Minimum Wages and Public Assistance:
Do Higher Minimum Wages Reduce Government Spending?

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Abstract

A number of policymakers have advocated minimum wage increases as tools to fight against poverty and thus reduce government spending. Using data from the Survey of Income and Program Participation between 1996 and 2013, we study the effects of minimum wage increases on a number of government assistance programs, including the Food Stamps and Temporary Assistance for Needy Family, Earned Income Tax Credits, Medicaid, and Supplemental Security Income. The longitudinal nature of the SIPP allows us to examine individual- and family-specific transitions onto and off of public assistance in response to minimum wage increases. This analysis is supplemented by the use of aggregate state-by-year data on welfare caseloads and public expenditures to examine the effect of minimum wage increases on government spending. Preliminary estimates suggest that minimum wage increases are associated with no net changes in government benefit receipt in the pre-Great Recession Era. While minimum wage increases may aid some working families in leaving the welfare rolls, adverse labor demand effects may increase government benefits received by others. Future analysis will explore effects in the Great Recession Era and examine the target efficiency of minimum wage increases to individuals eligible for public assistance. .

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Extended Abstract

Introduction. Policymakers advocating increases in minimum wages typically taut their potential to reduce poverty and material hardship (Obama 2013). However, with mounting empirical evidence that higher minimum wages are ineffective at alleviating poverty or material hardship due to their poor target efficiency (Sabia 2014a; Sabia and Nielsen 2013) and adverse labor demand effects (Neumark, Salas, and Wascher 2014; Neumark and Wascher 2002), attention has turned to other arguments in support of raising minimum wages. Among these arguments are (i) providing a fair wage standard for low-skilled workers (Bernstein and Sherholtz 2014), (ii) aiding middle class as well as near-poor families (Bernstein and Sherholtz 2014), and (iii) spurring economic growth by redistributing income to those with a higher marginal propensity to consume (Aaronson, Agarwal, and French 2011), and (iv) reducing low-skilled individuals' dependence on government (West and Reich 2014).

This final argument has had some appeal among conservative political activists (Schlafly 2014). And a new study by West and Reich (2014) suggests there may be some empirical support for this argument. Using data from the 1990-2013 March Current Population Surveys and a difference-in-difference approach—including controls for spatial heterogeneity (Dube 2013)—the authors find that a 10 percent increase in the minimum wage was associated with a 2.35 percent decline in the probability of participation in the Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamp program (FSP). Moreover, turning to expenditure data from the Bureau of Economic Analysis, the authors find that minimum wage

increases are associated with declines in state spending on SNAP, with an estimated elasticity of -0.190. The findings of West and Reich (2013) suggest that the income gains from minimum wage increases may reduce eligibility for or dependence on food stamps, leading to a reduction in government spending.

Contribution. While intriguing and important, the study by West and Reich (2014) has a number of limitations, a number of which the authors acknowledge. First, the study focuses exclusively on the effect of minimum wage increases on SNAP participation. An examination of a broader set of public assistance programs—including Temporary Assistance to Needy Families (TANF), Medicaid, Supplemental Security Income (SSI), and Section 8 housing assistance—would provide a more complete picture of the effect of minimum wage increases on family well-being and government spending. Second, because the March CPS is a repeated cross-sectional survey rather than a panel survey, the authors were not able to examine how flows in family- or household-specific economic well-being responded to minimum wages, nor how transitions onto or off of public assistance programs were affected by minimum wage increases. Finally, while the authors focused on participation in SNAP and expenditures on SNAP, they did not examine the effect of minimum wage hikes on food insecurity or the quality of diets of households affected by minimum wage increasers.

The current study will contribute to the literature on minimum wages and government assistance in several ways. First, we will use longitudinal data from four panels (1996-2000; 2001-2004; 2004-2008; 2008-2013) of the Survey of Income and Program Participation (SIPP) to examine the relationship between minimum wage increases and receipt of benefits from a number of government programs including SNAP, TANF, Women Infants and Children (WIC), free or reduced school meals, Section 8 housing, and Medicaid. These data have a number of

