Center for Research On the Wisconsin Economy
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CROWE Policy Brief:

Evidence on the Effects of Minnesota's Minimum Wage Increases

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Summary

Beginning in 2014, the state of Minnesota began a series of minimum wage increases. By contrast, Wisconsin increased its state minimum wage in 2010 to keep pace with the federal minimum wage, but has not increased it since. While the effects of minimum wages changes remains a controversial topic, comparing relative outcomes in Wisconsin and Minnesota suggests that the minimum wage increases led to employment losses in Minnesota, particularly in the restaurant industry and youth demographic most affected by the changes.

Over 60% of employees in the restaurant industry in Minnesota work for the minimum wage or less, and workers under the age of 24 account for 54% of minimum wage earners. Following the minimum wage increases limited service restaurant employment fell by 4% in Minnesota relative to Wisconsin. Further, youth employment fell by 9% in Minnesota following the minimum wage increases, while it increased by 10.6% in Wisconsin over the same time period.

In addition, part of the increased wage costs employers faced have been passed on to consumers through higher prices. The relative price of restaurant food in the Minneapolis metro area had fallen by 2% in the four years preceding the minimum wage hikes, but it has risen by 6% in the four years since. On the benefit side, earnings for affected workers grew more rapidly in Minnesota than Wisconsin following the minimum wage hikes, with average annual pay at limited service restaurants increasing by 5.5% more in Minnesota from 2014-2017.

Overall, this evidence is consistent with a competitive market for low wage workers in Minnesota, with the minimum wage increases leading to labor market distortions.

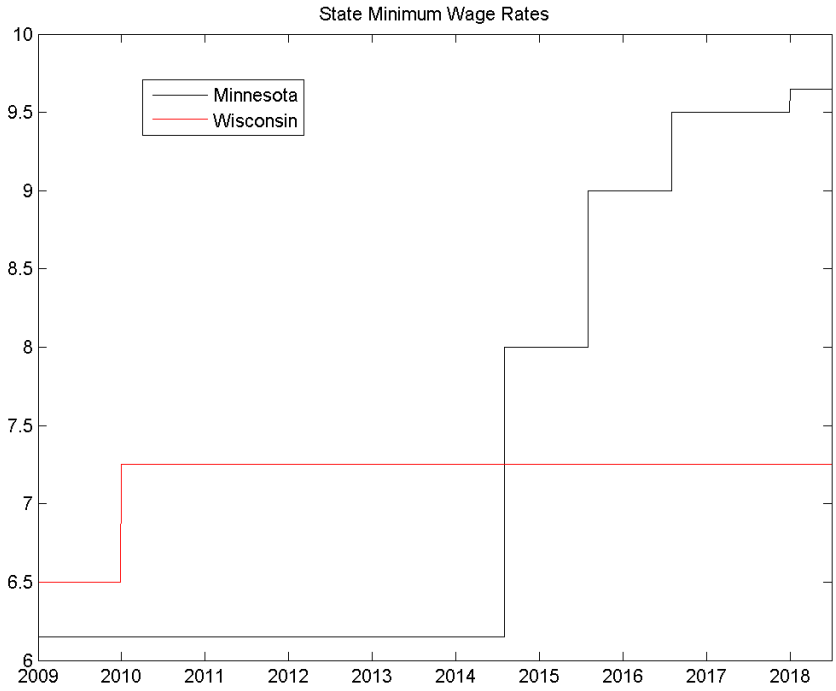

Figure 1: State Minimum Wage Rates in Minnesota and Wisconsin (large employers).

Introduction

While the federal minimum wage has remained constant at $7.25 per hour since July 2009, over recent years many states and localities have imposed minimum wages above the national level. In particular, the minimum wage in the state of Minnesota is now $9.65, an increase of 33% since 2014, and the city of Minneapolis has recently adopted plans to phase in a $15 minimum wage, a further 55% increase. While previous minimum wage changes have been small and gradual, these large recent and planned changes may have substantial impacts on labor markets.

Although there is a vast literature on the impact of minimum wages, assessments of their impact remain divided. Proponents of higher minimum wages point toward benefits of higher incomes for low wage workers, while opponents argue that higher minimum wages lead to employment losses for precisely the low-wage workers that the policy is designed to benefit, and both sides point toward economic research in support.[1] In this brief I provide evidence suggesting that Minnesota's minimum wage increases led to higher incomes in low wage industries, but at the cost of reductions in employment for young and low-wage workers, as well as higher prices for consumers as employers passed on part of the higher wage costs.

I identify the potential impacts of the minimum wage by comparing outcomes in Minnesota with those in its neighboring state of Wisconsin. As Figure 1 shows, while Minnesota has increased

[1] Neumark (2014) provides a brief overview of the issues and literature on the minimum wage. Examples of the recent debate include Dube, Lester, and Reich (2010) and Neumark, Salas, and Wascher (2014). Jardim et al. (2018) document the employment impact of the recent Seattle minimum wage increases.

its minimum wage in recent years, in Wisconsin the state minimum wage has remained constant after an increase in 2010 to match the higher federal minimum wage of $7.25/hour. Prior to 2014 Minnesota's state minimum wage was $6.15, which meant in practice that the effective minimum wage in the state was the higher federal wage of $7.25, which came into effect in July 2009. In 2014 Minnesota passed legislation to phase in a series of minimum wage increases. The minimum wage increased to $8.00/hour effective Aug. 1, 2014, to $9.00 effective Aug. 1, 2015, and to $9.50 effective Aug. 1, 2016. These minimums were effective for large employers, with a lower schedule, also ratcheting up in parallel, for smaller employers. Then on Jan. 1, 2018 the state minimum was further increased to $9.65 and it will be adjusted annually for inflation.

In less than four years the minimum wage in Minnesota had increased by one third, affecting a significant fraction of the labor force. In particular, Berry (2017) documents that before the wage hikes in 2013, 74,000 workers accounting for 4.7% of Minnesota's hourly workforce earned the minimum wage of $7.25 or less. But after the increase to $9.50 in 2016 this number more than tripled to 248,000, or 15.4%, of Minnesota's hourly workers. This substantial increase in affected workers was heavily concentrated in the restaurant industry and among the youth demographic, which I now examine.

Limited Service Restaurant Employment

Figure 2: Employment in Limited Service Eating Places in Minnesota and Wisconsin (monthly data, index with July 2014=100).

In order to identify the potential impacts of minimum wage increases, it is crucial to look at those parts of the labor market where the minimum wage is the most binding. Many previous studies,

including the work of seminal Card and Krueger (1994), have focused on the restaurant industry and limited service (fast food) restaurants in particular, which has a high concentration of minimum wage earners. As Berry (2017) noted, about 129,000 hourly workers were employed in eating and drinking places in Minnesota in 2016, with 60% of them, or about 78,000, being paid the minimum wage or less. This is by far the highest concentration of minimum wage earners in a single industry. Although restaurant workers account for 8% of the statewide hourly labor force, they make up about 31% of all minimum wage earners in the state.[2] As in Card and Krueger (1994), I focus on the limited service sector of the restaurant market, where workers earn lower average incomes and where their hourly wages are much less likely to be supplemented by tips.

Figure 2 shows limited service restaurant employment in Minnesota and Wisconsin from 2010-2018. The dashed line shown is July 2014, the month prior to the beginning of the phased-in minimum wage increases in Minnesota. To take account of the different sizes of the sectors in the two states, the data are also indexed so July 2014 is equal to 100. The figure clearly shows that from the beginning of 2010 until July 2014 fast food restaurant employment in the two states grew at the same rate. However beginning with the first minimum wage hike in Minnesota, there has been a divergence which has grown over time. The employment differences between the states have become especially notable over the past year, as fast food employment in Minnesota stagnated while it has continued to increase in Wisconsin. In total, from July 2014 to May 2018 fast food restaurant employment grew by 4.8% in Minnesota but 8.8% in Wisconsin. While other factors may have played a role, the timing of the trend break suggests that the minimum wage increases in Minnesota accounted for much of this 4 percentage point divergence.

