

7 Rivers Region: An Economic Update

April 1, 2015



- ***Economic Indicators and Trends***
Taggart J. Brooks, Ph.D.
UW-La Crosse Economics Department
- ***7 Rivers Equity Index***
Shane Van Dalsem, Ph.D.
UW-La Crosse Finance Department

Economic Indicators

Economic Indicators: An Update for the 7 Rivers Region reports on a long-term study of regional economic indicators. The research is ongoing and spans a period of time to enable us to understand and report trends. This project is expected to continuously build on a base of economic information and provide decision makers with valuable tools for strategic planning. The information will also provide a basis for comparison with other regions and a measure of our progress.

State Bank Financial sponsors this research project in collaboration with the University of Wisconsin-La Crosse College of Business Administration and the *La Crosse Tribune*. These programs will continuously build on a base of information and provide decision makers like you with valuable tools for strategic planning.

Specific goals of this project are:

- 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.
- Create a business recruitment and retention tool by publishing the information.

Core economic indicators cover the following areas:

- Employment
- Income
- Cost of Living
- Consumer Attitude and Behavior
- Real Estate and Housing
- Interest Rates
- Equity Performance

Economic Indicators and Trends

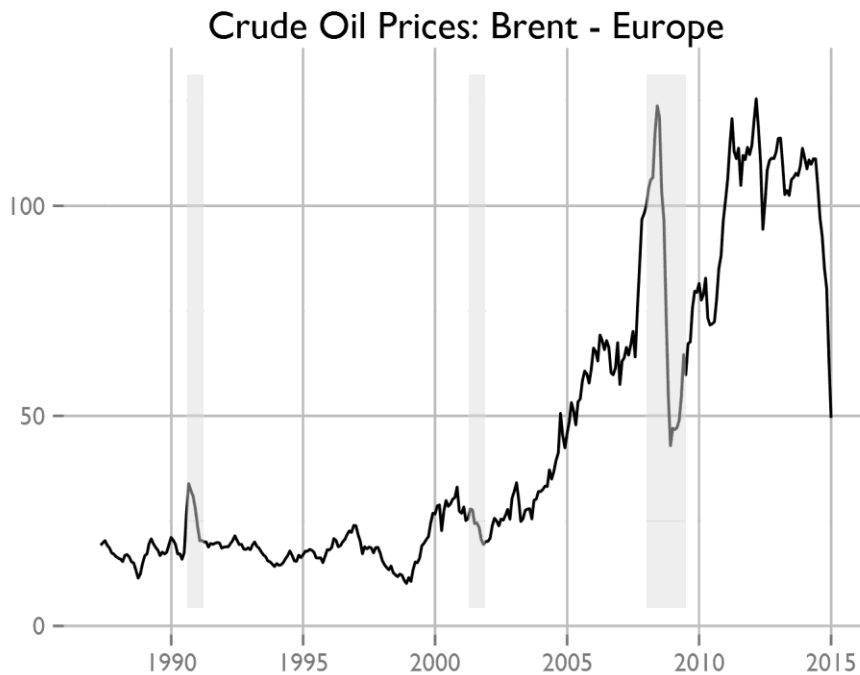
Taggart J. Brooks, Ph.D., UW-La Crosse Department of Economics

April 2015: Tail Winds

This year has started with some pleasant tailwinds for the US domestic economy. First and foremost energy prices have been falling. The most noticeable declines have happened specifically with oil prices. On the next page you will find the current chart on oil prices which depict Brent Sweet Crude falling from over \$100 per barrel in 2014 to around \$50 per barrel currently. Before discussing the benefits of lower oil prices, it is instructive to identify the reasons for current prices. First, on the supply side, we have the world's largest producer of oil, Russia,¹ producing at a post-Soviet peak of nearly 10.58 million barrels per day (bpd). Iran, although currently under sanctions limiting its exports in oil to around 1.0 million bpd, is still producing around 3.5 million bpd, and is looking to continue to increase its volume. While this is half of their pre-revolution volume it is a steady increase over recent years, which has contributed to a burgeoning supply. Finally the other foreign player contributing to supply is Saudi Arabia.² They continue to produce at high levels with nearly 9.6 million bpd, and an ability to produce as much as 12 million bpd. Saudi Arabia has clearly indicated that it is going to continue to set its production to achieve its own ends and it is one of the few countries with the ability to dramatically change output in a short period of time.

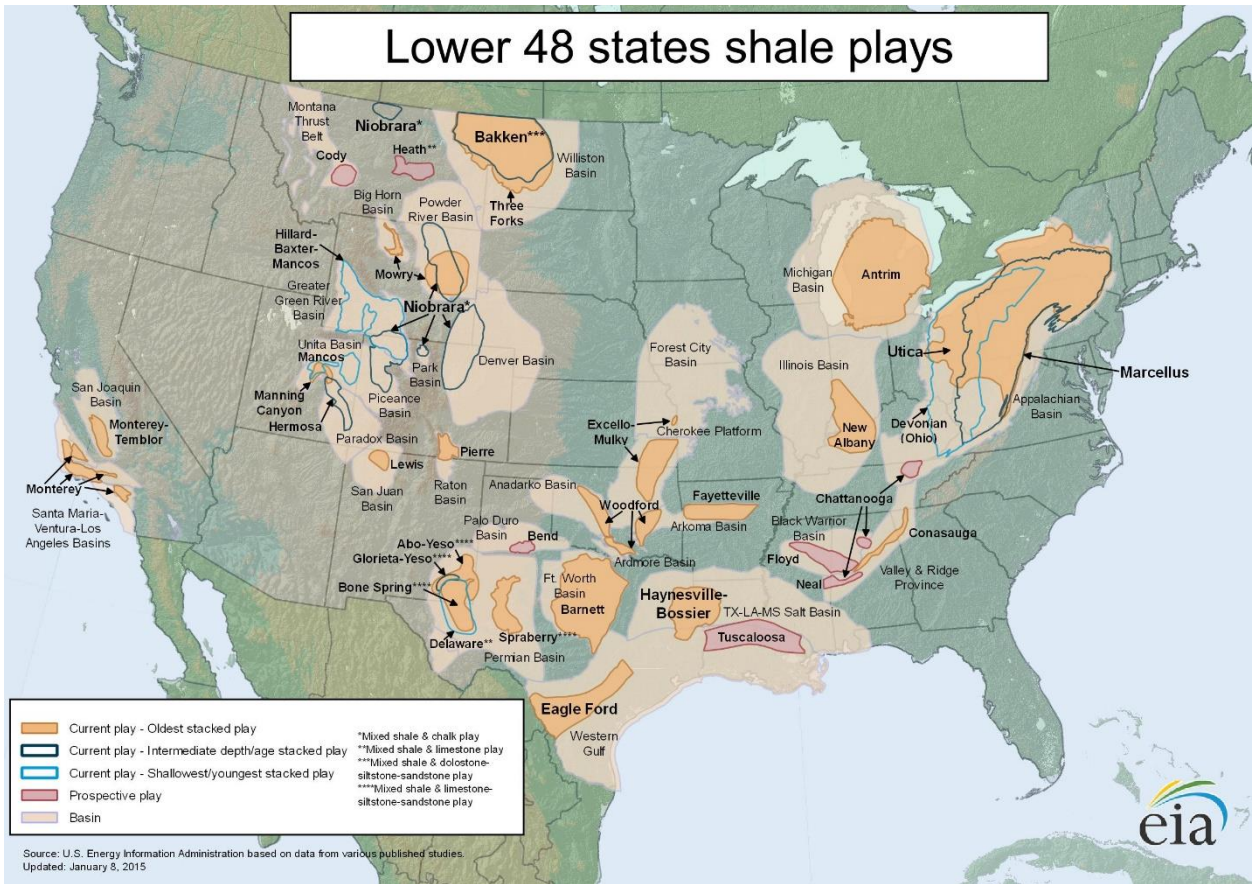
¹ Dmitry Zhdannikov, "Update 1-Russia may see oil output fall by 1 mln bpd at most– deputy PM," *Reuters*, January 21, 2015, <http://www.reuters.com/article/2015/01/21/davos-meeting-russia-crisis-idUSL6N0V014020150121>

² Isaac Arnsdorf, "Saudi Arabia's Risky Oil-Price Play," *Bloomberg Business*, October 23, 2014, <http://www.bloomberg.com/bw/articles/2014-10-23/oil-saudi-arabias-risky-price-play>



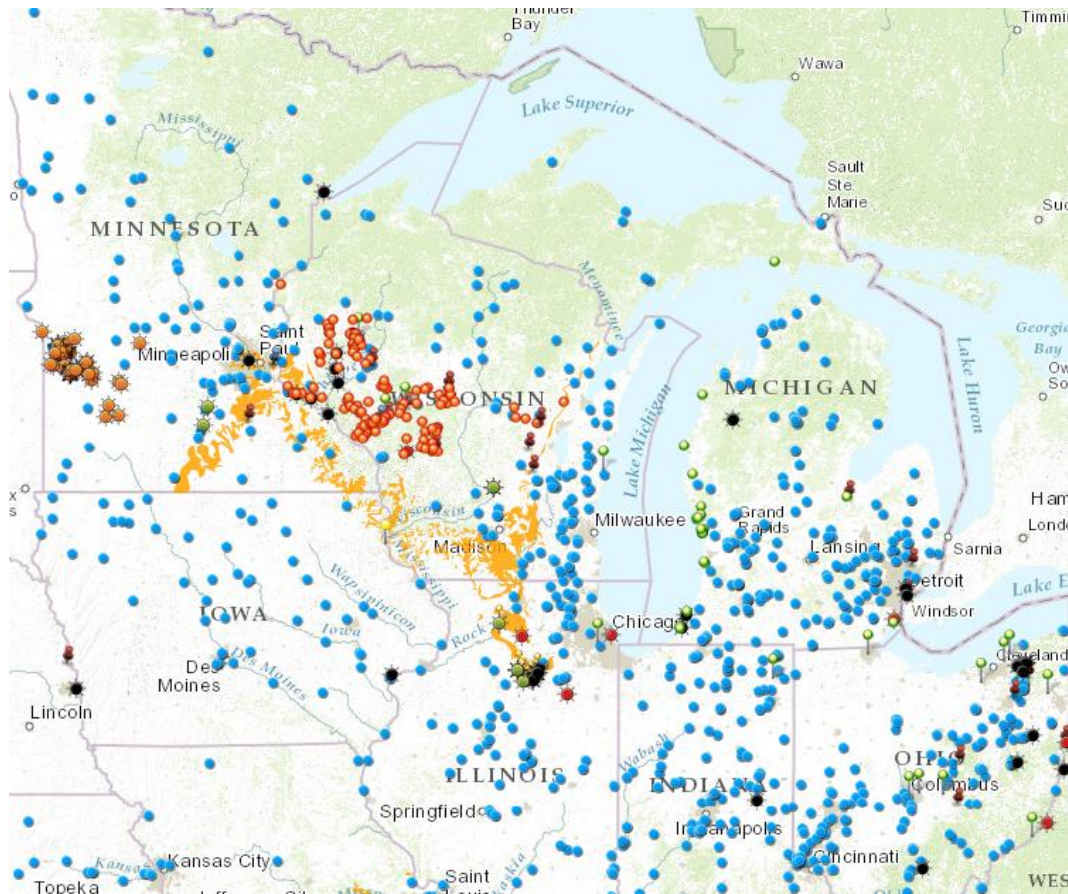
However, the real story behind why prices have dropped so rapidly lies with the US shale oil boom. The boom has put the US on track to become the largest supplier in the world sometime next year, which has clearly attracted the attention of the Saudis. The shale oil fracking in the Bakken and other regions has led to the largest production of US oil since 1988 with nearly 8.16 million bpd.³ The picture on the next page shows the shale plays that are benefiting from the technological advancement of hydraulic fracturing, also called “fracking.”

³ Mark J. Perry, “Energy fact of the day: US oil production surged last week to the highest level since July 1988, more than 25 years ago,” *AEI American Enterprise Institute*, January 15, 2014, <http://www.aei.org/publication/energy-fact-of-the-day-us-oil-production-surged-last-week-to-the-highest-level-since-july-1988-more-than-25-years-ago/>



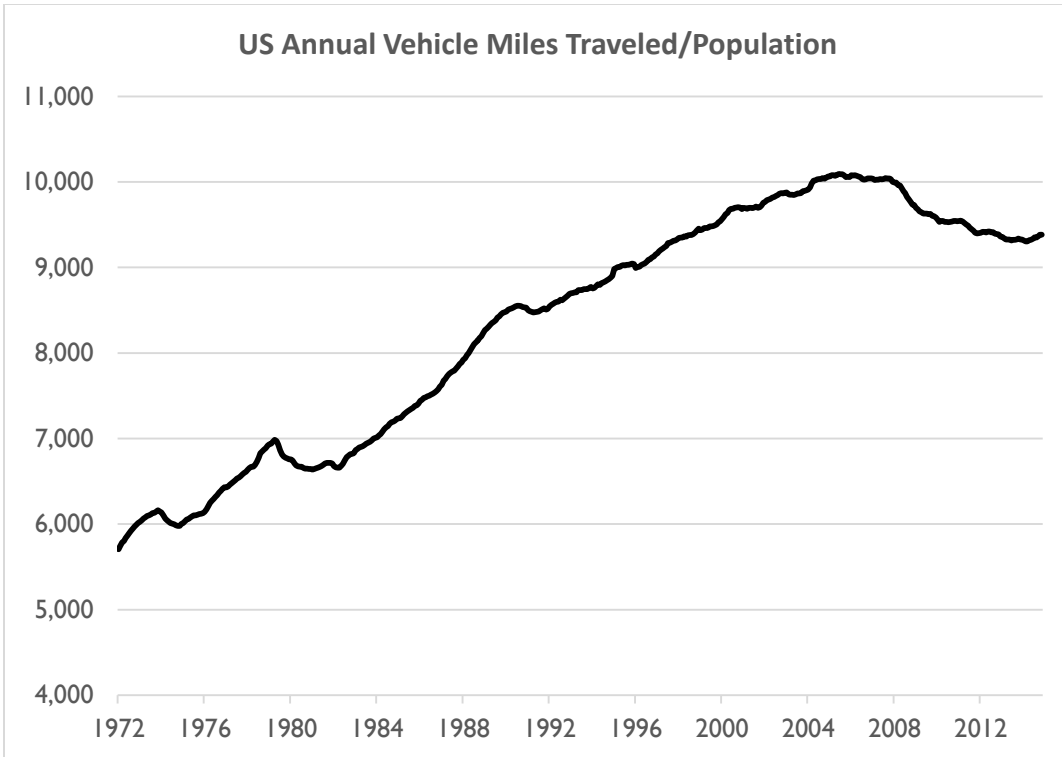
While falling oil prices have helped consumers, the concern is that US production will not be able to weather the fall in prices. While some wells are cost effective at lower prices, investment in drilling new wells might not be. Locally our concern is then over the impact on the demand for sand, one of the key inputs used in the process of hydraulic fracturing. The map on the next page shows the distribution of frac sand mining in the upper Midwest.⁴