important advantages over the CPS data used by West and Reich (2014), including (i) the availability of data on participation in a wide set of public programs, and (ii) information on changes in individual, household, and family well-being over time. Longitudinal data will allow us to estimate individual fixed effects models as well as explore differential effects of transitions onto and off of the welfare rolls in response to minimum wage increases. Second, we will collect data from government sources on both state-by-year expenditures on a variety of public programs (AFDC/TANF, SNAP, SSI, and Medicaid), as well as information on welfare caseloads. This will allow us to explore the effect of minimum wage increases on a broader set of public assistance benefits than examined by West and Reich (2014) (see Page et al. 2005) for a discussion of minimum wages and welfare caseloads in the pre-welfare reform era). Finally, given new evidence that minimum wage increases may have different labor demand effects over the business cycle (Sabia 2014b), we explore whether the public benefits effects of minimum wages differed during the Great Recession.

Empirical Approach. We will pool data from 1996 to 2013 in the SIPP for several policy-relevant samples: all individuals of working age (16-to-64), workers ages 16-to-64, less-educated (less than HS degree) individuals ages 16-to-29, single women ages 16-to-49 with children under age 18 and less than a high school degree, younger non-whites, and older individuals ages 60-to-74. Using these samples, we will estimate a difference-in-difference model of the following form:

$$Assistance_{ist} = \beta MW_{smt} + \mathbf{X'}_{it}\delta + \mathbf{E'}_{st}\delta + \mathbf{P'}_{st}\kappa + \theta_s + \gamma_m + \tau_t + \alpha_i + {}_{ist} \qquad (1)$$

where $Assistance_{ismt}$ is an indicator of whether individual *i* living in state *s* in month *m* in year *t* is receiving public assistance, MW_{smt} is the natural log of the higher of the state or federal minimum wage in state *s* in month *m* at year *t* collected from the Bureau of Labor Statistics (BLS). In addition, $\boldsymbol{X_{st}}$ is a vector of individual demographic controls (age, race/ethnicity), gender, educational attainment, marital status, and urbanicity, $\boldsymbol{E_{st}}$ is a vector of state-specific controls (the natural log of the prime-age unemployment rate and the average wage rate of prime-age workers), $\boldsymbol{P_{st}}$ is vector of state policy variables (refundable percentage of the federal EITC that is paid to state taxpayers via the state tax system, obtained from the Center on Budget and Policy Priorities, strict work requirements, time limits on benefits, and maximum TANF benefit allowable for family size of three), θ_s is a time-invariant state effect, γ_m is a state-invariant month effect, τ_t is a state-invariant year effect, and α_i is a time-invariant individual fixed effect. In some specifications, we will also augment equation (1) to account for spatial heterogeneity by controlling for state-specific linear and quadratic time trends as well as census division-specific year effects (Dube 2013; Neumark, Salas and Wascher 2014). The key coefficient of interest, β, measures the effect of the minimum wage on public program participation. The identifying variation will come from within-state variation in minimum wages.

In addition, we will also estimate dynamic models that separately estimate the effect of minimum wage increases on transitions onto and off of public assistance programs, following Neumark and Wascher (2002) and Sabia and Nielsen (2013). Specifically, respondents' food stamp, energy assistance program, TANF, and public health insurance program participation status is noted in January of each calendar year. If any changes to that status occur over the course of that status occur at any point during the remainder of that calendar year, the person is identified as transitioning onto or off of the given public assistance program. The relevant

minimum wage variable will then be the average minimum wage that persisted in that calendar year. We first condition the sample on those who were initially not receiving public assistance at period *t* and examine whether minimum wage increases affected the likelihood of transitioning onto public assistance at period *t+1*. We do the same for those initially on public assistance and examine transitions off of public assistance.

In addition to our SIPP-based longitudinal analysis, we will also use our aggregated state-by-year data on welfare caseloads and public program expenditures (e.g. SNAP, Medicaid, TANF, SSI, Section 8 Housing, EITC) to examine the effect of minimum wage increases on these outcomes.

Finally, to explore whether the effects of minimum wage increases had different effects on public program participation during recessions, we will take two tacks. First we will compare the effects of minimum wage increases on public program participation during the Great Recession Era (available in the final SIPP panel) as compared to the non-recession period. Second, we will examine the effects of minimum wage increases on receipt of public benefits over the state business cycle by interacting measures of the state economy over time (state unemployment rate, state GDP growth) with the minimum wage.

