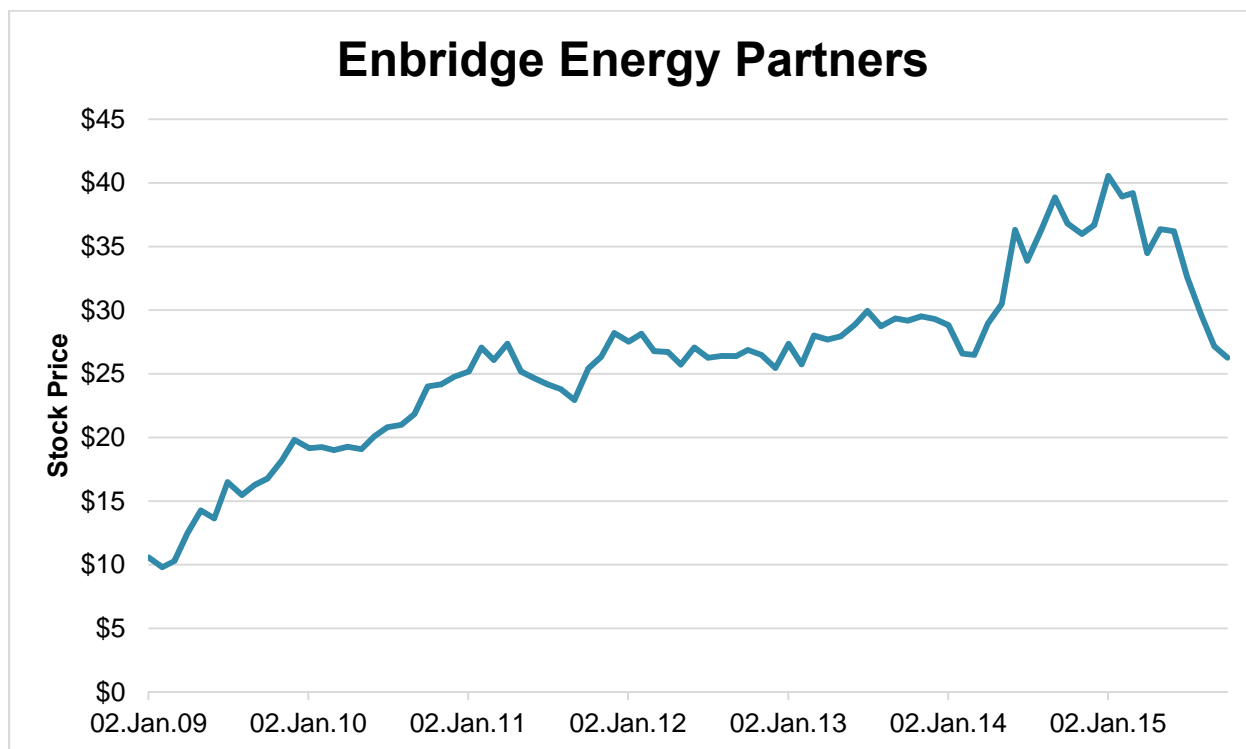
Ticker: CLF

Exchange: NYSE

Market Cap: \$325M

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**