⁴ Frac Sand Industry, “US Frac Sands Locations and Silica Geology,” mapped by The FracTracker Alliance on FracTracker.org, downloaded on 3/15/2015, <http://maps.fractracker.org/latest/?webmap=2f382d5fcd748deba89e6104b59551d>

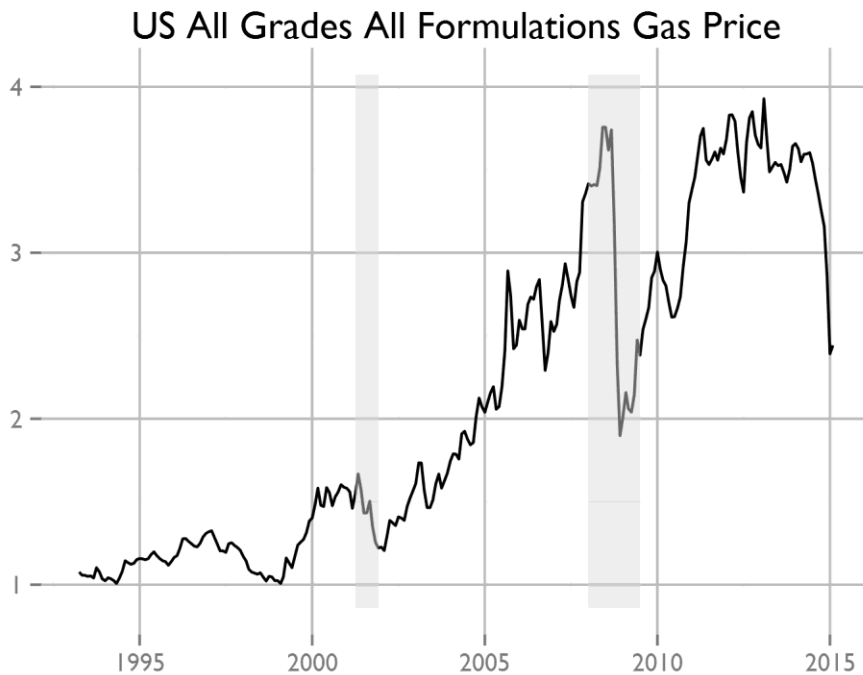


The 7 Rivers Region and parts to the north are obviously prime locations for sand mines. As production in the Bakken slows, so too will demand for frac sand.

Returning to the causes contributing to the fall in oil prices we have the slowing economies of China, Japan, and EU countries. Domestic demand is also flat, which can be seen in the fall off in annual vehicle miles travelled per capita, presented in the next graph.



While these factors have resulted in oil prices falling they have also resulted in gas prices falling to levels not seen since the depths of the last recession.



To give you a sense of how this impacts the typical consumer below we have a table which provides the average dollars spent on gasoline over the last few years for the years.

Annual Household Gas Consumption

Year	2011	2012	2013
Gas Consumption	\$2,451	\$2,549	\$2,418

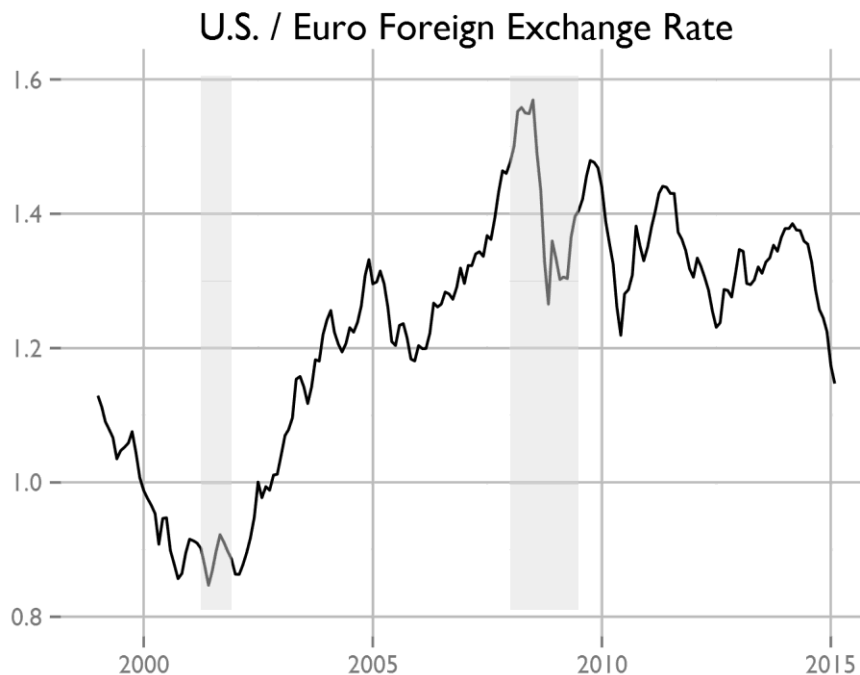
If we assume in 2013 gas averaged about \$3.50 per gallon then that makes average consumption about 690 gallons a year per household. If demand remains the same and prices fall to \$2.00 per gallon then that means the average household would spend about \$1,380 or a savings about \$1,000 a year.

While lower prices clearly helps the average American consumer, it places a strain on oil producing economies and oil producing states that rely on oil tax revenue such as Texas, Alaska, and now North Dakota.

The Euro

The summer of 2015 looks to be the time to travel abroad. The US dollar has been appreciating against many currencies in the world over the last six months, including the Euro, the Canadian

Dollar, the Japanese Yen, the Australian Dollar, and to a lesser extent the British Pound. Below we have the US/Euro exchange rate, which depicts the recent appreciation of the dollar (depreciation of Euro) to levels not seen since 2003.



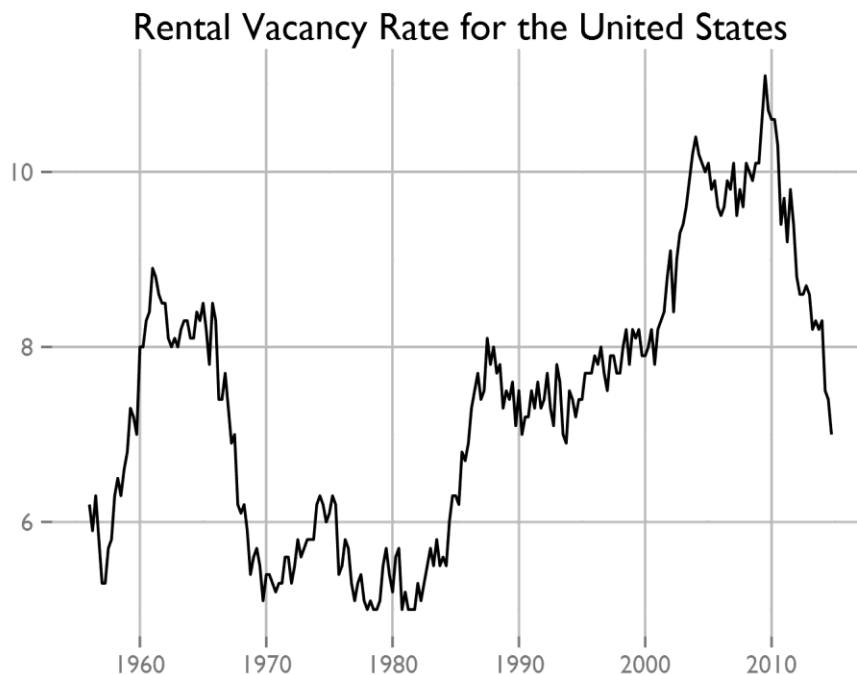
However, it might not feel like the Euro area countries are inexpensive relative to the US, it might feel as though their prices are merely in line with the US. According to the website World Economics⁵ the fundamental Purchasing Power Parity (PPP) exchange rate between the Dollar and Euro is about \$1.14 to the Euro. Purchasing Power Parity states that the exchange rate should be a ratio equal to the ratio of the cost of goods in each country. By way of an example, if the good in question was a car which cost \$20,000 in the US and 10,000 Euros in Germany, then the PPP exchange rate should be \$2/1. That would allow someone in Europe with 10,000 euros or someone in the US with \$20,000 to buy the car in either country, while exhausting their money. The World Economics website uses a World Price Index to determine PPP. The PPP rate of 1.14 dollars to euros implies that the euro has been over valued for some time and only now has fallen in line with PPP.

Finally while the appreciation of the dollar might be welcome by those of us traveling abroad, or local companies who rely heavily on imported inputs, it does make it challenging for our exporting firms.

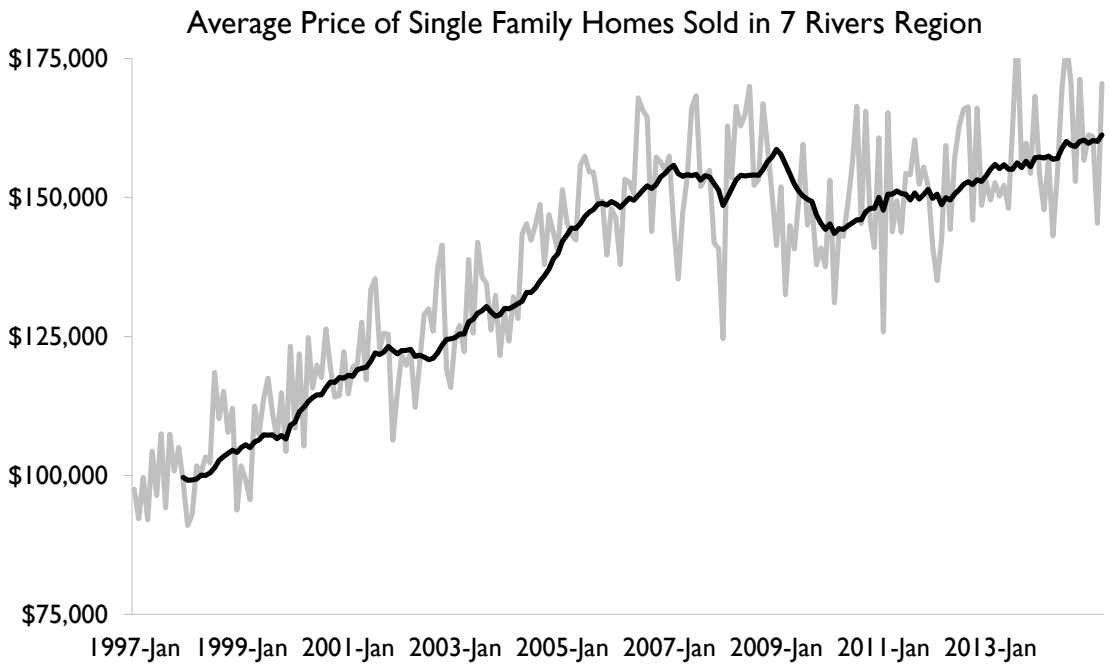
⁵ "The World Price Index," *World Economics*, March 10, 2015, <http://www.worldeconomics.com/WorldPriceIndex/WPI.efp>

April 2015 Housing Market Update

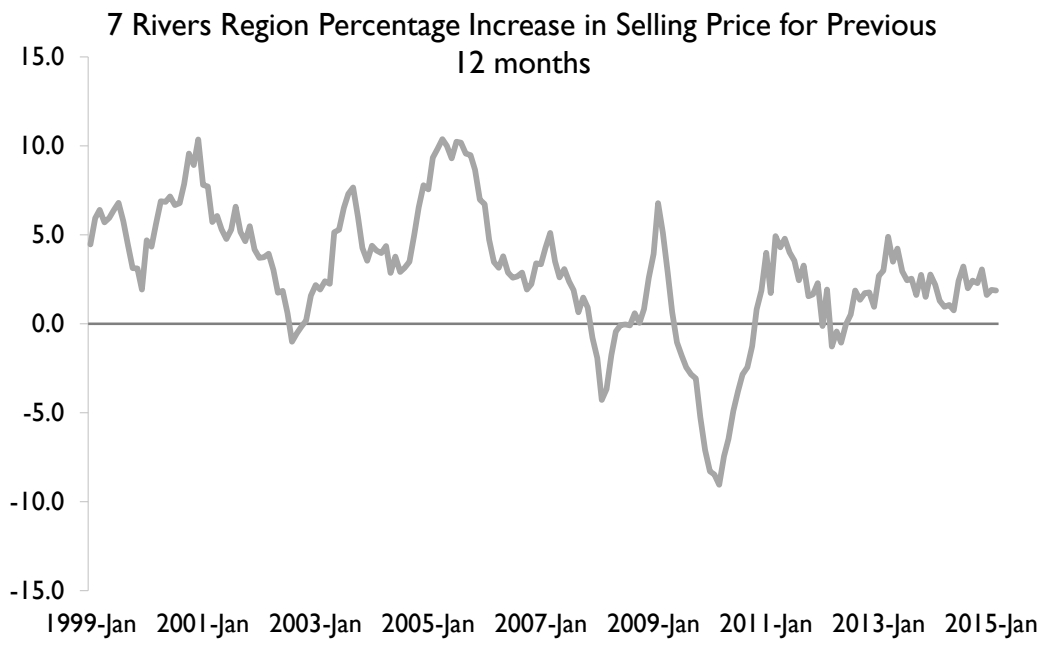
The housing market in both the region and the country continue to show improvement. Household consolidation appears to have turned around, and the housing and rental markets appear to be clearing the back log of supply, whether it was vacant rentals or foreclosures. Below we have the national data on Rental Vacancies reported quarterly, but not seasonally adjusted.



The vacancy rate has fallen from its peak of 10.7% experienced in the fourth quarter of 2009. This fall in vacancies has allowed rental rates to rise, which has also helped home sales continue to appreciate as well. Turning to the local economy we have the traditional graphs that you are used to seeing me present. Below we have the MLS average price of a single family home in the 7 Rivers Region. The MLS covers – though not completely – the counties in Wisconsin and Minnesota, but does not include Allamakee. The most recent observation had the average selling price at \$170,000, while the twelve month moving average, which is used to smooth out the seasonal effects, puts the average price in the region at a level near its all-time high of \$160,305.



