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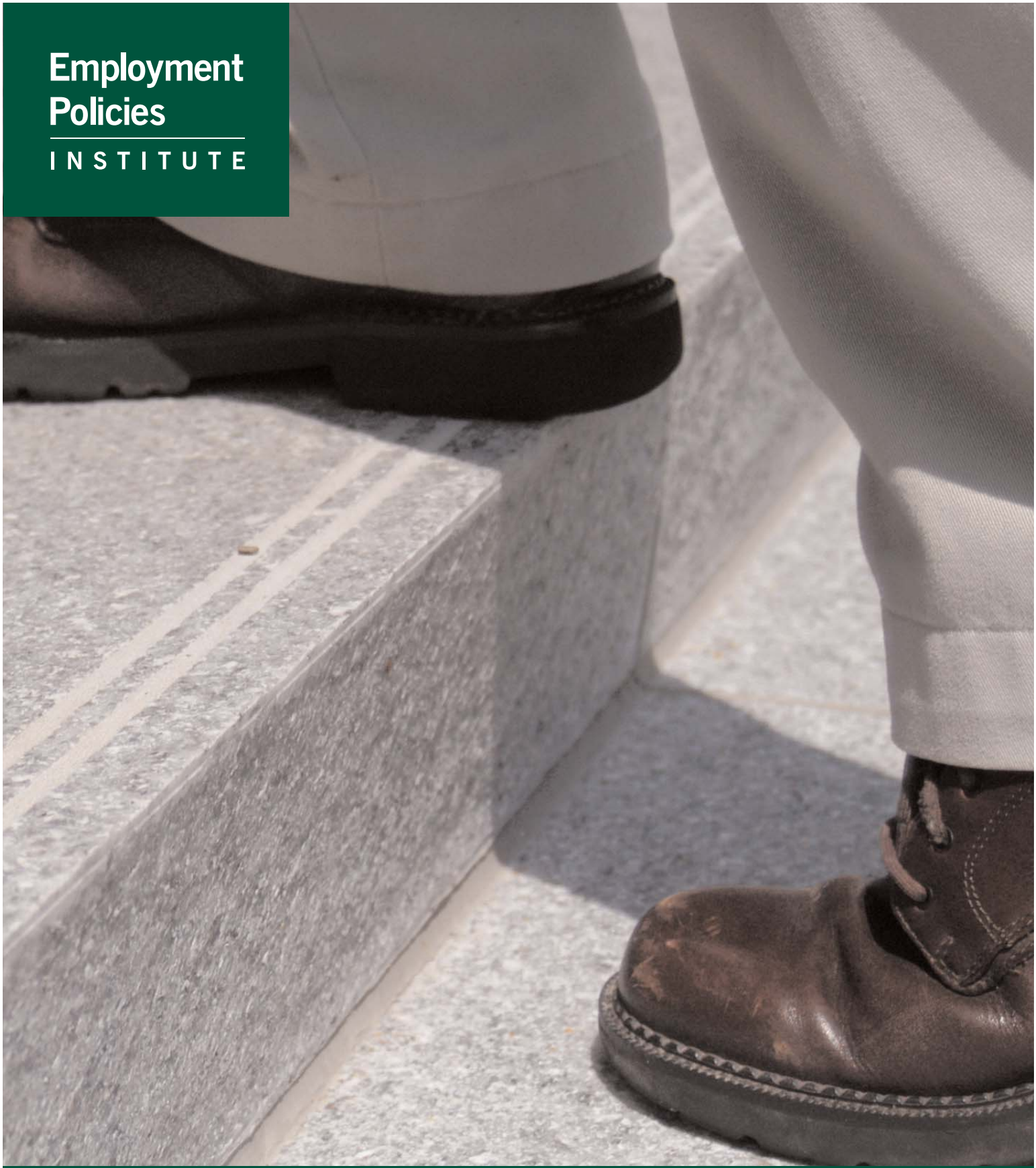

Employer Health Insurance Mandates and the Risk of Unemployment

by Katherine Baicker, Dartmouth
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The Employment Policies Institute (EPI) is a nonprofit research organization dedicated to studying public policy issues surrounding employment growth. In particular, EPI research focuses on issues that affect entry-level employment. Among other issues, EPI research has quantified the impact of new labor costs on job creation, explored the connection between entry-level employment and welfare reform, and analyzed the demographic distribution of mandated benefits. EPI sponsors nonpartisan research that is conducted by independent economists at major universities around the country.

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Executive Summary

Overview

As healthcare costs continue to rise, the growing number of uninsured Americans receives a great deal of attention from policymakers. In response, state legislatures across the country are experimenting with mandates requiring employers to provide health insurance to their employees. Last November, California voters narrowly defeated Proposition 72. This initiative would have required all employers with more than 20 employees to either provide comprehensive health coverage or pay a fee into a fund for the working uninsured. Similar "pay or play" mandates have been debated in several states, and were even passed (but later repealed) in Massachusetts, Oregon, and Washington. Only Hawaii currently has a pay or play mandate affecting private businesses.

