The Effects of the Proposed California Minimum Wage Increase

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Executive Summary

On August 23, 2004 the California legislature passed an increase in the minimum wage to $7.75 an hour. This study evaluates the consequences of the proposed increase, with a focus on the potential impact on California's labor market.

This report, by Dr. David Macpherson from Florida State University and the Employment Policies Institute, uses Current Population Survey data and labor demand estimates (as reported by a consensus of economists) to show that the proposed increase will be an expensive mandate on the employers of California.

Overall, the proposed increase is inefficient and detrimental to many of those it is intended to help. This study estimates that approximately 18,600 California employees will lose their jobs because of this mandate. These employees will lose a total of $220 million in income, while employers will face $738 million a year in net new costs.

One in four dollars spent as a result of this mandate will go to low-wage employees in families earning more than $40,000 a year. This results from the fact that the minimum wage is a blunt policy, unable to determine between a low-wage teenager (who may live in a wealthy family) and a low-income employee supporting a family. In reality, very few beneficiaries of this wage increase are actually raising a family on a single minimum wage income, as many policymakers have claimed. According to United States government data, only 20% of the potential beneficiaries from this wage increase are actually single earners with children. The remaining 80% are teenagers living with their working parents, adults living alone, or dual-earners in a married couple.

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While families that benefit from the wage increase may see a boost in earnings, many families will ultimately lose as a result of this mandate. Families who are eligible for means-tested benefits like food stamps will lose a substantial portion of their benefits, and may lose their eligibility altogether. This will greatly limit the ability of the minimum wage to improve the quality of life for beneficiaries. Even worse, many family heads will see their hours reduced—or lose their jobs altogether. Of the 18,600 individuals who will lose their job if this wage increase goes into effect, 45% are living in families earning less than $25,000 a year. A majority of these employees don't have a high school diploma,

decreasing their chances of finding new employment (the unemployment rate for adult high school dropouts was 8.3 percent in July—51% higher than the national level). Certain minority groups will also suffer disproportionate harm. Hispanics, for example, make up only 31 percent of the total California labor force—yet they account for 58 percent of the job loss from the proposed increase.

Essentially, much of the increase comes directly out of the pockets of those least-skilled employees who will lose their jobs.

— Craig Garthwaite
Director of Research

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Overview

The California minimum wage is currently set at $6.75 an hour, $1.60 higher than the federal rate of $5.15 an hour. Lawmakers recently passed legislation raising the wage floor to $7.75. Proponents of this increase claim that it is necessary to ensure a minimum standard of living for employees in California. In doing so, they ignore the vast number of unintended consequences–particularly labor market consequences–the proposed increase would create. This study investigates a portion of these labor market consequences. It estimates the expected job loss and examines the distribution of benefits that would result from the proposed wage hike.

Overall, this study reveals that employees affected by the proposed increase will be, on average, younger and less educated than the workforce as a whole. In addition, the vast majority of potential beneficiaries are not attempting to raise a family on a single minimum wage income, a common justification for an increase. Only 20 percent of potential beneficiaries are single earners with children. Similarly, the majority of benefits from the proposed increase will not to go to families in poverty. Over one quarter of the benefits will go to families earning more than $40,000 a year and the average family income of a beneficiary is nearly $42,000 a year.

The proposed increase is expected to cause 18,610 California employees to lose their jobs. Nearly 40 percent of these lost jobs will be in the retail sector. This job loss will result in $220 million in lost income for displaced employees. The wage increase will also be extremely costly to employers. This study estimates the proposed increase will cost California employers $738 million a year in net new costs.

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Data

To analyze the effects of the proposed California minimum wage increase, data are drawn from the January 2001 through December 2003 Current Population Survey (CPS) Outgoing Rotation Group (ORG) files. The CPS ORG has the important advantage of being a large and representative sample of the population. The main sub-sample of the CPS ORG data employed here includes wage and salary workers who are residents of California, 16 years of age or older, and whose hourly wage is between $6.75 and $7.75 in November 2006 dollars. Observations missing data necessary to compute the hourly wage, family income, or other relevant variables are deleted from the

sample. The data appendix describes the calculation of the hourly wage variable and other data issues.

