Minimum Wages and the Poor:
Evidence on the Target Efficiency of the Obama Proposal[*]

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Abstract

Using data drawn from March Current Population Surveys, we examine the effectiveness of minimum wage increases in alleviating poverty. Our results show that state and Federal minimum wage increases between 2003 and 2007 had no affect on state poverty rates. We then examine whether a newly proposed Federal minimum wage increase from $7.25 to $9.50 per hour will be effective in aiding poor workers, and compare its target efficiency to that of the last Federal minimum wage increase from $5.15 to $7.25 per hour. Our simulations show that the newly proposed increase will be even less well-targeted toward poor workers than was the last increase. Only 11.0 percent of workers who would be affected by the newly proposed Federal minimum wage increase are poor, compared to 15.1 percent from the last increase. We estimate that at an average employment elasticity of -0.77, raising the Federal minimum wage to $9.50 per hour will cause net monthly income losses for minimum wage workers. Taken together, our results suggest that raising the Federal minimum wage is a poor anti-poverty strategy.

I. Introduction

Former president William Jefferson Clinton famously claimed: "It's time to honor and reward people who work hard and play by the rules…No one who works full time and has children should be poor anymore," (Clinton and Gore, 1992). This sentiment is widely shared by Americans across the political spectrum. One popular strategy offered by policymakers to help the working poor has been to increase state and Federal minimum wages (AP-AOL, 2006). As part of a comprehensive anti-poverty strategy, U.S. Senator and 2008 Democratic Presidential Candidate Barack Obama (D-IL) has proposed to increase the Federal minimum wage from $7.25 to $9.50 per hour[1]:

> **"**Barack Obama believes that people who work full time should not live in poverty. Before the Democrats took back Congress, the minimum wage had not changed in 10 years. Even though the minimum wage will rise to $7.25 an hour by 2009, the minimum wage's real purchasing power will still be below what it was in 1968. As president, Obama will further raise the minimum wage to $9.50 an hour by 2011…" (BarackObama.com, 2008, p. 3)

Despite the laudable goal of helping poor workers, there is little empirical evidence that past minimum wage increases have been effective in reducing poverty (Sabia, 2008; Burkhauser and Sabia, 2007; Neumark and Wascher, 2002; Neumark et al., 1999; Card and Krueger, 1995). Two explanations have been offered for this finding. First, the historical relationship between earning a low wage and living in poverty is weak and has become weaker and weaker over time (Stigler, 1946; Burkhauser, Couch, and Glenn, 1996a, Burkhauser and Sabia, 2007). Second, even among low-skilled workers who may be affected by minimum wage increases, such increases might not raise household income. While an increase in the minimum wage may increase incomes of some low-skilled workers who remain employed and do not have their hours

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[1] The Obama minimum wage plan has support among a number of Democratic Senators, including Hillary Rodham Clinton (D-NY) and Edward M. Kennedy (D-MA).

significantly reduced, others may lose their jobs or have their hours significantly cut, moving them into poverty (Neumark and Wascher, 2002; Neumark et al., 2004, 2005; Sabia, 2008).

However, proponents of minimum wage increases continue to argue that minimum wage hikes have few important employment effects across low-skilled industries (Addison et al., 2008; Dube et al., 2008) and can, in fact, be effective in increasing incomes of some low-skilled workers (Dube et al., 2008; Card, 1992).[2] A flurry of state and Federal minimum wage hikes were passed between 2003 and 2007, all with the promise of helping poor workers.[3] And the new minimum wage plan advocated by Senator Obama is also promoted as an important anti-poverty tool. Our paper seeks to examine the effectiveness of these minimum wage increases in helping the poor.

Using data drawn from the outgoing rotation groups of the March Current Population Survey, this study examines the effect of recent minimum wage increases on poverty, and compares the target efficiency of the last Federal minimum wage increase from $5.15 to $7.25 per hour to the target efficiency of a newly proposed hike to $9.50 per hour. We find no evidence that minimum wage increases between 2003 and 2007 affected state poverty rates. Moreover, we find that the newly proposed Federal minimum wage increase, like the last, is not well-targeted to poor workers. Only 11.0 percent of those who will be affected by the Obama proposal are poor workers, an even smaller share than was the case with the last Federal increase (15.1 percent). Sixty-two percent of beneficiaries of a $9.50 per hour Federal minimum wage are second- or third-earners living in households with incomes over two times the poverty line, and 41.0 percent live in households with incomes over three times the poverty line.

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[2] See, for example, Economic Policies Institute (2005), Fiscal Policies Institute (2006), and Bernstein (2007).
[3] Between 2003 and 2007, 28 states raised their minimum wage above the Federal level, and in 2007, the Federal minimum wage rose from $5.15 to $5.85 per hour.

At an average employment elasticity of -0.3 for minimum wage workers, we estimate

than nearly 1.5 million jobs will be lost if the Federal minimum wage is increased to $9.50 per

hour, including 178,000 jobs held currently held by poor workers. We estimate that at average

employment elasticities greater (in absolute value) than -0.77, the new proposal will cause net

monthly earnings *losses* for minimum wage workers. We conclude that an expansion in the

Federal Earned Income Tax Credit program would be a more target efficient anti-poverty

strategy.

II. Literature Review

Poverty Effects. Several recent studies have examined the poverty effects of minimum

wage increases (see, for example, Card and Krueger, 1995; Addison and Blackburn, 1999;

Neumark and Wascher, 2002; Neumark et al., 2004, 2005; Burkhauser and Sabia, 2007; Sabia,

2008), and all but one have found that past minimum wage hikes had no effect on poverty.[4]

These studies have generally taken one of two approaches. The first approach uses matched CPS

data and examines household-specific family income changes caused by minimum wage

increases (Neumark and Wascher, 2002; Neumark et al., 2004; 2005). These studies find that

some poor low-skilled workers who remain employed see their incomes rise and are moved out

of poverty due to minimum wage increases. However, other low-skilled workers lose their jobs

or have their hours substantially reduced as a result of minimum wage hikes, causing income

losses and increased poverty. On net, Neumark and Wascher (2002) find that low-skilled

workers are no better off and may, in fact, be made worse off by minimum wage hikes.