Emboldened by the close margin in California—Proposition 72 failed by only 0.8 percent—supporters of mandated healthcare are preparing another ballot initiative in California and a combination of legislation and ballot initiatives in at least eight additional states over the next year.[1] Facing this resurgence of state-level healthcare legislation, it is important to understand the potential labor market consequences of these plans.

In this paper, Drs. Katherine Baicker and Helen Levy of Dartmouth University and the University of Michigan analyze who will be affected by this legislation and what potential disemployment effects would result from the passage of these mandates across the country. These facts will provide a richer understanding of the potential economic consequences of plans requiring employers to provide a minimum level of fringe benefits.

Who Are the Working Uninsured?

The scope of employer mandates is often limited to employees who work a minimum level of hours. This level often covers some, but not all, part-time employees, with a common cutoff of approximately 20 hours per week—the same cutoff utilized in this study.[2] Of employees who are working over 20 hours a week, more than 16 percent are currently uninsured. Nearly 67 percent of these employees have their own health insurance and 17 percent have insurance from another source.

The employees without insurance are significantly more likely to come from economically vulnerable groups. For example, employees who work but don't have health insurance are three times as likely to be high school dropouts and twice as likely to be from a minority group than their insured counterparts. In addition, uninsured employees are twice as likely to be single parents as their insured counterparts.

While many of the proposed mandates exempt small employers, this paper finds that employees in small firms are disproportionately more likely to lack insurance. Fully 45 percent of uninsured employees work in firms with fewer than 25 employees, while only 19 percent of insured employees work in these small firms. Concentrating on large firms while ignoring the disproportionate presence of the uninsured in small firms is a primary factor in the failure of mandated health insurance laws to reach the majority of the uninsured.[3]

The authors find the assumption that the working uninsured, as a group, have no access to insurance is not wholly accurate. Approximately one-quarter of uninsured employees work in firms where they are eligible for insurance but choose not to enroll.

There could be a variety of reasons for this decision, such as a decision to self-insure (particularly for the young and healthy) or the fact that their portion of the premium was too expensive. Employer mandates such as Proposition 72 ignore these rational decisions and force the employee to pay up to 20 percent of the cost of health insurance. If the employees do not value these additional benefits the same as cash—as indicated by their decision not to takeup benefits they qualify for—requiring they pay for healthcare could leave them worse off.

Disemployment Effects

According to United States Census Bureau Current Population Survey (CPS) data, a large fraction of uninsured employees are working either at or close to the minimum wage. As a result, the dramatic increase in costs created by a mandate represents a significant increase in the minimum compensation mandated for these employees. This paper reveals that nearly 43 percent of uninsured employees are working within three dollars of the minimum wage. While this amounts to only 7 percent of the workforce, it is clearly a significant portion of the uninsured population—the intended beneficiaries of the mandate.

As would be expected by the relatively low wages of the uninsured, CPS data reveal that skill level is a key factor in determining insurance status, with low-skill employees being disproportionately likely to be uninsured. Furthermore, among the uninsured, those with the lowest skills are earning the lowest wages and are disproportionately likely to lose their job as the result of a mandate.

The consensus of the economic literature on mandated benefits suggests that employers, where possible, will transfer the cost of a new mandate fully onto employees in the form of reduced wages. This process works smoothly for employees whose wages are high enough above the minimum wage to allow for full wage shifting. Problems arise, however, when employees' wages are too low to allow for shifting—as is the case for many of the uninsured employees discussed above. When this occurs, the mandated benefit will have the same effect as a minimum wage increase—lower employment as businesses replace workers with machines, self-service, and more efficient employees.[4]

The authors use these broad wage definitions and the existing literature on the minimum wage to construct an approximate estimate of the number of employees who would lose their job if healthcare mandates were passed across the country. The authors find that approximately 315,000 employees would lose their job as a result of these mandates. Traditionally vulnerable groups bear a disproportionate burden of the job loss. For example, more than half of these employees will be nonwhite yet only 25 percent of the workforce in this sample was nonwhite. In addition, one-third of job losers will have less than a high school education.

Conclusion

In order to fully evaluate the potential effects of a proposed employer mandate, it is essential to understand the labor market consequences of such policies. By clearly identifying the potential scope of lost jobs along with the various groups that will be disproportionately harmed, this study provides a fuller understanding of the potential labor market effects.

Specifically, it finds that the employees who will be most harmed by mandated employer-paid healthcare are disproportionately less likely to be educated, and more likely to be a minority, a single parent, and unmarried. These are the very groups that supporters of mandated healthcare often cite in support of their efforts.

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Endnotes

1. Legislation is expected or has already been introduced in Washington, New York, Connecticut, West Virginia, Massachusetts, and Maryland. Signatures are currently being gathered for ballot initiatives in Florida and Ohio.
2. In California the cutoff was 100 hours per month, while in Washington the cutoff was 86 hours per month.
3. For an analysis of the coverage rates of proposed employer mandates, please see: Yelowitz, Aaron, "The Economic Impact of Proposition 72 on California Employers," Employment Policies Institute, Sept (2004); Employment Policies Institute. "The Cost of Washington's Health Care Responsibility Act," 2005.
4. While the literature is clear that where possible, employers will wage-shift to pass along the cost of the mandate, it is not clear regarding the ability of the employer to do so in the short term or in a period of low inflation. As a result, the estimates in this paper should be viewed as a lower bound estimate of potential job loss from a mandate.