Employees Affected by Proposed Increase

Employees who would benefit from the proposed increase are, in general, much younger and less educated than all other California employees. Table 1 contains a demographic breakdown of affected employees with comparable numbers for the California workforce. While 20 percent of the beneficiaries from the proposed increase are age 16-19, this age group comprises only 4.7 percent of all employees in the economy. In contrast, 23.5 percent of beneficiaries will be age 40-64 while this group makes up 43.9 percent of all employees in the economy. In total, 50.5 percent of beneficiaries have not completed high school. In comparison, only 15.9 percent of all employees in California's economy lack a high school diploma.

Employees affected by the increase differ on several additional demographic variables. They are more likely to have never been married (50 percent of affected employees compared to 32 percent of all employees in the economy). They are also less likely to be supporting a family. Fully 35 percent of affected employees are living with their parents or another relative, compared to 14.8 percent of all employees in the economy. Affected employees are also less likely to be the sole supporters of a family. Overall, only 20 percent of employees affected by this increase are actually supporting a family on a single minimum wage income. The remaining 80% are either teenagers or adult children living with their parents, adults living alone, or dual earners in a married couple.

While the family income of affected employees is lower than the state average ($40,102 vs. $70,120), only 21 percent of affected employees have a family income that is less than $12,500 a year. Nearly one quarter of affected employees have an income greater than $50,000 a year.

Affected employees also have less attachment to the labor force than all employees in the economy. Potential beneficiaries work nearly 6 hours less per week than all other members of the labor force and are more likely to work part-time (60 percent of affected employees work full-time vs. 83 percent of all employees). Weeks worked per year were also lower for these beneficiaries, who worked an average of 1.8 fewer weeks per year than the typical employee.

How Will the Wage Increase Affect Family Income?

Proponents of the wage increase claim the increase is necessary to raise the standard of living for the "working poor." Table 2 provides calculations examining the efficacy of a minimum wage increase in achieving this goal. In reality, the minimum wage will have only a moderate effect on family income. The proposed 15 percent increase in the minimum wage will only provide an average 3.3 percent increase in family income. This low benefit results from the fact that the mean family income of a potential beneficiary from the increase is $41,706 a year, significantly higher than supporters of a minimum wage suggest.

Table 1 Means for Selected Variables

Variable	Affected Workers		Percentage of All Workers	Percentage of All Age 16 +
	Percent	Population		
Age:				
16 to 19	20.0%	148,065	4.7%	7.9%
20 to 24	21.4%	158,571	11.4%	9.6%
25 to 29	11.6%	85,876	11.8%	9.1%
30 to 39	21.4%	158,724	26.2%	20.8%
40 to 64	23.5%	174,341	43.9%	39.7%
65 to 99	2.0%	14,917	2.0%	13.0%
Average	31.3		38.4	42.5
Years of Schooling:				
0 to 8	22.7%	167,969	7.2%	9.2%
9 to 11	25.7%	190,217	8.7%	12.6%
12	24.7%	183,089	22.8%	23.5%
13 to 15	22.8%	168,801	31.8%	29.2%
16 or more	3.2%	30,418	20.2%	17.5%
Average	10.7		13.3	12.9
Race:				
White	85.2%	631,036	79.5%	78.9%
Black	4.4%	32,301	6.5%	6.7%
Asian	8.4%	62,510	12.0%	12.3%
Other Race	1.3%	14,647	1.4%	1.5%
Ethnic Status:				
Hispanic	57.3%	424,256	30.5%	28.4%
Non-Hispanic	42.7%	316,238	69.5%	71.6%
Gender:				
Male	47.2%	349,656	53.7%	48.7%
Female	52.8%	390,838	46.3%	51.3%
Marital Status:				
Married, Spouse Present	37.7%	258,356	52.2%	51.1%
Divorced, Separated, Widowed	12.3%	96,201	15.8%	18.8%
Never Married	50.0%	385,937	32.0%	30.2%
Family Status:				
Single Individual	17.4%	128,713	22.1%	NA
Single Head	12.7%	94,283	10.9%	NA
Single Head with no children	1.6%	11,701	1.2%	NA
Single Head with 1 child	2.4%	17,889	2.0%	NA
Single Head with 2 children	2.9%	21,355	2.8%	NA
Single Head with 3+ children	5.9%	43,338	4.9%	NA
Single Earner in Married Couple	10.8%	79,680	14.0%	NA
Single Earner with no children	1.6%	11,944	2.4%	NA
Single Earner with 1 child	0.8%	5,653	1.5%	NA
Single Earner with 2 children	1.3%	9,615	2.3%	NA
Single Earner with 3+ children	7.1%	52,468	7.8%	NA

