LABOR

A SEATTLE GAME-CHANGER?

The latest empirical research further underscores the harm of minimum wage laws.

BY RYAN BOURNE

Whether minimum wage increases result in significant "disemployment" effects—i.e., fewer jobs or hours worked—has been one of the most vigorous empirical debates in economics. To help resolve this debate, this article reviews the history of minimum wage scholarship and discusses a headline-grabbing new study showing large negative employment effects from recent increases in Seattle's minimum wage.

THE RECEIVED VIEW

Until the early 1990s, economists largely believed in the competitive model of the labor market. This model entails that raising a binding legal price floor on labor—that is, raising the minimum wage when a number of workers earn that wage—will result in a reduction in the quantity of labor demanded and therefore lower the level of employment. In that era, policy disagreements over minimum wage laws manifested themselves over whether the lost employment was a tolerable tradeoff for higher pay for low-wage workers who did maintain their jobs and hours.

A 1981 review by a Congressional Minimum Wage Study Commission concluded that "time-series studies typically find that a 10 percent increase in the minimum wage reduces teenage employment by one to three percent." Minimum wages were thought to reduce aggregate employment overall, with the biggest effect falling on younger, more disposable workers—those with low skill levels—or in regions with low levels of productivity. This is in line with the notion that raising minimum wages could raise take-home pay for those keeping their jobs, but it would also reduce employment opportunities.

CARD AND KRUEGER CHANGE THE DEBATE

However, there are theoretical models asserting that minimum wage laws can *increase* employment—if the labor market *isn't* competitive. If employers face little competition for labor (say, in a "company town") and so have *monopsony* power, they can pay labor less than the workers' marginal product, resulting in some would-be workers opting for leisure. Under such circumstances, a state-enforced higher minimum wage could make a minimum wage increase a "free lunch," increasing wages *and* employment.

David Card and Alan Krueger in 1994 seemed to find such a result. Using a telephone survey to analyze the response of fast-food restaurants in New Jersey to an increase in the state's minimum wage relative to nearby Pennsylvania, Card and Krueger concluded that the higher minimum wage actually increased employment in New Jersey.

However, David Neumark and William Wascher in 2004 reexamined the New Jersey increase using actual payroll data from the two neighboring states. They found that a combination of measurement error in the Card and Krueger telephone survey and the fact that the wages of many of the workers were already above both the new and old minimum wage accounted for Card and Krueger's findings, rather than a monopsony effect.

This scholarly fight sparked an explosion of both theoretical and empirical research on the minimum wage. Given sectors that include the overwhelming majority of workers earning at or below the minimum wage (e.g., food preparation and serving, sales, administrative support, transportation, and material moving) look fairly competitive, economists such as Alan Manning developed models that argued instead that all employment situations have an element of monopsony. Imperfect information and the costs to an employee of switching jobs are thought to give the current employer some market power over workers. As a result, these economists argue, raising the minimum wage can raise employment.

In truth though, theory has long taken a back seat in the literature to pure empirical work. And though the empirical work generally supports the received view on minimum wage laws, it

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is not unanimous. Hence, the main debates over the minimum wage today are about econometric methodology—which empirical studies better describe the effects of minimum wage laws?

EMPIRICAL WORK SINCE CARD AND KRUEGER

In 2006, Neumark and Wascher undertook an exhaustive analysis of the minimum wage literature since Card and Kreuger. They argued that two-thirds of the papers they reviewed supported the traditional understanding. They concluded that minimum wages had very negative employment effects for minority teenagers, who were often replaced by older, lower-skilled women.

But two papers in 2010 and 2011, using alternative research designs and controls, found no employment effects from minimum wage increases, highlighting the back-and-forth nature of this debate. The 2010 paper, by Arindrajit Dube, William Lester, and Michael Reich, examined restaurant and other low-wage employment in counties that bordered each other across state lines with different minimum wage laws. They found no effects on employment in counties in states that had increased their minimum wage. The 2011 paper, by Sylvia Allegretto, Dube, and Reich, examined all (not just low-wage) employment in states, but included state employment trends as a control variable. The authors again found no effect of the minimum wage increase on employment after controlling for the existing employment trends.