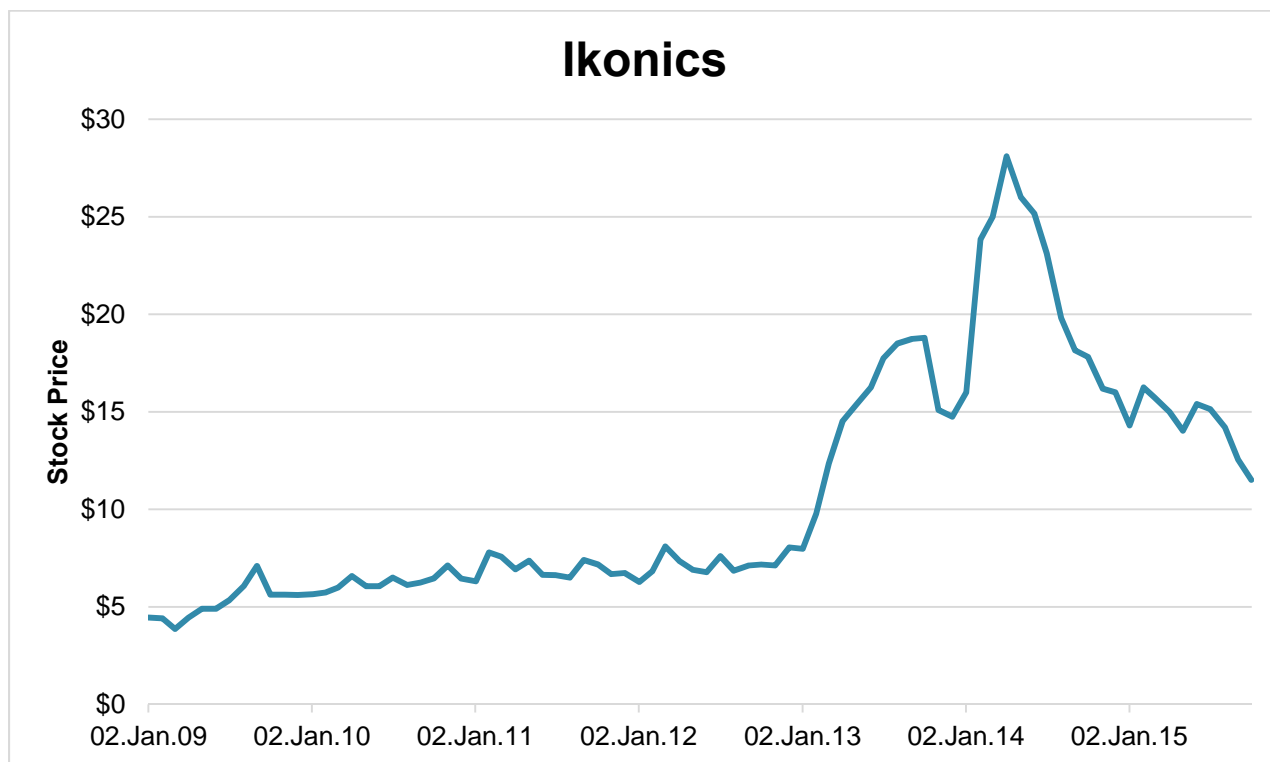
Ticker: **EEP**

Exchange: **NYSE**

Market Cap: **\$7.64B**

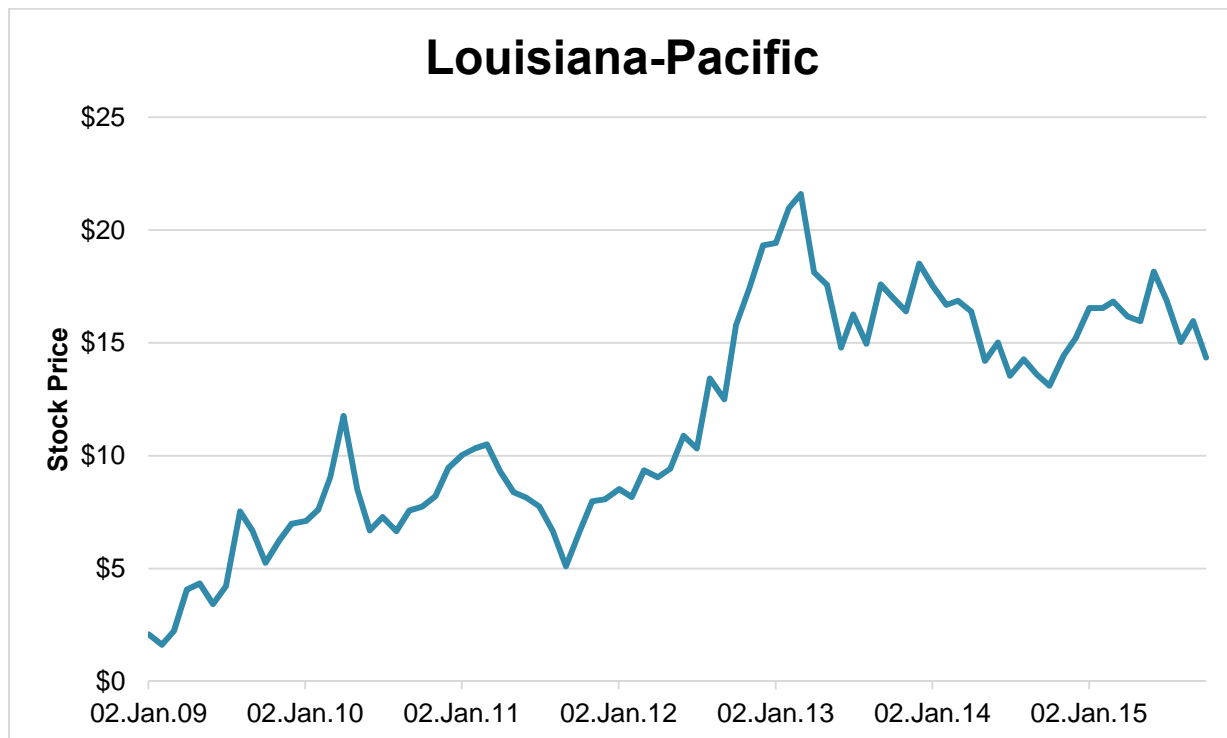
Industry: **Energy, Oil & Gas Midstream**