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Introduction

In the absence of any likely federal action on universal health insurance in the near future, several states have taken the lead on this issue by enacting or considering laws that require employers to provide health insurance for their employees. In California, for example, the state legislature passed a law requiring employers above a certain size to provide a specified package of health benefits for their workers; California voters narrowly overturned the measure ("Proposition 72") in November 2004. Massachusetts, Oregon, and Washington all enacted mandates that were later repealed. To date, only Hawaii has actually implemented an employer mandate, which has been in place since 1974.

The proponents of these measures make the case that they will increase insurance coverage while maintaining the role of the market in generating competition and efficiency in health insurance offerings. Opponents raise the concern that low-income workers will see offsetting reductions in their wages and that, in the presence of minimum wage laws, some of the lowest-wage workers will become unemployed. Academics and the popular press alike cite increased health insurance costs as one of the causes of recent increases in unemployment (Porter, 2004). Estimates of the potential job loss from the mandates included in the failed Clinton health care proposal ranged from 600,000 to more than 2,000,000.

To determine how important the potential job loss from employer mandates is, we need to know how many workers are likely to be affected. Several factors affect the degree to which employer mandates will cause unemployment. First, what is the likely cost of the mandated health insurance? This clearly depends on the specifics of the mandated coverage.[1] Second, how much of an increase in the cost of employing workers is borne by employees in the form of reduced wages? There is substantial evidence that the cost of health insurance mandates will be shifted to employees, resulting in lower wages.[2] Third, how many workers not currently covered by employer-sponsored insurance are so close to the minimum wage that their wages cannot be lowered enough to offset the cost of the new mandate? This paper provides an estimate of how big this pool of workers is likely to be and what characteristics they are likely to have, taking into account minimum wage laws and patterns of employer health insurance offering and coverage.

We construct an estimate of the number of workers whose wages are so low that they cannot be lowered to absorb the cost of health insurance, using detailed data on wages, health insurance offering and take-up, and demographics from the Current Population Survey (CPS). We characterize the population of workers at risk in terms of their sociodemographic characteristics (age, race, gender, education, family structure) and industry of employment. We find that 43 percent of uninsured workers earn within $3 of the minimum wage, putting them at substantial risk of unemployment if their employers were required to offer insurance. These workers are disproportionately likely to be high school dropouts or racial minorities. Understanding which workers these laws are likely to affect should play an impor-

tant role in the assessment of the effect of employer mandates on the level and distribution of employment and insurance coverage.

Background

The estimated impact of an employer health insurance mandate on insurance coverage and employment depends on two sets of factors: (1) the specifics of the mandate and (2) assumptions about the dynamics of wages, fringe benefits, and employment.

Specific mandate proposals vary widely from state to state.[3] Most include exemptions for smaller firms (e.g., those with fewer than 20 employees in California) and for employees with few hours (e.g., fewer than 20 hours per week in Hawaii or 100 hours per month in California). Most include minimum employer contributions (such as 80 percent of premiums in California or 75 percent in Oregon) and minimum coverage requirements (benchmarked to other plans offered in the state in Hawaii, including prescription drugs and preventive care in California). Three of these features are likely to be especially important for the analysis of any particular mandate. First, which employers and employees are affected? Any exemptions, such as those for small firms or part-time workers, will dilute both the positive and negative effects of a mandate. Second, what is the marginal cost of the newly mandated benefits, both in terms of specific benefits and in terms of lost flexibility for employers? A mandate can specify a generous benefits package that all employers must provide (thus increasing costs for some employers already providing insurance), or it can require minimal coverage that affects only employers who do not already provide insurance. Third, what fraction of these costs must nominally be borne by the employer? When nominal wage rigidities prevent accommodation of increased costs through reduced wages, the statutory incidence may have a substantial effect. Policies that require firms to offer insurance but not pay for it would likely have little effect on rates of coverage because uninsured workers do not appear to be very responsive to the availability of benefits unless they are very heavily subsidized (Chernew, Frick, and McLaughlin, 1997; for a review of the recent literature on price elasticities of demand for health insurance among uninsured workers, see Gruber and Washington, 2003).[4]

The second set of issues—what assumptions one maintains about the dynamics of wages, fringe benefits, and employment—come into play when a significant share of the cost of the newly mandated health benefits falls on employers. There is a consensus among most economists that these costs, like the cost of any fringe benefit that workers value, will be passed on to workers in the form of reduced wages whenever possible (see Gruber and Krueger, 1991; Gruber, 1994; Fishback and Kantor, 1995; Olson, 2002). The implication of this is that when an insurance mandate accomplishes its stated goal of extending coverage to a previously uninsured worker, that worker will also experience a reduction in her wage or the growth of her wage relative to what would have happened otherwise. In the best-case scenario, the worker's wage will be sufficiently high to absorb the entire cost of the benefit, and the mandate will have changed the composition of compensation (lower wages, more benefits) but not the total value of compensation.

The problem arises when the worker's wage is not high enough to absorb this cost without bumping into the minimum wage. When this is the case, the insurance mandate has the same effect on employment as an increase in the minimum wage. Suppose, for example, that an uninsured worker earning the minimum wage becomes subject to an insurance mandate that requires the employer to provide benefits that cost $1 per hour worked. Since there is no scope to reduce wages, the hourly cost of

employing the worker is now the minimum wage plus $1. Economists have long believed that this is likely to result in lower employment, as employers substitute machines for workers when workers become more expensive. The size of this "elasticity" of employment with respect to the minimum wage has been the subject of considerable recent controversy: there is little consensus on the magnitude of the unemployment effect associated with an increase in the minimum wage (see Brown, 1999, for a review). Regardless of one's beliefs about the employment effect of minimum wage increases, however, the employment effect of an employer health insurance mandate that increases employer costs ought to be the same as the effect of a change in the minimum wage. In the analysis that follows, we present estimates of the population at risk of being affected by the imposition of employer mandates, to which different estimates of the elasticity of employment with respect to changes in the minimum wage can be applied. Our analysis shows how many uninsured workers are within different ranges of the minimum wage (such as within $3), so that readers can consider mandates that impose different levels of cost on employers and a range of estimates of the effect of changes in the minimum wage on employment.

Data and Methodology

The primary data for analysis come from the CPS, conducted annually by the Bureau of the Census. The CPS collects information from about 50,000 households each month about household composition, sociodemographic characteristics, earnings, and employment in eight different monthly surveys over the course of 16 months. The March survey provides detailed demographic data (such as age, race, education, marital status, and family composition of respondents) as well as basic information about health insurance coverage. We combine these variables with information provided by respondents about their labor force status, whether or not they are paid hourly, usual hours worked, and wages in an exit ("outgoing rotation") interview. We use data from 1995 to 2003, the most recent CPS survey available. We restrict our sample to respondents ages 22 to 65.

In addition to these central variables, we use supplemental information collected from a subset of respondents in the February 1995, 1997, 1999, and 2001 Contingent and Alternative Employment Arrangement Supplements to the CPS. In these supplements, additional questions were asked about respondents' employment and the availability of employer-sponsored health insurance. The sample includes between 30,000 and 40,000 private sector wage and salary workers in each year. In addition to a sequence of questions about the nature of each worker's employment contract, intended to identify short-term and "contingent" jobs, these supplements ask whether the worker is in a firm that offers health insurance to any of its workers; if so, whether the worker is herself eligible for coverage; and if so, whether the worker is in fact covered by her employer's plan. These data allow us to explore the determinants of workers' insurance status in more detail, including whether respondents were employed at firms that offered health insurance and whether they were in fact eligible for that insurance.

To these data we add information on the minimum wage, which varies by state and over time (see Nelson, various years, for details of state law changes; also shown in Appendix Table A8). While the federal minimum wage changed only twice from 1995 to 2003, remaining at $5.15 from 1998 onward, several states enacted minimum wages that were higher than the federal minimum, so workers and employers in these states faced a higher minimum wage. We then compare workers' wages to the minimum wage in effect in January in their

state and year (which corresponds best with the period from which respondents in the CPS report their wages).

We also use information on health insurance premiums by state, year, and policy type (family or single) collected by the Kaiser Family Foundation/HRET survey for 1996 to 2002. We merge these data with the individual observations from the CPS for those years to impute a health insurance premium for each observation, attributing family policy premiums to those with a spouse or children and single policy premiums to those without.

Together, these data allow us to estimate the likely effect of different employer mandates on wages and employment as well as the distributional implications for workers with different characteristics. In the analysis that follows, we aggregate data from the CPS across years and report workers' insurance status, wages relative to the minimum wage, and various demographic characteristics such as age, race, marital status, and education. We use the weights provided in the CPS so that the numbers and proportions we report are representative of the fultime private sector workforce as a whole. See the Appendix tables for more detail.

Results

We use these data to estimate which workers would be at risk of unemployment with the imposition of employer mandates. We present data on the health insurance and wage distribution of all workers, as well as different demographic subgroups, focusing in particular on workers with wages close to the minimum wage since it is these workers whose wages may have the least flexibility to be lowered in response to mandates that make employing them more costly, and thus may be most likely to face adverse employment consequences.[5] We also limit our analysis to workers employed 20 hours per week or more, as those with fewer hours are likely to be exempt from employer mandates. Much more detailed data are shown in the Appendix tables that follow.

Workers at Risk

More than 16 percent of private sector workers employed 20 hours a week or more (whom we call "full time") are currently uninsured.

Table 1 Insurance Status of Full-Time Private Sector Workers
(Fraction of all full-time private sector workers shown)

Health insurance status	
Own employer health insurance	66.6%
Other health insurance	17.2%
Uninsured	16.2%
Total	100.0%

Table 2 Demographics of Insured and Uninsured Workers

	All	Insured	Uninsured
High school dropout	11%	8%	27%
Racial minority	26%	23%	46%
Under age 35	36%	33%	52%
Unmarried	38%	34%	57%
Single parent	8%	7%	14%

Who are these uninsured workers? They are more than three times as likely to be high school dropouts as insured workers, and twice as likely to be from a minority racial group. They are 50 percent more likely to be under age 35 and to be unmarried. They are twice as likely to be single parents.

Uninsured workers are thus demographically quite different from insured workers. Several of these characteristics make them economically vulnerable—and also make them the target population for policies intended to expand health insurance coverage.

Many of the employer mandates being considered by different states exempt small firms. More than 55 percent of all uninsured workers are employed in firms with more than 25 employees (compared to more than 80 percent of insured workers)—which means that they would be covered by many proposed mandates.[6]

Why are these workers uninsured? Some work at establishments that do not offer health insurance, some are not eligible for the insurance offered by their employer, and some do not take up insurance even when they are eligible. For a subsample of workers with sup-

Table 3 Establishment Size and Insurance Status

	All	Insured	Uninsured
Establishment size:			
1-9	13%	10%	27%
10-24	10%	9%	17%
25-99	15%	15%	17%
100-499	16%	17%	12%
500-999	7%	7%	4%
1,000+	39%	42%	23%
Total	**100%**	**100%**	**100%**

Table 4 Reasons for Not Having Employer Health Insurance

	Total
Those with other health insurance:	17%
Employer does not offer	5%
Employer offers; worker not eligible	2%
Employer offers and worker is eligible	10%
Those who are uninsured:	13%
Employer does not offer	8%
Employer offers; worker not eligible	2%
Employer offers and worker is eligible	3%
Those with (own) employer health insurance	70%
Total	**100%**

plemental information, we can see how large each of these groups is.

More than half of workers who do not have insurance through their own employer have insurance from another source—such as a spouse or a public program. Of the workers who are uninsured, about 25 percent are eligible for insurance but do not take it up, 15 percent work for an employer that offers insurance but are not eligible themselves, and almost 60 percent work for an employer that does not offer health insurance.

This decomposition is particularly important if we think that workers who are offered insurance but decline it are earning wages that have already been reduced to accommodate the cost of health insurance, and would thus be less likely to change if an employer mandate were enacted (especially if they are in firms where most other workers are offered and take up the insurance already).[7] It is likely, however, that these workers turn down insurance because of the required worker premium contribution. If firms are required to pay more for health insurance under the new employer mandates, then these workers *are* likely to be at risk of unemployment. On the other hand, some workers may not be offered health insurance by their employer, but may have insurance through an alternate source. If mandates required employers to offer health insurance to these workers, then their wages would also need to be adjusted down, so even though they already had insurance they would be vulnerable to employment effects.[8]

A more sophisticated estimate of the number of workers at risk should thus account for the distribution of employer offerings in addition to the distribution of workers currently covered. Uninsured workers who decline coverage represent about 3 percent of the overall workforce. Workers who are not offered health insurance but are covered through an alternative health insurance plan represent about 8 percent of the overall workforce. Thus, taking into account whether workers have employer health insurance available to them would, if anything, increase the fraction of workers at risk of unemployment.

Benchmark Insurance Costs

How likely these uninsured workers are to face unemployment depends on whether the minimum wage is binding—that is, if the hourly cost per worker of the newly mandated health insurance is greater than the gap between the worker's wage and the minimum wage. While a more detailed calculation requires knowledge of (or assumptions about) workers' family structure, health status, the elasticity of labor supply and demand, workers' valuation of health insurance benefits, long-run labor market dynamics (such as substitution toward part-time employees) and the like, we calculate several informative back-of-the-envelope benchmarks using aggregate insurance costs. The average health insurance premium in 2002 was approximately $5,500 per year, according to the Kaiser Family Foundation/HRET employer survey (using a weighted average of family and individual plans). The average uninsured full-time worker in our data works 40 hours per week and 46 weeks per year, or about 1,840 hours yearly. The average hourly wage for this group of workers would thus have to decrease by about $3 (because $5,500/1,840 = $2.99) to absorb fully the cost of providing the average health insurance package. Here, clearly, the costs would be different if the mandated insurance coverage were more or less generous than the typical plan already provided to most workers.

We also calculate a more sophisticated benchmark based on the insurance cost facing individual workers, rather than a broad average. We impute the insurance cost for each worker based on state of residence, year, and family structure, divide that number by 2,000 to generate an average hourly cost of insurance,

and compare the difference between hourly wages and the minimum wage to that hourly insurance cost.