Table 1 Continued

Variable	Affected Workers		Percentage of All Workers	Percentage of All Age 16 +
	Percent	Population		
Family Status Continued				
Dual Earner in Married Couple	24.1%	178,676	38.2%	NA
Dual Earner with no children	3.3%	24,564	7.1%	NA
Dual Earner with 1 child	2.3%	16,711	4.2%	NA
Dual Earner with 2 children	4.5%	33,473	7.1%	NA
Dual Earner with 3+ children	14.0%	103,928	19.7%	NA
Living with Parents	26.8%	198,253	11.0%	NA
Other Relative	8.2%	60,889	3.8%	NA
Family Income:				
< $12,500	20.5%	152,054	6.0%	9.7%
$12,500-$24,999	22.8%	169,141	11.8%	14.7%
$25,000-$39,999	24.0%	177,824	18.4%	19.0%
$40,000-$49,999	9.3%	68,880	9.5%	9.0%
$50,000-$50,999	5.8%	42,930	9.6%	8.7%
$60,000-$74,999	5.4%	40,104	11.4%	10.0%
$75,000 or more	12.1%	89,562	33.4%	28.9%
Mean	$40,102		$70,120	$63,488
Median	$27,075		$54,246	$44,370
Location:				
Non-Metro/Small Metro Areas	17.0%	125,944	10.3%	11.4%
Los Angeles CMSA				
Los Angeles-Long Beach PMSA	34.0%	252,019	27.0%	27.8%
Riverside-San Bernardino PMSA	9.8%	72,203	8.9%	9.0%
Orange County PMSA	1.7%	12,661	2.0%	2.0%
Ventura PMSA	6.0%	44,594	9.1%	8.7%
San Francisco CMSA				
Oakland PMSA	2.8%	20,987	7.2%	6.7%
San Francisco PMSA	2.3%	17,216	6.2%	5.7%
San Jose PMSA	2.4%	17,595	6.0%	5.4%
Other San Francisco PMSAs	1.7%	12,696	2.9%	2.9%
San Diego, MSA	6.4%	47,639	8.2%	8.3%
Sacramento, MSA	4.1%	30,553	5.8%	5.6%
Fresno, MSA	7.3%	53,773	2.7%	2.7%
Bakersfield, MSA	2.5%	18,162	2.1%	2.1%
Stockton, MSA	2.0%	14,452	1.6%	1.6%
Hours Per Week	32.5		38.4	NA
Full-time	59.9%		82.8%	NA
Weeks Worked Per Year	48.2		50.0	NA
Population	740,494		14,451,086	26,322,380
Sample Size	1,950		36,887	18,610

Source: January 2001 to December 2003 Outgoing Rotation Group Current Population Survey files

The majority of the benefits from this wage increase will not go to working poor families. As column four of Table 2 shows, over 27 percent of the benefits from this wage increase go to families earning more than $40,000 a year, while only 23.4 percent go to families earning less than $12,500.

Table 3 provides a more complete picture of the effect of the minimum wage increase on income distribution by examining all families in California, rather than only those families affected by the increase. The mean increase in family income across all persons 16 and over is $65.00 a 0.1 percent increase. Even looking at all poor families, we see an increase of only $124 or 1.7 percent of income. These statistics illustrate a significant problem with the minimum wage: since the majority of individuals in poverty do not work, the minimum wage is a poor means of improving the quality of life for these people.