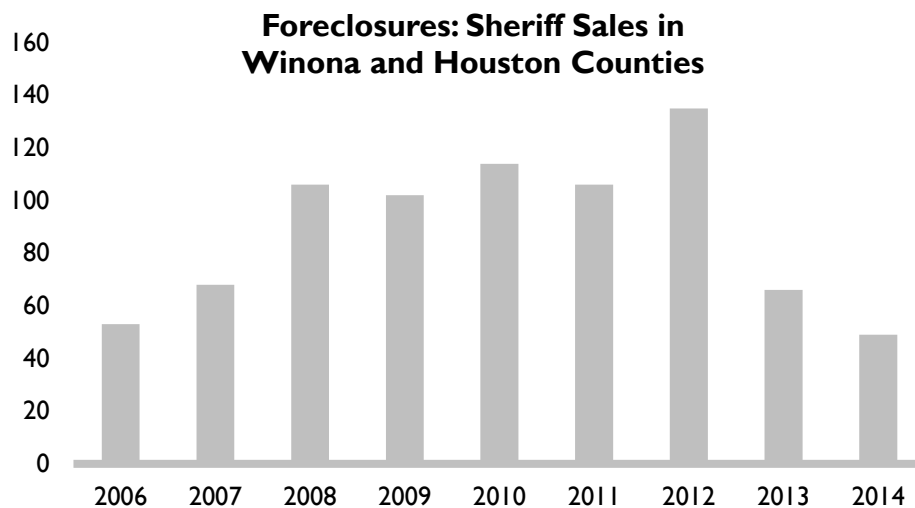
The following graph shows the price appreciation over the previous twelve months. We have seen solid gains almost every month since the end of the housing crisis locally in late 2010.



The final numbers are in for 2014 and foreclosures have continued to fall. They have approached levels last seen before the beginning of the housing crisis. The first graph I will

present is for data representing Winona and Houston Counties. Recall that the foreclosure process differs between Wisconsin and Minnesota. In the fall of 2008 I discussed these differences in more detail, but it is important to note that these represent sales at sheriff auctions, not merely court filings.⁶

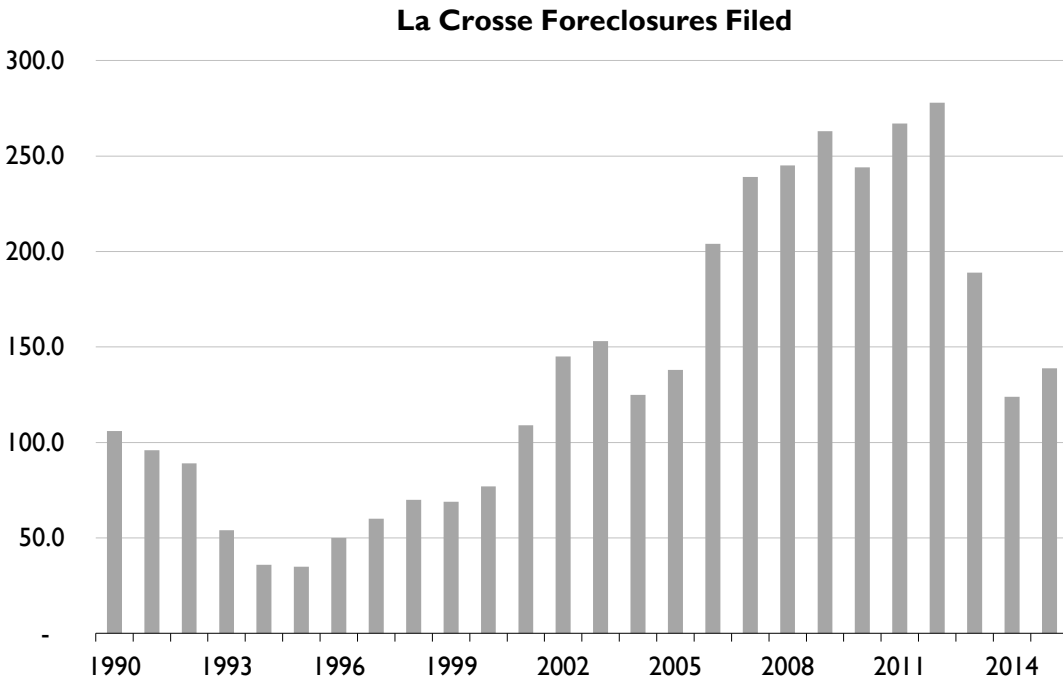
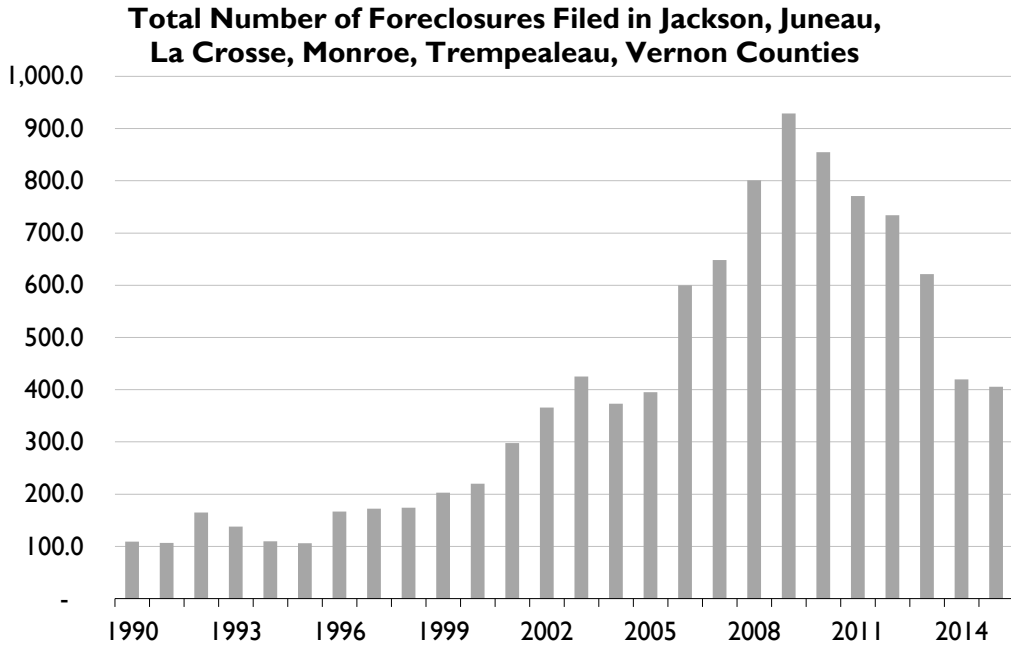
In 2012 both counties reported a total of 135 Sheriff Sales, while 2014 saw a total of 49, the lowest since the beginning of available data.



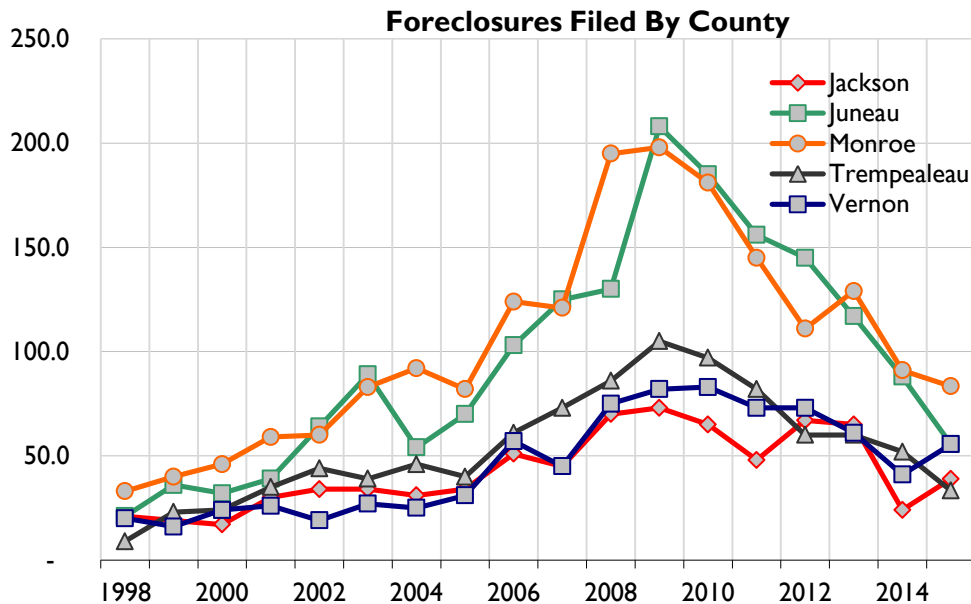
On the next page I produce two graphs based on data from the Wisconsin Circuit Court Access website, which provides information on foreclosure filings for Wisconsin counties. I forecast the totals for 2015 based on the rate of foreclosures for the first 66 days of the year. This is a risky endeavor as holidays, snow days, and other seasonal effects can exert a larger influence when using such a short time span to forecast the future. With that important caveat we can see for the 7 Rivers Region we are on pace to have 406 foreclosure filings in 2015, with La Crosse county itself on pace to have a little more than a quarter of them at 139. Demonstrating the long duration of financial crises we can see that it has been a decade since foreclosures were at this low a level. In the future I will include measures of the housing stock, since this chart can be a bit misleading. The chart does not account for the fact that the number of housing units has been increasing over the last 25 years. Thus the foreclosure rate would be a better measure of the foreclosure problem. However, the number of housing units are infrequently counted and often estimated from underlying growth trends. To give you a sense for the change in the number of housing units, estimates from the Census are 48,815 in 2013 from

⁶ “Economic Indicators,” page 6, *State Bank Financial*, September 10, 2008, <http://www.statebankfinancial.com/custom/fi/statebankfinancial/fb/disclosure/September-2008-Economic-Indicators.pdf>

43,479 in 2000 and 38,239 in 1990. The growth rate in the housing stock over these two time periods represents about a 1.0% and 1.3% per year rate respectively.

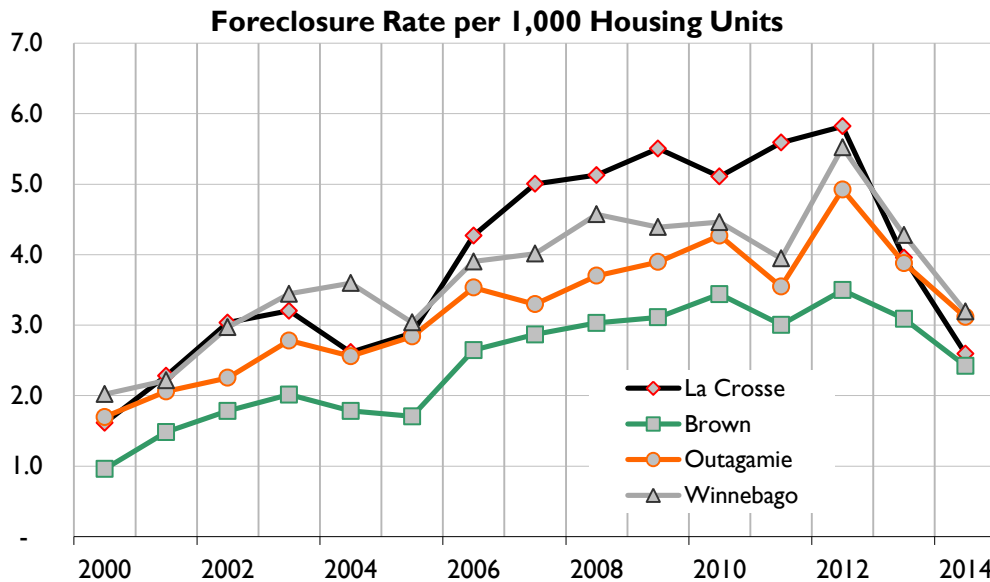


The next chart gives a sense of the evolution of the foreclosure by the Wisconsin counties in the 7 Rivers Region, excluding La Crosse. Both Monroe and Juneau exhibit the highest levels of foreclosure.



I've recently had reason to gather data on the housing market in the Fox Valley area which is located in the eastern part of Wisconsin. The area is branded like the 7 Rivers Region and is known as the NewNorth. The NewNorth includes cities such as Green Bay, Appleton and Oshkosh. The counties in the region include Outagamie, Winnebago, Calumet, Waupaca, Brown, Shawano, Oconto, Marinette, Door, Kewaunee, Sheboygan, Manitowoc, Fond du Lac, Green Lake, Marquette, Menominee, and Waushara.

I want to focus some comparisons between La Crosse County and the three bigger counties of the NewNorth: Brown, Outagamie, and Winnebago. The graph on the next page depicts the foreclosure rate across the four counties. While I did not use annual estimates for each county's number of housing units, I did use the estimates of the 2009 housing stock in each county so as to make at least that year comparable across counties. This was necessary because all three other counties are larger than La Crosse County. The interesting aspect of this graph is that while the foreclosure rate appeared to be higher in La Crosse County through the Great Recession, the recovery of the foreclosure rate in La Crosse County appears to have been far more rapid than the other counties.

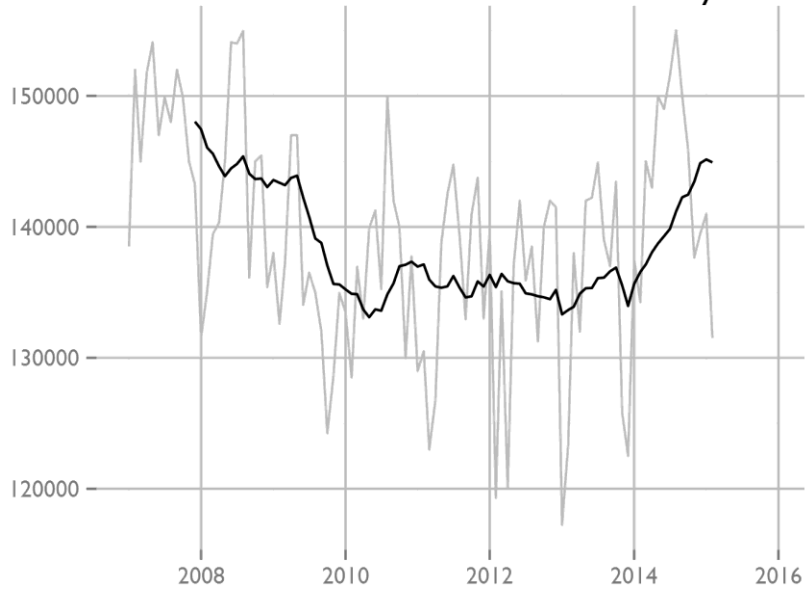


The data on the next page comes from the Wisconsin Realtors Association.⁷ The data represent the monthly median home selling prices for each county since 2007. The grey line depicts the raw data, not seasonally adjusted. I have overlaid the twelve month moving average in black to smooth out month to month fluctuations.

