Does the Minimum Wage Make Young Adult Labor More Attractive to Firms?
A Panel Data Analysis That Controls for Spatial Heterogeneity

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ABSTRACT

Adverse effects of minimum wage policy on labor markets materialize only if the new rate is binding. Annual data from the Current Population Survey indicate that the minimum wage is effectively non-binding for young adults (19-29) who have at least one year of college and are not enrolled in school. Hence, a minimum wage hike would have no effect on young adult workers… or does it? The authors investigate this using dynamic panel data that accounts for spatial heterogeneity, which must be controlled for because minimum wage coefficients are biased otherwise (Allegretto, Dube, and Reich 2011). The authors find that accounting for spatial heterogeneity and the inertia that is present in labor market variables affects the results dramatically. Average unemployment in adjacent states has a large net positive cumulative impact on young adult male employment but a large negative cumulative effect on young adult female employment. Though both cohorts are sensitive to market wages and weekly earnings, males are more geographically mobile while female employment is negatively linked to having children, poverty, welfare participation, and urbanity but positively associated with welfare reform. While the minimum wage was insignificant in the young adult male employment model, its anticipatory effect is associated with higher young adult female employment. This is perhaps due to firms substituting teen (16-18) labor with young adult females who possess longer employment tenure, slightly better job skills, and greater personal responsibility.

Keywords: Employment, Employment Tenure, Minimum Wage, Panel Data Regression, Spatial Heterogeneity

INTRODUCTION

Though teen (16-18) employment was relatively steady between 1994 and 2000, it declined precipitously thereafter as a disparity in the effective state minimum wage rate (the maximum of state and federal rates) widened. According to Allegretto, Dube, and Reich (2011), this disparity is driven by legislative hikes and inflation indexation in several states. Because a vast body of research provides support to a causal relationship between unskilled
employment and minimum wage hikes (Neumark & Wascher 2007), it can be argued that the decline of youth employment is a direct consequence of minimum wage policy. This is grounded in standard neoclassical firm theory, where the least productive workers are the first fired because a minimum wage hike exogenously increases the price of their labor. Firms can also offset higher payroll expenses with cutbacks in general training, break time, on-site child-care, and ‘free’ meals or parking for employees. A hike exacerbates teen unemployment if the new rate exceeds the reservation wages of those who had previously dropped out of the labor force. Regardless of the situation, the minimum wage may be harming the very group of people policy makers intended to help (Partridge & Partridge 1999). Nevertheless, minimum-wage advocates, using favorable empirical evidence from case studies, persistently call for modest hikes in the minimum wage.

The decline in teen employment and increasing disparity in state minimum wages coincide with relatively stable low-skilled young adult (19-29) employment and a marked decline in the share of the older group earning the minimum. In 1994, roughly five percent of low-skilled young adults earned the minimum. By 2008, this fell to around one to two percent. Over this same period of time, the share of low-skilled young adult females and males earning more than the minimum drifted up by about two percentage points from 85 and 90 percent in 1994, respectively. Thus, the minimum wage is perhaps mostly binding for teen but not for low-skilled young adults. If hikes in it mitigate the differential in wages paid to teens and to young adults over time, firms will substitute teen labor with that of low-skilled young adults provided the latter are more skilled than the former.

The purpose of this analysis is to contribute to the understanding of the minimum wage affects low-skilled workers when it is non-binding. While the results suggest that a non-binding minimum wage has an insignificant effect on low-skilled young adult male employment, its anticipatory effect in the low-skilled young adult female model is significant and positive. We attribute the differential effects to perhaps teens and low-skilled young adult females being imperfect substitutes, minimum wage policy reducing the differential in their wages, and young adult females having longer employment tenures, slightly better job skills and greater personal responsibility than teens. From a policy perspective, our results also indicate that welfare reform in 1996 had a large positive effect on low-skilled young adult females but an insignificant effect on young adult males. Unemployment in adjacent states has a large net positive cumulative impact on young adult male employment but a large negative cumulative effect on that of young adult females, which we attribute to perhaps greater geographic mobility of the former. In total, the results suggest that employment rates should be disaggregated by gender and age to better understand the consequences of policy. This understanding is essential for community development. After all, if the minimum wage improves employment opportunities of young adult females at the expense of teens, it places future labor market participants at a substantial disadvantage because they are unable to acquire valuable experience and basic job skills that are needed in the increasingly competitive global market place.

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The rest of this paper is organized as follows. The subsequent section summarizes the literature, which is followed by discussions of the data and empirical methodology in sections 3 and 4, respectively. We then proceed to interpret our results in section 5. The final section of the paper includes concluding remarks and suggestions for future work.

**LITERATURE REVIEW**

Prior to the New Minimum Wage Research Conference (NMWRC) of 1991, the prevalent view amongst macroeconomics regarding the effect of minimum wage policies on labor was that a 10-percent increase in the minimum wage would reduce employment by between 1 and 3 percent. While this notion was challenged by
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