Labor Market Effects of a Minimum Wage

One of the most well documented effects of an increase in the minimum wage is a decrease in low-skill employment, since it is no longer profitable for firms to employ these workers. Burkhauser, Couch, and Wittenberg (2000) examined CPS data following the last increase in the federal minimum wage and found that a 10 percent increase in the minimum wage resulted in a 2 percent to 6 percent decrease in teenage employment.[1] In 2003, Federal Reserve economists found a 2 percent to 3 percent decrease in employment from a 10 percent increase in the minimum wage.[2] Deere, Murphy, and Welch (1995) found similar results when examining the 1990-91 minimum wage increase. Following the increase, employment of teenage males fell 5 percent while the employment of teenage females fell 7 percent.[3]

Table 2 **Income Increases for Families of Workers Affected by Minimum Wage Increase to $7.75**

Variable	Percent in Class Before Increase	Annual Income Increase	Percent Increase In Family Income	Percent Share of Total Income Increase
All	100.0%	$1,361	3.3%	100.0%
Family Income:				
< $12,500	19.6%	$1,628	22.0%	23.4%
$12,500-$24,999	22.0%	$1,531	8.4%	24.7%
$25,000-$39,999	23.8%	$1,404	4.5%	24.6%
$40,000-$49,999	9.5%	$1,205	2.7%	8.4%
$50,000-$50,999	6.2%	$922	1.7%	4.2%
$60,000-$74,999	5.8%	$1,204	1.8%	5.1%
$75,000 or more	13.1%	$990	0.7%	9.5%
Mean Family Income $41,706				

Table 3 Income Distribution Impact of Minimum Wage Increase to $7.75 Across All Families

Variable	Percent in Class Before Increase	Annual Income Increase	Percent Increase In Family Income	Percent Share of Total Income Increase
All	100.0%	$65	0.1%	100.0%
Family Income:				
< $12,500	12.2%	$124	1.7%	23.4%
$12,500-$24,999	16.2%	$99	0.5%	24.7%
$25,000-$39,999	19.4%	$82	0.3%	24.6%
$40,000-$49,999	9.3%	$58	0.1%	8.4%
$50,000-$50,999	8.6%	$32	0.1%	4.2%
$60,000-$74,999	9.6%	$35	0.1%	5.2%
$75,000 or more	24.7%	$25	0.0%	9.5%
Mean Family Income $58,213				

Neumark and Wascher (2000), one of the most definitive studies demonstrating employment loss from a minimum wage increase, serves as the basis of the estimates of employment loss in this study. This study estimates a labor demand elasticity for minimum wage employees of -0.22.[4] This implies that a 10 percent increase in the minimum wage will result in a 2.2 percent decrease in employment for the affected group. This estimate is similar to the elasticity expected by the average economist (-.21), according to a survey of economists at leading universities.[5] Conducted by Fuchs, Poterba, and Krueger (1998)[6]

To estimate the employment loss from a minimum wage increase, the following procedure was utilized. First, the fractional wage gain due to the minimum wage increase is computed for each affected employee and then averaged across the sample. Second, the estimated fractional wage gain is used in the following formula to calculate the employment loss:

Employment Loss = Fractional Wage Gain x Affected Worker Employment x Labor Demand Elasticity

Table 4 contains a breakdown of the estimated employment loss from an increase in the California minimum wage. In total, increasing the California minimum wage to $7.75 will cost 18,610 jobs. A majority of this job loss will affect employees under the age of 30. Over 45 percent of the job loss will be for employees in