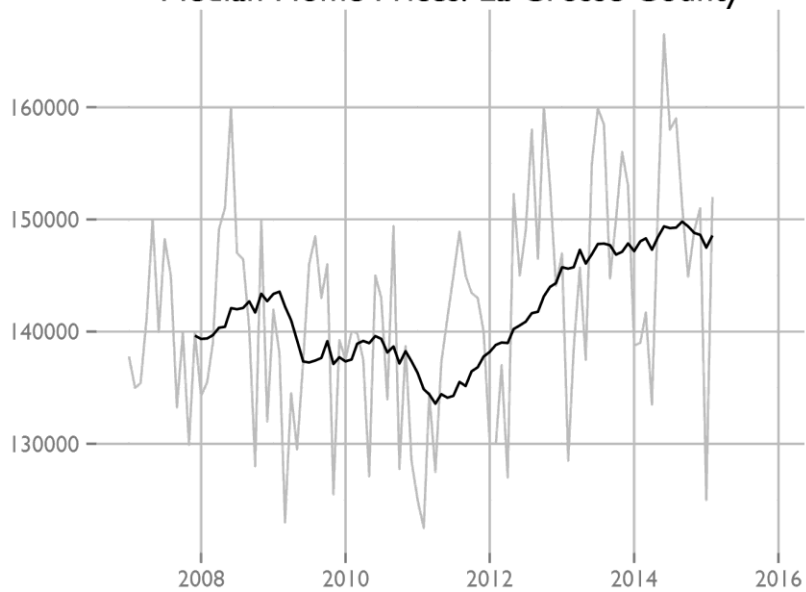
We can see that while median home prices are pretty similar across Brown and La Crosse Counties, their response to the Great Recession is quite different. The median home price in La Crosse County appears to have fully recovered sometime in 2013, whereas for Brown it has not.

⁷ "Wisconsin Housing Statistics," Wisconsin Realtors Association, <https://www.wra.org/HousingStatistics/>

Median Home Prices: Brown County

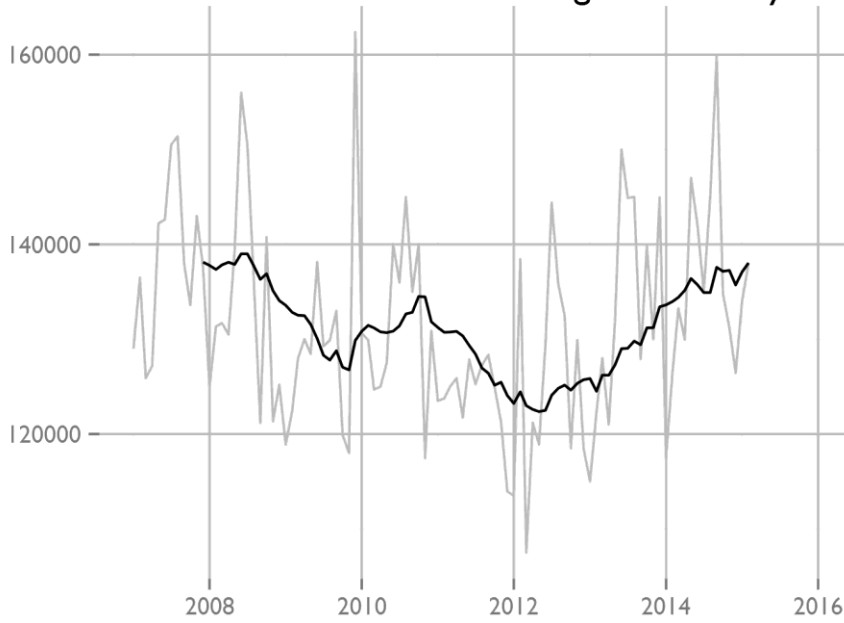


Median Home Prices: La Crosse County

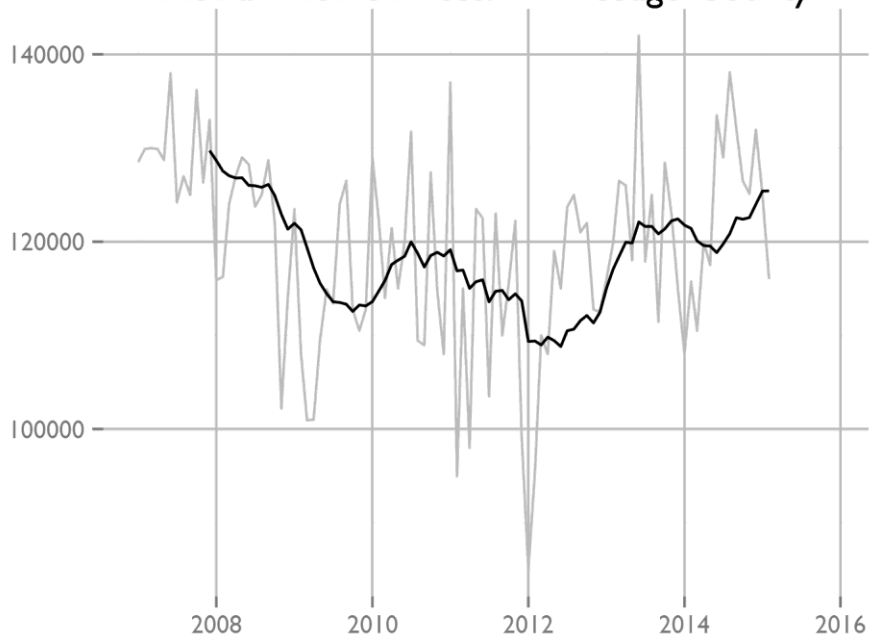


While the median prices for Outagamie and Winnebago are lower than for Brown and La Crosse, their evolution mirrors that of Brown in that they are not yet fully recovered to levels seen at the start of the Great Recession.

Median Home Prices: Outagamie County



Median Home Prices: Winnebago County



March 2015: Consumer Sentiment

During the week of March 9 I distributed, via email, the biannual consumer sentiment survey to 1,455 past participants in programs related to the 7 Rivers Region. I received 151 responses for an overall response rate of 10.4%. A table with all the data since the inception of the regional survey is available on the next page. We see from February of 2009 to March 2015 the regional overall consumer sentiment index has generally risen, but always remained above the national index. The Current Conditions and the Expectations sub-indices have both trended upward over the last few surveys, and they have both returned to their pre-recession levels.

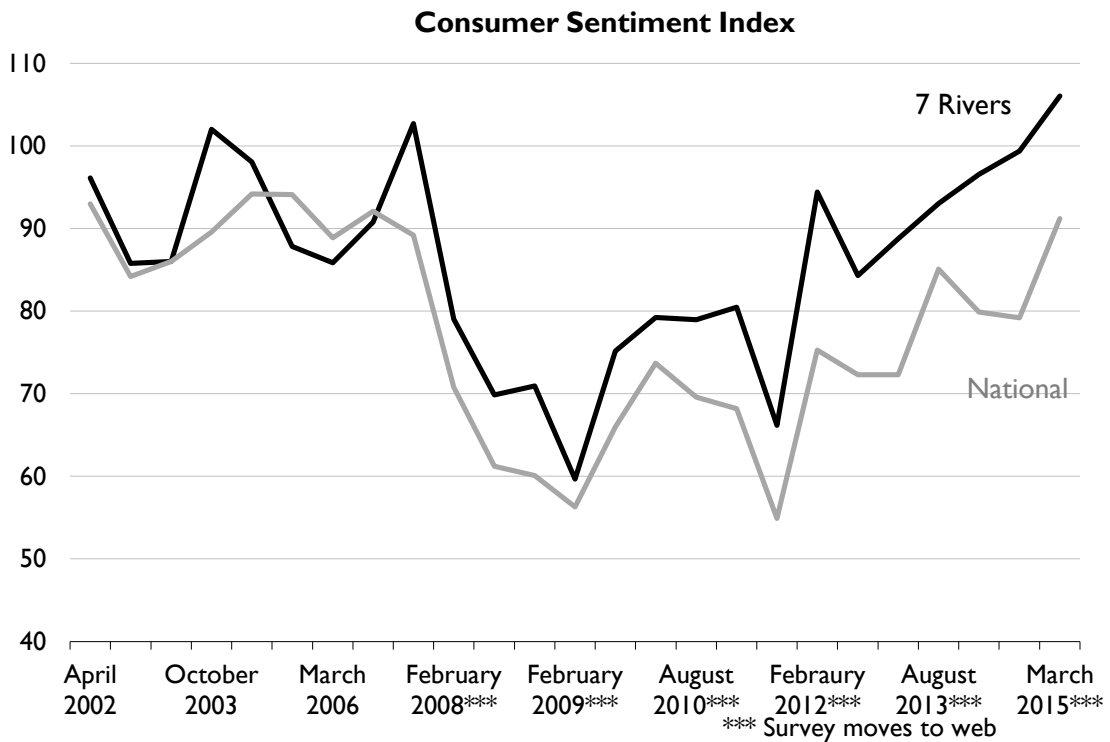
Consumer Sentiment Index Data

	Consumer Sentiment		Current Conditions		Consumer Expectations	
	7 Rivers	National	7 Rivers	National	7 Rivers	National
April 2002	96.1	93	94.7	99.2	97.1	89.1
November 2002	85.8	84.2	97.0	93.1	78.6	78.5
April 2003	86.0	86	94.4	96.4	80.6	79.3
October 2003	102.0	89.6	104.6	99.9	100.4	83.0
April 2004	98.1	94.2	102.9	105	95.0	87.3
February 2005	87.9	94.1	100.7	109.2	79.6	84.4
March 2006	85.9	88.9	107.6	109.1	71.9	76.0
November 2006	90.8	92.1	96.7	106	86.9	83.2
April 2007***	102.7	89.2	113.7	111.1	95.7	75.1
February 2008***	79.1	70.8	91.3	83.8	71.2	62.4
August 2008***	69.9	61.2	76.5	73.1	65.6	53.5
December 2008***	70.9	60.1	87.0	69.5	60.6	57.8
February 2009***	59.7	56.3	75.9	65.5	49.2	50.5
July 2009***	75.2	66	83.7	70.5	69.7	63.2
February 2010***	79.2	73.7	91.8	84.1	71.2	66.9
August 2010***	79.0	69.6	91.5	69.0	70.9	64.1
April 2011***	80.5	68.2	88.2	83.6	75.5	58.3
August 2011***	66.2	54.9	80.8	69.3	56.8	45.7
February 2012***	94.4	75.3	102.4	83.0	89.3	70.3
August 2012***	84.3	72.3	96.8	82.7	76.3	65.6
April 2013***	88.8	72.3	99.9	84.8	81.6	64.2
August 2013***	93.0	85.1	103.3	98.6	86.4	76.5
March 2014***-	96.6	79.9	108.4	96.1	89.0	69.4

August 2014***-	99.4	79.2	106.8	99.6	94.6	66.2
March 2015***	106.0	91.2	115.3	103.0	100.1	83.7

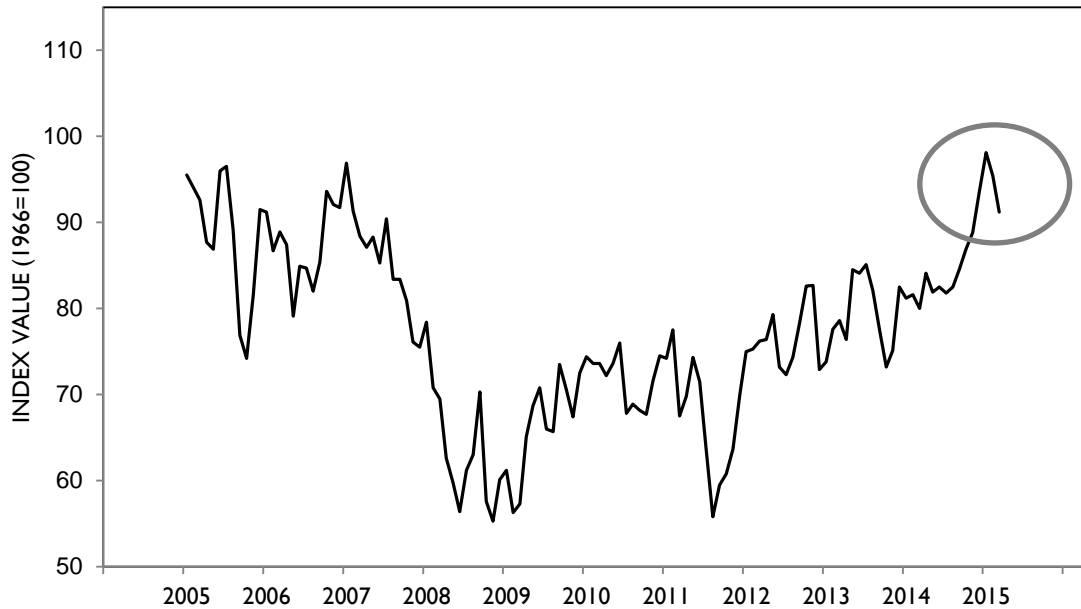
*** Survey moved to the web.

It is worth taking a moment to caution the reader when interpreting the data. The challenge with presenting data that is collected only twice a year is that we can miss important turning points. A casual inspection of the 7 Rivers consumer sentiment suggests that its trend is unambiguously upward. The national index seems to recently be following the same track.



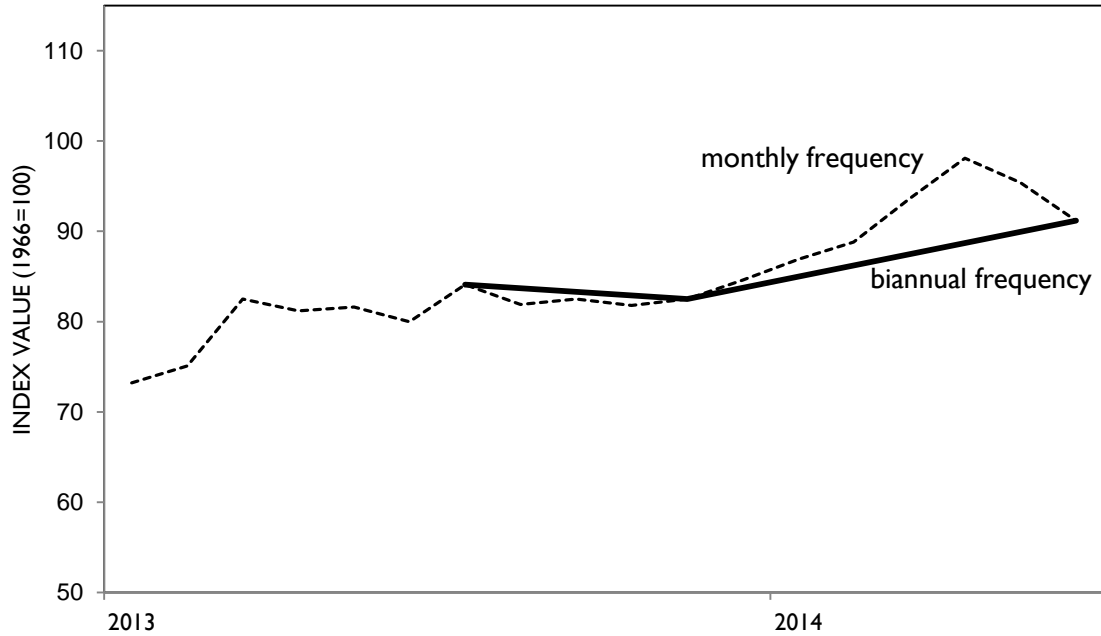
In order to demonstrate the potential vagaries of such a casual look, I've included the national data in a separate graph, where I provide all monthly data since 2005. The grey circle highlights the very recent pull back in March.

