Discussion Paper

The potential economic impact of increasing the minimum wage in New Hampshire

by Antoniya Owens

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Introduction

In May 2007, Governor John Lynch signed into law the first increase of New Hampshire's minimum wage in ten years. The bill, HB 514, which passed overwhelmingly in both the Senate and the House of Representatives, mandates an increase in the state minimum wage to $6.50 in September 2007 and to $7.25 in September 2008. In New Hampshire, currently the only state in New England whose minimum wage is set at the federal level of $5.15, bills aimed at increasing the state minimum wage had been filed and defeated every year since 2000.

This recent movement on the minimum wage issue in New Hampshire came, perhaps not coincidentally, at a time when a similar increase was being considered at the federal level. In January 2007, the U.S. House of Representatives passed the Fair Minimum Wage Act of 2007, proposing to increase the federal minimum wage to $7.25 per hour. One month later, the Senate passed an amended version of the bill that aimed to alleviate some of the burden on employers through tax relief provisions for small businesses. More recently, this bill was combined with a war funding bill and passed by a large margin in both the House and the Senate. The approved version of the bill mandates an increase of the minimum wage to $7.25 in three consecutive stages over a period of two years. President Bush signed the bill into law on May 25, 2007, which means that the final increase to $7.25 will take place in the summer of 2009.

This paper estimates the potential economic impact of the New Hampshire's new state minimum wage law on the state's aggregate employment and wages. According to the analysis, the minimum wage increase would raise the wages of 26,000 workers in the state and would have a negative impact on employment ranging from 300 to 1,500 jobs, which is between 1 percent and 6 percent of workers directly affected by the law. On net, the combined impact of both stages of the increase would raise aggregate wages by approximately $17.4 million. The analysis here focuses on workers with hourly wages between $5.15 and $7.25 and does not examine the impact of the bill on tipped employees, whose new hourly wage rate will be set at 45 percent of the state minimum wage.

How does New Hampshire compare with other states?

New Hampshire is the only state in New England where the minimum wage remains at the federal level of $5.15. State minimum wage levels in Connecticut, Vermont, Massachusetts, and Rhode Island all rank among the top seven in the nation, with hourly rates of $7.65, $7.53, $7.50, and $7.40, respectively; Maine ranks 16th with a minimum wage of $6.75. Furthermore, the Massachusetts minimum wage is set to increase to $8.00 in 2008, which—barring any future minimum wage legislation by other states—will make it among the highest in the nation at that time, along with California, whose minimum wage will also increase to $8 in 2008, and possibly Washington and Oregon, where minimum wages are tied to inflation and are currently set at $7.93 and $7.80, respectively.

The New Hampshire legislation will increase the minimum wage in the state for the first time since the federal minimum wage was last raised in 1997. This ten-year stretch is the longest period without an increase since the federal minimum wage was enacted in 1938. Since the minimum wage is not indexed to inflation, its value has eroded by 20 percent over the past ten years. For a full-time worker who earns $5.15 per hour, this represents a loss of more than $2,500 per year.[1] Currently, in real terms, the value of the minimum wage is the lowest it has been in 50 years. Increasing it to $7.25 per hour by 2008 would bring its real value back to where it was in the early 1980s (see Figure 1).

Nationally, an increase in the federal minimum wage would mean a raise for 5.9 million workers. Not surprisingly, the majority of workers (over 63 percent) who will be directly impacted by a federal minimum wage increase reside in those 21 states where the current state minimum wage is set at the federal level, such as New Hampshire. Yet a sizeable number of workers will also be affected in all but eight of the remaining states that have already set their minimum wage levels above the current federal level because their state minimum wages are below the proposed increase to $7.25.

Who will be affected by an increase in New Hampshire's minimum wage?

Analysis of data from the outgoing rotation group files of the 2006 Current Population Survey (CPS) shows that in New Hampshire roughly 26,000 workers are likely to be affected by the minimum wage increase—meaning that they earn hourly wages between the current minimum of $5.15 and the new state minimum of $7.25 (See the technical appendix for more information on the CPS outgoing rotation group data). Nine thousand of these "affected" workers will receive an immediate raise in their hourly wage in September 2007 during the first stage of the increase, from $5.15 to $6.50. In September 2008, the

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[1] Jared Bernstein. "Tax Incentives for Businesses in Response to a Minimum Wage Increase." Economic Policy Institute. January 2007.
http://www.epi.org/content.cfm/webfeatures_viewpoints_minwage_tax_incentives_testimony_01102007

wages of all workers who remain employed after the first increase will be raised to a new state minimum of $7.25 per hour.[2]