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[4] The one exception is Addison and Blackburn (1999), who find that minimum wage increases reduce poverty
among junior high school dropouts. However, as Neumark and Wascher (2008) note in their forthcoming book,
junior high school dropouts are older and unlikely to have small children, whereas most anti-poverty efforts focus on
families with younger children.
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A second approach, taken by Card and Krueger (1995), Burkhauser and Sabia (2007), and Sabia (2008a), estimates the effect of state minimum wage increases on state poverty rates. These studies also find no evidence that minimum wage increases during the 1980s, 1990s, and early 2000s have significantly reduced poverty either among all individuals or among workers. However, no studies in the literature have estimated the effect of minimum wages on state poverty rates in the mid- to late-2000s, a period during which 28 states increased their minimum wages above the Federal level, and the Federal minimum wage rose from $5.15 to $5.85 per hour.

Employment and Hours Worked Effects. One explanation for the ineffectiveness of past minimum wage increases in reducing poverty may be adverse labor demand effects. Neoclassical economic theory suggests that minimum wage increases reduce the demand for low-skilled labor, reducing employment and hours worked (see Stigler, 1946). Much of the literature examining the employment effects of minimum wage hikes have focused on low-skilled workers, usually teenagers and high school dropouts or on low-skilled industries, because these populations are more likely to be affected by them.

Neumark and Wascher (2007) review over 90 studies published since the Card and Krueger (1994; 1995) studies of the mid-1990s and conclude that there is overwhelming evidence that the least-skilled workers experience the strongest disemployment effects from minimum wage increases (see, for example, Campolieti et al., 2006; Campolieti et al., 2005; Burkhauser, Couch, and Wittenburg, 2000a,b; Deere, Murphy, and Welch, 1995; Neumark, 2001; Neumark and Wascher, 1992, 2002; Neumark et al., 2004; Partridge and Partridge, 1999; Currie and Fallick, 1996; Williams, 1993; Couch and Wittenburg, 2001; Sabia, 2008a,b,c). Median employment elasticities range from -0.1 to -0.3, though a few studies have found

employment elasticities that are larger (around -0.8) for less-educated single mothers (Sabia, 2008a) and younger high school dropouts (Burkhauser, Couch, and Wittenberg, 1996b).

Recently, however, the debate in the literature about the presence of adverse employment effects has been renewed by Dube, Lester, and Reich (2008) and Addison et al., (2008). These authors argue that the identification strategy used in many national panel studies is flawed due to unmeasured low-skilled employment trends across states. To better ensure common underlying trends across treatment and comparison states, they use variation in minimum wages in contiguous counties across borders for identification, and find no evidence of adverse employment effects across low-skilled sectors. But this work is far from definitive. Other studies that have examined low-skilled workers across sectors have found evidence of adverse employment and welfare take-up effects even after controlling for unmeasured state trends (Page et al., 2005; Sabia, 2008a; Sabia and Burkhauser, 2008).

Examining only employment effects, however, may mask full labor demand effects. Firms may respond to minimum wage hikes by (i) reducing both employment and average hours worked by employed teens, or (ii) increasing hours of retained workers to compensate for reduced employment (Couch and Wittenburg, 2001; Neumark and Wascher, 2007). The evidence on hours worked effects is mixed. Couch and Wittenburg (2001) and Sabia (2008c) find some evidence that employment effects alone understate full labor demand effects, but Sabia (2008a) and Sabia and Burkhauser (2008) find little evidence of conditional hours worked effects.

Simulations of Distributional Effects. While adverse labor demand effects may help to explain the ineffectiveness of past minimum wage increases in reducing poverty (Neumark and Wascher, 2002; Neumark et al., 2004; 2005; Sabia, 2008c), another explanation may be poor

target efficiency. A series of studies by Burkhauser and Finegan (1989), Burkhauser, Couch, and Glenn (1996), Burkhauser and Harrison (1999), and Burkhauser and Sabia (2007) have avoided the controversies surrounding the magnitude of employment and hours worked effects of past minimum wage increases and have instead focused on the target efficiency of proposed increases. These studies assume no behavioral effects of the minimum wage, giving proposed hikes their best chance to benefit affected workers. But even under the optimistic assumption of no employment or hours worked effects, the authors find that few benefits are received by workers in poor households, because most poor workers earn hourly wages higher than proposed state or Federal minimum wages, and most workers who do earn minimum wages are second- or third-earners that live in non-poor families.

One important critique of these simulations is that they overstate the benefits of minimum wages to poor workers because they ignore employment effects. As the authors note, because they assume zero employment elasticities, their simulations are likely upper-bound estimates of the benefits to workers (Burkhauser and Sabia, 2007). And, in fact, a recent case study of New York State (Sabia and Burkhauser, 2008) finds that when they account for the adverse labor demand effects of the minimum wage, poor workers receive an even smaller share of a shrinking pie of benefits.

The current study integrates and contributes to previous studies in the literature in several ways. First, we extend the work of Burkhauser and Sabia (2007) by estimating the effects of minimum wage increases from 2003 to 2007 on state poverty rates. Second, we examine the target efficiency of Senator Obama's current proposal to raise the Federal minimum wage from $7.15 to $9.50 per hour, and compare the target efficiency of his proposal to the target efficiency of the last Federal minimum wage increase from $5.15 to $7.15 per hour. And finally, while

previous simulations in the literature have assumed no behavioral effects of the minimum wage, we simulate the distribution of benefits from the proposed minimum wage hike using a range of employment elasticities from the literature. Specifically, we use these elasticities and workers' wage rates to estimate individual-specific probabilities of job loss and expected net benefits from the newly proposed minimum wage increase.

III. Data and Estimation Strategy

Our analysis uses data drawn from the outgoing rotation groups of the March Current Population Survey. We use the March CPS because it contains information not only on current employment and wage rates, but also on household income and household size, which we use, along household size-specific poverty thresholds, to calculate an income-to-needs ratio for each worker. For example, in 2007, the poverty threshold for a household size of four was $20,650. Thus, a household of four with total household income of $41,300 would have an income-to-needs ratio of 2.0. Workers in households with income-to-needs ratios less than 1.0 are classified as poor and those with income-to-needs ratios between 1.0 and 1.5 are defined as "near poor."