THE INDEX OF CONSUMER SENTIMENT



Now on the next page I plot only the national data from 2013 and beyond (monthly frequency), while overlaying the national data sampled at the same interval as our 7 Rivers Region index (biannual frequency). It is easier to see in this graph that the biannual frequency seems to suggest a continued upward trend while the higher frequency monthly data suggests a recent retrenchment. There is no doubt that this series has a lot of noise in it, so one month, or even two does not a trend make. Still it is helpful when thinking about the future of the local consumer sentiment to recall that the data is sampled at a biannual frequency and while consumer sentiment is again about what it was last fall that does not mean we are on a straight track up.

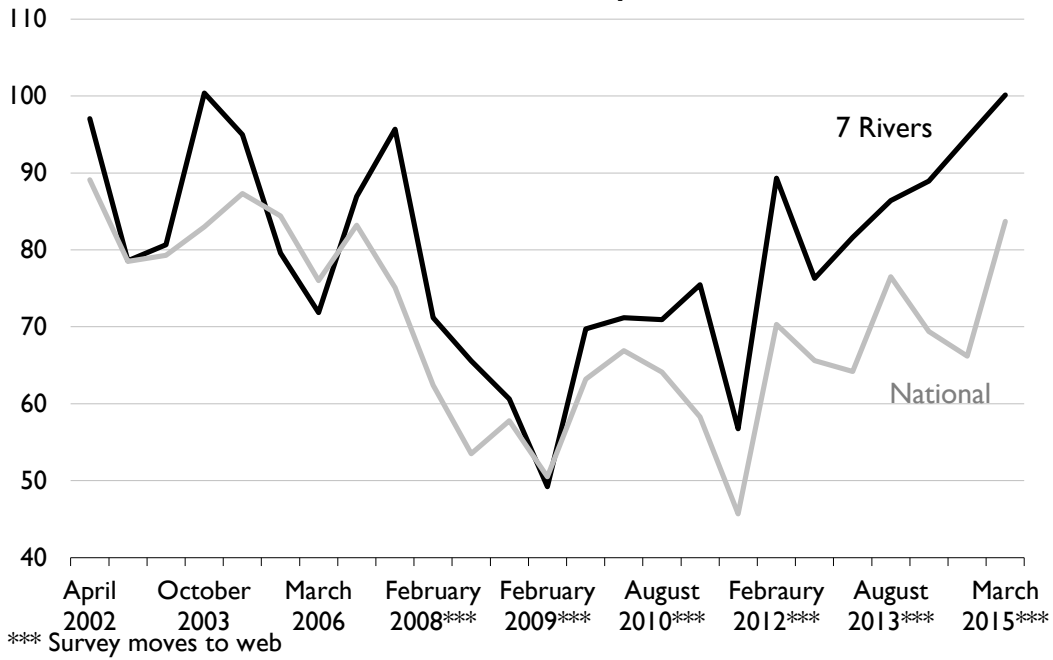
THE INDEX OF CONSUMER SENTIMENT



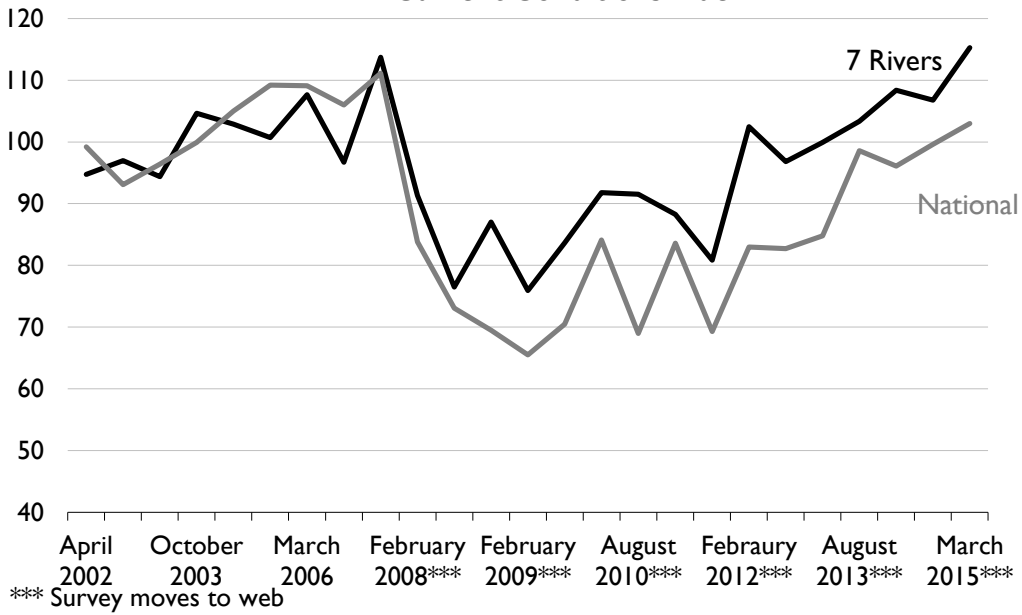
The major source of deviation between the national consumer sentiment index and the regional consumer sentiment index is largely due to the differences in expectations. Both track each other fairly well on current conditions, but whereas the national index shows a retrenchment in consumer expectations the regional index does not show the same pessimism about the future. Some of this may be due to the national slowdown in the housing recovery.

Appendix

Consumer Expectations Index



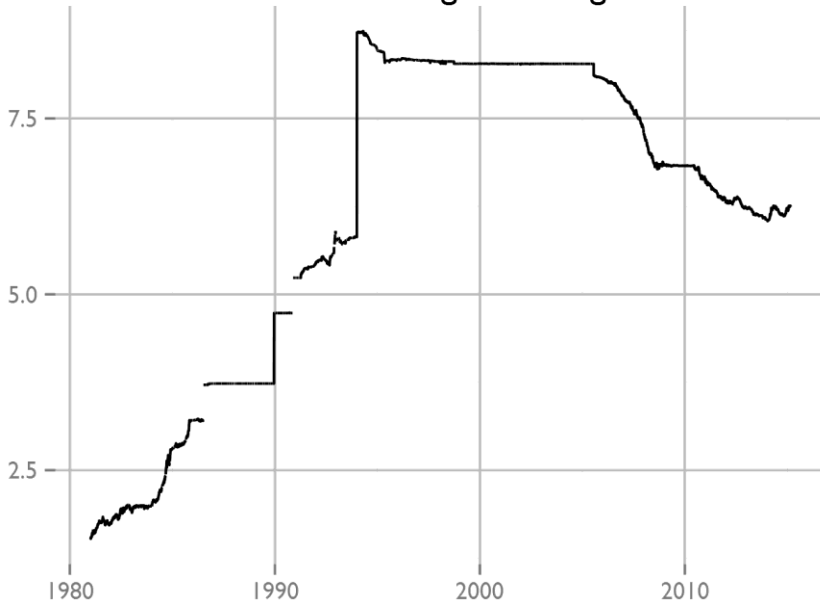
Current Conditions Index



Canada / U.S. Foreign Exchange Rate



China / U.S. Foreign Exchange Rate



Japan / U.S. Foreign Exchange Rate



U.S. / Australia Foreign Exchange Rate



U.S. / U.K. Foreign Exchange Rate



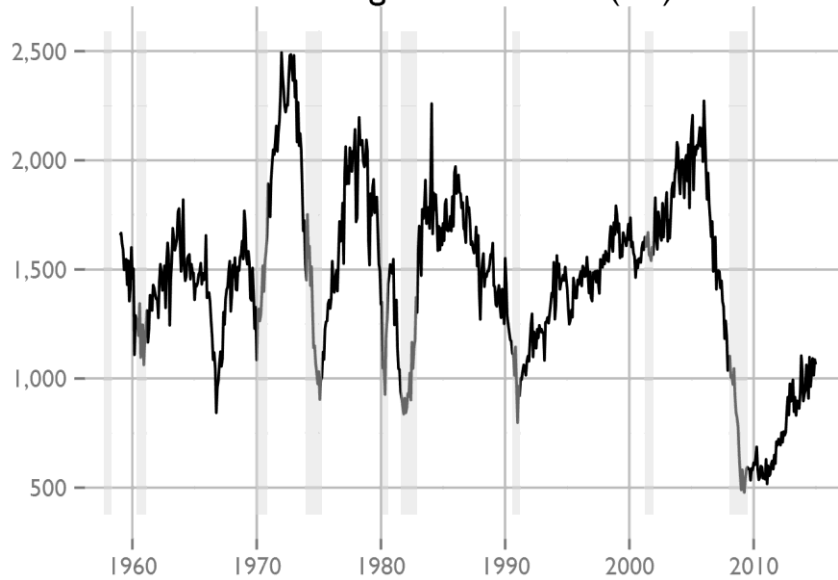
30-Year Conventional Mortgage Rate



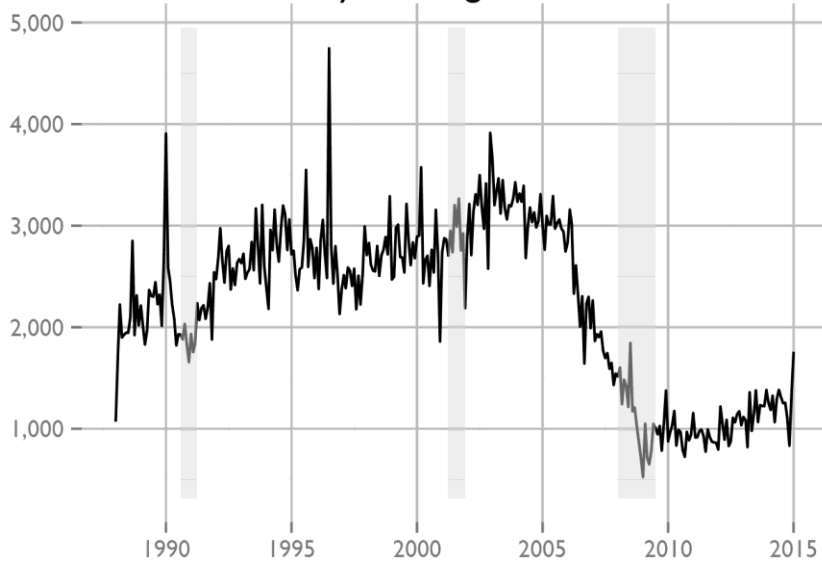
New Private Housing Units Authorized by Building Permits (US)



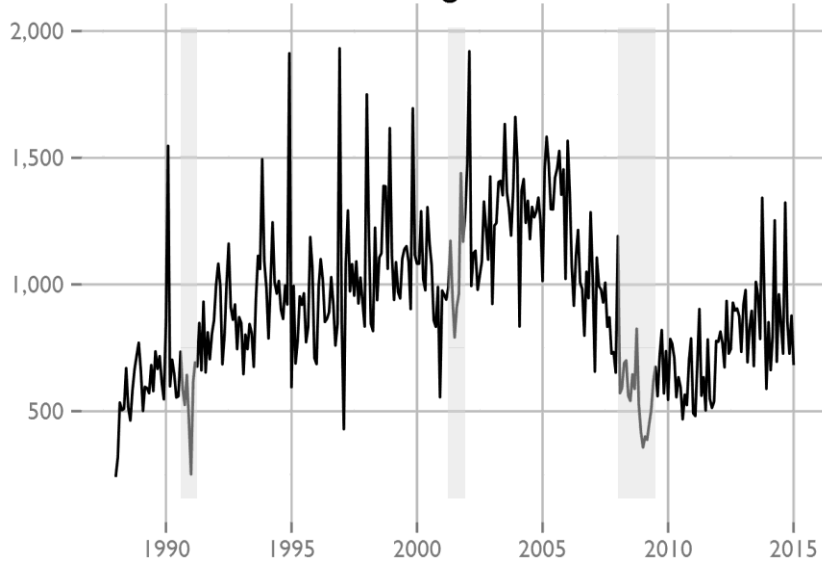
Housing Starts: Total: New Privately Owned Housing Units Started (US)



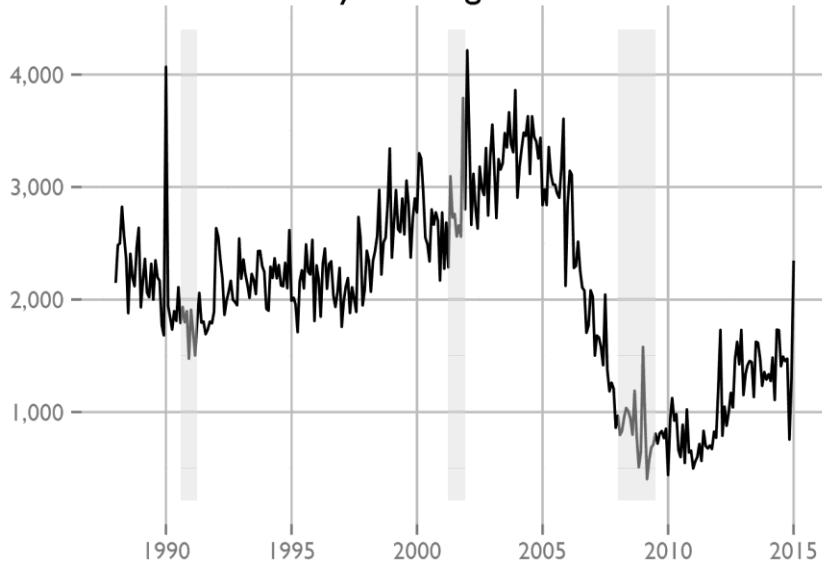
Wisconsin - New Private Housing Units Authorized By Building Permit