Opponents of increasing the minimum wage often argue that such raises benefit primarily teenagers and part-time workers who do not contribute much to their families' total earnings. They contend that the minimum wage has little impact on reducing family poverty and is not as efficient as other more targeted approaches, such as the Earned Income Tax Credit.[3] Although some studies of other states have found that a high proportion of minimum wage earners are adults, work full-time, and make significant contributions to their families' incomes, this does not appear to be the case in New Hampshire.[4] In general, it appears that the 26,000 affected workers in New Hampshire are younger, more likely to be enrolled as full-time students and to work fewer hours, and less likely to be married or have children than the affected workers in the nation as a whole (see Table 1).[5]

- **Age and gender:** As noted above, affected workers in New Hampshire tend to be younger than in the nation as a whole. Unlike in the United States, where only a quarter of the affected workers are teenagers, in New Hampshire just under half are between the ages of 16 to 19. One third of affected workers in the state are between 20 and 44 and one in five is 45 or older. The median age of these workers in New Hampshire is 20 years; nationwide, it is 25 years. The majority of affected workers in both New Hampshire (62 percent) and the United States (59 percent) are women.

- **Race/Origin:** Nearly all (96 percent) affected workers in New Hampshire are white (non-Hispanic), which roughly equals the percentage of the state's general population who are white. Only five percent of the affected workers in the state (compared to 15 percent nationally) are foreign-born workers who emigrated to the United States, mainly from Europe, the Middle East, or Asia.

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[2] For a robustness check, we replicated the demographic analysis on a merged dataset of 2005 and 2006 MORG data, which increased the sample size by almost two thirds. While the majority of the demographic characteristics from the merged dataset told the same story, the two indicators that differed more significantly in New Hampshire were the share of single parents (which doubled to 4 percent of the affected population) and the share of workers whose weekly work hours vary (which increased from 8 to 14 percent).

[3] Joseph J. Sabia. "Tax Incentives for Business in Response to a Minimum Wage Increase." Testimony Prepared for U.S. Senate Finance Committee, January 10, 2007; and Richard V. Burkhauser, and T. Aldrich Finegan. "The Economics of Minimum Wage Legislation Revisited." *Cato Journal*. Spring/Summer 1993, vol. 13, No. 1,

[4] For a study on Massachusetts, see Jeff McLynch. "Keeping It Real: The Effect of Increasing and Indexing the Massachusetts Minimum Wage." Massachusetts Budget And Policy Center. November 26, 2004. This report examines three options for increasing the Massachusetts minimum wage: from $6.75 to $7.65, to $8.25, and to $9.23. Both the minimum wage and its increases evaluated in the MBPC report are higher than the wage levels considered in New Hampshire. This may be contributing to the findings that, in Massachusetts, a higher share of the affected workers are adults, work full-time, and support families than in New Hampshire.

[5] For the US as a whole, the number of affected workers is the sum of the workers in all states where the state minimum wage is greater than or equal to the federal minimum but lower than the proposed federal minimum of $7.25 per hour. An affected worker from these states would be one who earns an hourly wage equal or higher than their state minimum wage but lower than $7.25.

- **Work hours:** A quarter of the affected workers in the state work 35 or more hours per week, and 38 percent work less than 20 hours per week. Nationwide, 44 percent of all affected workers work full time and only 16 percent work less than 20 hours per week.

- **Educational attainment:** Over 40 percent of the affected workers in New Hampshire have either dropped out of or have not yet graduated from high school. Over 11,000 affected workers are full-time students—at 43 percent, this share is twice as high as in the nation as a whole. This is not surprising considering that almost half of the affected workers in the state are between the ages of 16 and 19. Nearly 80 percent of the New Hampshire student workers are teenagers who are still in high school and work part-time.

- **Industry and occupation:** Unsurprisingly, retail trade and food services are the industries with the highest concentration of affected workers both in New Hampshire and in the nation. Similarly to the nation, a quarter of all affected workers in New Hampshire are in sales related occupations and another quarter have food preparation and serving related jobs.

- **Family status:** Thirteen percent of the New Hampshire workers likely to be affected by a minimum wage increase have children and 2 percent are single parents.[6] These shares are significantly lower than in the United States as a whole, where a quarter of all affected workers are parents and 9 percent are single parents. However, in both New Hampshire and the nation, the share of affected parents who are teenagers is fairly low: In New Hampshire, this share is 6 percent, whereas nationwide it is even lower, at 2 percent.