Neumark and Wascher responded in 2013 that the inclusion of the linear state-employment time trends would be appropriate if the early 1990s recession and the Great Recession had similar effects within states. But, for example, teenage employment was much higher than predicted by linear trends in California during the 1990s recession and much lower during the Great Recession. They found that the inclusion of *nonlinear* state time trends eliminated the systematic prediction errors over time and resulted in negative effects of minimum wages on teen employment—the same basic result found in their 2006 paper.

In a provocative 2016 paper, Johnathan Meer and Jeremy West argued that the inclusion of state employment trends is methodologically problematic for another reason. They argued that increased minimum wages do not prompt employers to reduce their employment levels in the short run, but rather reduce their hiring rates at the margin, resulting in lower employment in the long run. And states that enact minimum wage increases tend to have higher rates of employment growth than other states, which means that controlling for trend growth, as the 2010 and 2011 papers did, obscures the negative employment effect of a minimum wage increase. That is because the higher growth *before* the wage increase and lower growth *after* the increase averages out to a seemingly steady growth rate similar to what's seen in the control state. Meer and West concluded that a real minimum wage increase of 10% reduced job *growth* by 0.3 percentage points annually—a hefty 15% of the baseline level.

Another criticism of the minimum wage studies that find no employment effects concerns their use of geographically "close" control groups, usually neighboring states. For this research design to result in accurate inferences, the treatment and control areas must share common employment trends prior to the minimum wage change in the "treated" state. But states that are growing faster are more inclined to increase their minimum wage relative to states that are not growing as robustly, so there are likely important economic differences between them, and those differences distort statistical analysis of the effects of one state changing its minimum wage.

A 2014 study by Jeffrey Clemens and Michael Wither attempts to overcome this problem. Instead of examining a state-level change in the minimum wage, the two examine the effects of the federal minimum wage increase from $5.15 to $7.25 in the late 2000s. The nationwide change meant the researchers couldn't look for differences by comparing workers in different states, so they instead compared groups of workers within each of the affected states. The treatment group included those who were paid the very lowest wage before the increase. The control group included workers earning slightly above the new minimum. The researchers found that the number of workers in the treatment group declined relative to the control group once the new minimum wage took effect. They estimated that the new federal minimum eliminated about 800,000 jobs in the lowest paid group.

A BROAD REVIEW

To many readers, this academic back-and-forth is probably confusing. Some analyses show that employers respond to an increased minimum wage by cutting hours or jobs. Other studies conclude that minimum wage increases raise wages without reducing employment. A recent comprehensive literature review by Hristos Doucouliagos and T.D. Stanley of 1,424 estimates of elasticities from minimum wage studies found small disemployment effects overall, but that finding was heavily caveated, with the authors claiming that it probably stems from "publication bias" in favor of the traditional negative results.

Nevertheless, a few conclusions about the literature prior to 2017 are clear.

First, the majority of published papers found small but statistically significant disemployment effects from modest minimum wage increases, while most of the rest of the studies found neither positive nor negative employment effects. Very few found a positive effect, which suggests that readers should have little confidence in the monopsony model of the labor market.

Second, papers that used methodologies comparing areas experiencing wage hikes with close geographic control areas tended to find smaller disemployment effects, whereas those controlling for other state-specific shocks and using longer time periods or more advanced estimation methods tended to find larger negative effects.

Third, the broad results of the literature suggested that certain demographic groups, particularly the low-skilled and teenagers, absorbed the worst of the employment losses when minimum wages increased. This suggests a degree of labor-for-labor substitution in favor of older workers.

THE SEATTLE SALVO

The intensity of this debate and the fragility of the research results to the nature of controls makes the recent salvo on Seattle's minimum wage ordinance fascinating. In 2014, city leaders voted to increase Seattle's minimum wage in a series of steps, set to reach $15 per hour by 2022, with larger employers and employers not offering health benefits reaching that level earlier. The implementation of the first few steps and the availability of ample labor data for Seattle and comparison areas have given researchers an especially promising opportunity to probe the economic effects of minimum wage laws.

