The Minimum Wage: Let’s Be Careful About What We Think We Know

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The minimum wage debate has been rekindled. Following long-term increases in the minimum wage in Seattle and Los Angeles, New York City has followed suit, proposing to raise the minimum wage to $15 over several years. There have been both critics and proponents of features of this increase (the minimum wage increase will apply only to fast food restaurant chains, with more than 30 locations). Lawrence Katz, a prominent economist who has advocated, in the past, for a higher federal minimum wage, notes that very targeted minimum wages can lead to undesirable behavioral changes; firms may choose to operate less than 30 establishments, and workers may choose to endure longer spells of unemployment to gain one of these coveted jobs. Others, such as Dean Baker, have noted that chain owners likely enjoy “rents”, excess profits beyond what a competitive market would lead to, so that they can afford these changes.¹

But, in what follows, I attempt to address the impacts of a broader minimum wage at the national level, and lay the groundwork for the evidence surrounding its impacts, both positive and negative. I attempt to show that the debate is not yet settled as to the benefits and downsides of a higher federal minimum wage.

There are two camps about the relative effects of an increased minimum wage. One, led by economists David Card and Alan Krueger, have estimated that increases in the minimum wage have no discernible impact, on teenage and overall employment, of increases in the minimum wage.² The other camp, led by David Neumark and William Wascher, have found the opposite; that increases in the minimum wage reduce both teenage and overall employment of low-skill workers, those who are targeted by minimum wage increases.³ In fact, they have found, at times, that a 10-percent increase in the minimum wage leads to a 1 to 3-percent increase in the unemployment rate. These debates hinge on a variety of factors: (1) the dataset used, (2) the statistical techniques used to analyze the data, and (3) assumptions about the effect of outliers (extreme data points) on the results.

In fact, another study by Hristos Doucouliagos and T.D. Stanley utilized a meta-analysis, a comprehensive statistical review of the entire minimum wage literature, to map out the effects of increases in the minimum wage on employment.⁴ They argue that, for a variety of reasons, authors rarely publish “no results” studies, studies which do not have any finding (in this case, studies that find no loss of employment due to the minimum wage). They corroborate the

² Their initial study, “Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania”, utilized the $0.80 increase in the New Jersey state minimum wage in 1992. Further research, such as their 1995 book “Myth and Measurement”, as well as their 2000 study “Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Reply”, have continued to support their results that there is no discernible unemployment effect from raising the minimum wage.
³ This is provided in their article “Minimum Wages and Employment: A Review of Evidence from the New Minimum Wage Research” in 2006, as well as in their book “Minimum Wages”.
⁴ This study is “Publication Selection Bias in Minimum-Wage Research? A Meta-Regression Analysis”.
findings by Card and Krueger, and find that employment losses from minimum wage increases are small.

In fact, in their paper, they include a figure of all the estimated minimum wage effects that have been found in studies across time (1,424 of them). It is replicated below:

Figure 1: Employment Impacts of Minimum Wage

![Figure 1: Employment Impacts of Minimum Wage](image)


The horizontal axis measures the wage elasticity, or the percent change in employment due to some increase in the wage. The vertical axis measures how variable the estimates are; a higher value represents results that are less uncertain (if the techniques utilized by the papers are correct). The implication is clear; most studies find a small impact of increased wages on employment. If you take out all the elasticities that are positive, we find that a 10-percent increase in the minimum wage will reduce employment by 0.1-percent.

The majority of the data are located between an elasticity of 0 and -0.25; this means that a 10-percent increase in the wage, from an increase in the minimum wage, leads to anywhere from 0 to 2.5-percent decrease in employment. Thus can the two camps be reconciled; employment effects, at least in the short-run, from small changes in the minimum wage are small.

In fact, two economists believe that looking at changes in employment is incorrect.\(^5\) They argue that the minimum wage impedes job creation, and that higher minimum wages slow the growth of this job creation.

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\(^5\) This is Jonathan Meer and Jeremy West, both at Texas A&M University.
But what leads to the finding of POSITIVE elasticities (or the fact that minimum wage increases can increase employment)? Neumark and Wascher have speculated that these are industry-specific findings; in other words, certain industries may exhibit positive employment increases because they have a less competitive nature. This means that, in theory, it is plausible that a government can mandate a minimum wage level that increases employment. But, as Neumark and Wascher point out, it is likely that these industries comprise a small fraction of total industries that employ many minimum wage workers (one doubts that the fast food industry, with it significant competition, leads to any decisive market power on the part of firms, as restaurants are fighting for a rather small pool of highly competent workers). This means that industry-specific employment can increase, while total employment will decrease from increases in the minimum wage.

So, if it is unlikely that there are significant employment effects from moderate raises of the minimum wage, does this mean that firms do not respond at all to changes in the wages that they pay? No; firms have a variety of tools with which they can alter the total compensation paid to workers (which includes wages and fringe benefits), pass the costs on to the consumer (higher food prices), or even replace the workers (technological innovation). But what does happen?

John Schmitt at the Center for Economic and Policy Research (CEPR) lists a variety of transmission mechanisms, how firms respond to the minimum wage, beyond reducing employment. These transmission mechanisms include:

1. **Reduction in Hours Worked**: instead of reducing employment, firms may move employees to part time, or cut back on what is considered full time hours. There is little evidence that supports that this is a large-scale phenomenon.  

2. **Reduction in Non-Wage (Fringe) Benefits**: firms may cut back on extra benefits, such as the level of a pension match, health insurance benefits (or contributions to the employee health insurance premium), reduced price food at work, uniforms, etc. Research finds little evidence that what benefits are offered to employees are altered substantially.