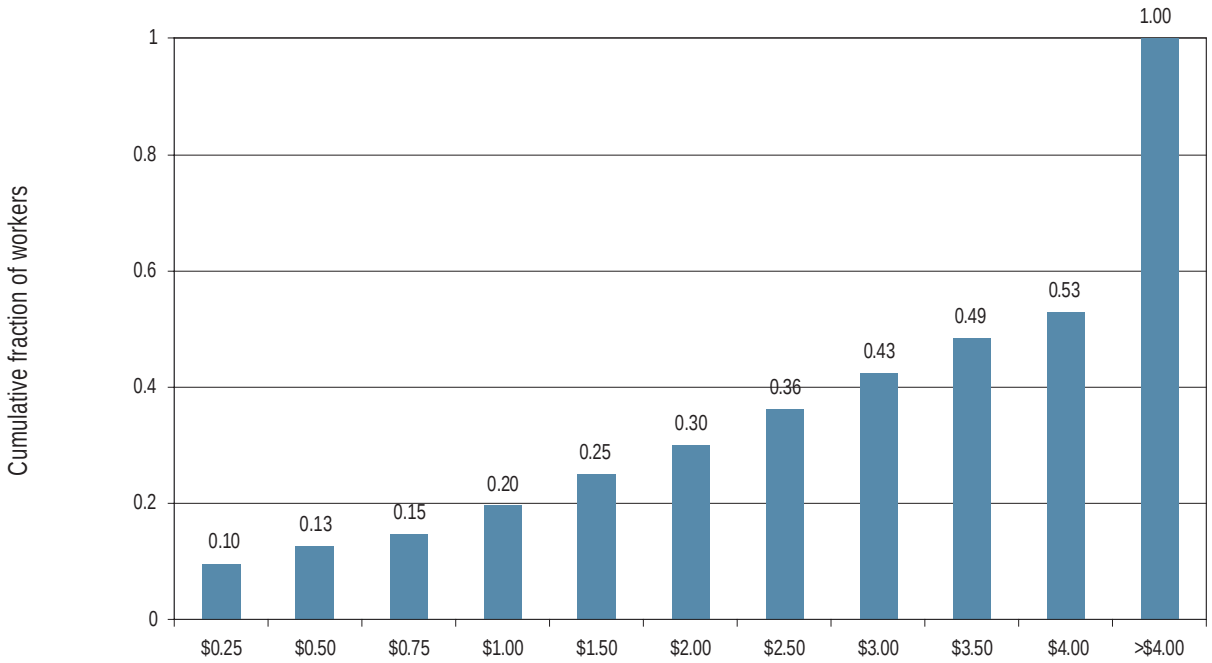
The Role of the Minimum Wage

A large fraction of uninsured workers earn little more than the minimum wage. Insurance costs potentially represent an enormous increase in the minimum compensation for this group of workers. The federal minimum wage is $5.15, and the average minimum wage in our sample (taking into account state minimums that are sometimes higher) is only $5.30—so the benchmark cost of $3 represents almost 60 percent of the effective minimum wage.[9] There is clearly a great deal of disagreement about the

Table 5 Insurance Status and Wages for Full-Time Private Sector Workers

Fraction of workers with:	
Own employer health insurance	67%
Other health insurance	17%
No insurance and wages:	
Within $1 minimum wage	3%
Within $1.01 - $2 of minimum wage	2%
Within $2.01 - $3 of minimum wage	2%
More than $3 above minimum wage	9%

Figure 1
How close to the minimum wage are uninsured full-time workers?



effect of minimum wages on employment, but even under relatively conservative elasticity estimates this could result in significant effects on minimum wage-workers.

Uninsured workers earning within $3 of the minimum wage represent 7 percent of the workforce, and almost 43 percent of all uninsured workers. (Using the more sophisticated benchmark based on individual insurance costs yields answers very similar to the $3 benchmark, both of which are reported in the Appendix tables.)

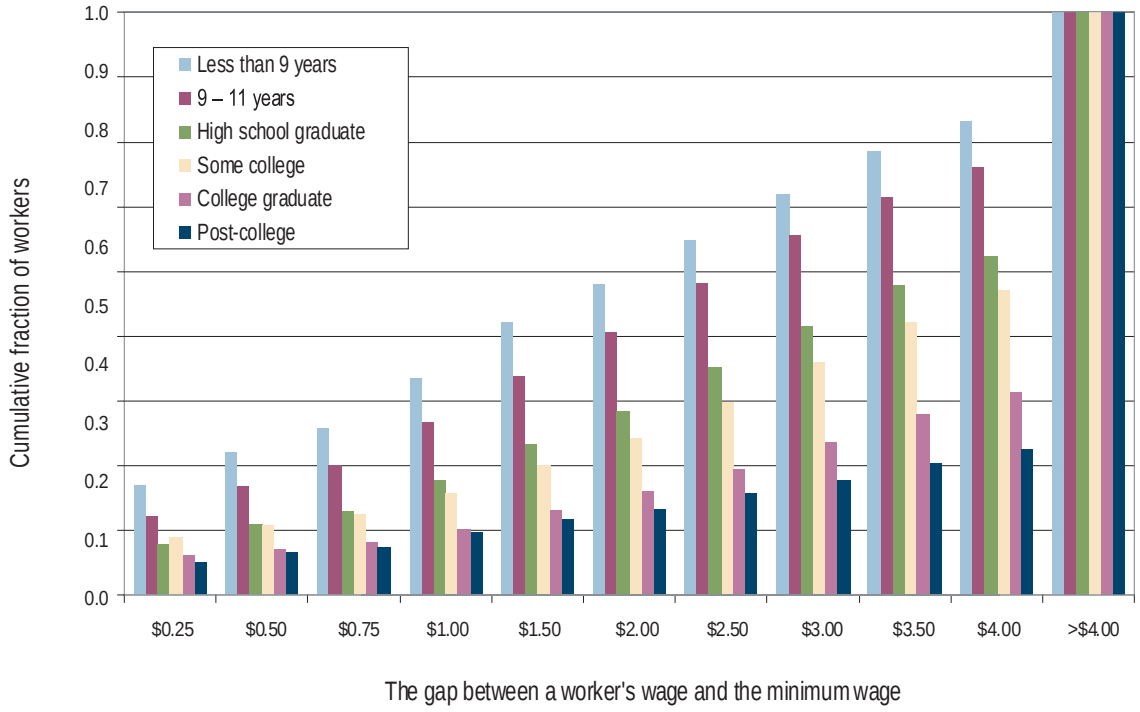
Figure 1 shows a more detailed distribution of the hourly wages of uninsured workers relative to the minimum wage.