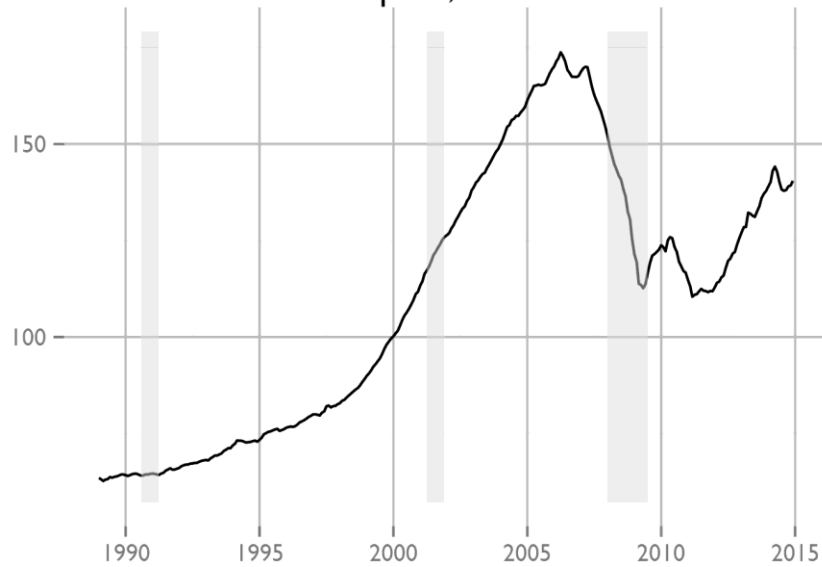
Iowa - New Private Housing Units Authorized By Building Permit



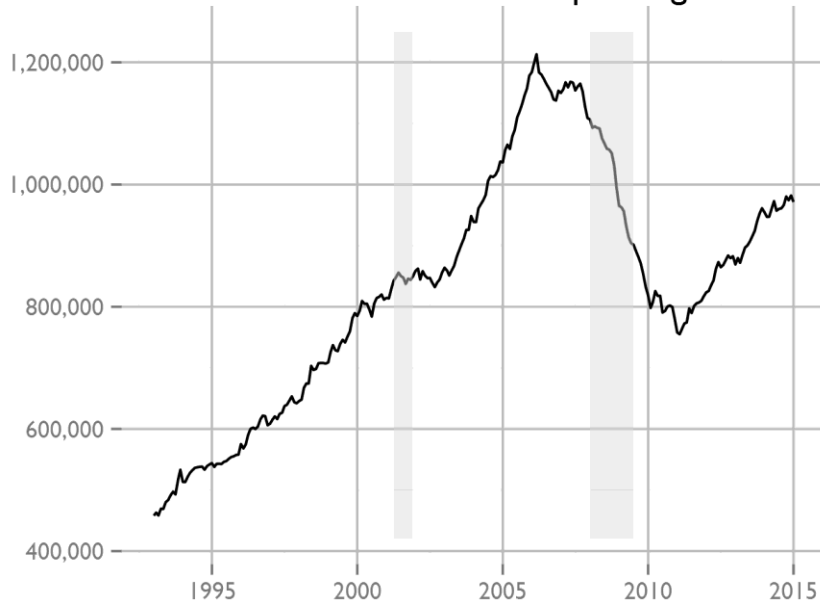
Minnesota - New Private Housing Units Authorized
By Building Permit



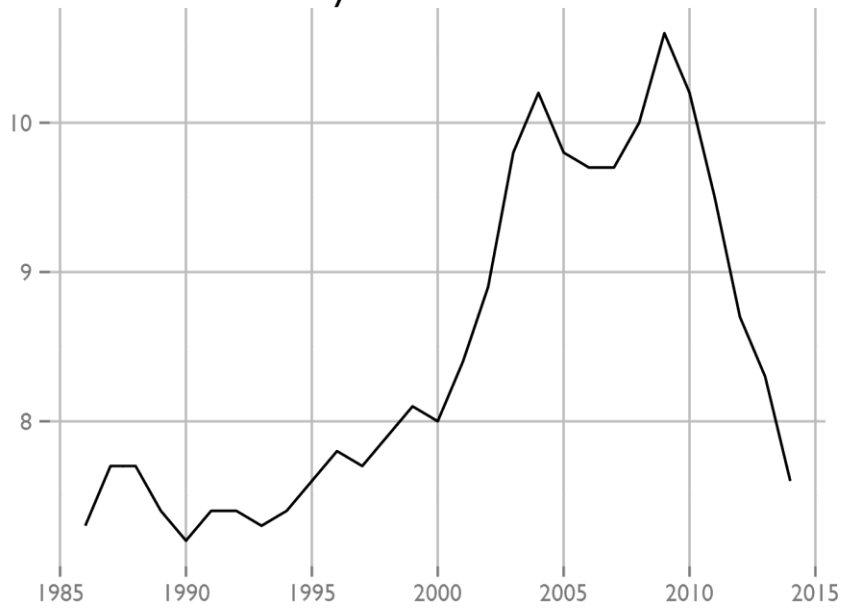
S&P Case-Shiller Home Price Index for
Minneapolis, Minnesota



Total Construction Spending



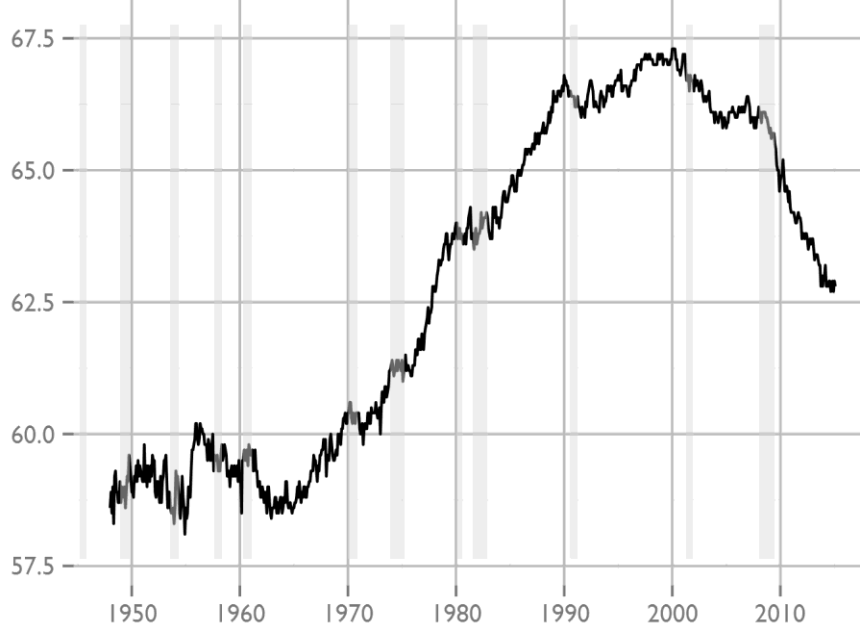
Rental Vacancy Rate for the United States



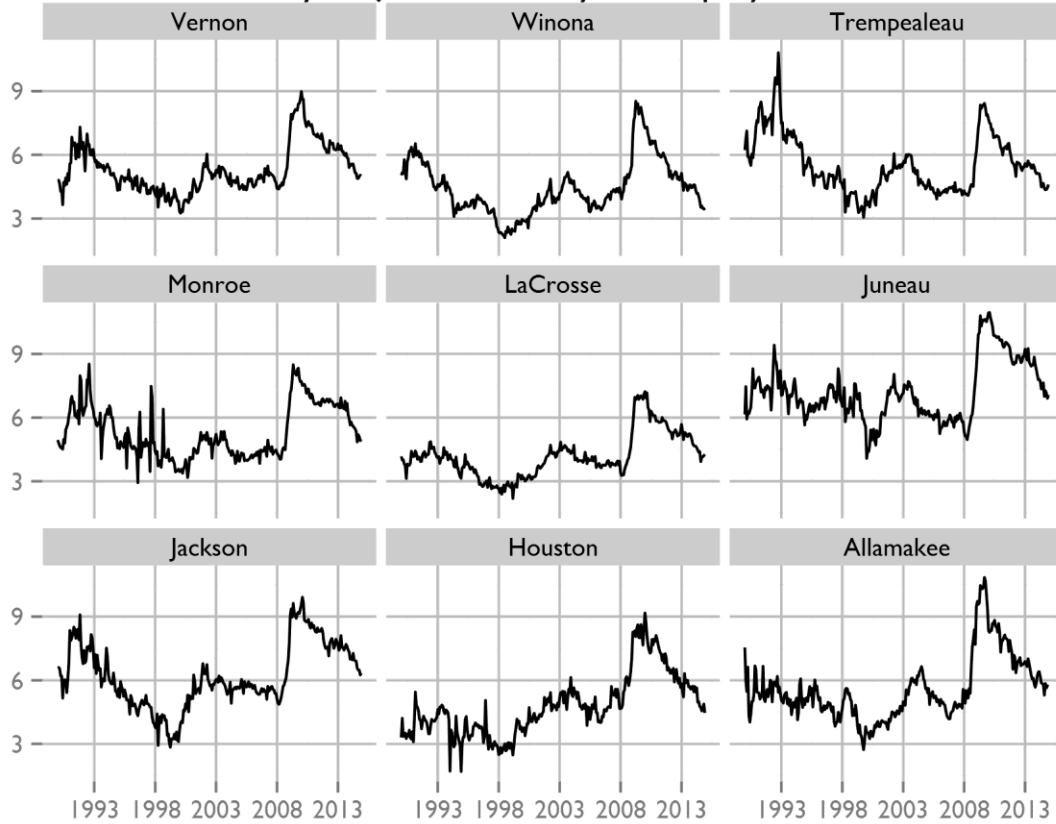
Job Openings and Labor Turnover Survey (JOLTS)



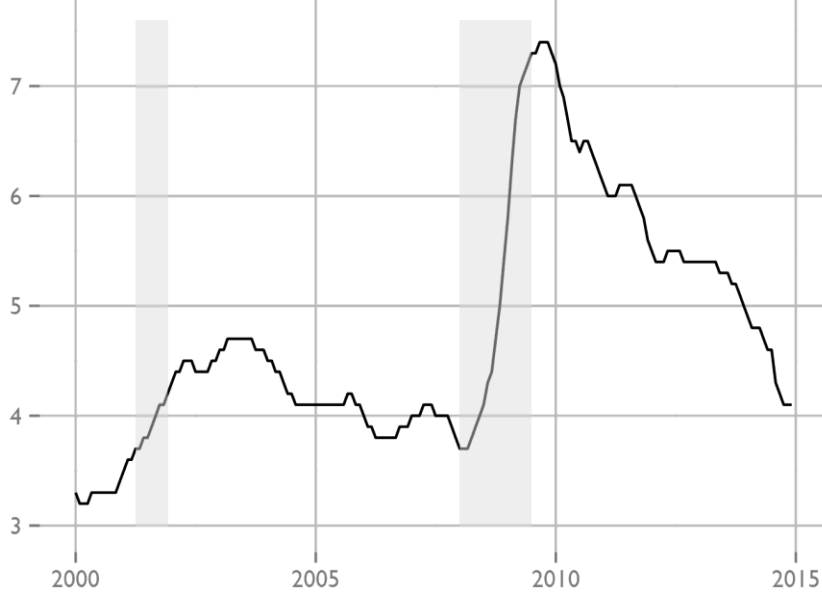
Civilian Labor Force Participation Rate



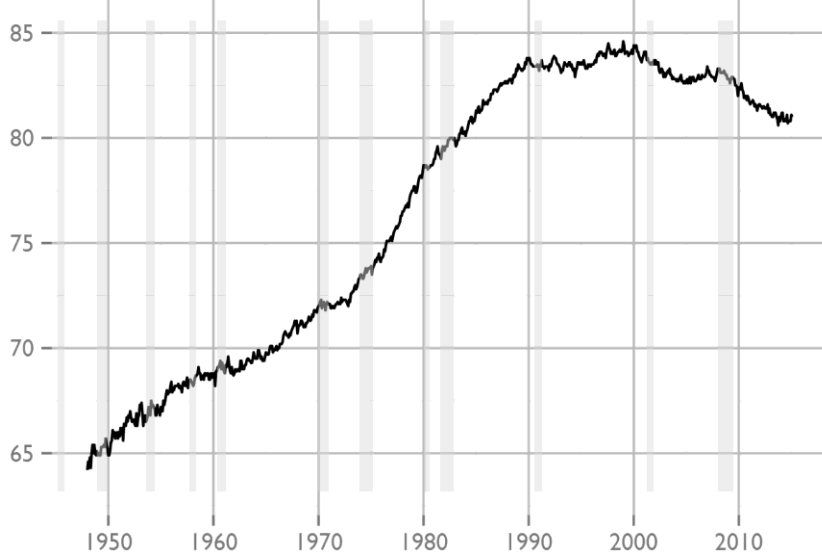
Seasonally Adjusted County Unemployment Rates



Unemployment Rate in La Crosse, WI-MN (MSA)



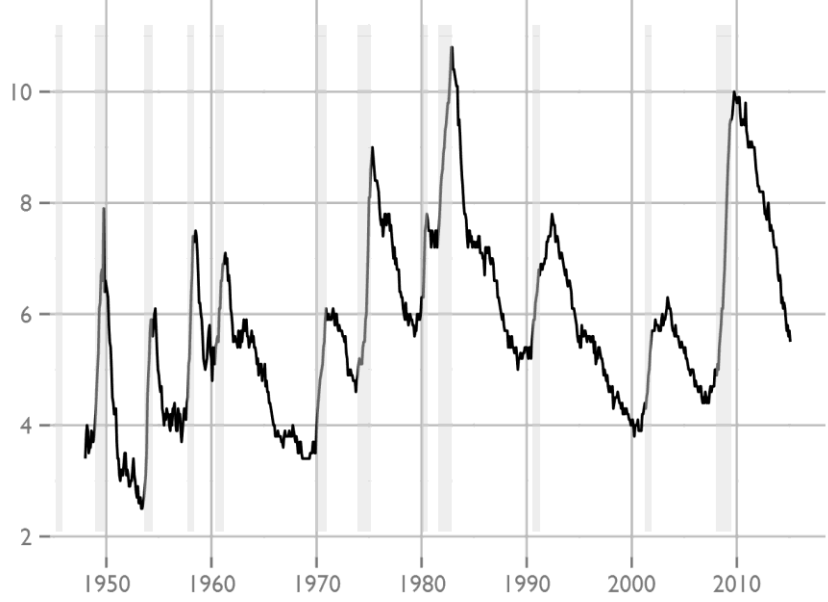
Civilian Labor Force Participation Rate - 25 to 54 years



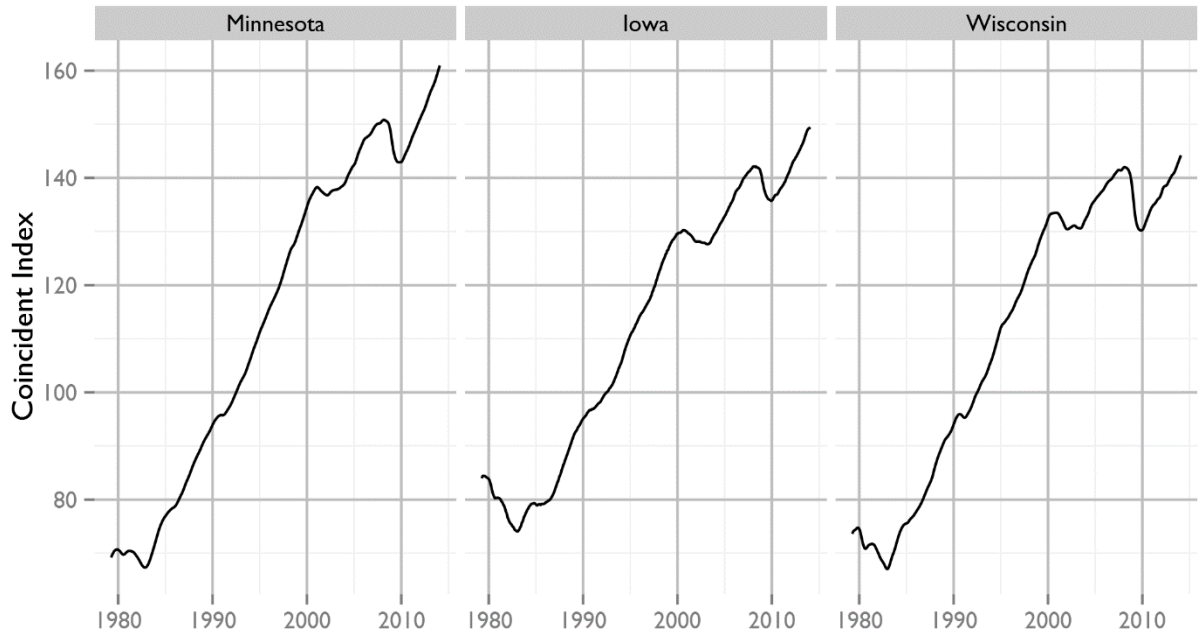
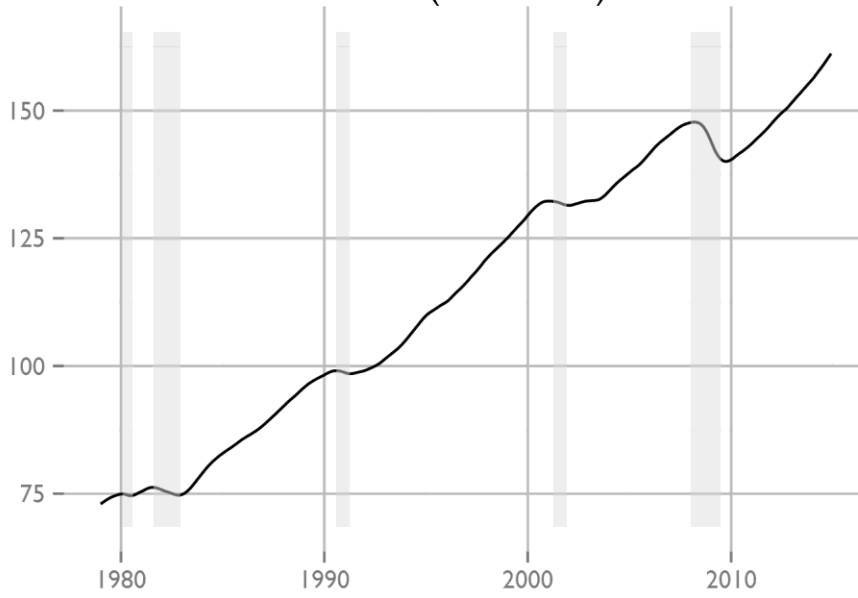
Of Total Unemployed, Percent Unemployed 27 Weeks and Over



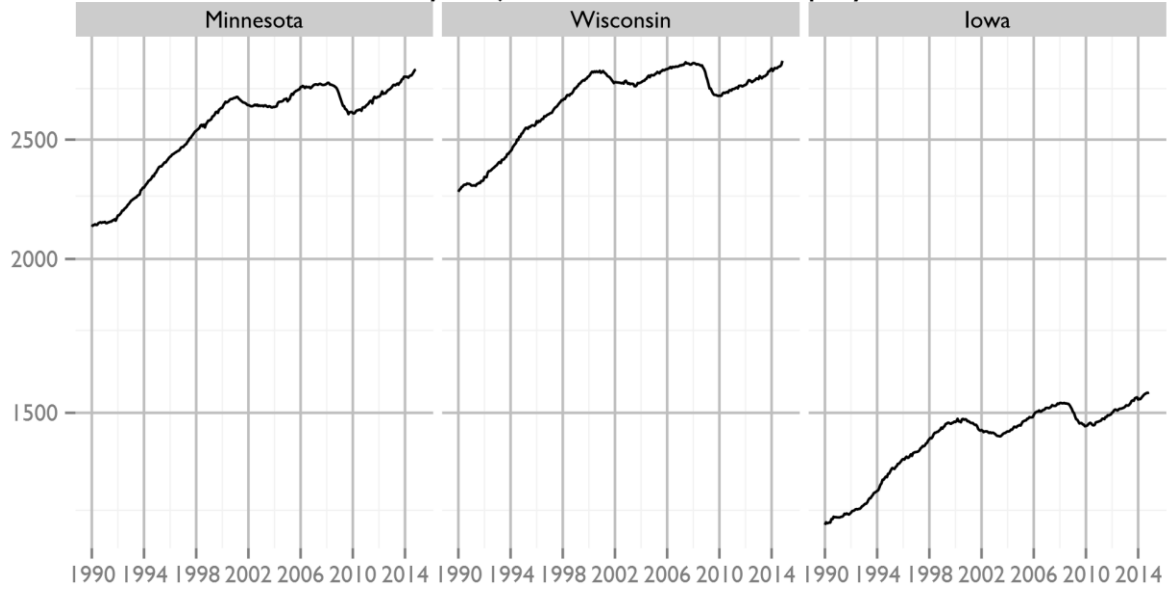
Civilian Unemployment Rate (US)



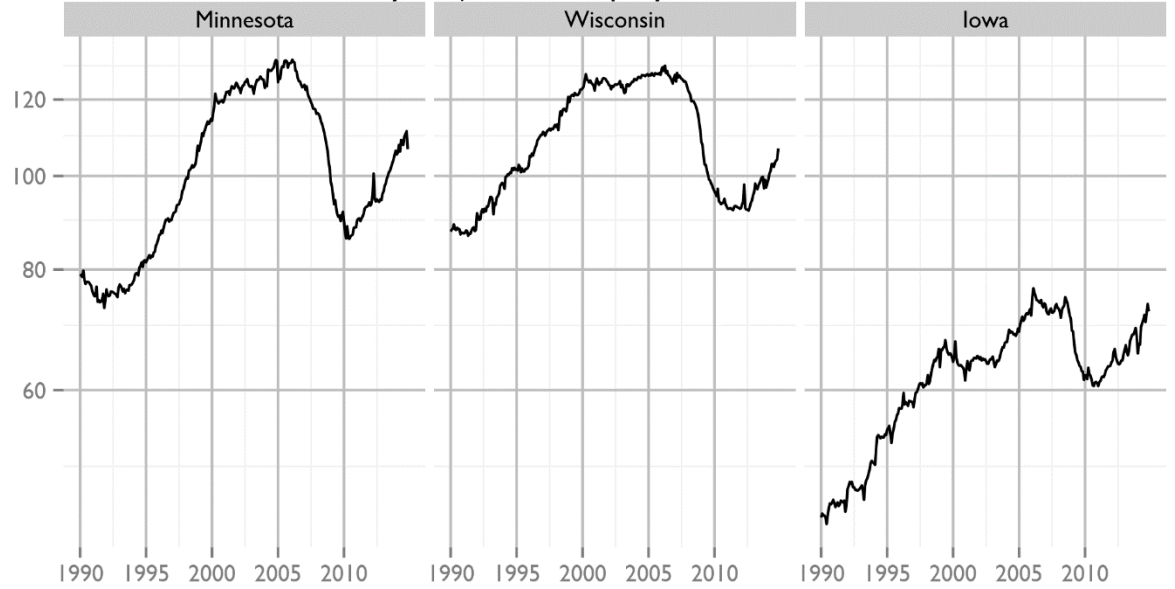
Coincident Economic Activity Index for the United States (1992=100)



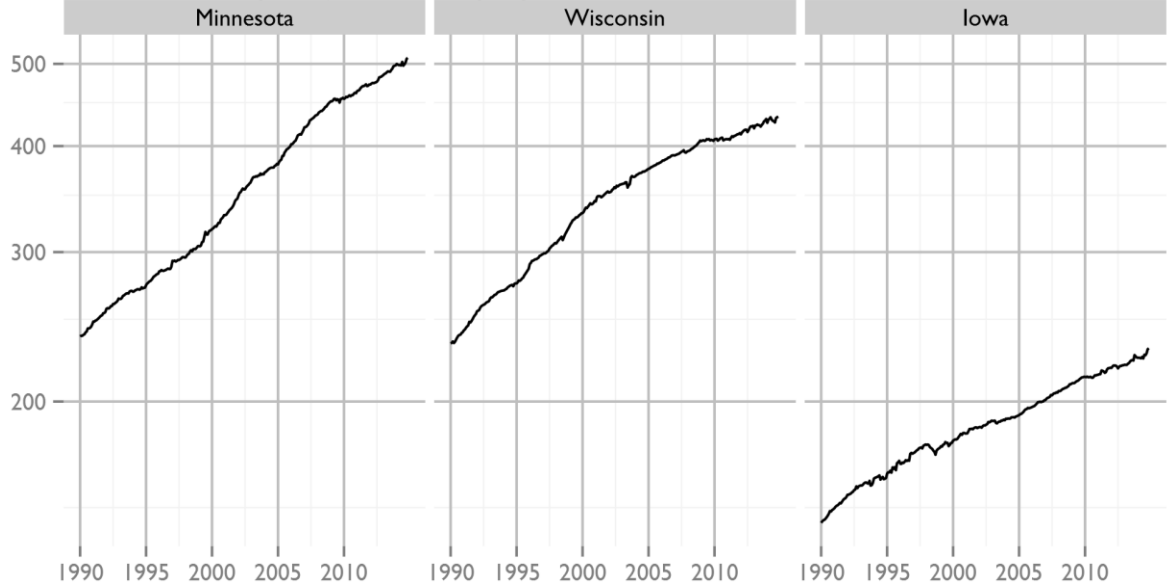
Seasonally Adjusted, Non-Farm Employment



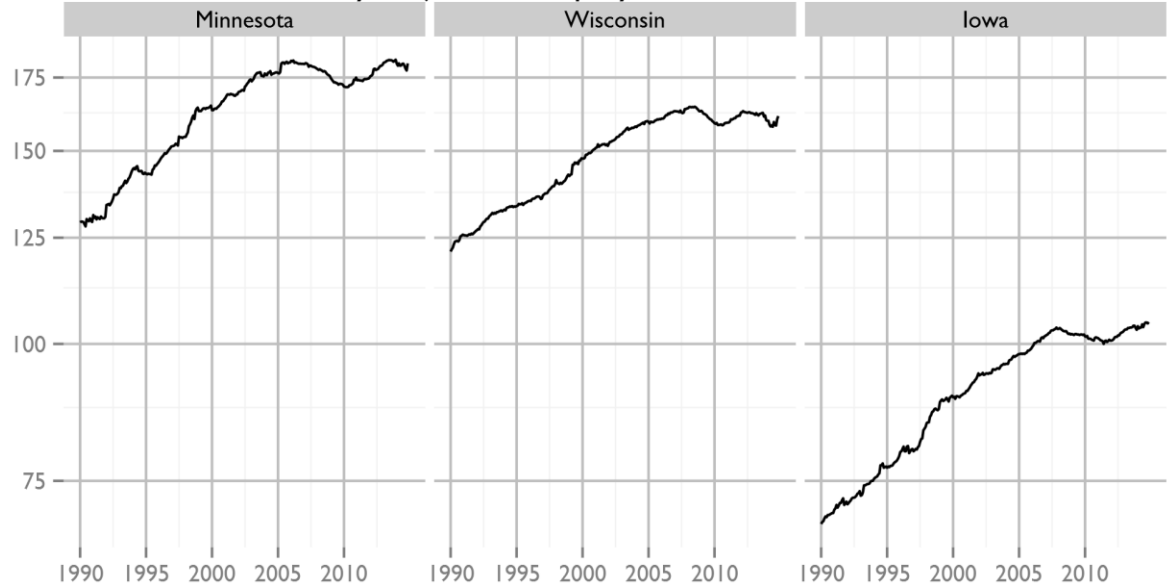
Seasonally Adjusted, Employment - Construction



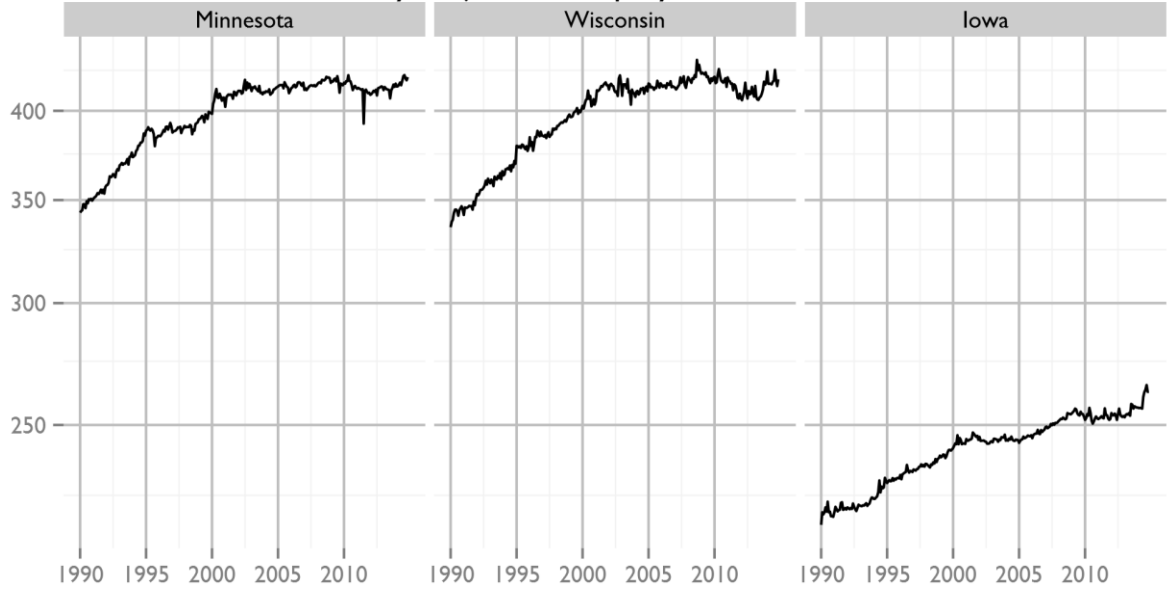
Seasonally Adjusted, Employment - Educational and Health Services