- **Share of family earnings:** Counting only workers who reside with family members in their households, the average share of weekly family earnings contributed by affected workers is 33 percent in New Hampshire and 43 percent nationwide. Yet these average figures mask considerable variation as 21 percent of affected workers in New Hampshire (and 26 percent nationwide) are responsible for earning 100 percent of their families' weekly earnings (see Table 2).

Potential economic impact of increasing the minimum wage in New Hampshire

We estimate the potential economic impact of increasing the minimum wage in New Hampshire separately for each of the two consecutive stages stipulated in the legislation— from $5.15 to $6.50 in September 2007 and from $6.50 to $7.25 a year later. The analysis focuses on those workers who are expected to experience a direct and immediate increase from their current wage level to the new minimum level. In the first stage, workers who

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[6] A single parent is defined as someone who is widowed, divorced, separated, or never married, and has at least one child of their own present in their household.

earn between \$5.15 and \$6.50 per hour are assumed to be directly impacted. In the second stage, those who earn between \$6.50 and \$7.25 (including workers who previously received a raise to \$6.50 and did not lose their jobs as a result of the increase) are assumed to be directly impacted. Furthermore, empirical evidence shows that, without being legally compelled to do so, many firms also choose to raise the wages of those workers who already earn above the new minimum wage in order to preserve internal wage structures.[7] In this paper, we do not attempt to calculate any such "spill-over" effects on the wages of those workers previously earning \$7.25 per hour or higher—for simplicity's sake, we assume that their wage rates will be unaffected by the minimum wage increase.

Impact on employment

The impact of raising the minimum wage on employment largely depends on how sensitive the demand for labor is to changes in wages. This sensitivity is measured by the elasticity of demand for labor, defined as the percent change in employment that occurs in response to a percent change in the wage rate. For example, if wages increase by 10 percent and as a result employment falls by 4 percent, the elasticity of demand for labor in that case is -0.4. The more sensitive the demand for labor to changes in the wage rate (the larger the elasticity of demand), the greater the reduction in employment following a minimum wage increase.

Numerous studies have sought to quantify the employment effects of raising the minimum wage. A recent review of the economic literature on this subject reveals a wide range of estimated effects on low-wage employment.[8] Yet the preponderance of empirical evidence in the literature suggests that increases in the minimum wage do result in decreases in employment, but that this effect tends to be relatively small. For example, Charles Brown's comprehensive assessment of the literature over the past three decades concludes that "the minimum wage effect is small (and zero is often hard to reject)" and is "centered on an elasticity of -0.10."[9] Yet, Brown also suggests that the elasticity of demand for workers directly affected by a minimum wage increase could also be as high as -0.50, given the variation across datasets and methodologies used in different studies. Furthermore, a 1998 survey of 63 labor economists, who were asked to provide their "quantitative best estimates" of the effect of increasing the minimum wage, yields an average elasticity of demand of -0.21.[10]

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[7] Economic Policy Institute, *Minimum Wage Issue Guide*, April 2007. http://www.epi.org/issueguides/minwage/epi_minimum_wage_issue_guide.pdf

[8] David Neumark and William Wascher. "Minimum Wages and Employment: A Review of Evidence from the New Minimum Wage Research." *NBER Working Paper* No.12663. November 2006.

[9] Charles Brown. "Minimum Wages, Employment, and the Distribution of Income." *Handbook of Labor Economics*, O. Ashenfelter and D. Card (eds.). 1999, vol.3.

[10] Victor Fuchs, Alan Krueger, and James Poterba. "Economists' Views About Parameters and Policies: Survey Results in Labor and Public Economics." *Journal of Economic Literature*. September 1998, vol. 36, pp. 1387-1425.

In this paper, the employment impact of the minimum wage increase is calculated by multiplying an elasticity of demand for labor by the number of affected workers in each stage of the increase and by the percentage increase in their wage rates.

1. Elasticity of demand for labor

The analysis in this paper sets up a range of possible employment outcomes by using the three different elasticities discussed above from the literature. Brown's summary estimates constitute a lower bound (elasticity of -0.10) and an upper bound (elasticity of -0.50) of the potential employment effects. In addition, the 1998 survey estimate (-0.21) serves as a mid-point. When calculating the employment impacts of the second stage of the increase with each of the three elasticities, we assume job losses from the previous increase calculated with the same elasticity. That is, the lower bound of the calculations always assumes an elasticity of -0.10, the middle estimate always assumes an elasticity of -0.21, and the upper bound always assumes an elasticity of -0.50.