Table 4 Employment Levels and Job Losses by Sector for Minimum Wage of $7.75

Group	Employment		Projected Job Loss	Percent of All Job Loss
	All Workers	Affected Workers		
Age:				
16-19	675,568	148,065	3,882	20.9%
20-24	1,648,206	158,571	3,901	21.0%
25-29	1,702,829	85,876	2,006	10.8%
30-39	3,791,650	158,724	4,033	21.7%
40-64	6,349,893	174,341	4,430	23.8%
65-99	282,940	14,917	358	1.9%
Family Income:				
< $12,500	864,851	152,054	4,194	22.5%
$12,500-$24,999	1,698,371	169,141	4,320	23.2%
$25,000-$39,999	2,655,052	177,824	4,441	23.9%
$40,000-$49,999	1,374,576	68,880	1,633	8.8%
$50,000-$50,999	1,387,435	42,930	940	5.0%
$60,000-$74,999	1,648,629	40,104	1,021	5.5%
$75,000 or more	4,822,171	89,562	2,168	11.6%
Gender:				
Male	7,754,229	349,656	8,639	46.4%
Female	6,696,857	390,838	9,971	53.6%
Race:				
White	11,494,120	631,036	16,167	86.9%
Black	936,127	32,301	795	4.3%
Asian	1,731,331	62,510	1,407	7.6%
Other Race	289,508	14,647	242	1.3%
Ethnic Status:				
Hispanic	4,406,240	424,256	10,778	57.9%
Non-Hispanic	10,044,846	316,238	7,832	42.1%
Years of Schooling:				
0 to 8	1,044,194	167,969	4,438	23.8%
9 to 11	1,256,517	190,217	4,963	26.7%
12	3,290,996	183,089	4,572	24.6%
13 to 15	4,600,776	168,801	4,046	21.7%
16 or more	4,258,603	30,418	591	3.2%
Location:				
Los Angeles CMSA				
Los Angeles-Long Beach PMSA	3,902,911	252,019	6,255	33.6%
Riverside-San Bernardino PMSA	1,282,247	72,203	1,900	10.2%
Orange County PMSA	293,525	12,661	372	2.0%
Ventura PMSA	1,310,094	44,594	951	5.1%
San Francisco CMSA				
Oakland PMSA	1,046,003	20,987	375	2.0%
San Francisco PMSA	894,931	17,216	373	2.0%
San Jose PMSA	862,518	17,595	338	1.8%
Other San Francisco PMSAs	420,165	12,696	290	1.6%
San Diego, MSA	1,185,107	47,639	1,315	7.1%
Sacramento, MSA	841,251	30,553	768	4.1%
Fresno, MSA	394,087	53,773	1,524	8.2%
Bakersfield, MSA	298,324	18,162	481	2.6%
Stockton, MSA	226,312	14,452	291	1.6%
Non-Metro/Small Metro Areas	1,493,611	125,944	3,379	18.2%

Table 4 Continued

Group	Employment		Projected Job Loss	Percent of All Job Loss
	All Workers	Affected Workers		
Industry:				
Agriculture	371,751	73,476	2,162	11.6%
Mining	20,066	-	-	0.0%
Construction	849,759	18,814	394	2.1%
Durable Manufacturing	1,234,122	32,667	802	4.3%
Nondurable Manufacturing	739,586	52,823	1,335	7.2%
Transportation, Communication, and Utilities	995,389	18,317	360	1.9%
Wholesale Trade	564,028	32,502	764	4.1%
Retail Trade	2,443,086	274,109	7,029	37.8%
Finance, Insurance, and Real Estate	915,120	12,702	283	1.5%
Business and Repair Services	1,354,449	52,517	1,266	6.8%
Personal Services	485,259	37,271	900	4.8%
Entertainment and Recreation Services	391,742	28,838	694	3.7%
Other Professional Services	3,353,823	92,597	2,277	12.2%
Public Administration	732,906	13,861	344	1.8%
Occupation:				
Executives, Administrators, and Managers	2,145,245	14,507	325	1.7%
Professionals	2,419,505	22,367	444	2.4%
Technicians	483,709	4,037	93	0.5%
Sales Occupations	1,654,349	129,678	3,298	17.7%
Administrative Support Occupations	2,096,918	73,392	1,627	8.7%
Service Occupations	2,058,915	227,576	5,829	31.3%
Farming, Forestry, and Fishing Occupations	370,710	81,349	2,317	12.5%
Precision Production, Craft, and Repair Occupations	1,419,626	39,857	897	4.8%
Machine Operators, Assemblers, and Inspectors	676,148	72,169	1,895	10.2%
Transportation and Material Moving Occupations	509,833	17,671	433	2.3%
Handlers, Equipment Cleaners, Laborers	616,128	57,891	1,452	7.8%