Preliminary Estimates. In Table 1 below, we present some preliminary estimates of equation (1) for a few of our sub-samples from the pre-Great recession era (the 1996, 2001, and 2004 SIPP panels). The results suggest evidence of modest redistributional effects of the minimum wage on public program participation, consistent with the hypothesis that minimum wages may raise incomes of some individual, allowing them to leave the welfare rolls, but reducing incomes of others (who lose their jobs or have their hours cut), leading to increased program participation. For example, we find that minimum wage increases are associated with a

significant decrease in the probability of *entering* public health insurance programs among non-white individuals between the ages of 16 and 24. However, this positive effect is offset by the negative association between minimum wage increases and the probability of *exiting* public health insurance programs for this group. On net, our estimates suggest little evidence that minimum wage hikes reduce net receipt of public benefits.

In the full paper, we will (i) explore effects for other important sub-samples (particularly single mothers), (ii) examine the Great Recession Era, (iii) examine the sensitivity of our estimates to the inclusion of more extended controls for spatial heterogeneity, (iv) examine the target efficiency of minimum wages to those who receive public assistance benefits, and (v) explore the state-by-year aggregate caseload and expenditure analysis described above. We believe that the results from this study will be informative to policymakers assessing the public budget effects of minimum wages.

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Table 1. Preliminary Estimates of Relationship Between Minimum Wage Increases and Government Benefit Receipt

	Food Stamp Receipt (1)	Into Food Stamps (2)	Out of Food Stamps (3)	Energy Assistance (4)	Into Energy Assistance (5)	Out of Energy Assistance (6)	Public Health Insurance (7)	Onto Public Health Insurance (8)	Off of public health ins. (9)
	Panel A: All ages 16 to 64								
Ln (Minimum Wage)	0.0009 (0.002) [0.090]	-0.0007 (0.001) [-0.157]	0.014 (0.014) [0.215]	0.0002 (0.001) [0.090]	-0.0001 (0.001) [-0.045]	-0.016 (0.018) [-0.094]	-0.001 (0.002) [-0.047]	0.008 (0.020) [0.127]	-0.0003 (0.002) [-0.024]
N	3,193,098	3,016,406	169,468	3,193,098	3,131,726	61,372	3,193,098	474,518	2,718,580
	Panel B: Workers ages16 to 64								
Ln (Minimum Wage)	-0.0003 (0.002) [-0.006]	-0.0001 (0.001) [-0.032]	0.022 (0.027) [0.251]	0.0006 (0.0005) [0.539]	-0.00008 (0.0009) [-0.062]	0.002 (0.019) [0.011]	-0.003 (0.002) [-0.324]	0.004 (0.019) [0.062]	-0.00001 (0.002) [-0.001]
N	2,409,129	2,346,319	59,762	2,409,129	2,384,848	24,281	2,409,129	313,508	2,095,621
	Panel C: Ages 16 to 29 w/out high school degree								
Ln (Minimum Wage)	0.007 (0.008) [0.224]	-0.016* (0.009) [-1.165]	0.034 (0.049) [0.454]	0.017** (0.008) [2.786]	0.001 (0.011) [0.159]	-0.086 (0.065) [-0.478]	0.003 (0.024) [0.053]	-0.023 (0.039) [-0.397]	-0.058*** (0.022) [-1.653]
N	130,678	109,474	20,746	130,678	125,013	5,665	130,678	43,684	86,994
	Panel D: Non-white ages 16 to 24								
Ln (Minimum Wage)	-0.012 (0.021) [-0.346]	-0.005 (0.024) [-0.269]	0.079 (0.088) [1.025]	0.012 (0.012) [1.648]	0.018 (0.019) [2.538]	-0.042 (0.153) [-0.232]	-0.013 (0.043) [-0.228]	-0.178*** (0.056) [-2.254]	-0.061** (0.030) [-1.649]
N	56,830	46,203	10,381	56,830	53,883	2,947	56,830	16,695	40,135

***Significant at 1% level; **Significant at 5% level; *Significant at 10% level

Notes: Excerpted findings from Sabia and Nielsen (2013). Each estimate comes from a separate regression from a weighted OLS model using data from the 1996, 2001, and 2004 panels of the SIPP. Standard errors corrected for clustering on the state are in parentheses and elasticities in brackets. All models include the full set of controls described in equation (1) above.