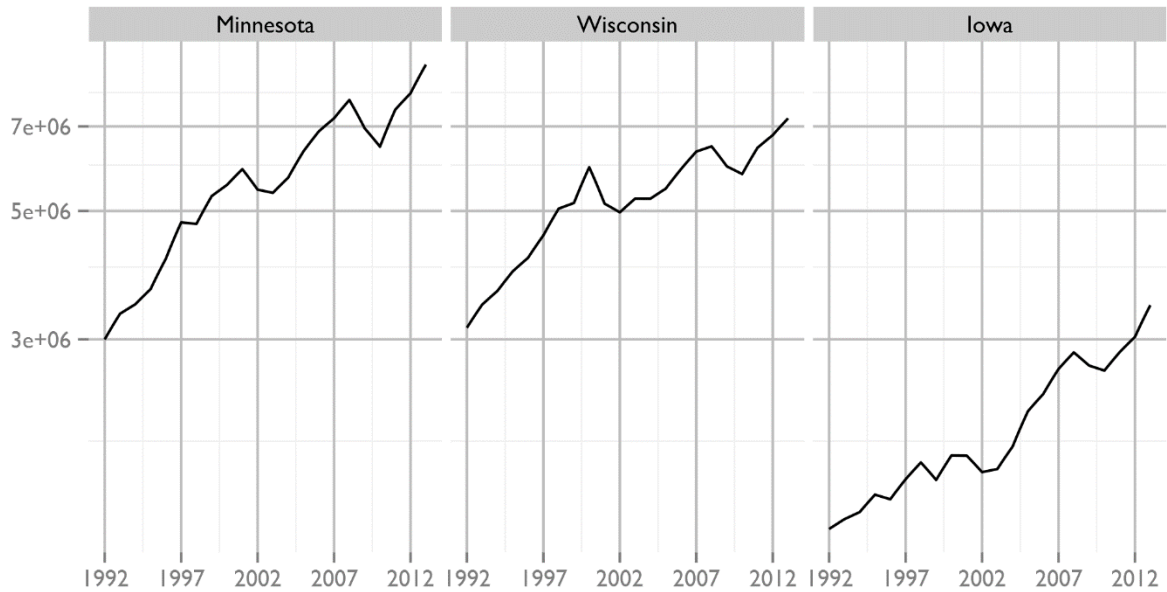
Seasonally Adjusted, Employment - Financial Activities



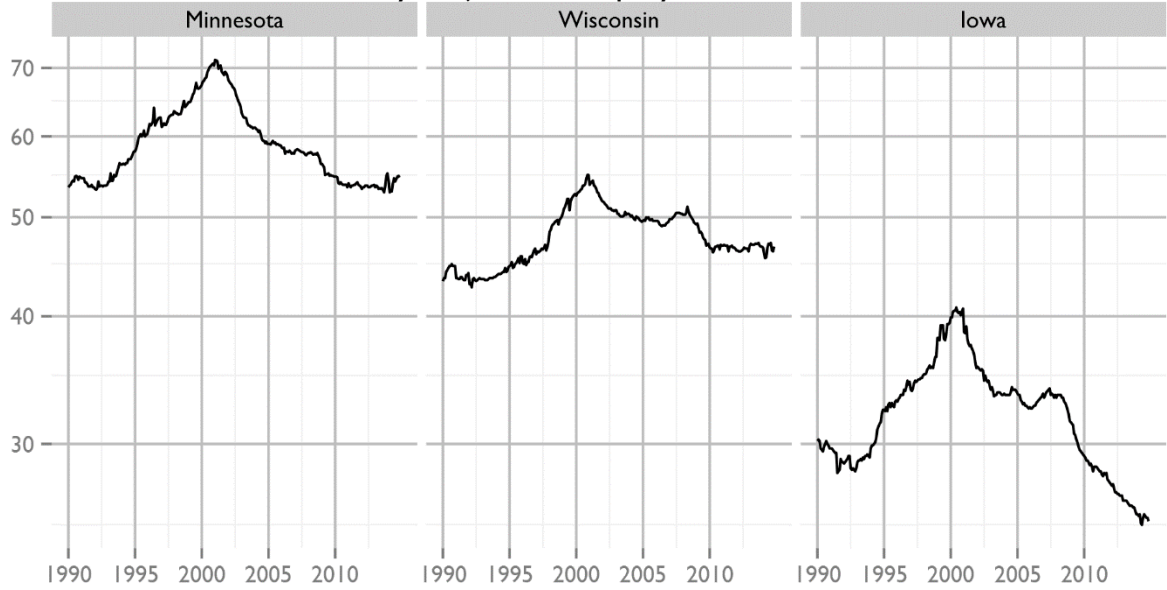
Seasonally Adjusted, Employment - Government



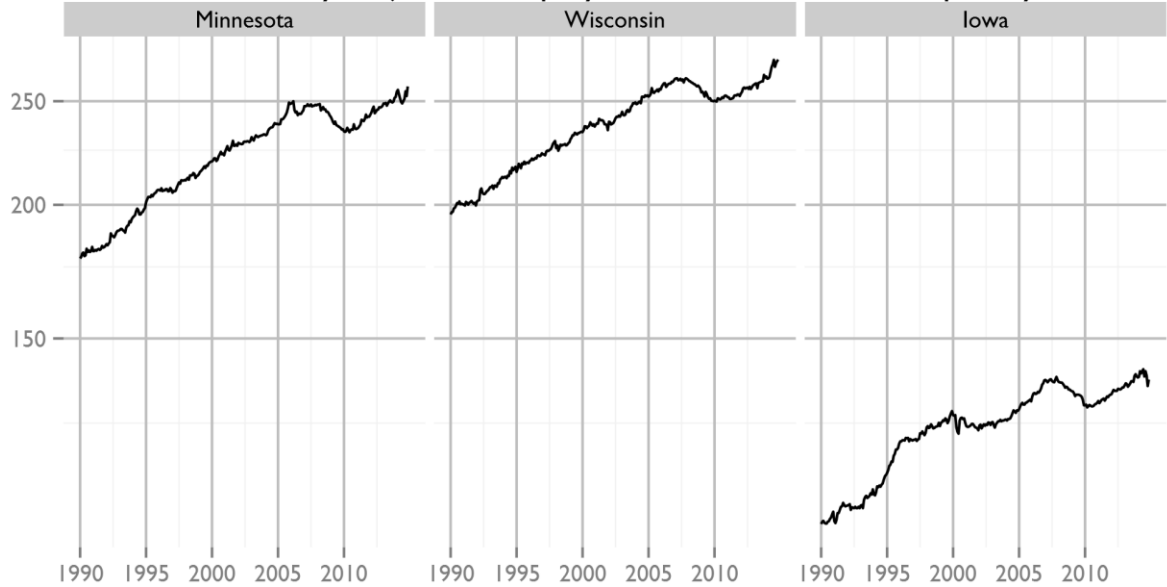
Annual Income Tax Collections



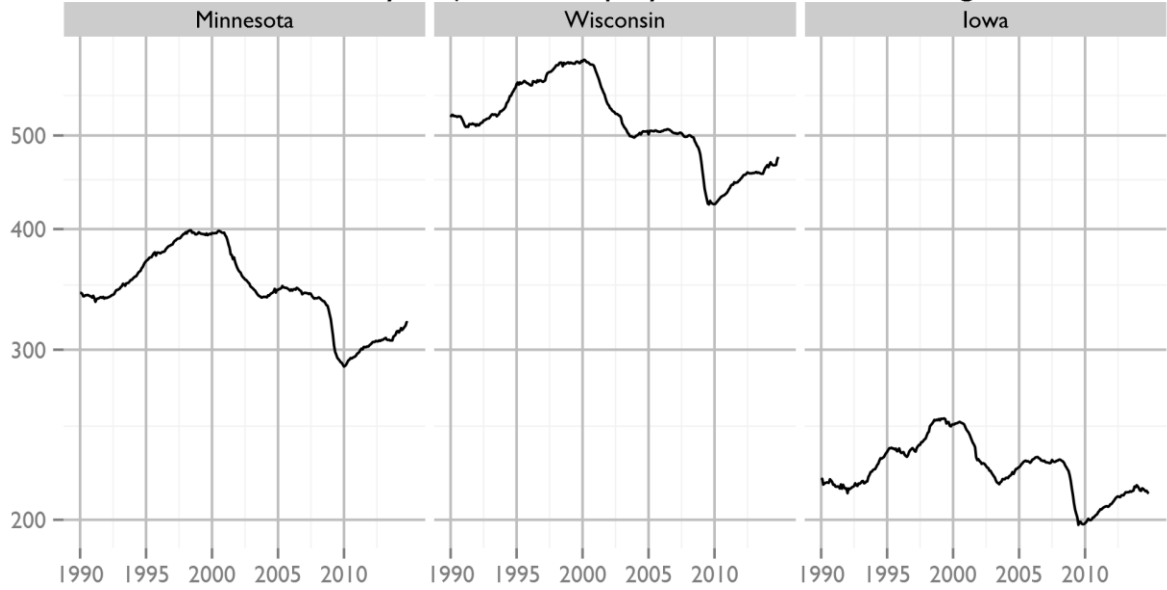
Seasonally Adjusted, Employment - Information



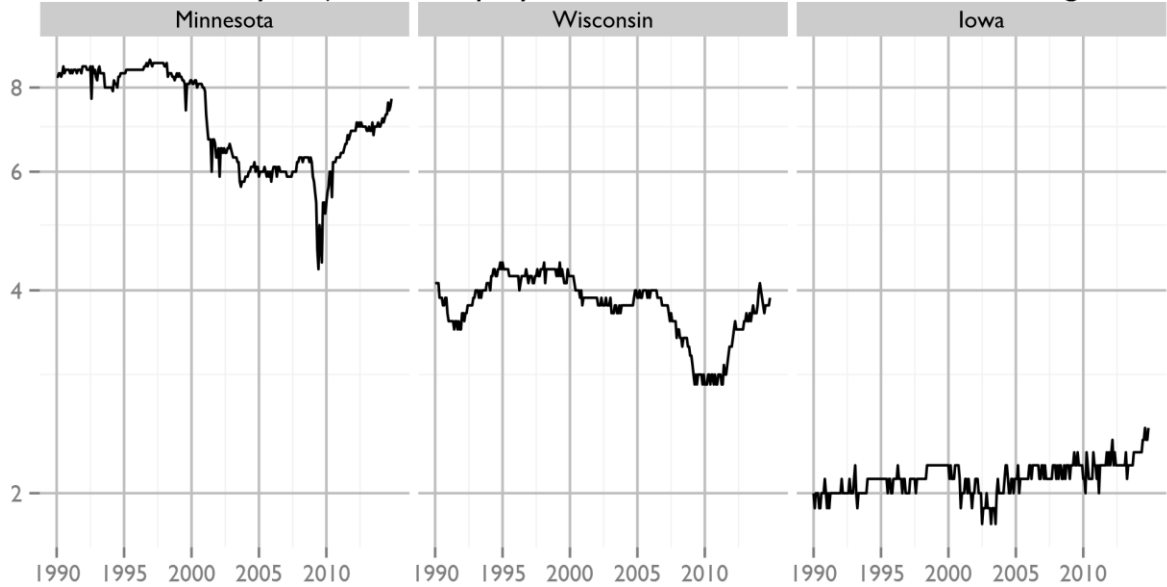
Seasonally Adjusted, Employment - Leisure and Hospitality



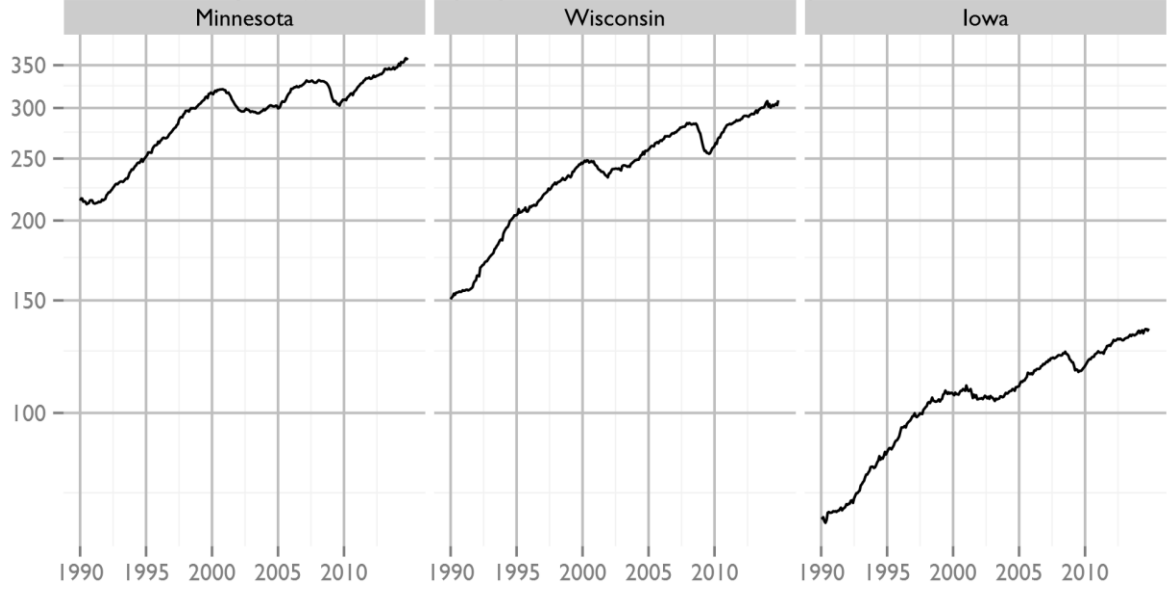
Seasonally Adjusted, Employment - Manufacturing



Seasonally Adjusted, Employment - Natural Resources and Mining



Seasonally Adjusted, Employment - Trade, Transportation and Utilities





State Bank Financial, dedicated to the economic growth of the region, sponsors this research and community forum to deepen our understanding of regional economic trends to provide tools for decision makers.

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UW-La Crosse College of Business Administration contributes faculty and administrative support for this regional initiative. The project team tracks core economic indicators, analyzes trends, and prepares periodic reports.

Bruce May, Dean
Glenn Knowles, Interim Associate Dean
Anne Hlavacka, SBDC Director