Information on individual wage rates and hours worked of workers comes from the outgoing rotation group and are measured in the last week. For workers who report being paid hourly, their wage rate is directly reported from their current job. For those who are not paid hourly, wage rates are calculated as the ratio of weekly earnings to weekly hours in the past week. Information on household income comes from the previous calendar year, so mapping individual wages to the poverty status of the household requires the assumption that the income-

to-needs ratio of the household was the same in 2007 as it was in March 2008 (see Burkhauser, Couch, and Glenn, 1996 and Burkhauser and Sabia, 2007 for a discussion of this issue).

Poverty Effects. To examine the effect of past minimum wage increases on state poverty rates, we pool data from the March 2004 through March 2008 CPS and estimate a fixed effects model similar to Card and Krueger (1995) and Burkhauser and Sabia (2007):

$$P_{st} = \alpha + \beta MW_{st} + \mathbf{X'}_{st}\delta + \theta_s + \tau_t + \varepsilon_{ist} \qquad (1)$$

where P_{st} is the natural log of the poverty rate in state s at time t, MW_{st} is the natural log of the higher of the state or Federal minimum wage[5], X_{st} is a vector of state-specific, time-varying socioeconomic controls including the unemployment rate for prime-age males aged 25-to-54, the average adult wage for working individuals aged 25-to-54, the share of older (aged 55-to-64) and younger (aged 16-24) individuals in the state population, a time-invariant state effect (θ_s) and a state-invariant time effect (τ_t). Because household income is measured in the previous year, the sample used in the regression corresponds to calendar years 2003 to 2007. The key parameter of interest in this model is β_1. Thus, much of the identifying variation is coming from state minimum wage increases.[6]

Simulations. To simulate the employment and distributional consequences of the newly proposed Federal minimum wage increase as well as the last Federal minimum wage hike from $5.15 to $7.25 per hour[7], we follow Burkhauser and Simon (2008), Yelowitz (2008), and Baicker and Levy (2008), who use estimates of employment elasticities from the minimum wage literature to simulate the effect of pay-or-play health insurance reforms. This approach uses the

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[5] If multiple minimum wages prevailed during the year, this variable is coded as the average minimum wage that prevailed during the year, weighted by the share of their year each wage was in effect.
[6] During this period, the following 28 states raised their minimum wages: AZ, AR, CA, CO, CT, DE, DC, FL, HI, IL, ME, MD, MA, MI, MN, MO, NV, NH, NJ, NY, NC, OH, OR, PA, RI, VT, WA, and WI. The Federal minimum wage rose from $5.15 to $5.85 per hour on July 24, 2007.
[7] The Federal minimum wage rose again from $5.85 to $6.85 per hour on July 24, 2008, and will increase again to $7.25 per hour in July 2009.

March CPS to identify the set of workers who are affected by a policy change. For the last

Federal minimum wage increase, we define these workers are those earning hourly wages

between $5.00 and $7.24 per hour in the March 2007 CPS, and for the new Federal minimum

wage increase, these are workers earning between $5.70 and $9.49 per hour in the March 2008

CPS.[8] For each simulation, we calculate an individual-specific probability of job loss:

$$p_i = \frac{(FMW - w_i)}{w_i} |e_i| \tag{2}$$

where FMW is the Federal minimum wage, w_i is worker i's current hourly wage rate and e is the

estimated employment elasticity that applies to worker i. The true employment elasticity that

should be applied to each minimum wage worker is unknown. We use a range of elasticities for

minimum wage workers that range from zero (Card and Krueger, 1995; Dube et al., 2008;

Addison et al., 2008), to "consensus" elasticities of -0.1 to -0.3 (Neumark and Washer, 2007), to

upper-bound estimates of -0.6 to -1.0 (Burkhauser, Couch, and Glenn, 1996b, Sabia, 2008a,

Sabia and Burkhauser, 2008). Thus, the distribution of job loss by income-to-needs ratio of

households will depend on (i) the share of minimum wage workers in each income-to-needs

category, (ii) the magnitude of the gap between the worker's current wage and the new Federal

minimum wage, and (iii) the elasticity that should be applied to each worker. Total job loss is

calculated by summing the product of the individual probabilities of job loss and the population

weights attached to each worker.

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[8] As discussed below, the Federal minimum wage in March 2008 was $5.85 per hour. Thus, we are taking a conservative approach by assuming that workers earning hourly wages between $5.70 and $7.14 will be earning $7.15 at the time the Obama plan is being considered in the next session of Congress in 2009. As in past simulations (see Burkhauser and Sabia, 2007; Burkhauser, Couch, and Glenn, 1996; Burkhauser and Finesgan, 1989), we assume that workers earning hourly wages less than 15 cents below the current Federal minimum wage are in the "uncovered" sector. Theoretically, workers earning wages greater than $9.50 per hour could benefit from minimum wage increases if there are wage spillovers. But there is little empirical evidence that such spillovers exist (see, for example, Sabia and Burkhauser, 2008).

To simulate the expected net benefits of the minimum wage increase to each minimum wage worker, we calculate expected net benefits for each worker as follows:

$$EB_i = \left(1 - \frac{(FMW - w_i)}{w_i}|e_i|\right)(FMW - w_i)H_i - \left(\frac{(FMW - w_i)}{w_i}|e_i|\right)w_iH_i \qquad (3)$$

where H_i is the usual monthly hours worked by worker i. The first term on the right-hand side of equation (2) is the expected monthly earnings gains from a Federal minimum wage hike from a retained job. The second term on the right-hand side is the expected earnings losses from a job loss due to the minimum wage increase. Total net benefits for each income-to-needs category are calculated by aggregating individual net benefits using earnings weights.

There are a number of simplifying assumptions needed to interpret the expression in equation (2) as the expected net benefit to minimum wage workers. First, we assume that there are no wage spillovers to workers earning more than the Federal minimum wage. This assumption is reasonable given that there is little evidence in the existing literature that minimum wages have important spillover effects (Burkhauser and Sabia, 2007; Sabia, 2008a, Burkhauser and Sabia, 2008). Second, as in the simulation of job loss, we must make assumptions about the employment elasticities that are applied to minimum wage workers. As above, we apply a broad range of employment estimates from the literature to estimate employment and distributional effects. Third, we assume that minimum wages have no effect on hours worked by retained workers. Existing estimates in the literature tend to point to either no effects or only small negative effects (see, for example, Sabia, 2008c; Sabia and Burkhauser, 2008); thus, we conservatively assume no adverse hours worked effects. Finally, we assume that if a worker is laid off, his monthly earnings are zero.

