Effects of Minimum Wage on Employment Rates

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November 14, 2020

Abstract

This paper explains the effects of a rise in minimum wage on employment rates. It is centered around a study done in 1992 in New Jersey and Pennsylvania, which examined the effects of an $.80 increase in minimum wages in New-Jersey fast-food restaurants compared to a control group of a static minimum wage in Pennsylvania. The study's findings indicate that an increase in minimum wage does not decrease employment rates.

1 Introduction

On April 1st, 1992, New Jersey implemented a law raising the minimum wage from $4.25 to $5.05(Card & Krueger, 1994). By comparing the employment rates, price of food, and wages in 410 different fast-food restaurants throughout New Jersey and Pennsylvania, the result of an increase in minimum wages can be clearly proven through the difference in difference method, explained further in Section 3. Using fast food restaurants in New Jersey, a state with an economy linked to that of geographically close states, to that of eastern Pennsylvania, the study eliminates the possibility of other factors impacting employment rates, thereby allowing the results to assume that the increase in minimum wage causes the effect in employment rates. This study provides further evidence that an increase to minimum wage does not decrease employment(Card & Krueger, 1994, pg. 776). While the largely accepted assumption of a perfect competitive labor market predicts a decrease in employment, multiple studies examining the effects of the increase in minimum wage show this may be an incorrect presumption.

2 Literature Review on Minimum Wage Controversy

2.1 Disputes over Card and Krueger's 1992 Case Study

Considering the significance of Card and Krueger (1994)'s article, it is no surprise that many debated the validity of their findings. Neumark and Wascher (2000) attempted a similar study but instead used administrative payroll data

rather than phone surveys and found New Jersey's employment rate decreased relative to Pennsylvania's. Aaronson et al. (2018)'s article further disputed whether the true effects of the increase in minimum wage could be accurately evaluated so quickly after being introduced. Aaronson et al. (2018) also found that the elasticity of employment in the long run was -.252 after an increase in minimum wage, implying that in both the long and short run, a rise in minimum wage has a negative effect on employment(Fernandez-Villaverde, 2018, pg. 9). While in Card and Krueger (1994)'s findings the exit rate of the fast-food restaurants in New Jersey stayed static to that of Pennsylvania, Aaronson et al. (2018) found that the exit rate increased from 5.7% to 7.1% after a 10% increase in minimum wages in the 2000's (Aaronson et al., 2018).

2.2 Effects of Minimum Wage on Varying Income Levels

A common justification for raising minimum wages is to help low-income families; however, MaCurdy (2015) explains how a rise in minimum wage almost equally affects the lowest 20% income households and the highest 20% income households(MaCurdy, 2015, pg. 535). If corporations respond to a rise in minimum wage by increasing price of goods, the rise in prices disproportionately impact low-income households compared to higher-income households. However, Card and Krueger (1994) argue that an increase in minimum wage does not necessarily equate to a rise in prices, and thus the net effect of a rise in minimum wage is still beneficial for low-income families.

2.3 Viewpoints on Minimum Wage Controversy

Prior to Card and Krueger (1994)'s case study, the widely accepted effect of minimum wage on employment rates came from an article by economists Brown et al. (1982) which stated that a rise in minimum wage increased teenage unemployment by 1-3% (Brown et al., 1982, pg. 505).Their beliefs were further confirmed by economists Dolado et al. (1996) that employment will only increase with the rise of minimum wage as long as the wage rate stays below where labor supplied and the marginal revenue product of labor intersect one another (Dolado et al., 1996, pg.329). This explains the differing outcomes in monopsonistic and perfectly competitive labor markets when a price floor is enacted, as the price floor will cause unemployment in the perfectly competitive labor market but will be beneficial for both laborers and employers under the monopsonistic model as long as the previously stated requirements are met.

3 Data

Card and Krueger (1994) began collecting data ten months after the minimum wage had been increased from $4.25 to $5.05 in New Jersey, using data from phone surveys with 410 different fast-food restaurants throughout New Jersey

and eastern Pennsylvania. They recorded the price of food, wages, and employment rates before and after the increase took effect. Changes in pricing of food was collected in order to dispute whether a rise in minimum wage would increase the price of the product (in this case it did not). The data collected from Eastern Pennsylvania was used as a control group as their minimum wage remained static. The Difference in Difference between the two groups is also calculated as the difference between the change in employment rates in New Jersey and Pennsylvania and shows the effect of New Jersey's rise in minimum wage.

4 Model of Perfect Competition

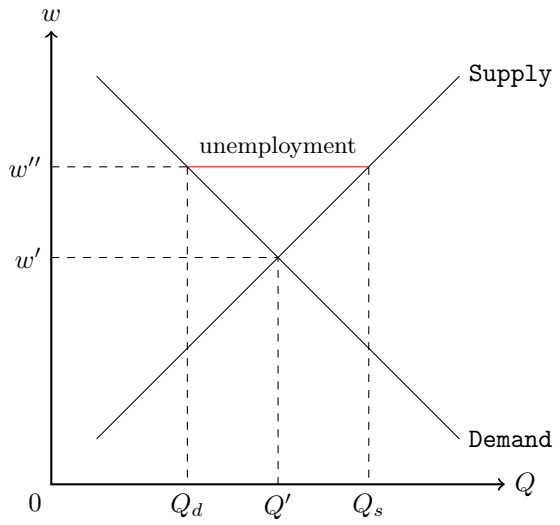

Figure 1: Price Floor

Figure 1 above shows the effect of an increase in wages in a perfectly competitve labor market. As wages increase from w' to w'' due to a price floor from a set minimum wage of w'', the quanitity of labor demanded decreases from Q' to Q_d, leaving a gap between labor supplied and demanded of Q_n-Q_d. This gap is the amount of unemployment caused from the increase in wages in a perfectly competitive labor market.

5 Results: Change in Average Employment

	Before	After	Difference
Pennsylvania	23.33	21.17	-2.16
New Jersey	20.44	21.03	0.59
			2.76

Table 1: Difference-in-differences

Table 1 above shows the average employment rate in New Jersey and Pennsylvania before and after the minimum wage was raised to $5.05 in New Jersey. As displayed in the table, New Jersey had a .59% increase in average employment after the new wage rate was implemented while Pennsylvania suffered a 2.16% decrease in average employment in the same time frame, primarily due to the concurrent recession happening(Card & Krueger, 1994, pg.779).

6 Conclusion

The debate over the impact of a rise in minimum wage is ongoing, and observations are muddled by external factors that could also be affecting the outcome. While Card and Krueger (1994) continue to justify their viewpoint on the benefits of increasing minimum wage, others like Aaronson et al. (2018) and MaCurdy (2015) continue to question whether Card and Krueger (1994)'s results were merely an error in execution. However, economists like Allen (2009) have contributed entire Industrial Revolutions to rising minimum wages, impressing the crucial impact that the issue has on the entire society, regardless of whether that effect is negative or beneficial. Thus it is critical that further research be done to implement the best methods to better society's perspective on minimum wage.

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