Youth Employment

In addition to being concentrated in the restaurant industry, minimum wage workers are also heavily concentrated among the young. In particular, Berry (2017) documented that in 2016 workers under age 19 accounted for only 7.5% of the hourly workforce in Minnesota, but 58.4% of them worked at the minimum wage or less. Therefore this youngest age cohort of workers accounted for 28.7% of all minimum wage earners. In addition, the minimum wage concentration is also quite high in the next oldest age group, as 29.2% of workers in the larger 20-24 age cohort earned the minimum wage or less. Thus I group together workers age 16-24, who in Minnesota for August 2016-July 2017 accounted for an average of 339,000 workers (21% of total hourly workers). Of these, 134,000 (or 39.5%) earned the minimum wage or less, which was 54% of the total number of minimum wage workers in the state.

Figure 3 shows the level of youth employment for workers age 16-24 in Wisconsin and Minnesota, with the data at an annual frequency from 2009-2017. There we see that in both states the level of youth employment was relatively constant from 2009-2014, with a slight increase in Minnesota and a decline in Wisconsin in the 2012-2014 period. However after Minnesota began its minimum wage increases in 2014 there was a big fall in youth employment

[2] The next highest industry category is retail, which accounts for 20% of Minnesota's minimum wage earners. But retail has a more dispersed distribution of earnings, with 23% of retail workers earning the minimum wage or less.

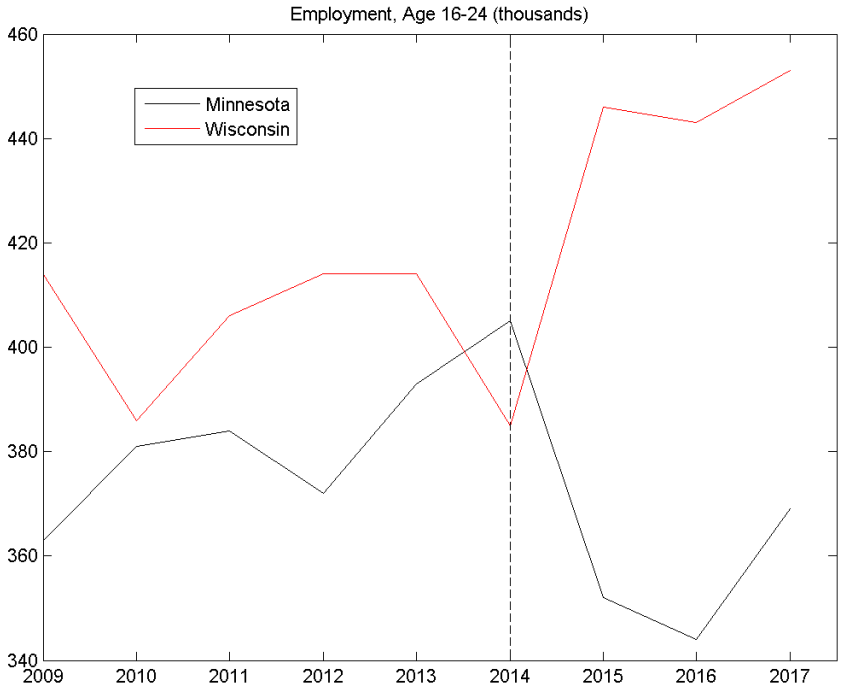

Figure 3: Employment, Age 16-24 in Minnesota and Wisconsin (annual data, thousands of people).

in Minnesota, and an increase in Wisconsin over the same period. In particular, youth employment averaged 9% lower, a reduction of 35,000 young workers, in Minnesota in the three years following the minimum wage increases compared to the preceding three years. During the same span, youth employment increased by 10.6%, or 43,000 jobs in Wisconsin. Again, while other factors certainly played a role in driving these changes, the timing of the trend break and the concentration of youth employment in minimum wage jobs suggests that much of it was driven by the minimum wage increases.