There are, of course, limitations to these simplifying assumptions. For instance, if consumers face higher prices as a result of higher costs of producing goods and services

(Aaronson and French 2006, 2007) or if our employment estimates are underestimated due to a failure to capture lagged effects of minimum wage increases (Neumark et al. 2004; Burkhauser et al., 2000a; Page et al., 2005; Baker et al., 1999; Campolieti et al. 2006), our estimates will overstate the true benefits of the minimum wage. Moreover, if there are heterogeneous effects of the minimum wage by poverty status, our simulations may mask other distributional effects. While our assumptions are imperfect, incorporating estimates of the behavioral consequences of past minimum wage increases will be an important improvement over past simulations.

IV. Results

Poverty Effects. Table 1 presents fixed effects estimates of the effect of recent minimum wage increases on state poverty rates among 16-to-64 year-olds. In column (1), we find no evidence that minimum wage increases between 2003 and 2007 affected overall state poverty rates. While the sign on the estimate of β_1 is negative, the effect is not statistically different from zero and is, in fact, smaller than the estimate obtained by Burkhauser and Sabia (2007) in their examination of the 1988-2003 period (-0.052 in column 1 of Table 7 vs. -0.082 in column 4 of Table 7 of their paper). When the sample is restricted to workers (column 2), which gives the minimum wage its best chance to reduce poverty by raising incomes of low-skilled workers, we still find no effect on poverty rates. In fact, the magnitude of the poverty elasticity (-0.020) is even smaller.

When we define poverty more broadly—those with incomes falling below 125 percent of the poverty line—estimates remain statistically insignificant and small across all individuals (column 3) and workers (column 4). Finally, when we estimate poverty as those with family

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incomes below 150 percent of the poverty line (columns 5-6), the estimate of β_1 actually becomes positive, though still statistically indistinguishable from zero.

Taken together, the estimates in Table 1 suggest that recent minimum wage increases enacted between 2003 and 2007 had no effect on state poverty rates, much like past minimum wage increases (Burkhauser and Sabia, 2007). One reason for this finding may be adverse labor demand effects, but another may be poor target efficiency. We now turn to exploring the question of who would gain from the newly proposed Federal minimum wage increase to $9.50 per hour, and how this population compares to those who were affected by the last increase.

Who Will Benefit? Table 2 shows cross-tabulations of the wage distribution of non-self employed 16-to-64 year-olds by the income-to-needs ratio of their households using the March 2008 CPS. Each column shows a different wage category and each row shows the income-to-needs ratio of workers' households. Workers who are expected to be directly affected by the Obama proposal are those who earn between $7.25 and $9.49 per hour. However, in March 2008, when wage rates of workers are measured, the Federal minimum wage was $5.85 per hour. The Federal minimum wage was increased to $6.55 on July 24, 2008 and will increase again to $7.15 on July 24, 2009. We take a conservative approach and assume that workers earning between $5.70 and $9.49 in March 2008 will be affected by the newly proposed Federal minimum wage increase.[9] Those who earned less than $5.70 per hour are assumed to be in the sector uncovered by the Federal minimum wage, such as tipped employees and restaurant workers.

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[9] Following Burkhauser and Finegan (1989), Burkhauser, Couch, and Glenn (1996a), and Burkhauser and Sabia (2007), we assume that workers earning $0.15 below the Federal minimum wage—in this case, those earning hourly wages between $5.70 and $5.84 per hour in March 2008—are working in jobs covered by the Federal minimum wage and their wages simply reflect reporting error.

We see from Table 2 that a minority of workers will be affected by the newly proposed Federal minimum wage increase. Only 17.7 of all workers in the United States earned hourly wages between $5.70 and $9.49 per hour and stand to be directly affected by the increase, while 80.3 percent of all workers earn hourly wages of $9.50 per hour or more.

To assess how well the proposed Federal minimum wage hike will target poor workers, we first examine the share of poor workers who stand to be affected by the new Federal minimum wage increase. Just 4.4 percent of all workers live in poor households, but a substantial percentage of poor workers (45.4 percent) earn hourly wages between $5.70 and $9.50 per hour. Thus, many poor workers will be affected by the increase. But an even greater percentage of poor workers (48.9 percent) already earn wages greater $9.50 per hour and will not be directly affected by it.

In the final column of Table 2, we show the distribution of workers who earn between $5.70 per hour and $9.50 per hour by the income-to-needs ratios of their households. We find that only 11.0 percent of these minimum wage workers are poor. When near-poor workers are also included (those workers living in households with income-to-needs ratios between 1.0 and 1.5), this number rises to 23.0 percent. However, 63.7 percent of minimum wage workers live in households with incomes over two times the poverty line, and 42.5 percent live in households with incomes over three times the poverty line. In sum, the descriptive evidence in Table 2 suggests that raising the Federal minimum wage to $9.50 per hour will not be a target efficient anti-poverty tool because (i) many poor and near-poor workers already earn hourly wages greater than $9.50 per hour, and (ii) most workers who do stand to benefit are not poor.

How does the target efficiency of the current Federal minimum wage proposal compare to that of the last increase from $5.15 to $7.15? Table 3 replicates Appendix Table A3 from

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Burkhauser and Sabia (2007) using the March 2007 Current Population Survey.[10] In contrast to

the new Federal minimum wage proposal, a smaller share of poor workers were affected by the

last Federal minimum wage hike. Thirty-one percent of poor workers earned between $5.00 and

$7.24 per hour in 2007 compared to 45.4 percent of poor workers earning between $5.70 and

$9.49 in 2008. Thus, because the current proposal affects workers who earn higher wages, more

poor workers are affected.

When we compare workers who are expected to be affected by the Obama proposal to the

workers who were affected by the last increase, (final column of Table 3), we find that the

current proposal may be even less target-efficient than the last one. While 15.1 of those affected

by the last increase were poor, just 11.0 percent of those who would be affected by the current

proposal are poor. Like the last increase, the current proposal will largely affect workers in non-

poor households with incomes that are over two or three times the poverty line.