3. **Reduction in Training**: firms may reduce the amount of training that they provide employees, opting to force employees to learn on-the-job. Research finds that the amount of training is reduced as the minimum wage increases.

4. **Higher Prices of the Good the Firm Sells**: the firm may choose to raise the price it charges. Research shows that minimum wage increases in the fast food industry raise prices more than the price raises in all industries that employ minimum wage workers.

5. **Reduction in Firm Profits**: firms may simply largely eat the increased business costs and suffer from reduced profits. Research shows that firm profitability will decrease with minimum wage increases.

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6 Evidence for these findings are found in Dickens, Machin, and Manning, “The Effects of Minimum Wages on Employment: Theory and Evidence from Britain”.
7 Dube et al. (2010), find no evidence of this transmission mechanism.
9 Neumark and Wascher (2010) find this.
10 Lemos (2008) finds that a 10-percent increase in the minimum wage increases food prices by 4-percent, and overall prices by 0.4-percent. Neumark and Wascher (2010) agree with these results, as minimum wage workers are often a small fraction of the total costs of a firm (but larger in the fast food industry than other industries).
11 Draca et al. (2011) find this.
6. **Technological Innovation**: firms may choose to replace workers with automated machines (such as self-order kiosks or auto-payment mechanisms). There is limited evidence of this beyond the rapid technological changes that are automatically arising every day.

7. **Reduced Worker Turnover**: workers may stay in jobs longer, rather than cycle in and out of them, because of the higher wages that they earn in these minimum wage jobs. These higher wages help employees pay for transportation and child care, reducing the need to leave work early. Firms benefit because they do not have to train as many employees. Evidence shows that low-wage workers stay at jobs longer as the minimum wage increases.\(^\text{12}\)

8. **Changes in Worker Composition**: as workers become more expensive, firms may choose to hire more stable, long-term employees, rather than the short-term employees. This means that firms may choose to hire older workers with children, rather than teens or younger workers without children. There is no evidence that this occurs.\(^\text{13}\)

Thus, we see that looking solely at the employment effects of the minimum wage may mask considerable changes in how the firm may respond to minimum wage increases. There has been some thought that firms may be hesitant to cut employment in response to changes in the economic environment, as it may adversely affect the mood and motivation of the remaining workers (evidence has largely looked at the employment response to recessions). Firms are much more willing to save employee jobs because of increased costs (or decreased revenues) by cutting elsewhere, where workers may be more amenable to seeing their fellow employees remain at their jobs.

So, the evidence on the minimum wage is mixed. It appears that there are small employment losses, with firms choosing to reduce job creation growth instead. It also appears that the negative effects are spread out; workers get less training, customers pay higher prices, and firms earn lower profits. But, is the minimum wage an effective strategy at limiting poverty and raising wages for the low-skilled? It appears that the minimum wage is not a scalpel, but a rather ineffective sledgehammer at combating poverty and low wages.

As shown in Figure 2, though the minimum wage will increase incomes for the poor, it affects individuals further up the income spectrum, as a sizable minority of minimum wage workers are in families that earn substantially beyond the poverty line (either as second earners or as teen workers). In fact, for the $10.10 minimum wage, families that are 2 to 6 times beyond the federal poverty threshold (about $44,000 to $130,000 for a family of four in 2009) have the highest income increases from the minimum wage. Families that live below the poverty line (less than $22,000 for a family of 4 in 2009) benefit, but not as much as one would hope.

Even though the minimum wage does benefit low income workers, it cannot be targeted exclusively to families of workers that truly need it (i.e., those in poverty or low income families with children). Families with significant family income have secondary (or tertiary) earners who can earn the minimum wage. There are tools that are able to effectively combat poverty by

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\(^{12}\) Dube, Lester, and Reich (2012) find this.

\(^{13}\) Dube, Lester, and Reich (2012) find that there are no age or gender composition changes in the workforce of minimum wage jobs.
targeting monies to those populations only. A negative income tax (also known as a guaranteed minimum income) or the Earned Income Tax Credit (EITC; where workers receive tax rebates if they work up to a certain amount) have been shown to be much more effective in providing low-income families with income, while limiting payments to families that have less need of these government measures.

**Figure 2. CBO Estimate of Who Benefits from Minimum Wage Increases**

<table>
<thead>
<tr>
<th>Estimated Effects on Real Family Income of an Increase in the Federal Minimum Wage, Second Half of 2016</th>
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<tr>
<td>(Billions of 2013 dollars, annualized)</td>
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<td>$10.10 Option²</td>
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<td>$9.00 Option²</td>
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Source: The Congressional Budget Office (CBO).

Though its disincentive effects are often over-stated, the minimum wage is an imprecise and blunt tool for a growing and persistent problem.

But, back to recent policy; what are the likely impacts of a major increase in local minimum wages ($15 in New York, for fast food restaurants only, by 2021)? It is unlikely that the short-term effects that I have described will hold. It is very likely that there will be larger negative impacts, even as it is phased in over the course of several years. Technological adoption may accelerate in firms that employ many minimum wage workers, and it is likely that we see continued fringe benefit cuts. But caveats must apply; the labor market is incredibly adaptive, and has weathered sizable minimum wage increases in the past with minimal disruptions to low-skill, low-wage workers. We must not forget that the minimum wage, even as a blunt and imprecise tool, still helps improve the lives of millions of Americans. The debate about what level to set it at is a valid one. But, as found in many other areas of the economy, the impacts of mandated changes from above are too often over-stated and under-stated, polarizing the debate.
References:


