This memo is preliminary in nature and subject to revision and review. Any views expressed are not necessarily those of the Federal Reserve Bank of Boston or the Federal Reserve System.

To: Senator Fuller Clark, Chair, Senate Energy, Environment and Economic Development Committee; Senate President Sylvia Larsen; Republican Leader Theodore Gatsas; Senator David Gottesman, Chair, Senate Commerce, Labor, and Consumer Protection Committee; Senator Betsy DeVries, Vice-Chair, Senate Commerce, Labor, and Consumer Protection Committee

Cc: Ms. Elizabeth Ignacio, Office of the Governor, Elaine Rapp, Senate Research Office; Steve Norton and Dennis Delay, New Hampshire Center for Public Policy Studies

From: Darcy Saas, New England Public Policy Center (617.973.3177)

Re: Economic Impact of the Proposed Increase in the New Hampshire Minimum Wage

Date: April 20, 2007

This memo provides data from a discussion paper by Antoniya Owens soon to be released by the New England Public Policy Center at the Federal Reserve Bank of Boston that analyzes the potential economic impact of the minimum wage legislation (HB 514) pending in the New Hampshire legislature. It presents the preliminary findings of the study, which may be subject to revisions prior to the full paper's official release.

Using data from the 2006 Current Population Survey, the study estimates a range of possible employment outcomes. It focuses on workers with hourly wages between $5.15 and $7.25 and does not examine the impact of the bill on tipped employees. The analysis indicates that HB 514 is likely to have a negative but small impact on employment and a net positive impact on aggregate wages in the state.

The Center estimates that increasing the minimum wage to $7.25 would result in a loss of between 300 and 1500 jobs. Under the most likely scenario, the minimum wage hike would induce a loss of about 640 jobs, or 2.5 percent of workers directly affected by the bill. However, after deducting wages foregone as a result of this job loss, the state would see a net gain of about $20.5 million in annual aggregate wages, or $803 per year for each minimum wage worker who remains employed.

Affected population

The analysis finds that the proposed minimum wage increase will directly affect about **26,000** workers who earn hourly wages between the current minimum of $5.15 and the proposed state minimum of $7.25. Approximately 9,000 of these workers will receive a wage raise during the first stage of the increase—from $5.15 to $6.50—in September 2007. In September 2008, the wages of all 26,000 workers who remain employed after the first increase will increase to the proposed state minimum of $7.25 per hour.

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Compared to workers in the nation who would be affected by the similar increase proposed at the federal level, the affected workers in New Hampshire are, in general, younger, more likely to be enrolled as full-time students, work fewer hours, and are less likely to be married or have children. Though the educational attainment of the affected workers in New Hampshire is comparable to that of their national counterparts, they are twice as likely to be enrolled in school full-time. They are also responsible for contributing a smaller average share of their family weekly earnings compared to similar workers nationwide. Yet 21 percent of affected workers in New Hampshire are the sole earners for their families. As is the case nationally, the highest concentration of affected workers in New Hampshire is in retail trade and food preparation and services (see Tables 1 and 2).

Employment Impact
The employment impact of the minimum wage increase is calculated separately for each stage of the increase. The analysis sets up a range of possible employment outcomes by using three different estimates (lower bound, mid-point, and upper bound) from the economics literature of how sensitive (or "elastic") the demand for labor is in response to changes in the wage rate. The overall employment impact of the proposed minimum wage increase is estimated to be between 1.2 percent and 5.8 percent of the 26,000 workers affected by the bill. Using the lower bound of employment impact range yields a total loss of 309 jobs, or 1.2 percent of affected workers. The upper bound yields a loss of 1,519 jobs, or 5.8 percent of affected workers. At the mid-point, employment would be expected to decrease by **646** jobs, or **2.5** percent of affected workers. This represents less than one tenth of one percent (-0.09 percent) of total employment in New Hampshire, which was about 711,500 in 2006 (see Table 3).

Aggregate Wages Impact
The increase in annual aggregate wages is also calculated separately for each stage of the minimum wage increase. The positive wage gains that result from each increase are partially offset by the lost wages of those workers who lose their jobs as a result of that increase—these lost wages are subtracted from the aggregate annual wage increase. This leaves a net annual wage gain of $6.6 million— approximately $752 per year for each worker who remains employed—after increasing the minimum wage from $5.15 to $6.50. The second increase, from $6.50 to $7.25, would lead to a net increase in annual aggregate wages of $13.9 million, or $544 annually per worker who remains employed.

