Research

Dueling Studies of Seattle's Minimum Wage Hike: A Reader's Guide

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EXECUTIVE SUMMARY

Recently, two studies came to opposite conclusions on Seattle's $15 minimum wage law. Researchers at the Institute for Research on Labor and Employment (IRLE) of the University of California, Berkeley find that Seattle's minimum wage hike has raised wages without harming employment. Researchers at the University of Washington (UW) conclude that the minimum wage increase has raised wage rates, but not without drastically cutting work hours and employment. These two papers reveal an important lesson about the intricacies of minimum wage research. In particular:

- Seattle's high-growth labor market means that to fairly gauge the impact of the minimum wage increase, it is essential that analysts specifically examine the low-wage workers that the wage hike actually affects.
- The IRLE researchers fail to find job losses because they do not actually examine low-wage workers and instead analyze restaurant workers as a proxy for low-wage workers.
- When the UW researchers precisely identify the low-wage workers actually impacted by the minimum wage increase, they find significant negative labor market consequences that outweigh the benefits of the wage hike.

These dueling studies highlight that the more precisely the research identifies the low-wage workers impacted by a minimum wage increase, the more likely it is to find significant job losses.

INTRODUCTION

Seattle's law raising the city's minimum wage to $15 per hour is back in the headlines after two recently released studies came to strikingly different conclusions. The first study, released by researchers at the Institute for Research on Labor and Employment (IRLE) of the University of California, Berkeley concludes that the new minimum wage law has increased wages without eliminating jobs.[1] The second study, sponsored by the city government itself and released from researchers at the University of Washington (UW) concludes that the minimum wage increase has modestly raised wage rates, but has also substantially reduced work hours and employment, resulting in a net decline in average monthly pay.[2]

So how does one make sense of these two studies? They demonstrate an important and consistent lesson about minimum wage research: the more precisely that researchers examine the low-wage workers actually impacted by a minimum wage hike, the more likely they are to find negative labor market consequences. The IRLE researchers fail to find job losses because they only examine the overall restaurant industry, which is an imprecise measure of low-wage employment. On the other hand, the UW researchers specifically examine the

low-wage workers actually impacted by Seattle's wage hike and find substantial negative effects on employment and hours.

THE MINIMUM WAGE AND SEATTLE'S JOBS MARKET

In June 2014, Seattle approved a new law raising the city's minimum wage to $15 per hour over the next several years. The law's implementation schedule varies by business size and health benefits, as the minimum wage rises much more rapidly for large employers and employers that do not provide health benefits than it does for small employers and employers that do provide health benefits. Table 1 contains the minimum wage implementation schedule.

Table 1: Seattle's Minimum Wage Schedule[3]

Effective Date	Employers with over 500 Workers		Employers with 500 or fewer workers	
	No Benefits	Health Benefits	No Benefits	Health Benefits
January 1, 2015	$9.47	$9.47	$9.47	$9.47
April 1, 2015	$11.00	$11.00	$11.00	$10.00
January 1, 2016	$13.00	$12.50	$12.00	$10.50
January 1, 2017	$15.00	$13.50	$13.00	$11.00
January 1, 2018		$15.00	$14.00	$11.50
January 1, 2019			$15.00	$12.00
January 1, 2020				$13.50
January 1, 2021				$15.00

Seattle began to implement the new minimum wage law on April 1, 2015, when the minimum wage rose from $9.47 per hour (the state's minimum wage) to $10 for small employers that provide health benefits and $11 for all other employers. On January 1, 2016, the minimum wage rose again, reaching as high as $13 for large employers. At the beginning of 2017, the minimum wage rose to $15 for large employers that do not provide health benefits and was between $11 and $13.50 for all other employers. By 2021, all employers in Seattle will be required to pay at least $15 per hour. Seattle also allows employers to count a tip credit towards the minimum wage for tipped workers. In 2015, the tip credit was $1 per hour and in 2016 it increased to $2 per hour.

Seattle's labor market, meanwhile, is among the fastest growing in the nation. For instance, the unemployment rate in the Seattle-Tacoma-Bellevue metropolitan statistical area (MSA) is currently only 3.4 percent. Since 2009, employment and average weekly earnings in Seattle have respectively grown at 2.5 percent and 3 percent annual rates. Those rates are far quicker than the average growth rates throughout the entire United States where employment and weekly earnings have only grown at 1.6 percent and 1.8 percent annual rates, respectively.[4]

Minimum wage advocates frequently point to these figures and claim that Seattle's rising minimum wage has not cost jobs or had any other negative consequences.[5] The main goal of raising the minimum wage, however, is to improve the livelihoods of low-wage workers and it is impossible to tell from these statistics how they have been managing. Thus, when examining how increasing the minimum wage impacts employment and wages, it is vital to identify the low-wage workers who are actually impacted by the minimum wage and analyze their outcomes.