2. Number of affected workers

As noted above, the workers affected by the first stage of the increase (from $5.15 to $6.50) are all 8,988 workers whose initial hourly wages were between $5.15 and $6.50. The number of workers affected by the second stage of the increase (from $6.50 to $7.25) is the number of workers whose hourly wages were raised to $6.50 during the first increase (excluding those who lost their jobs as a result), plus all 17,120 workers whose wages were initially between $6.50 and $7.25.

3. Percentage increase in wage rate

The percentage increase in the wage rates used in the calculations is the weighted average of the percentage increase that each worker would receive relative to his or her previous wage level. The weighted average of the wage increases across all affected workers is 11.9 percent in the first stage of the increase. Since the number of workers who may lose their jobs after the first stage of the increase varies depending on which elasticity of demand is used in the calculations, the weighted average percentage increase in the wage rates following the second stage of the increase will also vary. Using either the lower bound (-0.1) or the mid-point elasticity of -0.21, we estimate that the workers affected by the second stage of the increase will experience a wage increase of 7.8 percent, on average (see Table 3). Using the upper bound elasticity of -0.5 yields a slightly lower average wage increase of 7.7 percent.

Results

Using the mid-point elasticity, the analysis shows that the combined impact of both stages of the minimum wage increase is a 2.5 percent decline in the affected employment, or 646 lost jobs. This amounts to less than one tenth of one percent (-0.09 percent) of total employment in New Hampshire, which was roughly 711,500 in 2006 (see Table 4).[11]

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[11] Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics. http://www.bls.gov/lau/

In the first stage of the increase, all 8,988 workers who earn between $5.15 and $6.50 an hour will receive a raise in their wage rate. The average hourly wage of these workers is $5.83 per hour and the average percentage increase that they will experience is 11.9 percent. We calculate the decrease in employment following the first stage of the increase by multiplying the number of affected workers (8,988) times the average percentage increase in the wage rate times an elasticity of -0.21. Thus, using the mid-point elasticity yields a decrease of 2.5 percent, or 224 lost jobs following the first stage of the increase.

For the second stage, the number of workers affected is the 17,120 workers with wages between $6.50 and $7.25 per hour as well as the 8,764 workers whose wages were raised to $6.50 in the first round and who are still employed (8,988 minus the 224 lost jobs). The average wage for this group is $6.74 and the average percent increase caused by the second stage of the wage hike is 7.8 percent. Multiplying the number of affected workers (25,884) times the average percentage increase in the wage rate times an elasticity of -0.21 yields a percentage decrease in the affected employment of 1.6 percent, or 422 jobs lost as a result of the second stage of the minimum wage increase.

Allowing the elasticity of demand to vary between the upper and lower bounds, the overall employment impact of the new state minimum wage law is likely to be between 1.2 and 5.8 percent of all affected workers in New Hampshire. At the lower bound of the percent change in employment, raising the minimum wage would be expected to yield a total decrease in employment of 309 jobs, or 1.2 percent of affected workers. Using the upper bound from the literature yields a loss of 1,519 jobs, or 5.8 percent of affected workers.

It should be noted that the additional labor costs associated with increasing the minimum wage may not entirely translate into employment losses. Rather, some portion of these higher labor costs may be either absorbed by employers through lower profits or passed on to consumers in the form of higher prices. For example, small increases in the minimum wage (on the order of 10 percent) may be absorbed by employers given the costs associated with employee turnover and/or raising prices for consumers. Indeed, few studies in the empirical literature find an employment effect for such small wage increases. [12] Considering that the federal minimum wage has not been increased in a decade and its value in real terms has eroded considerably, it is likely that at least some of the increase mandated by the new state law will be absorbed by employers. If this happens, the number of jobs lost as a result of the increase will be lower than the estimates presented in this paper.