If those affected by the Federal minimum wage increases are not, in the main, poor, who

are they? Tables 4 and 5 present the demographic characteristics of those who are affected by

Federal minimum wage hikes. In Table 4, we find that 50.2 percent of those who will be

affected by the current proposal are not the high earners in their families (first three columns,

row 1). Moreover, an additional 23.4 percent are the high earner, but either have a family size

equal to one or have a family size greater than one but have no children. Just 11.1 percent of

those affected are unmarried females with children under age 18 living in the family, and only

5.8 percent are single fathers.

Compared to the last increase (final three columns of Table 4), the new proposal appears

to affect more high earners (49.8 percent versus 43.4 percent), but these high earners are more

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[10] Burkhauser and Sabia (2007) used the March 2003 CPS. The March 2007 CPS is the latest annual March CPS
available when all workers faced a Federal minimum wage of $5.15 per hour. Note that a smaller share of workers

likely to have no children or come from single-person families, and are slightly less likely to be single mothers (11.1 percent versus 12.0 percent).

Table 5 compares the age distribution of those who will be affected by the new proposal with those who were affected by the last. The evidence suggests that the new proposal will help more older (aged 40+) workers (31.2 percent versus 23.8 percent), fewer teenagers (16.7 percent versus 28.0 percent), and more non-whites (23.2 percent versus 21.8 percent) than the last. However, as Tables 2 and 3 show, these workers are less likely to be poor or near-poor.

Taken together, the results in Tables 2, 4, and 5 suggest that, like past state and Federal minimum wage hikes (Tables 1 and 3), the current proposal to raise the Federal minimum wage to $9.50 per hour will not be well targeted to poor workers and, in fact, may be even less target efficient than the last Federal increase.

Simulations. Poor target efficiency is one important reason why minimum wage increases are ineffective at reducing poverty; adverse labor demand effects are another. In Table 6, we simulate expected job losses from the proposed Federal minimum wage increase. We estimate that the proposed hike to $9.50 per hour will affect over 22 million workers (final row, column 2), including 2.45 million poor workers and 2.66 million near-poor workers. To estimate job losses, we calculate individual probabilities of job loss as described in equation (2) using a range of employment elasticities from the literature. Columns (3) and (4) present estimates of job losses by income-to-needs ratios of households using "consensus" estimates in the literature (Neumark and Wascher, 2007), while columns (5) and (6) present simulations using upper-bound estimates of -0.6 and -1.0. Lower-bound elasticity estimates imply job losses of 489,000 to 1.47 million, while upper-bound estimates imply job losses of 3 to 5 million.

Interestingly, the share of job losses suffered by workers in poor households (12.1 percent; column 7, row 1) is slightly larger than the share of minimum wage workers who are poor (11.0 percent). This is because relative to non-poor minimum wage workers, poor minimum wage workers are more likely to earn wages further below the proposed Federal minimum wage, thus leading to a higher probability of job loss. Moreover, it may be that employment effects for poor minimum wage workers are greater than employment effects for non-poor workers (see, for example, Sabia, 2008a). If this is the case, then our estimates may understate the adverse employment effects for poor workers.

The magnitude of simulated job losses from the current proposal are much larger than from the last increase, because the last increase affected far fewer workers (see Table 7). Using an employment elasticity of -0.3 for minimum wage workers, we simulate that the last Federal minimum wage hike from $5.15 to $7.25 will, when fully implemented, reduce employment by approximately 391,500 jobs. However, in contrast to the current proposal, the last increase did not yield higher percentage job losses among poor workers than the percentage of minimum wage workers who were poor.

While job losses are certainly possible and, perhaps, probable given the consensus of existing empirical evidence (Neumark and Wascher, 2007), net income gains are still possible if adverse employment effects are sufficiently small. But are the gains from minimum wage increases received, in the main, by poor workers, as proponents expect? In Table 8, we simulate the expected monthly benefits from the proposed Federal minimum wage hike to $9.50 per hour. Column (1) shows the distribution of monthly benefits assuming no behavioral effects of the minimum wage, as was assumed by Burkhauser and Finegan (1989), Burkhauser, Couch, and Glenn (1996b), and Burkhauser and Sabia (2007). If no minimum wage workers are laid off and

none have their hours reduced, the minimum wage increase is simulated to yield $4.2 billion in monthly benefits. This estimate can be considered an upper-bound estimate of benefits, given our optimistic behavioral assumptions. However, even under these assumptions, just $445 million of these benefits (10.6 percent) will be received by poor workers (column 2) and 22.3 percent of the benefits will be received by workers in poor or near-poor families. Nearly sixty-two percent of the benefits will be received by workers in households with incomes over two times the poverty line, and 40.9 percent will be received by workers in households with incomes over three times the poverty line. Thus, even under optimistic assumptions of zero employment elasticities (Card, 1992; Card and Krueger, 1994; 1995; Dube et al., 2008 Addison et al., 2008), only a small share of the benefits will be received by poor workers.

In columns (3)-(8), we improve upon the previous literature's simulations by allowing for behavioral effects of the Federal minimum wage increase. At a conservative employment elasticity of -0.1, the total net benefits from the minimum wage fall by 13.1 percent to $3.66 billion, but the distribution of benefits remains similar to that when no employment effects were assumed: approximately 10.5 percent of benefits are received by workers in poor households.

At higher employment elasticities, net benefits fall substantially. An employment elasticity of -0.3 reduces net benefits by 39.2 percent to $2.56 billion (column 4), and an elasticity of -0.6 reduces net benefits by 78.1 percent to $0.921 billion (column 5). At an employment elasticity of -1.0, net benefits are actually *negative*: the income losses to those who lose their jobs are greater than the income gains to those who remain employed and have their wages and incomes boosted.

We estimate the "turning point" employment elasticity where equation (4) equals zero to be -.077 (column 8). While an employment elasticity of -0.77 is large relative to the consensus

estimates in the literature, a few studies have found estimates as large for less-educated single mothers (Sabia, 2008c) and young dropouts (Burkhauser, Couch, and Wittenberg, 1996b; Sabia and Burkhauser, 2008). Each of these groups of low-skilled workers is more likely to be poor than other minimum wage workers (i.e. teenagers); thus, it is not improbable to imagine that benefits of minimum wage increases for poor workers could be quite small, or even negative.