HOW THE IRLE AND UW REPORTS DIFFER

The IRLE and UW reports are quite similar in many respects. Specifically, both examine the immediate effects of Seattle's minimum wage increases as of 2016, when the minimum wage was as high as $13 per hour. Both reports also utilize a "synthetic control" method in which they take data from other cities to construct a "synthetic" Seattle (that does not raise its minimum wage) that they use to compare what actually happened to Seattle's workers after the minimum wage rose to what would have happened absent a minimum wage increase.

The fundamental difference between the two studies is that they analyze two different groups of workers. While both studies attempt to examine the low-wage workers actually affected by the minimum wage, the IRLE report identifies low-wage workers in a more imperfect manner than the UW report.

The IRLE paper uses restaurant workers as a proxy for the low-wage workforce and examines how Seattle's minimum wage law has affected restaurant wages and employment. While using restaurant employment as a proxy for low-wage workers is an intuitive and common approach to analyzing the minimum wage,[6] it is far from perfect. Restaurants frequently employ low-wage workers and no other industry is impacted more by a minimum wage hike than the restaurant industry.[7] However, since the restaurant industry employs middle- and high-wage workers as well, any minimum wage analysis of the overall restaurant workforce inherently includes workers who are not impacted by the wage hike. Analyzing only the restaurant industry also excludes the effect of the minimum wage on low-wage workers in other industries. Moreover, since many restaurant workers receive tips and their employers can claim the tip credit, the minimum wage's impact on low-wage workers in the restaurant industry may not resemble the experiences of low-wage workers in other industries. So, by examining all restaurant workers in Seattle, the IRLE does not directly analyze how city's minimum wage law has impacted low-wage workers.

The UW paper, on the other hand, uses detailed data on Seattle's workforce to precisely identify the low-wage

workers who are actually impacted by the new minimum wage law and examine their experiences. This method allows the UW researchers to provide a detailed analysis on how Seattle's minimum wage law has impacted low-wage worker wage rates, work hours, employment, and overall earnings. Moreover, the UW report also demonstrates that simply examining restaurant employment masks the actual effect of the minimum wage on low-wage workers.

IRLE's Results

When examining Seattle's restaurant industry, the IRLE researchers find that the minimum wage law has been associated with significant pay raises for restaurant workers. Specifically, they conclude that every 10 percent increase in Seattle's minimum wage has been associated with a 1 percent increase in restaurant worker pay and a 2.3 percent increase specifically in fast-food worker pay. In addition, the IRLE finds no evidence that the minimum wage hike has led to any restaurant job losses so far. In effect, the IRLE researchers conclude that Seattle's minimum wage law has led to an increase in worker pay without any evidence of significant costs to the low-wage labor market.

UW's Results

When the UW researchers examine the low-wage workers that Seattle's new minimum wage law actually impacts, they find that the minimum wage increases have been quite harmful. The UW researchers conclude that Seattle's minimum wage increases have boosted the average wage rate among low-wage workers by 3.1 percent or $0.44 per hour. Unfortunately, this modest wage increase has been entirely offset by declines in work hours and jobs. The UW researchers find that Seattle's minimum wage law has caused low-wage work hours to decline by 9.4 percent. In addition, the minimum wage hike has caused 6.8 percent of low-wage workers to lose their jobs, which means up to 10,000 workers in Seattle have lost their jobs.

Between the reduction in work hours and loss of jobs, the UW researchers estimate that the minimum wage increases have, on net, *reduced* the total income paid to low-wage workers by $120 million per year. Even among the low-wage workers who are still employed and earn higher wages, their average monthly earnings have, on net, *still declined* by $125 per month because the reduction in work hours has been so severe. Clearly, the UW report suggests that the minimum wage increases so far have been self-defeating, reducing the incomes of the very workers the minimum wage law is intended to help.

Interestingly, the UW researchers take a close look at Seattle's restaurant workers to examine the usefulness of the overall restaurant industry as a proxy for low-wage workers. When estimating the effect of Seattle's minimum wage increase on total restaurant employment and work hours, they find no evidence that the minimum wage has negatively impacted restaurant workers overall, which mirrors the IRLE's results. However, when the UW researchers specifically examine the low-wage workers within the restaurant industry, they find substantial declines in employment and hours. This suggests that the restaurant industry, as a whole, is not a good of a proxy for low-wage work, indicating that IRLE's researchers may have failed to identify Seattle's low-wage workers and, as a result, failed to accurately gauge the effect of Seattle's minimum wage law.