families earning less than $25,000 a year. Even more troubling, a majority of the displaced employees lack a high school diploma. These low-skill employees already have significant difficulty getting hired (the unemployment rate for adult high school dropouts was 8.3 percent in July—51 percent higher than the national level) and these results show that the proposed increase will only make the situation much worse for these individuals. Certain minority groups will also suffer disproportionate harm. Hispanics, for example, make up only

Table 5 Cost to Employers and Lost Income to Workers of Minimum Wage Increase to $7.75

Group	Rise in Labor Cost if no Layoffs of Workers	Lost Income Due to Layoffs	Net Rise in Cost of Labor to Employers
All	$957,358,344	$219,531,678	$737,826,666
Industry:			
Agriculture	$137,837,488	$30,943,381	$106,894,107
Mining	$-	$-	$-
Construction	$22,124,228	$5,066,740	$17,057,488
Durable Manufacturing	$48,497,682	$11,156,100	$37,341,582
Nondurable Manufacturing	$83,105,589	$18,792,789	$64,312,800
Transportation, Communication, and Utilities	$21,678,583	$5,084,015	$16,594,568
Wholesale Trade	$45,233,183	$10,437,825	$34,795,358
Retail Trade	$317,660,309	$72,752,502	$244,907,807
Finance, Insurance, and Real Estate	$13,085,838	$3,104,241	$9,981,597
Business and Repair Services	$72,433,888	$16,516,426	$55,917,462
Personal Services	$47,232,845	$10,700,668	$36,532,177
Entertainment and Recreation Services	$31,937,562	$7,741,981	$24,195,581
Other Professional Services	$99,971,093	$23,509,954	$76,461,139
Public Administration	$16,560,056	$3,932,098	$12,627,958
Location:			
Los Angeles CMSA			
Los Angeles-Long Beach PMSA	$337,489,340	$77,492,324	$259,997,016
Riverside-San Bernardino PMSA	$92,519,102	$21,568,999	$70,950,103
Orange County PMSA	$17,912,643	$4,133,231	$13,779,412
Ventura PMSA	$48,462,943	$10,900,993	$37,561,950
San Francisco CMSA			
Oakland PMSA	$18,818,546	$4,173,772	$14,644,774
San Francisco PMSA	$21,076,905	$4,642,247	$16,434,658
San Jose PMSA	$15,023,712	$3,559,536	$11,464,176
Other San Francisco PMSAs	$12,856,127	$2,937,566	$9,918,561
San Diego, MSA	$62,766,056	$14,449,731	$48,316,325
Sacramento, MSA	$32,763,588	$8,011,841	$24,751,747
Fresno, MSA	$83,657,628	$18,696,576	$64,961,052
Bakersfield, MSA	$26,716,590	$6,343,851	$20,372,739
Stockton, MSA	$15,552,906	$3,644,309	$11,908,597
Non-Metro/Small Metro Areas	$171,742,259	$39,072,303	$132,669,956

31 percent of the total California labor force, yet they account for 58 percent of the job loss from a minimum wage increase.

Examining the results by industry, it is clear that the retail trade sector suffers the greatest employment loss from a minimum wage hike accounting for 38% of the total job loss from the proposed increase. Employees in other service sector occupations account for an additional 28% of the job loss.[7]

How Much Will the Proposed Increase Cost Employers and Employees?

The high cost of an increase in the minimum wage is important not simply because of the cost to employers, but because this cost is passed on—in part—to consumers through higher prices. In determining the complete cost, it is essential that the lost income of the 18,610 displaced California employees be considered.