When we compare the distribution of benefits from the current proposal at an assumed employment elasticity of -0.3 (Table 9, columns 1-2) to the distribution of benefits of the last increase (Table 9, columns 3-4), we find that the benefits from the new proposal are even less well targeted than the last. Approximately 14.0 percent of the simulated monthly net benefits of the last increase went to workers in poor families compared to 10.5 percent of the benefits from the Obama proposal. The "turning point" elasticity of the last Federal minimum wage increase is -0.81 (column 5), comparable to the current proposal.

V. Conclusions

This study examines the effect of recent minimum wage increases on state poverty rates, and compares the target efficiency of the last Federal minimum wage increase from $5.15 to $7.25 per hour to the target efficiency of a newly proposed hike from $7.25 to $9.50 per hour. Our results show that recent minimum wage increases between 2003 and 2007 had no effect on state poverty rates. Moreover, Barack Obama's proposal to raise the Federal minimum wage to $9.50 per hour is unlikely to be any better at reducing poverty because (i) many poor workers (48.9 percent) already earn hourly wages greater than $9.50 per hour, (ii) most workers (89.0 percent) who are affected are not poor, and (iii) the minimum wage increase is likely to cause adverse employment effects for poor workers. Our evidence also suggests that the target

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efficiency of Federal minimum wage increases is not improving, and may actually be worsening. When compared to the last Federal increase, the current proposal appears even less target efficient; 14.0 percent of the benefits of the last increase were received by poor workers compared to 10.5 percent from the current proposal. At an employment elasticity of -0.3 for minimum wage workers, we forecast that nearly 1.5 million jobs to low-skilled workers will be lost if the Federal minimum wage is raised to $9.50 per hour, including 178,000 jobs held by poor workers. And at employment elasticities greater than -0.77, we estimate that net monthly benefits from the minimum wage increase will actually become negative.

While raising the Federal minimum wage is an increasingly ineffective anti-poverty strategy, expansions in the Earned Income Tax Credit (EITC) program may be a promising alternative for several reasons. First, because eligibility is based on family income rather than a wage rate, the benefits are much more likely to be received by workers in poor families (Congressional Budget Office, 2007; Burkhauser & Sabia, 2007; Burkhauser, Couch, & Glenn, 1996b). Thus, most of the 48.9 percent of poor workers who earned hourly wages greater than $9.50 per hour in March 2008 would not gain from the Obama proposal, but could gain from expansions in the EITC. Second, because the costs of the EITC are not directly borne by employers, expansions in wage subsidies do not cause adverse labor demand effects. In fact, a large body of empirical literature finds that expansions in the EITC increase employment among low-skilled single mothers (Hotz & Scholz, 2003; Eissa & Hoynes, 2005; Meyer & Rosenbaum, 2001; Ellwood, 2000; Grogger, 2003; Meyer & Rosenbaum, 2000; Hotz et al., 2002; Eissa & Liebman, 1996). Given that employment is an important anti-poverty mechanism and wage subsidies can increase income to the working poor, expansions in the EITC may be a more

effective means of aiding poor workers than increasing the Federal minimum wage. Senator

Obama has, in fact, called for such an expansion:

> **"**In both the Illinois State Senate and the U.S. Senate, Obama has championed efforts to
> expand the EITC, which is one of the most successful anti-poverty programs to date. As
> president, Obama will reward work by increasing the number of working parents eligible
> for EITC benefits, increasing the benefit available to parents who support their children
> through child support payments, and reducing the EITC marriage penalty which hurts
> low-income families. Under the Obama plan, full-time workers making minimum wage
> would get an EITC benefit up to $555, more than three times greater than the $175
> benefit they get today. If the workers are responsibly supporting their children on child
> support, the Obama plan would give those workers a benefit of $1,110."
> (BarackObama.com, 2008)

 We conclude that such a proposal to expand the Federal EITC would be a far more effective

way to help poor workers than another increase in the minimum wage.

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Table 1. Estimates of Relationship Between the Minimum Wage and Log of State Poverty Rates, 2003-2007

	Poverty Rate (INR< 1.0)		Poverty Rate (INR< 1.25)		Poverty Rate (INR<1.5)	
	Overall	*Workers*	*Overall*	*Workers*	*Overall*	*Workers*
	(1)	(2)	(3)	(4)	(5)	(6)
Log (minimum wage)	-0.052	-0.020	-0.016	-0.013	0.004	0.045
	(0.146)	(0.203)	(0.104)	(0.186)	(0.132)	(0.196)
Prime-age male unemployment rate	1.71**	1.52*	1.52**	1.59**	0.748	0.560
	(0.754)	(0.901)	(0.025)	(0.779)	(0.599)	(0.658)
Log (average adult wage rate)	-0.103	-0.025	-0.072	-0.010	-0.21	0.013
	(0.121)	(0.155)	(0.101)	(0.136)	(0.090)	(0.107)
Percentage of individuals aged 54-64	0.558	0.059	0.013	-0.933	0.447	-0.487
	(1.00)	(1.11)	(0.780)	(1.06)	(0.645)	(0.836)
Percentage of individuals aged 16-24	2.18***	3.49***	1.23*	2.20**	0.529	0.989
	(0.681)	(1.26)	(0.672)	(1.03)	(0.540)	(0.695)
State Effects?	Y	Y	Y	Y	Y	Y
Year Effects?	Y	Y	Y	Y	Y	Y
Mean of Dependent Variable	0.108	0.059	0.144	0.067	0.183	0.093
N	225	255	255	255	255	255

*** Indicates significance at the 1 percent level   ** Indicates significance at the 5 percent level
* Indicates significance at the 10 percent level

Source: Computed by the authors.
Notes: The poverty rate is calculated using family income and the family size-adjusted poverty line.
Adult wage measures and unemployment rates are calculated for those aged 25-54.
All regressions are weighted by the relevant population of workers and standard errors are corrected for clustering on the state.