It is also important to note that while youth employment fell sharply in Minnesota after the minimum wage increases, youth unemployment was relatively unchanged. In particular, even though youth employment experienced a sharp reduction of 53,000 jobs between 2014 and 2015, the youth unemployment rate fell from 8.1% to 7.6% as an even larger number of 60,000 young workers left the labor force. This suggests that rather than increasing youth unemployment rates, the minimum wage hikes reduced levels of employment, and led the previously employed young workers to leave the labor force.

Restaurant Prices

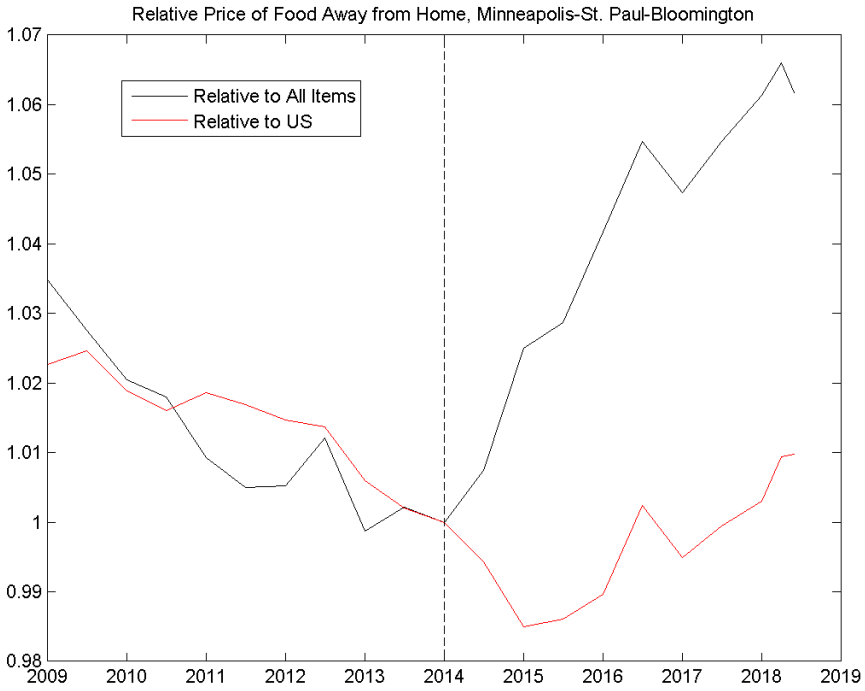

Figure 4: Relative Price of Food Away from Home, Minneapolis-St. Paul-Bloomington MSA. (Semi-annual data through 2017 plus Jan.-Mar.-May 2018.)

While I have focused on the employment effects of minimum wage increases, employers have other dimensions along which they can make adjustments in response to the wage hikes. For example, rather than cutting jobs they could reduce their labor input by cutting back on hours per worker. In addition, as shown by Aaronson, French, and MacDonald (2008), in a competitive industry firms will respond to the higher wage costs by reducing their labor input and also passing some of the costs on to consumers by raising prices. It seems that restaurants in Minnesota, or at least in the Minneapolis-St. Paul metro area, did just that.

Data limitations arise in analyzing price changes. There is no statewide data on restaurant prices, so I use the consumer price index component for food away from home in the Minneapolis-St. Paul-Bloomington metropolitan statistical area. This data source is less than ideal, as minimum wage employment is less prevalent in metro areas, where higher living costs and more competition bid up wages. Further, while so far I have focused on comparing Minnesota with Wisconsin, the only Wisconsin MSA in the CPI is Milwaukee-Racine. However restaurant prices there have behaved very differently than in Minneapolis, so that MSA does not provide a valid control. Therefore instead I look at the restaurant prices in Minneapolis relative to two different benchmarks: the price of all goods in Minneapolis, and restaurant prices nationwide.

Figure 4 plots these relative prices. For the figure I re-index each price series, which are semi-annual through 2017, so that the first half of 2014 is equal to 100. Then I divide the price of

food away from home in Minneapolis by the price of all goods (black line) or the price of food away from home nationwide (red line) to find the relative prices. The figure clearly shows that the price trends for Minneapolis restaurants reversed after the minimum wage increases began in 2014. This is most evident in the price of restaurants relative to all goods in Minneapolis. Relative restaurant prices had fallen 2% in the four years (-0.5% annually) preceding the minimum wage hikes, but have risen by 6% in the four years since (1.5% annually). Thus restaurant prices grew 2% per year faster following the minimum wage hikes.