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: \$22.32M
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**

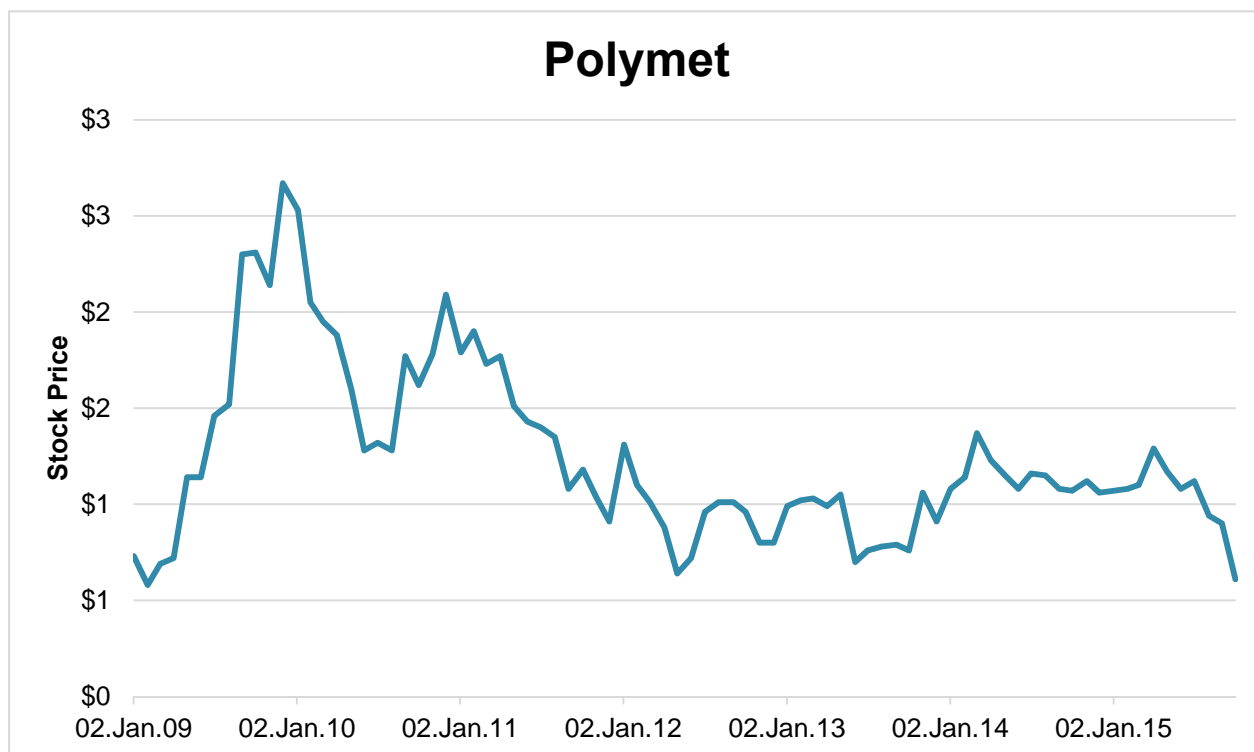
Ticker: LPX

Exchange: NYSE

Market Cap: \$2.42B

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**

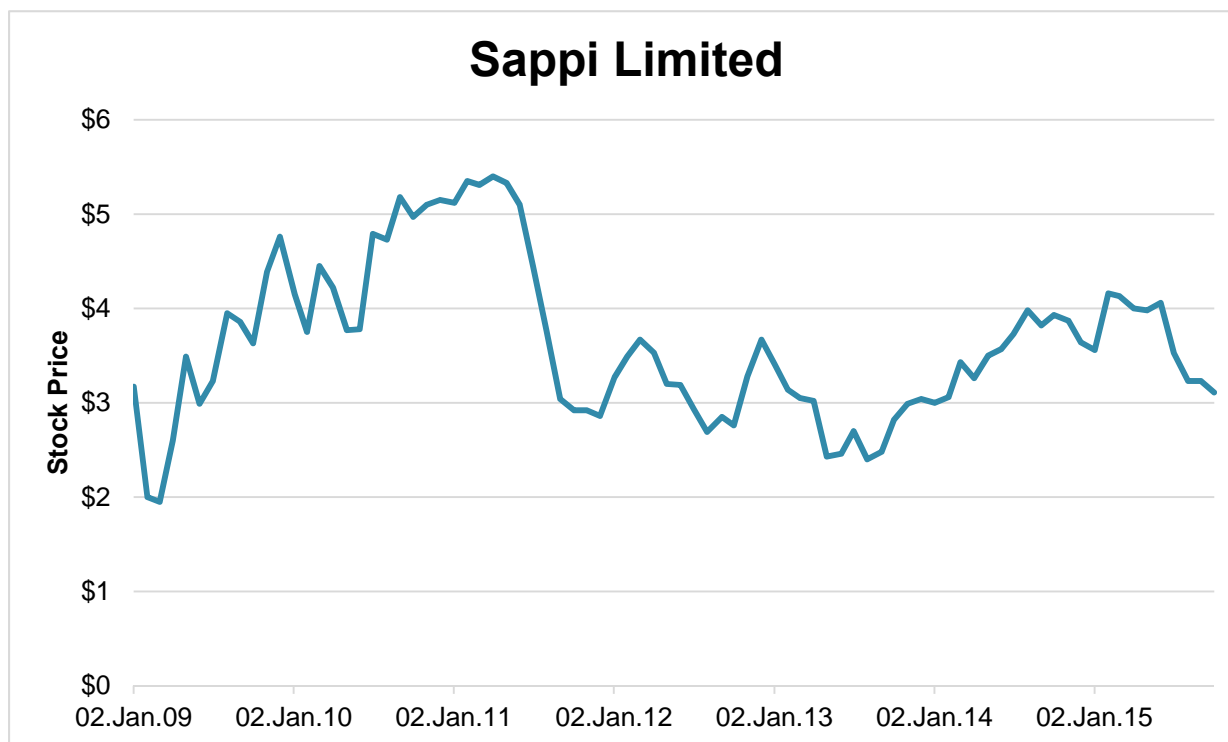