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[12] A study conducted by the Political Economy Research Institute (PERI) at the University of Massachusetts at Amherst finds little evidence of reduced employment or hours worked in response to the 1998 Boston living wage ordinance. Additional survey data collected by PERI indicates that covered firms may have taken lower profits rather than reduce employment. (Mark Brenner. "The Economic Impact of the Boston Living Wage Ordinance." *Industrial Relations*. January 2005, vol. 44, no. 1)

Impact on aggregate wages

In addition to calculating the potential employment impact, we also determine the impact of the state minimum wage increase on aggregate statewide wages and wages per employed worker. First, the increase in annual wages following each minimum wage hike is calculated for each individual worker by multiplying the dollar increase in the hourly wage for that worker by his or her annual work hours.[13] The gross annual statewide increase is then determined by summing up these individual wage effects over all workers. For example, using the midpoint elasticity, the gross aggregate change in wages for all 26,108 individuals over the two stages would be $22.0 million (Table 5b).

However, the positive wage gains that result from each minimum wage increase would be partially offset by the lost wages of those workers who lose their jobs as a result. Therefore, in the calculation of the net wage impact of the increase, the lost annual wages of the laid-off workers are subtracted from the gross aggregate wage increase.[14] So, while increasing the minimum wage from $5.15 to $7.25 would lead to a gross annual wage increase of $22.0 million, the lost wages of the 646 laid-off workers (-$4.6 million) would bring the net annual statewide wage increase to about $17.4 million. That translates into an increase of about $682 per year for each worker who remains employed after the two stages. Allowing the elasticity of demand to vary between the upper and lower bounds, the net aggregate wage impact of the new minimum wage law is likely to range from a high of $19.9 million to a low of $10.9 million (See Tables 5a and 5c).

Impact on hours

In addition to causing job losses, increasing the minimum wage may also cause some employers to reduce the hours of their workers in order to cut back on labor costs. The majority of the research on minimum wage effects, however, focuses on the employment impact of minimum wage increases rather than on the potential reduction in the number of work hours. Most of the studies that examine the impact on hours use data on teen employment and do not find consistent results of either positive or negative effect on hours. A recent study finds that minimum wage increases do not adversely affect hours among teenage workers.[15] On the other hand, limited evidence from a few relatively dated studies that examine "full-time-equivalent" employment suggests that minimum wage increases do

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[13] Annual work hours are calculated by multiplying each worker's weekly hours times an imputed number of weeks worked per year. Since the CPS Merged Outgoing Rotation Group files do not provide data on the number of weeks worked per year by each worker, the numbers used here are imputed for part-time and full-time workers separately, using data from the 2006 CPS March Supplement for workers in the same hourly wage range. If the actual number of annual work weeks is higher (or lower) than the imputed values, this would result in a certain degree of overestimation (or underestimation) of the annual wage impact of the increase.

[14] The lost annual wages of the laid-off workers are calculated by multiplying the hourly wage of each unemployed worker times their weekly hours times their imputed annual work weeks.

[15] Madeline Zavodny. "The effect of the minimum wage on employment and hours." *Labour Economics*. 2000, vol. 7, pp. 729–750

reduce hours worked by teenagers.[16] A more recent paper estimates that a 10 percent increase in the minimum wage would yield a 3 percent reduction in hours worked for those workers earning between 1 and 1.2 times the old minimum wage.[17]

While this paper does not estimate the impact of the minimum wage increase on the number of work hours, it is important to note that a reduction in hours for those workers who remain employed may lead to other adverse consequences that are hard to measure. A reduction in hours for the workers who remain employed may cause a shift from full-time to part-time employment, possibly resulting in the loss of employer-sponsored benefits, such as health insurance or pension benefits, typically offered to full-time employees. Alternatively, employers may directly reduce the amount spent on employee benefits, such as contributions to health insurance premiums. The analysis in this paper calculates the annual wage impact of the minimum wage increase with the assumption that hours remain unchanged. If they are reduced as a result of the increase, the net annual wage impact would be smaller than estimated here.

Conclusion

The analysis presented in this paper relies on CPS data to estimate the employment and aggregate wage impact of New Hampshire's new state minimum wage law. It also presents a demographic profile of the workers whose hourly wages are at or close to the minimum wage level in the state as well as in the nation. The workers in New Hampshire likely to be affected by a minimum wage increase to $7.25 tend to be younger and to work fewer hours per week compared to those in the United States. They are also less likely to be married or to have children. Whereas the educational attainment of the affected workers in New Hampshire is comparable to that of those in the nation, they are twice as likely as their national counterparts to be enrolled in school full-time. Similarly to the nation as a whole, the highest concentration of affected workers in New Hampshire is in retail trade and food preparation and services.