SYNTHETIC MODELS

As previously mentioned, each study examines the impact of the minimum wage increase by comparing Seattle to a synthetic version of the city that is supposed to represent what would have happened in Seattle if it had not

raised the minimum wage. Since Seattle's overall rapid growth often masks the impact of the minimum wage, it is vital that each study's synthetic city replicates Seattle's high growth environment. Using data from the Quarterly Census of Employment and Wages (QCEW)[8] and the cities, counties, and weights reported in each study, we examine whether the synthetic cities in each report mimic Seattle's rapidly growing labor market by calculating the annual growth rates associated with each synthetic control. We find that while the synthetic controls used in both studies fail to resemble Seattle's high wage growth, the synthetic control in the IRLE paper often fails to mimic Seattle's rapid job growth. In effect, UW paper may fail to take into account Seattle's rapid wage growth and the IRLE report may fail to take into account Seattle's rapid growth in both wages and employment.

Since 2009, average weekly wages in the Seattle-Tacoma-Bellevue MSA have grown at a 3 percent annual rate. In the synthetic city the UW researchers used to analyze wages, average weekly wages have only grown at a 1.8 percent rate.[9] In the IRLE report, which uses several synthetic models, annual growth in average weekly wages in the synthetic city ranges from 1.2 percent to 2 percent. Since the synthetic controls (the comparison group) in each report have much slower wage growth than what Seattle actually experienced, both reports could be overstating the wage growth resulting from the minimum wage increase.

For the minimum wage's impact on employment, the two papers diverge. The UW synthetic control effectively resembles Seattle's job growth. Since 2009, employment in the Seattle-Tacoma-Bellevue MSA has grown at a 2.5 percent annual rate. Employment in the UW synthetic city has grown at a 2.4 percent annual rate. Employment in the IRLE synthetic controls, however, do not consistently resemble Seattle's actual experience. In particular, since 2009, employment has only grown at 1.5 percent and 1 percent annual rates in the IRLE's synthetic cities constructed to examine restaurants and full-service restaurants, respectively. This suggests IRLE's conclusion that Seattle's minimum wage increase did not cost any jobs may be merely due to the synthetic controls greatly understating Seattle's job growth environment. The IRLE synthetic models are far less likely to detect any job losses resulting from the minimum wage increase if they are comparing Seattle's employment after the minimum wage increase to a synthetic version of Seattle that already has employment levels far lower than in reality.

IRLE researchers' synthetic models appear to be constructed in order to more closely reflect the Seattle restaurant industry than to actually resemble the city's economy. Specifically, food services and drinking places average weekly wage growth in the synthetic city mirrors Seattle and employment growth is faster than in Seattle. Since the overall wage and employment growth in the synthetic model tends to be much slower than in reality, we know that the rapid restaurant wage and employment growth in the synthetic city has little to do with the overall growth environment. Rather, the restaurant industry is far more prominent in the synthetic city than in Seattle. In particular, food services and drinking places workers make up 10.5 percent of all workers in the synthetic city, while in reality those workers only make up 7.3 percent of Seattle's workforce. So instead of effectively recreating Seattle's rapidly growing economy, the rapid restaurant wage and employment growth in IRLE's synthetic control is likely due to the prevalence of restaurants within the synthetic city. Consequently, the IRLE may not have created a fair apples-to-apples comparison between Seattle and synthetic versions of Seattle.[10]

HOW THESE REPORTS RELATE TO OTHER MINIMUM WAGE RESEARCH

The UW report highlights an important trend in minimum wage research: the more precisely that researchers are

able to examine the impact of the minimum wage on low-wage workers, the more likely they are to find major labor consequences. For instance, Clemens & Wither (2014) examine what happened to low-wage workers when the federal minimum wage increased from $5.15 per hour in 2007 to $7.25 per hour in 2009.[11] Like the UW report, Clemens & Wither (2014) focus on how the minimum wage hike affected employment and pay among those whom the minimum wage hike affected most: low-wage workers earning below $7.50 per hour. The report finds that from 2006 to 2012, employment in this group fell by 8 percent, translating to a loss of about 1.7 million jobs. The jobs lost in this low-wage group accounted for 14 percent of the national decline in employment during this period. The minimum wage hike also increased the probability of working without pay (e.g., unpaid internships) by 2 percentage points. As a result of the reduction in employment and paid work, net average monthly incomes for low-wage workers fell by $100 during the first year after the minimum wage increased and fell by an additional $50 in the following two years.