Thus, while the overall fraction of private sector workers who are "at risk" is moderate, since only 7 percent of all workers are uninsured workers earning within $3 of the minimum wage, a potentially very large fraction of the group supposedly targeted for help by employer mandates might in fact be hurt, since 60 percent of uninsured workers earn within $3 of the minimum wage. So, of the roughly 108 million U.S. private sector workers, 105 million of whom work 20 hours or more per week, 17 million are uninsured, and more than 7 million of those earn within $3 of the minimum wage.[10]

As Table 2 suggested, low-skilled workers are more likely to be uninsured. Figure 2 shows this wage distribution for workers with different levels of education. Workers with less than a high school diploma are significantly more likely to have earnings close to the minimum wage.

Thus, among the uninsured, those with the least education face the highest risk of losing their jobs under employer mandates. The same is true for nonwhites, those under age 35, sin-

Figure 2
Wages of uninsured full-time workers by education



gle parents, and women (as seen in Appendix Table A5).

Potential Job Loss

How many of those workers are likely to lose their jobs? We calculate an approximate answer to this question in the following way. First, we compare the individual-specific hourly insurance costs described above to the cushion between an uninsured worker's wage and the minimum wage. If a worker's wage is sufficiently high that it can adjust downward by the full cost of insurance without hitting the minimum wage, we assume this worker is not at risk of losing her job. If, however, the minimum wage constraint binds, we calculate the percentage increase in total compensation implied by the health insurance mandate. For example, if a worker earning $6 per hour is mandated to have health insurance costing the firm $2 per hour, we assume that her wage will adjust downward by 85 cents to the minimum wage of $5.15. However, the remaining $1.15 of the cost of the mandate cannot be absorbed by reducing wages and increases her total compensation to $7.15—an increase in compensation of almost 20 percent ($1.15/$6.00 = 0.19). Assuming an employment elasticity with respect to the minimum wage of -0.1, meaning that a 10 percent increase in the minimum wage would lead to a 1 percent reduction in employment, this worker has a 2 percent chance of losing her job.[11] Performing a similar calculation for all the workers in our sample suggests that about 315,000 workers would lose jobs as a result of a mandate with these costs. About half of these workers would be nonwhite and about one-third would have less than a high school education. The burden of the mandate would thus fall disproportionately on these groups since, for example, nonwhite workers are only 25 percent of the workforce in this sample.

To the extent that mandates impose additional costs on firms (such as reduced flexibility or more generous coverage than they were already offering), these figures represent a lower bound on the increase in unemployment likely to result from such mandates.

Regional Variation

These results are not confined to any particular area of the country. As Appendix Table 9 shows, the Northeast, Midwest, South, and West have very similar fractions of workers at

Table 6 Number of Workers at Risk of Losing Employment

Total private sector workers (2003; from BLS)	108 million
Fraction of those workers who work full time (20 hours or more per week) (author calculations)	97.2%
Total full-time private sector workers	105 million
Fraction of those who are uninsured	16.2%
Fraction "at risk" (uninsured and earning wages less than the minimum wage plus the cost of health insurance)	6.9%
Workers at risk of losing employment	7.25 million
Average increase in compensation for uninsured workers	19.9%
Workers likely to become unemployed assuming elasticity = -0.1	315,000
Nonwhite workers	164,000
Workers with less education than high school diploma	107,000

Note: BLS= Bureau of Labor Statistics

risk for unemployment. Looking at individual states shows that there is local variation in this at-risk pool, however (although sample size limits our ability to compare individual states).

Individual states should be more concerned with employment effects of their own minimum wage laws than the federal government, since firms and jobs may move across state lines if the minimum wage is lower elsewhere.

Discussion

Understanding the labor market consequences of employer mandates is a key component in evaluating their effectiveness relative to other policies such as tax credits, Medicaid expansions, and individual mandates. Several studies have analyzed the effect of different versions of employer mandates on insurance premiums and on workers' wages. This study contributes an important missing piece to the analysis: how large is the potential risk of unemployment? Our analysis suggests that almost half of the targeted population of uninsured workers have hourly wages close enough to the minimum wage that employers will not be able to lower their wages enough to accommodate fully the increase in compensation costs that employer mandates would impose. These workers, who tend to be disproportionately low-education, minority, and female, thus face a risk of unemployment. This risk of unemployment should be a crucial component in the evaluation of both the effectiveness of these policies in reducing the number of uninsured and their broader effects on the well-being of low-income workers.