A broadly similar pattern holds for the price of Minneapolis restaurants relative to restaurants nationwide, but the trend reverses one year later. That is, Minneapolis restaurant prices had been falling relative to all restaurants until 2015, after which they have grown relatively steadily. Clearly there were many other factors affecting restaurants in different parts of the country, so this evidence is less clean and more mixed. Nonetheless it also suggests a relative increase in Minnesota restaurant prices in recent years.

Restaurant Earnings

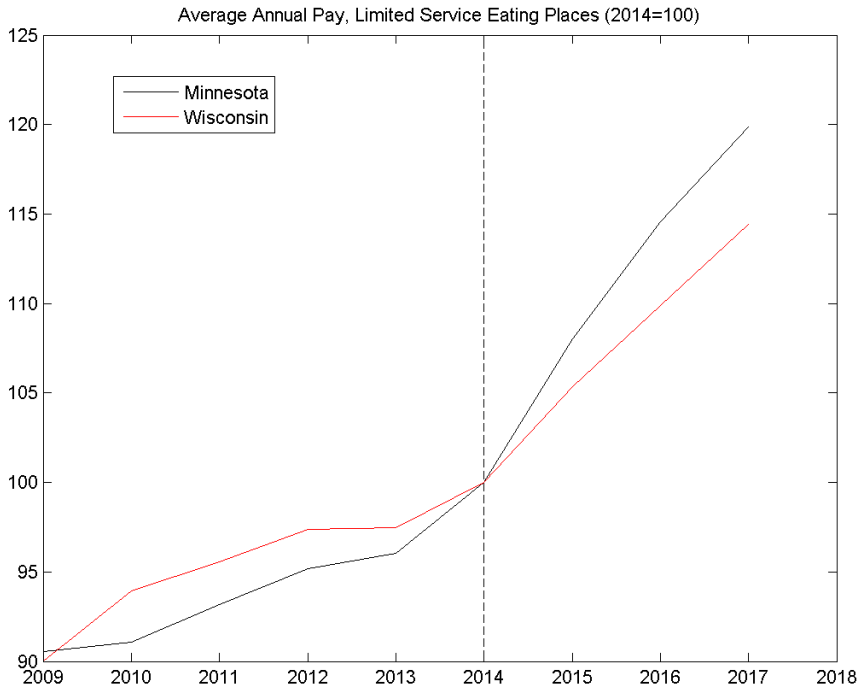

Figure 5: Average Annual Pay in Limited Service Eating Places in Minnesota and Wisconsin (annual data, index with 2014=100).

So far I have focused on the costs of the minimum wage increases, but clearly the benefits are the increased earnings through higher wages for affected workers. In addition to the wage gains for the directly affected workers, the minimum wage increases may lead to wage gains further up

the wage distribution, as initially higher-earning workers seek to maintain their relative positions. Thus the minimum wage hikes may potentially lead to wage gains for a broader class of workers.

Figure 5 shows that average incomes for fast food restaurant workers did increase more sharply following the minimum wage hikes. In particular, the figure shows average annual pay at limited service eating places in Minnesota and Wisconsin, annual data which is indexed to 100 in 2014. The figure shows roughly the same growth (if not exactly the same time patterns) in average incomes for these workers in the two states between 2009 and 2014. However following the minimum wage hikes beginning in 2014 incomes in Minnesota increased much more rapidly. In particular, from 2014-2017 average annual pay at limited service restaurants increased by 5.5% more in Minnesota than Wisconsin. Thus although there were fewer of these workers in after the minimum wage increases, the workers that remained earned more.

Conclusion

Overall these results are consistent with a competitive market for low wage workers in Minnesota. The distortions from the minimum wage increases led to higher incomes for some workers, but lower employment particularly among young and low-skilled workers, and higher prices for the products of low-skilled labor. These negative impacts should give policymakers pause before they consider further minimum wage increases.

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