Table 2. Wage Distribution of All Workers in 2008 by Income-to-Needs Ratio of Their Household

Income-to-Needs Ratio	Hourly Wage Categories[a]							Percent of All Workers	Percent of Workers Earning More than $5.70 and Less Than $9.49
	$0.01 to $5.69	$5.70 to $7.24	$7.25 to $9.49	$9.50 to $11.99	$12.00 to $15.99	$16.00 and over	Total		
Less than 1.00	5.7	12.7	32.7	19.5	15.5	13.9	100.0	4.4	11.0
1.00 to 1.24	2.3	10.1	32.1	22.1	19.7	13.8	100.0	2.6	6.1
1.25 to 1.49	6.1	10.4	30.7	22.5	19.2	11.2	100.0	2.5	5.9
1.50 to 1.99	3.6	6.7	30.0	20.2	21.7	17.8	100.0	6.4	13.3
2.00 to 2.99	2.8	5.4	17.2	19.6	28.2	26.7	100.0	16.3	21.2
3.00 or above	1.4	2.8	8.2	8.9	17.6	61.1	100.0	67.8	42.5
Whole Category Share[b]	2.1	4.3	13.3	12.5	19.6	48.2	100.0	100.0	100.0

Notes:

[a]Hourly wage rates are based on a direct question concerning earnings per hour on their current primary job. All income data used to calculate income-to-needs ratios come from retrospective information from the previous year because that is the period for which it is reported. Wages are in 2008 dollars.

[b]Share of all workers with wage earnings in each category

Source: Estimated from the outgoing rotation group of the Current Population Survey, March 2008.

Table 3. Wage Distribution of All Workers in 2007 by Income-to-Needs Ratio of Their Household

	Hourly Wage Categories[a]								Percent of Workers Earning More than $4.99 and Less Than $7.25	Percent of Workers Earning More than $5.70 and Less Than $9.49 in 2008
Income-to-Needs Ratio	$0.01 to $4.99	$5.00 to $5.14	$5.15 to $7.24	$7.25 to $8.99	$9.00 to $14.99	$15.00 and over	Total	Percent of All Workers		
Less than 1.00	6.0	1.2	21.9	23.6	37.1	10.3	100.0	4.6	15.1	11.0
1.00 to 1.24	3.4	1.1	14.3	24.6	48.3	8.3	100.0	2.3	5.4	6.1
1.25 to 1.49	1.7	0.9	16.0	20.3	44.5	16.6	100.0	2.7	6.8	5.9
1.50 to 1.99	3.0	0.5	10.2	15.5	46.0	24.8	100.0	7.0	11.6	13.3
2.00 to 2.99	1.0	0.5	8.1	11.8	43.6	35.0	100.0	16.6	21.7	21.2
3.00 or above	0.9	0.2	3.8	6.0	24.8	64.4	100.0	66.8	39.4	42.5
Whole Category Share[b]	1.4	0.3	6.4	9.3	31.1	51.6	100.0	100.0	100.0	100.0

Notes:

[a]Hourly wage rates are based on a direct question concerning earnings per hour on their current primary job. All income data used to calculate income-to-needs ratios come from retrospective information from the previous year because that is the period for which it is reported. Wages are in 2007 dollars.

[b]Share of all workers with wage earnings in each category

Source: Estimated from the outgoing rotation group of the Current Population Survey, March 2007.

Table 4. Demographic Characteristics of Workers Affected by Past and Future Increases in the Federal Minimum Wage: Family Type and Gender [a]

Family Type	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)
	Obama Proposal			*Last Federal Increase*		
Not highest-earner in family	50.2	20.0	30.2	56.6	23.9	32.7
Highest-earner, unmarried female, children under 18 years old in family	11.1	--	11.1	12.0	--	12.0
Highest-earner, unmarried male, children under 18 years old in family	5.8	5.8	--	5.8	5.8	--
Highest-earner, married with children under 18 years old in family	9.3	5.1	4.2	6.7	2.8	3.9
Highest-earner, family size greater than 1, no children	10.5	4.7	5.9	7.5	3.4	5.1
Highest-earner, family size equal to 1	12.9	6.4	6.5	10.3	5.5	4.8
Whole Category Share	100	42.1	57.9	100	41.5	58.5

Notes:
[a]The first three columns ("Obama Proposal") consists of a weighted sample of workers that includes all non-military, non-self employed workers who earned between $5.70 and $9.49 per hour in March 2008, based on the March 2008 CPS outgoing rotation group. The final three columns ("Last Federal Increase") consists of weighted sample of workers that includes all non-military, non-self employed workers who earned between $5.00 and $7.24 per hour in March 2007, based on the March 2007 CPS outgoing rotation group.

Table 5. Demographic Characteristics of New York Workers Affected by Past and Future Increases in the Federal Minimum Wage: Age, Race, and Gender[a]

Age Group	Total (%)	Male (%)	Female (%)	Non-White (%)	White (%)	Total (%)	Male (%)	Female (%)	Non-White (%)	White (%)
			Obama Proposal					*Last Federal Increase*		
Age 16 to 19	16.7	7.6	9.2	2.7	14.0	28.0	12.9	15.1	3.0	24.9
Age 20 to 25	24.5	12.0	12.5	4.8	19.6	22.4	9.9	12.5	5.0	17.4
Age 26 to 39	27.6	12.1	15.5	8.4	19.2	25.9	9.5	16.4	7.3	18.6
Age 40+	31.2	10.5	20.7	7.3	24.0	23.8	9.2	15.6	6.5	17.3
Whole Category Share[b]	100	42.1	57.9	23.2	76.8	100	41.5	58.5	21.8	78.2

Notes:

[a]The first three columns ("Obama Proposal") consists of a weighted sample of workers that includes all non-military, non-self employed workers who earned between $5.70 and $9.49 per hour in March 2008, based on the March 2008 CPS outgoing rotation group. The final three columns ("Last Federal Increase") consists of weighted sample of workers that includes all non-military, non-self employed workers who earned between $5.00 and $7.24 per hour in March 2007, based on the March 2007 CPS outgoing rotation group.