Moreover, neither the IRLE nor the UW researchers address the multitude of other ways that the minimum wage has been shown to negatively affect low-wage workers and low-income families. This includes evidence that minimum wage increases slow job creation over the course of several years.[12] In addition, research shows that when facing a minimum wage hike, employers replace unskilled workers with more productive workers[13] and they raise prices, which disproportionately harms low-income families. [14] And if a business is still unable to afford a wage hike, it shuts down and leaves its employees without work.[15]

CONCLUSION

So far it appears that Seattle's rising minimum wage is doing the exact opposite of what city officials intended. According to the UW report, due to significant reductions in employment and work hours, Seattle's minimum wage increase has lowered worker pay. While the IRLE report calls into question whether Seattle's minimum wage law has cost jobs, the UW researchers demonstrate that IRLE's analysis does not actually examine low-wage workers. Given that Seattle's minimum wage is still phasing in, it is important to keep in mind that the current reports on the new law only pertain to its initial effects. In reality, it will take several years for researchers to understand the full-effects of raising the minimum wage in Seattle.

[1] Michael Reich, Sylvia A. Allegretto, & Anna Godoey, "Seattle's Minimum Wage Experience 2015-16," Institute for Research on Labor and Employment, University of California, Berkeley, June 20, 2017, http://irle.berkeley.edu/seattles-minimum-wage-experience-2015-16/.

[2] Ekatrina Jardim, Mark C. Long, Robert Plotnick, Emma van Inwegen, Jacob Vigdor, & Hilary Wething, "Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle," Nber Working Paper No. 23532, National Bureau of Economic Research, June 2017, http://www.nber.org/papers/w23532.

[3] "$15 Minimum Wage," Mayor Edward B. Murray, Office of the Mayor, http://murray.seattle.gov/minimumwage/.

[4] Calculations based on author's analysis of data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages, https://www.bls.gov/data/.

[5] Invictus, "Seattle Minimum Wage Experiment is Over," The Big Picture, December 1, 2016, http://ritholtz.com/2016/12/seattle-min-wage-update/.

[6] Ben Gitis, “Update: 2015 Local Minimum Wage Increases and Restaurant Employment Trends,” American Action Forum, March 16, 2016, https://www.americanactionforum.org/research/update-2015-local-minimum-wage-increases-restaurant-employment-trends/.

[7] Terence P. Jeffrey, “64% Earning At/Below Minimum Wage Are Under 30; 63% Work in Restaurants, Bars, Retail,” cnsnews.com, February 17, 2014, http://www.cnsnews.com/news/article/terence-p-jeffrey/64-earning-atbelow-minimum-wage-are-under-30-63-work-restaurants-bars.

[8] Quarterly Census of Employment and Wages, https://www.bls.gov/data/.

[9] It is important to note that we do not have access to the Washington administrative data that the UW paper uses. Consequently, we are only able to derive rough estimates for the UW synthetic model by utilizing QCEW county and metropolitan area data.

[10] Contact the author for detailed information on county-level growth rates and the methodology for estimating the growth rates in each synthetic city.

[11] Jeffrey Clemens & Michael Wither, “The Minimum Wage and the Great Recession: Evidence of the Effects on the Employment and Income Trajectories of Low-Skilled Workers,” NBER Working Paper No. 20724, National Bureau of Economic Research, December 2014, http://www.nber.org/papers/w20724.

[12] Jonathan Meer & Jeremy West, “Effects of the Minimum Wage on Employment Dynamics,” Journal of Human Resources, August 2015, http://people.tamu.edu/~jmeer/Meer_West_MinimumWage_JHR-final.pdf.

[13] John J. Horton, “Evidence form a Minimum Wage Experiment,” New York University, January 2017, http://john-joseph-horton.com/papers/minimum_wage.pdf.

[14] Thomas MaCurdy, “How Effective Is the Minimum at Supporting the Poor?” Journal of Political Economy, Vol. 123, No. 2, April 2015, pp. 497-545, http://www.jstor.org/stable/10.1086/679626?&seq=1#page_scan_tab_contents.

[15] Dara Lee Luca & Michael Luca, “Survival of the Fittest: The Impact of the Minimum Wage on Firm Exit,” Harvard Business School NOM Unit Working Paper No. 17-088, April 2017, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2951110.