The total cost of the proposed increase is calculated in the following manner. First, the increase in labor costs that would occur if no employees are laid off is calculated. This figure is estimated by multiplying the annual increase in wages due to the minimum wage hike times the number of affected employees. Second, the lost income to employees due to the layoffs is estimated. This number is calculated by multiplying the number of employees who are projected to lose their jobs times their average wage before the minimum wage increase. Third, the net increase in labor costs to employers is calculated by taking the difference between the cost to employers if no layoffs occurred and the reduction in costs due to layoffs.

In California, if no layoffs occurred, the proposed increase would cost over $957 million per year.[8] The projected loss of 18,610 jobs will cost low-skill employees in California nearly $220 million in lost income.[9] The resulting net cost to employers is $738 million. The retail trade sector will bear the largest portion of these costs, with an estimated net $245 million increase in cost to employers and $73 million in lost income to employees.

As would be expected, Los Angeles area employers will bear the brunt of these costs. In the Los Angeles metropolitan area, employers will see an increase of $260 million in labor costs and employees will suffer $77 million in decreased wages.

Conclusion

This report clearly details the total costs resulting from an increase in the California minimum wage to $7.75 an hour. Raising the wage floor to this level would cost 18,610 jobs. The majority of this job loss would be focused on the least skilled employees in the economy. This wage increase would be extremely costly, with employers facing increased labor costs of $738 million and employees suffering $220 million in lost wages due to layoffs.

Moreover, the majority of the expenditures resulting from this wage increase will not go to families in poverty. In fact, 27 percent of the financial benefits from the wage increase will go to families earning more than $40,000 a year. Furthermore, while the majority of the working poor will receive no benefit from this wage increase, 21% of the job loss will be experienced by families earning less than $12,500 a year.

Data Appendix

Hourly **Wage**

This study uses data from the January 2001 through December 2003 Current Population Survey (CPS) Outgoing Rotation Group (ORG) files. The main sub-sample of the CPS data employed here includes wage and salary workers who are residents of California, 16 years of age or older, and whose hourly wage is between $6.75 and $7.75 in November 2006 dollars.

The hourly wage is constructed to account for problems caused by workers with variable hours, "top coded" or "capped" earnings, tips, commissions, and overtime, inflation, and changes in the minimum wage.

The first step is to assign a wage for workers who don't have these difficulties. Non-top coded workers who are paid by the hour and receive tips, commissions, or overtime are assigned their reported hourly earnings. For all non-hourly workers, the hourly wage is constructed by dividing usual weekly earnings (which includes tips, commissions, and overtime pay) by usual hours worked per week.

The second step is to estimate usual weekly earnings for workers whose weekly earnings are top coded or capped at a maximum value. The CPS ORG files have a topcode of $2,885 per week, or about $150,000 per year, for year-round workers. If the earnings of topcoded workers were not adjusted, average earnings would be understated. To estimate the mean earnings of topcoded workers, it is assumed that the upper tail of weekly earnings distribution follows a Pareto distribution. These estimated mean values for the CPS ORG files using this approach are presented in Hirsch and Macpherson (2002) by gender and year and are used in this study.

The third step is to estimate usual weekly hours for workers who indicate their weekly hours are variable. This is calculated by using the results of a regression model based on a sample of workers that have non-missing data on usual hours worked. The model is estimated by gender and year and includes controls for hours worked in the prior week, full-time status, marital status, years of schooling, age, race and ethnic status, broad occupation, and broad occupation interacted with full-time status. The parameters from this regression model are then used to estimate the usual hours for those whose weekly hours are variable.

The next step is to assign a wage for hourly workers who receive tips, commissions, or overtime pay or are topcoded workers. In this case, their hourly wage is constructed by dividing usual weekly earnings (adjusted for topcodes) by usual hours worked (or estimated usual hours if usual hours is missing).