The combined employment impact of the two stages of the minimum wage increase in New Hampshire is likely to be negative and small—the number of jobs lost as a result of the increase is likely to be between 300 and 1,500, which amounts to between 0.04 and 0.2 percent of total state employment and between 1 and 6 percent of all affected workers in the state. If employers absorb a certain portion of the minimum wage increase through reduced turnover costs or higher prices, the employment impact of the increase would be lower than the one presented in this paper.

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[16] Charles Brown. "Minimum Wages, Employment, and the Distribution of Income." *Handbook of Labor Economics*, O. Ashenfelter and D. Card (eds.). 1999, vol.3.

[17] David Neumark, Mark Schweitzer, and William Wascher. "Minimum Wage Effects throughout the Wage Distribution." *Journal of Human Resources*. 2004, vol. 39, No. 2, pp. 425-50.

In addition, increasing the state minimum wage to $7.25 in two stages is estimated to lead to a total net annual wage gain of approximately $17.4 million in New Hampshire. The size of this aggregate wage increase may be diminished, however, if employers respond to the increase by reducing the hours of their workers or curtailing their nonpecuniary benefits.

Acknowledgements

Technical appendix

The analysis in this paper is based on wage data from the Current Population Survey (CPS), a government monthly survey of employment and labor markets, prepared by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS). Each month, the CPS surveys about 50,000 households. Each household is in the survey for four consecutive months, out for eight, and then back in for another four months. Only households in either their fourth or eighth month are asked questions about their current hourly and weekly earnings and weekly hours of work—these are called the outgoing rotation groups (ORG). Each year, the BLS gathers all these interviews into a single Merged Outgoing Rotation Group File (also known as the CPS Annual Earnings File), where an individual appears only once in the same file year. The analysis for this paper uses microdata from the NBER extracts of Merged Outgoing Rotation Group (MORG) File that contains a full year's data for 2006.

Since the analysis in this paper is focused on hourly wages (reported or imputed), the ORG files provide a better source of data than the March CPS files which are traditionally used for income and poverty analysis. In order to calculate hourly wage rates from the March CPS, one would have to approximate them by dividing annual earnings by weeks worked and by usual weekly hours worked in the year prior to the survey. In contrast, participants in the ORG are asked to report their exact weekly wages, hourly wages (for workers paid by the hour), and hours worked in the week prior to the survey.[18]

The subsample used in this paper includes all wage-and-salary workers with valid wage and hour data, whether paid weekly or by the hour. It is limited to those individuals age 16 and older who are employed in either public or private establishments (self-employed workers are excluded). If a valid hourly wage has been reported, it is used throughout the analysis. For those workers who report only a weekly wage, the hourly wage is calculated by dividing their weekly wage by their weekly hours worked.

About 5 percent of the workers in the entire sample reported varying weekly work hours. For these workers, an hourly wage is calculated by dividing their weekly earnings by their imputed weekly hours. The imputed values of their work hours used in this analysis are calculated by the Center for Economic and Policy Research using a regression-based imputation procedure.[19] In this procedure, the weekly hours for the workers whose hours vary are predicted based on the usual weekly hours worked by persons with similar demographic characteristics (age, gender, race, educational attainment). It should be noted that excluding these workers from the subsample instead of using their imputed hours in the analysis does not alter the findings of this paper in any qualitative way.

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[18] For a more detailed discussion of the Merged Outgoing Rotation Group files of the CPS, see Appendix B in Lawrence Mishel, Jared Bernstein, and Sylvia Allegretto. "The State of Working America 2006/2007," 10th Ed, December 2006. http://www.epi.org/datazone/06/swa06-99-appendices.pdf