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A new University of Washington study by Ekaterina Jardim, Mark C. Long, Robert Plotnick, et al. examines the first two Seattle minimum wage increases. The researchers used hours and earnings data from Washington's Employment Security Department's unemployment insurance database. Unlike previous studies, which examined sectors or groups known for low-wage work—such as restaurants, or retail, or teenagers—this study examined the effect of the minimum wage increases on *all* employees earning under $19 per hour in single-location employers in the state.

The study used synthetic rather than actual controls. That is, the control group is a weighted-average of census regions in Washington. This approach minimizes the differences in trends between Seattle and the other regions prior to the minimum wage ordinance, making the findings of the study more reliable. Differences in hours and employment after the ordinance passed in Seattle are then assumed to be the result of the policy change.

The University of Washington results are striking. The researchers found the first minimum wage increase from $9.47 to $11 in 2015 resulted in statistically insignificant reductions in hours

worked and jobs. But the second increase to $13 had dramatic effects. Hours worked fell by between 8.7% and 10.6%, and the total number of low-wage jobs decreased by between 5.1% and 6.3%. Employers in Seattle cut back on both the number of low-wage employees and the hours that retained employees worked relative to the synthetic control of weighted counties in the rest of Washington. The result is that the average person affected by the law was $125 per month *worse off* because of the policy change.

The University of Washington study is not the only one to examine the Seattle increases. A rival study from Reich, Allegretto, and Anna Godoey specifically examined food service employment and used federal Census Department data rather than state unemployment administration data. They found no employment effects, just like the 2010 and 2011 studies that Reich and Allegretto co-authored. But the University of Washington study's authors, anticipating this comparison, conducted a version of their own looking exclusively at restaurant employment. They also found no net employment effects, but there were large negative effects when only *low-wage* restaurant employment was examined. In other words, Seattle's minimum wage increase shifted income from lower-wage to higher-wage restaurant workers. This suggests that Reich, Allegretto, and Godoey's overall "no-effect" result stems from a restaurant-employment research design that does not distinguish the specific effects on different groups of workers.

A GAME-CHANGER?

The University of Washington study may significantly alter the minimum wage debate for three reasons. First, the use of geographically close controls by other studies has usually yielded findings of only small disemployment effects. The University of Washington finding of large negative employment effects is therefore harder for minimum-wage proponents to dismiss because the controls are analogous to those used in the restaurant studies.

Second, the study examined a two-step minimum wage increase to the highest minimum wage in the nation. This suggests that there may be nonlinear employment effects from minimum wage increases, meaning that employment losses grow progressively worse as the minimum wage rises.

Third, the paper implies that the studies that examine the effect of minimum wage increases on aggregate employment in the restaurant industry give a false conclusion on the broader effect of minimum wage increases because of those studies' data limitations.

Of course, the University of Washington paper is not the last word on the subject. Critics have pointed out that it excluded multi-site businesses and independent contractors from its analysis, which may have affected the overall results. The authors responded to the multi-site employer exclusion by conducting survey work that suggests that multi-site businesses are in fact *more* likely to have laid off workers following the wage increase than single-site businesses. But the exemption of independent contractors could be a more meaningful omission.

There is also debate about the appropriateness of the control group. Some critics of the study have claimed that the strength of Seattle's economy and broader employment market may have caused the paper to overstate the minimum wage increase's effect. These critics do not understand that, if anything, strong growth in Seattle relative to the synthetic control trend would suggest that the minimum wage had an *even bigger* negative effect. For the results to overstate the disemployment effects, the control group performance in the treatment period would have had to improve relative to the city of Seattle.

CONCLUSION

The disinterested observer may be confused by the endless back-and-forth on this question over the past 25 years. But the University of Washington study of Seattle's minimum wage increase offers evidence that minimum wages of sufficient magnitude reduce employment of the low-paid. In addition, it suggests studies that examine only certain "low-wage" sectors provide inaccurate inferences about low-wage labor in general. *R*

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