The last step is to adjust the wages of workers for inflation and changes in the minimum wage. Wages of workers are adjusted for inflation to November 2006 using the CPI-U (a 2.5% percent annual inflation rate is assumed for the period between May 2004 and November 2004). For workers whose inflation-adjusted wage is less than $6.75 in November 2006 dollars, a wage of $6.75 in November 2006 dollars is assigned. Workers whose wage at the time of the survey was less than the legal minimum wage were deleted from the sample. The minimum wage for California workers was $6.25 between January 2001 and December 2001; and $6.75 since January 2002.

Family Income

Family income is reported as categorical variable in the CPS ORG and includes all sources of money income received in the prior 12 months. The income ranges are less than $5,000; $5,000-$7,499; $7,500-$9,999; $10,000-$12,499; $12,500-14,999; $15,000-$17,499; $17,500-$19,999; $20,000-$24,999; $25,000-$29,999; $30,000-$34,999; $35,000-$39,999; $40,000-$49,999; $50,000-$74,999; and $75,000 and up. To assign a dollar value to these categories, mean values of family income for persons in each income range was calculated from a sample of California residents in the March 1999, March 2000, and March 2001 CPS (which reports family income received in the prior year as a continuous variable). Very similar results occurred when a national rather than a California-based sample was employed to generate the mean income values. The CPS ORG observations where matched to appropriate March CPS sample (*i.e.*, 1999 values are used for the 1999 observations, etc.).

Annual Income

Though the CPS ORG provides measures of hourly earnings and hours worked, it does not indicate the number of weeks worked per year. Thus, to generate annual income estimates for workers affected by the higher minimum wage, an alternative data source must be used and merged with the CPS ORG. Fortunately, the April 1993 CPS provides such a measure and the mean usual weeks worked was calculated for all California workers earning $6.75-$7.75 per hour in November 2006 dollars.

Endnotes

1. Richard V. Burkhauser, Kenneth A. Couch, and David C. Wittenberg, "A Reassessment of the New Economics of the Minimum Wage Literature with Monthly Data from the Current Population Survey," *Journal of Labor Economics,* Oct 2000.
2. Daniel Aaronson and Eric French, "Product Market Evidence on the Employment Effects of the Minimum Wage," working paper, Federal Reserve Bank of Chicago, 2003.
3. Donald Deere, Kevin Murphy, and Finis Welch, "Employment and the 1990/91 Minimum Wage Hike," *The American Economic Review,* May 1995.
4. David Neumark and William Wascher, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Comment," *American Economic Review*, December 2000.
5. Victor R. Fuchs, Alan B. Krueger, and James M. Poterba, "Economists' Views about Parameters, Values and Policies: Survey Results in Labor and Public Economics," *Journal of Economic Literature*, September 1998.
6. Other research confirms that a 10 percent hike leads to at least a 2 percent decrease in employment for employees affected by the hike. See, e.g., David Neumark, et al. "The Effects of Minimum Wages Throughout the Wage Distribution," NBER Working Paper 7519 (February 2000) (for employees at the minimum wage, a 10 percent increase in the minimum wage reduces employment by about 2 percent and reduces hours of work by about 6 percent). Some studies using micro-data on individuals, or panel data using year and state and the unit of observation, have documented much higher negative employment effects. See Neumark et al., NBER Working Paper No. 7519; Richard V. Burkhauser, et al. "Who Minimum Wage Increases Bite: An Analysis Using Data from the SIPP and CPS," *Southern Economic Journal* 67(1), 16-40 (2000). Longer-term effects are likely to be larger because there is more time for employers to make adjustments.
7. Service industries include Finance, Insurance, and Real Estate; Business and Repair Services; Personal Services; Entertainment and Recreation Services; Other Professional Services; and Public Administration.
8. This calculation ignores the cost of payroll taxes. If they were included, the cost to employers would be at least 7.65% higher (the employer portion of the Social Security tax).
9. Employee may reduce this income loss if they are able to obtain employment in a job not covered by the minimum wage.

References

Aaronson, Daniel and Eric French. "Product Market Evidence on the Employment Effects of the Minimum Wage," working paper, Federal Reserve Bank of Chicago, 2003.

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