[19] For more information, see http://www.ceprdata.org/cps/org_index.php

All of the calculations in this paper apply CPS earnings weights. Since the ORG survey is administered each month, the earnings weights sum up to the total population each month and 12 times the population for each annual MORG file. Therefore the weights used in this paper are the MORG earnings weights divided by 12.
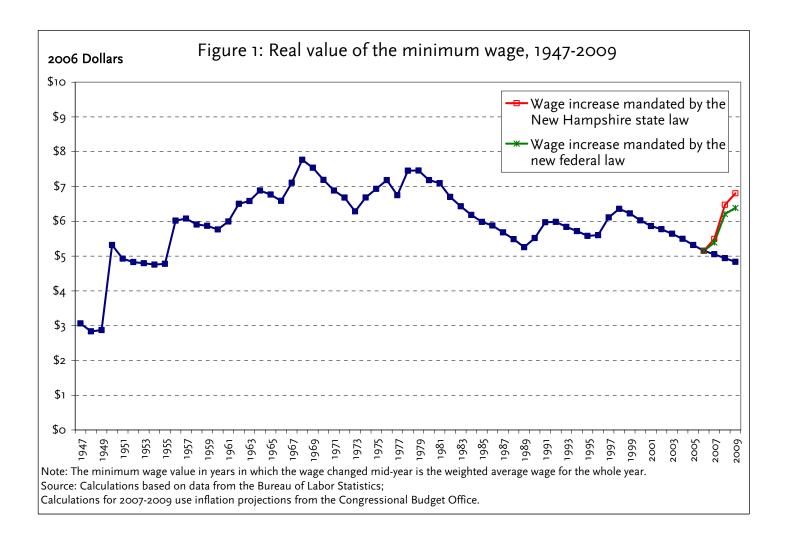
Figures and Tables

Figure 1: Real value of the minimum wage, 1947-2009

2006 Dollars

Legend:
- Wage increase mandated by the New Hampshire state law
- Wage increase mandated by the new federal law

Note: The minimum wage value in years in which the wage changed mid-year is the weighted average wage for the whole year.
Source: Calculations based on data from the Bureau of Labor Statistics;
Calculations for 2007-2009 use inflation projections from the Congressional Budget Office.

Table 1: Who are the workers who will be affected by an increase in the minimum wage?

	New Hampshire	United States
Number of directly affected workers	26,108	5,917,684
Affected workers as percent of total employment	3.7	4.1
Distribution of affected workers by:		
Gender	**Percent of affected workers**	
Male	38	41
Female	62	59
Age		
16 to 19	47	25
20 to 44	33	52
45 and older	20	22
Median age	20 years	25 years
Race/Ethnicity		
White	96	60
Black	N/A	16
Asian	2	2
Mixed	1	1
Of Hispanic origin	2	20
Work hours		
Hours vary	8	13
1 to 19 hours	38	16
20 to 34 hours	29	27
Full-time (35 or more hours)	24	44
Educational attainment		
Less than high school	41	34
High school graduate	30	34
Some college/Associate degree	21	26
Bachelor's degree or higher	7	6
Student status		
Full-time students	43	23
Part-time students	1	2
Industry		
Retail trade	34	23
Food services	22	23
Arts, entertainment, and recreation	7	3
Occupation		
Sales	26	21
Food preparation and serving	23	21
Office and administrative support	13	12
Personal care	9	6
Family status		
Parents	13	24
Single parents	2	9
Married workers	24	30

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files

Table 2: How much do affected workers contribute to family earnings in New Hampshire? (percent)

	New Hampshire	United States
Average share of weekly family earnings contributed by affected worker	33	43
Share of workers earning 100% of weekly family earnings	21	26

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.

Table 3: What are the average wages and wage increases for workers affected by the New Hampshire minimum wage increase?

	Stage 1: Increase from $5.15 to $6.50	Stage 2: Increase from $6.50 to $7.25
Initial wage	$5.83	$6.74
New wage	$6.50	$7.25
Dollar increase	$0.67	$0.51
Percentage increase	11.9%	7.8%
Number of workers affected	8,988	25,884

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files
Notes: The values of the wages and wage increases in this table are weighted averages across the wage distribution.
The weighted averages in the second stage of the minimum wage hike are estimated assuming employment impact of the first stage calculated with an elasticity of -0.21.
The second stage of the increase—from $6.50 to $7.25—is set to September 2008, twelve months after the first increase in September 2007.

Table 4: What is the likely impact on the employment of affected workers due to increasing the minimum wage in New Hampshire?

	Number of affected workers	Estimated number of jobs lost	Estimated impact as a percentage of affected workers
Using the "lower bound" elasticity of demand from the literature (-0.10)			
Stage 1: Increase from $5.15 to $6.50 Workers initially earning between $5.15 and $6.50 per hour	8,988	-107	-1.2%
Stage 2: Increase from $6.50 to $7.25 Workers earning between $6.50 and $7.25 per hour after the Stage 1 increase to $6.50	26,001	-202	-0.8%
Total Impact	26,108	-309	-1.2%
Using the "mid-point" average elasticity of demand from a 1998 survey of economists (-0.21)			
Stage 1: Increase from $5.15 to $6.50 Workers initially earning between $5.15 and $6.50 per hour	8,988	-224	-2.5%
Stage 2: Increase from $6.50 to $7.25 Workers earning between $6.50 and $7.25 per hour after the Stage 1 increase to $6.50	25,884	-422	-1.6%
Total Impact	26,108	-646	-2.5%
Using the "upper bound" elasticity of demand from the literature (-0.50)			
Stage 1: Increase from $5.15 to $6.50 Workers initially earning between $5.15 and $6.50 per hour	8,988	-533	-5.9%
Stage 2: Increase from $6.50 to $7.25 Workers earning between $6.50 and $7.25 per hour after the Stage 1 increase to $6.50	25,575	-986	-3.9%
Total Impact	26,108	-1,519	-5.8%