Ticker: PLM

Exchange: NYSE

Market Cap: \$246M

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**

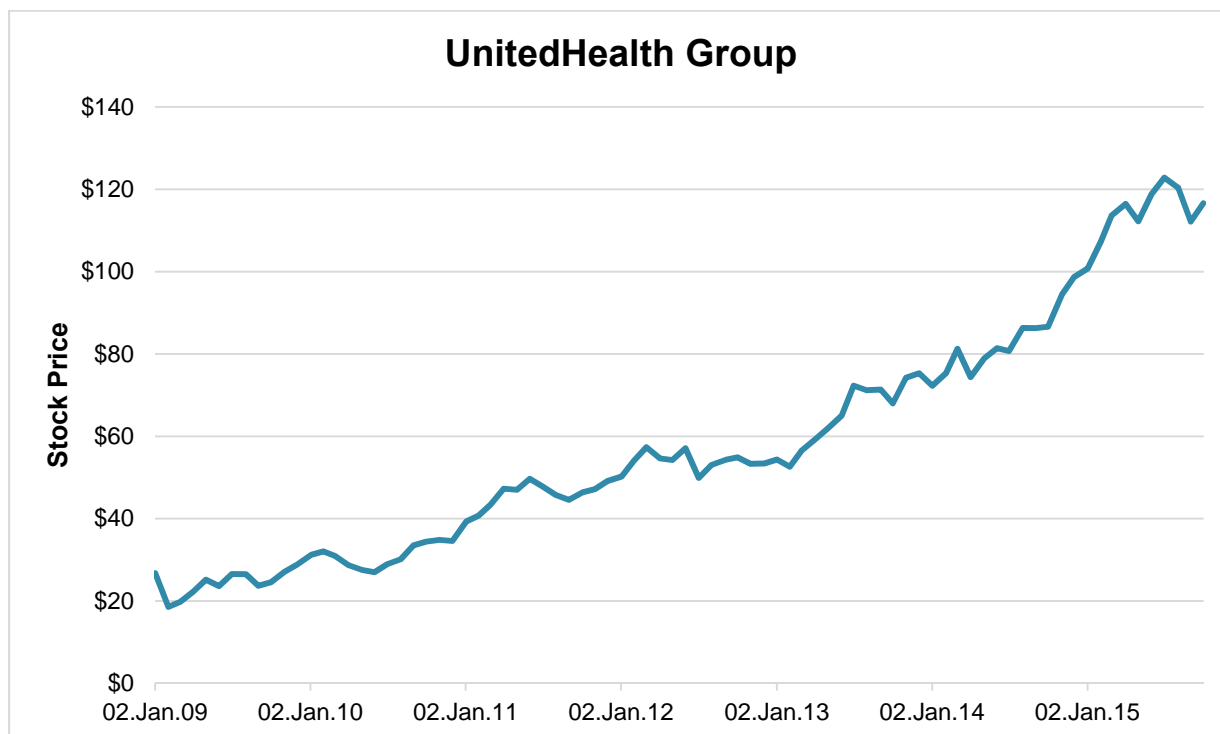
Ticker: SPPJY

Exchange: OTCPK

Market Cap: \$2.07B

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**

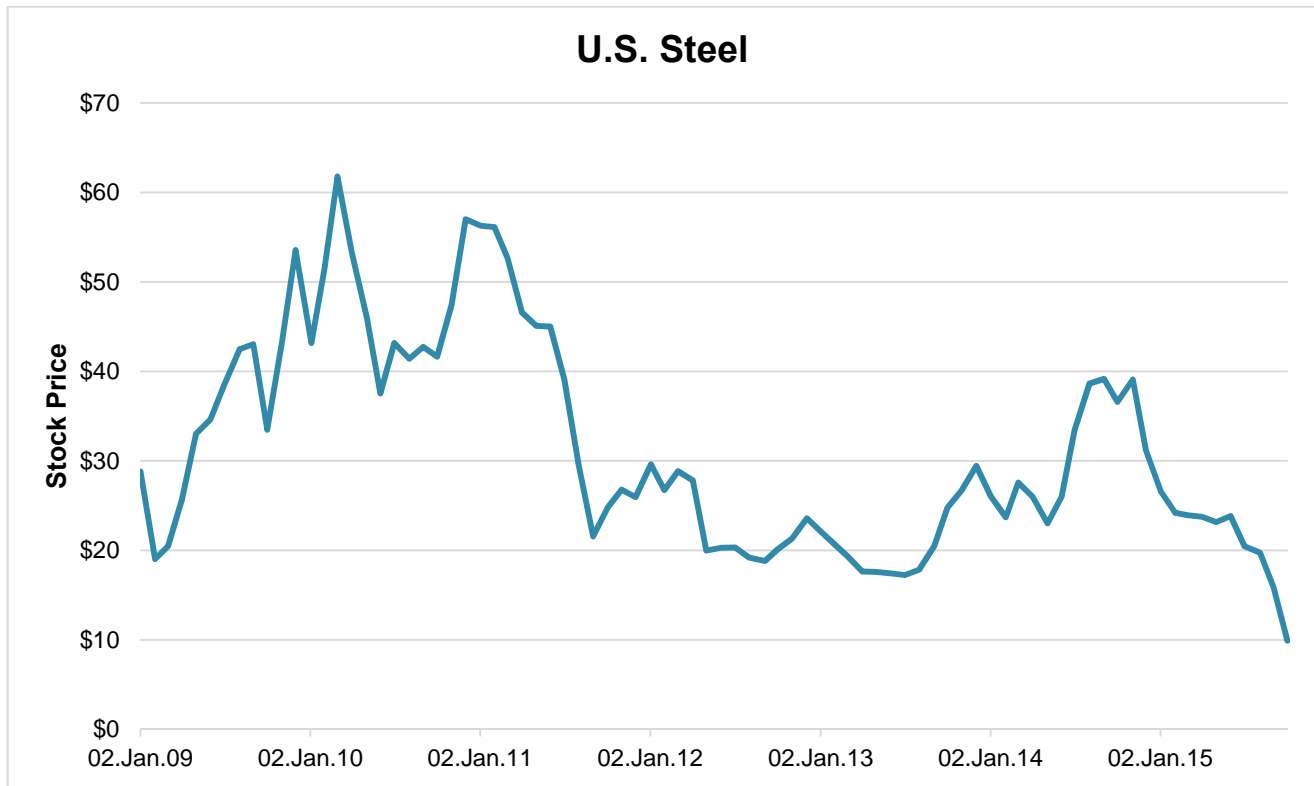
Ticker: UNH

Exchange: NYSE

Market Cap: \$109B

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: **U.S. Steel**

Ticker: X

Exchange: NYSE

Market Cap: \$1.02B

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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