Assuming a total employment loss of 646 jobs—which is at the mid-point of outcomes—the overall net increase in annual aggregate wages from both stages of the minimum wage increase would be around **$20.5 million**, or $803 annually for each worker who remains employed (see Table 4).

Putting the proposed increase in the minimum wage in context

If passed, the New Hampshire bill would increase the minimum wage in the state for the first time since the federal minimum wage was last raised in 1997. This 10-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 over $2,500 per year. Currently, in real terms, the value of the minimum wage is the lowest it has been in the past fifty years. Increasing the

minimum wage to $7.25 per hour by 2008, as proposed in the New Hampshire bill, would bring its real value back to the level where it was in the early 1980s (see Figure 1).

Considering that the real value of the minimum has eroded significantly, it is likely that at least some of its increase will be absorbed by employers through increased productivity, higher prices, or lower profits. If this happens, the number of jobs lost as a result of the increase will be lower than the estimates presented in this paper.

In addition, it is important to note that employers may respond to an increase in the minimum wage by seeking other ways to reduce labor costs. For example, rather than laying off workers, employers may reduce the hours of current employees, resulting in underemployment rather than unemployment. Moreover, a reduction in hours for workers who remain employed may lead to a shift from full-time to part-time employment, possibly resulting in the loss of employer-sponsored benefits, such as health insurance, typically offered to full-time employees. Alternatively, employers may directly reduce the amount spent on employee benefits, such as contributions to health insurance premiums. This study assumes that hours would remain unchanged. If they are reduced as a result of the increase, the net annual wage impact of the minimum wage increase would be smaller than presented here.

Finally, this analysis examines the impact of HB 514 only on the workers who will experience a direct increase in their wage rate (those earning between $5.15 and $7.25 per hour). It does not calculate any "spill-over" effects on the wages of those workers previously earning higher than $7.25 per hour—for simplicity's sake, their wage rates are assumed to be unaffected.

Figures and Tables

2006 Dollars

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

Source: Calculations based on data from the Bureau of Labor Statistics;
Calculations for 2007-2009 use CBO inflation projections.

Table 1. Who are the workers likely to be affected by an increase in New Hampshire's minimum wage?		
	New Hampshire	United States
Number of workers directly affected	26,108	5,917,684
Affected workers as percent of total employment	3.7%	4.1%
Distribution of affected workers by:	Percent of affected workers	
Gender		
Male	38%	41%
Female	62%	59%
Age		
16 to 19	47%	25%
20 to 44	33%	52%
45 and older	20%	22%
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.
Note: Affected workers are defined as those directly affected by an increase in New Hampshire's minimum wage as proposed under HB 514.

Table 2. How much do affected workers contribute to family earnings in New Hampshire? (percent)		
	New Hampshire	United States
Average share of weekly household earnings contributed by affected worker	33%	43%
Share of affected 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.
Note: Affected workers are defined as those directly affected by an increase in New Hampshire's minimum wage as proposed under HB 514.

Table 3. What is the likely impact on 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:
Affected workers are defined as those directly affected by an increase in New Hampshire's minimum wage as proposed under HB 514.
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.

	Number of Affected Workers	Aggregate change in wages ($ millions)	Wage impact per affected worker who remains employed (dollars)
Table 4. Based on the mid-point of the employment estimates, what is the likely impact on aggregate wages due to increasing the minimum wage in New Hampshire?			
Stage 1: Increase from $5.15 to $6.50			
Workers initially earning between $5.15 and $6.50 per hour	8,988	$8.3	
Workers expected to become unemployed	-224	-$1.8	
Net increase in wages		$6.6	$752
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	$17.5	
Workers expected to become unemployed	-422	-$3.7	
Net increase in wages		$13.9	$544
Total impact on wages from all increases			
Workers earning between $5.15 and $7.25 previously	26,108	$25.9	
Workers expected to become unemployed	-646	-$5.4	
Total overall net increase in wages		**$20.5**	$803

Source: New England Public Policy Center calculations using the 2006 CPS Merged Outgoing Rotation Group Files.
Notes:
Affected workers are defined as those directly affected by an increase in New Hampshire's minimum wage as proposed under HB 514.
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.