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.

Notes: The second stage of the increase—from $6.50 to $7.25—is set to September 2008, twelve months after the first increase in September 2007.

Table 5a: Based on the lower bound of the employment impact estimates, what is the likely impact on aggregate wages due to increasing the minimum wage in New Hampshire?

	Number of Affected Workers	Aggregate change in wages ($ millions)	Wage impact per affected worker who remains employed (dollars)
Stage 1: Increase from $5.15 to $6.50			
Workers initially earning between $5.15 and $6.50 per hour	8,988	$7.1	
Workers expected to become unemployed	-107	-$0.7	
Net increase in wages		$6.4	$724
Stage 2: Increase from $6.50 to $7.25			
Workers who remain employed and earn between $6.50 and $7.25 after the Stage 1 increase to $6.50	26,001	$15.0	
Workers expected to become unemployed	-202	-$1.5	
Net increase in wages		$13.5	$514
Total impact on wages from both increases			
Workers earning between $5.15 and $7.25 previously	26,108	$22.1	
Workers expected to become unemployed	-309	-$2.2	
Total overall net increase in wages		**$19.9**	$771

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.
Notes: Wage impact is calculated assuming job losses calculated with lower-bound elasticity (-0.1). The second stage of the increase—from $6.50 to $7.25—is set to September 2008, twelve months after the first increase in September 2007.

Table 5b: Based on the mid-point of the employment impact estimates, what is the likely impact on aggregate wages due to increasing the minimum wage in New Hampshire?

	Number of Affected Workers	Aggregate change in wages ($ millions)	Wage impact per affected worker who remains employed (dollars)
Stage 1: Increase from $5.15 to $6.50			
Workers initially earning between $5.15 and $6.50 per hour	8,988	$7.1	
Workers expected to become unemployed	-224	-$1.5	
Net increase in wages		$5.6	$644
Stage 2: Increase from $6.50 to $7.25			
Workers who remain employed and earn between $6.50 and $7.25 after the Stage 1 increase to $6.50	25,884	$14.9	
Workers expected to become unemployed	-422	-$3.1	
Net increase in wages		$11.7	$461
Total impact on wages from both increases			
Workers earning between $5.15 and $7.25 previously	26,108	$22.0	
Workers expected to become unemployed	-646	-$4.6	
Total overall net increase in wages		**$17.4**	$682

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.
Notes: Wage impact is calculated assuming job losses calculated with middle elasticity (-0.21). The second stage of the increase—from $6.50 to $7.25—is set to September 2008, twelve months after the first increase in September 2007.

Table 5c: Based on the upper bound of the employment impact estimates, what is the likely impact on aggregate wages due to increasing the minimum wage in New Hampshire?

	Number of Affected Workers	Aggregate change in wages ($ millions)	Wage impact per affected worker who remains employed (dollars)
Stage 1: Increase from $5.15 to $6.50			
Workers initially earning between $5.15 and $6.50 per hour	8,988	$7.1	
Workers expected to become unemployed	-533	-$3.6	
Net increase in wages		$3.6	$422
Stage 2: Increase from $6.50 to $7.25			
Workers who remain employed and earn between $6.50 and $7.25 after the Stage 1 increase to $6.50	25,575	$14.6	
Workers expected to become unemployed	-986	-$7.3	
Net increase in wages		$7.3	$296
Total impact on wages from both increases			
Workers earning between $5.15 and $7.25 previously	26,108	$21.7	
Workers expected to become unemployed	-1,519	-$10.9	
Total overall net increase in wages		**$10.9**	$442

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.
Notes: Wage impact is calculated assuming job losses calculated with upper-bound elasticity (-0.5). The second stage of the increase—from $6.50 to $7.25—is set to September 2008, twelve months after the first increase in September 2007.