Table 6. Simulated Employment Losses of Proposed Federal Minimum Wage Increase to $9.50 per Hour, by Household Income-to-Needs Ratio[a,b]

	Percent of Workers Earning More than $5.70 and Less Than $9.49[a,b]	Number of Workers in thousands	Employment Losses in thousands ($e = -0.1$)	Employment Losses in thousands ($e = -0.3$)	Employment Losses in thousands ($e = -0.6$)	Employment Losses in thousands ($e = -1.0$)	Percent of Total Job Loss
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Income-to-Needs Ratio							
Less than 1.00	11.0	2,451	59.3	177.9	355.8	593	12.1
1.00 to 1.24	6.1	1,355	29.4	88.2	176.4	294	6.0
1.25 to 1.49	5.9	1,304	28.7	86.1	172.2	287	5.9
1.50 to 1.99	13.3	2,960	60.8	182.4	364.8	608	12.4
2.00 to 2.99	21.2	4,731	103.2	309.6	619.2	1,032	21.0
3.00 or above	42.5	9,462	208.0	624	1,248	2,080	42.5
Total	100.0	22,263	489.5	1,469	2,937	4,895	100.0

Notes:
[a]Hourly wage rates are based on a direct question concerning earnings per hour on their current primary job. All income data used to calculate income-to-needs ratios come from retrospective information from the previous year because that is the period for which it is reported. Wages are in nominal dollars. Sample restricted to 16-64 year-olds who report positive weeks and weekly hours worked in previous year.
[b]This wage category corresponds to March 2008.

Table 7. Simulated Employment Losses from the Last Federal Minimum Wage Increase to $7.25 per Hour, by Household Income-to-Needs Ratio[a,b]

	Percent of Workers Earning More than $5.00 and Less Than $7.25 in 2007[a,b]	Number of Workers in thousands	Employment Losses in thousands ($e = -0.3$)	Percent of Total Job Loss
	(1)	(2)	(3)	(4)
Income-to-Needs Ratio				
Less than 1.00	15.1	1,281	59.9	15.3
1.00 to 1.24	5.4	456.6	24.4	6.2
1.25 to 1.49	6.8	578.3	22.2	5.7
1.50 to 1.99	11.6	988.5	48.1	12.3
2.00 to 2.99	21.7	1,844	79.8	20.4
3.00 or above	39.4	3,347	157.0	40.1
Total	100.0	8,496	391.5	100.0

Notes:
[a]Hourly wage rates are based on a direct question concerning earnings per hour on their current primary job. All income data used to calculate income-to-needs ratios come from retrospective information from the previous year because that is the period for which it is reported. Wages are in nominal dollars. Sample restricted to 16-64 year-olds who report positive weeks and weekly hours worked in previous year.
[b]This wage category corresponds to March 2007.

Table 8. Simulated Monthly Net Benefits from Proposed Federal Minimum Wage Increase to $9.50, by Household Income-to-Needs Ratio[a,b]

	Net Benefits in Billions $ (e = 0)	% Net Benefits (e = 0)	Net Benefits in Billions $ (e = -0.1)	Net Benefits in Millions $ (e = -0.3)	% Net Benefits (e = -0.3)	Net Benefits in Millions $ (e = -0.6)	Net Benefits in Millions $ (e = -1.0)	Net Benefits in Millions $ (e = -0.77[c])
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income-to-Needs Ratio								
Less than 1.00	0.445	10.6	0.386	0.269	10.5	0.0932	-0.141	-0.005
1.00 to 1.24	0.288	6.8	0.251	0.177	6.9	0.0648	-0.0842	0.002
1.25 to 1.49	0.273	6.5	0.238	0.168	6.5	0.0632	-0.0768	0.004
1.50 to 1.99	0.596	14.2	0.520	0.368	14.1	0.140	-0.164	0.012
2.00 to 2.99	0.885	21.0	0.769	0.536	21.0	0.186	-0.280	-0.010
3.00 or above	1.72	40.9	1.50	1.05	41.0	0.374	-0.528	-0.004
Total	4.21	100.0	3.66	2.56	100.0	0.921	-1.27	0.000

Notes:

[a]Expected benefits are calculated as the weighted sum of $(1-p)(\$9.50-w)H - pwH$ for each minimum wage worker, where p is the probability of job loss from the minimum wage hike, $[(\$9.50-w)/w]e$, w is the worker's hourly wage rate, H is monthly hours worked, and e is the employment elasticity.

[b]The analysis uses data from the outgoing rotation groups of the March 2008 CPS. A minimum wage worker is defined as earning between $5.70 and $9.49 per hour in March 2008. Sample restricted to 16-64 year-olds who report positive weeks and weekly hours worked in previous year.

[c]The break-even elasticity is -0.7683.

Table 9. Comparison of Simulated Monthly Net Benefits from Proposed Federal Minimum Wage Increase to the last Federal Minimum Wage Increase, by Household Income-to-Needs Ratio[a,b]

	Net Benefits in Millions $ from Obama Proposal ($e = -0.3$)	% Net Benefits from Obama Proposal ($e = -0.3$)	Net Benefits in Millions $ from Last Federal Increase ($e = -0.3$)	% Net Benefits from Last Federal Increase ($e = -0.3$)	Net Benefits in Millions $ from Last Federal Increase ($e = -0.81$)
	(1)	(2)	(3)	(4)	(5)
Income-to-Needs Ratio					
Less than 1.00	0.269	10.5	0.073	14.0	0.000
1.00 to 1.24	0.177	6.9	0.026	5.0	-0.001
1.25 to 1.49	0.168	6.5	0.034	6.5	0.001
1.50 to 1.99	0.368	14.1	0.074	14.2	0.000
2.00 to 2.99	0.536	21.0	0.117	22.4	0.002
3.00 or above	1.05	41.0	0.198	37.9	-0.003
Total	2.56	100.0	0.522	100.0	0.000

Notes:

[a]Expected benefits from last Federal minimum wage increase are calculated as the weighted sum of $(1-p)(\$7.25-w)H - pwH$ for each minimum wage worker, where p is the probability of job loss from the minimum wage hike, $[(\$7.25-w)/w]e$, w is the worker's hourly wage rate, H is monthly hours worked, and e is the employment elasticity.

[b]The analysis uses data from the outgoing rotation groups of the March 2007 CPS. A minimum wage worker is defined as earning between $5.00 and $7.24 per hour in March 2007. Sample restricted to 16-64 year-olds who report positive weeks and weekly hours worked in previous year.

[c]The break-even elasticity is -0.8045.