Table 7 Workers at Risk by State

	CA	MA	OR	WA	US Avg
Total	100.0%	100%	100%	100%	100%
Own Employer Health Insurance	62.0%	65.2%	70.2%	69.8%	62%
Other Employer Health Insurance	15.5%	22.7%	15.4%	15.4%	15.5%
Unins, within $1 min	65.0%	1.9%	4.9%	3.2%	6.5%
Unins, $1-2 of min wage	2.6%	1.2%	2.0%	2.3%	2.6%
Unins, $2-3 of min wage	2.6%	1.1%	1.2%	1.5%	2.6%
Unins, $3+ min wage	10.8%	8.0%	6.3%	7.9%	10.8%

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Appendix Tables

The data for this analysis come primarily from the *Current Population Survey*. The survey is done over several months each year. The variables we use come from several different months of the survey. We use data on demographics and basic health insurance coverage from the March CPS, 1995-2003. We use more detailed data on health insurance eligibility and employer offering for a subsample of workers available from the February supplement for 1995, 1997, 1999, and 2001. We use wages from each respondent's exit interview.

The following tables provide more detail on the data used for this analysis.

Table A1: Distribution of full-time private sector workers by health insurance coverage
Table A2: Demographic and employment characteristics for full-time private sector workers with and without insurance
Table A3: Distribution of full-time private sector workers by insurance status and wage relative to the minimum wage
Table A4: Distribution of all full-time private sector workers by insurance coverage and wage relative to minimum if uninsured
Table A5: Cumulative fraction of uninsured full-time private sector workers within a certain amount of minimum wage
Table A6: The fraction of full-time private sector workers who are at risk, based on wages and demographics
Table A7: Projected impact of insurance mandate on different groups
Table A8: State Minimum Wage Laws in Effect by Year (in January)
Table A9: Distribution of full-time private sector workers by insurance coverage and (if uninsured) wage relative to the minimum wage, for regions and selected states
Table A10: Description of final sample selection

Table A1	Distribution of full-time private sector workers by health insurance coverage

	March sample	February subsample
Total	1.000	1.000
Own employer health insurance	0.666	0.703
Other health insurance	0.172	0.171
Employer does not offer	-	0.051
Employer offers; worker not eligible	-	0.021
Employer offers and worker is eligible	-	0.100
Uninsured	0.162	0.126
Employer does not offer	-	0.078
Employer offers; worker not eligible	-	0.019
Employer offers and worker is eligible	-	0.030
Sample n (unweighted)	200,655	47,239

Note: The survey years included in the March sample are 1996 through 2003 while the February subsample includes 1997, 1999, and 2001.

Table A2 Demographic and employment characteristics for full-time private sector workers with and without insurance

(each entry represents fraction of total full-time private sector workforce)

	All	Insured	Unins.
Age:			
22 – 24	0.073	0.058	0.147
25 – 34	0.289	0.274	0.368
35 – 44	0.310	0.318	0.266
45 – 54	0.228	0.242	0.153
55 – 64	0.101	0.108	0.066
Family structure:			
Single male, no kids	0.167	0.146	0.276
Married male, no kids	0.149	0.158	0.101
Single male, kids	0.023	0.018	0.049
Married male, kids	0.218	0.227	0.170
Single female, no kids	0.131	0.126	0.155
Married female, no kids	0.124	0.134	0.078
Single female, kids	0.055	0.048	0.092
Married female, kids	0.133	0.143	0.079
Education:			
Less than 9 years	0.037	0.022	0.114
9 – 11 years	0.072	0.056	0.153
High school graduate	0.342	0.335	0.381
Some college	0.289	0.298	0.239
College graduate	0.190	0.209	0.094
Post-college	0.070	0.080	0.020
Race:			
White non-Hispanic	0.736	0.774	0.536
Black	0.108	0.100	0.150
Hispanic white	0.108	0.079	0.256
Other	0.049	0.047	0.058
Establishment size:			
1 – 9	0.127	0.100	0.271
10 – 24	0.103	0.090	0.169
25 – 99	0.153	0.149	0.172
100 – 499	0.164	0.172	0.123
500 – 999	0.065	0.070	0.039
1,000+	0.389	0.420	0.226
Industry			
Agro/for/fish	0.014	0.010	0.039
Mining	0.006	0.007	0.004
Construction	0.067	0.056	0.122
Mfg	0.219	0.235	0.136
Trade	0.202	0.188	0.275
TCPU	0.079	0.084	0.056
FIRE	0.080	0.088	0.041
Services	0.325	0.326	0.323
Public admin	0.006	0.006	0.005
Unweighted sample size	200,655	170,028	30,627

Note: TCPU= Transportation, communication, and public utilities.
FIRE= Finance, insurance, and real-estate.

Table A3 Distribution of full-time private sector workers by insurance status and wage relative to the minimum wage
(each entry represents fraction of total full-time private sector workforce)

	March sample	February subsample
Own employer health insurance	**0.666**	**0.703**
Other health insurance and:	**0.172**	**0.171**
Not offered own EHI	-	0.051
Not eligible for own EHI	-	0.021
Eligible for own EHI	-	0.100
Uninsured and:	**0.162**	**0.111**
Within $1 of minimum wage	0.032	0.028
…and not offered own EHI	-	0.020
…and not eligible for own EHI	-	0.004
…and eligible for own EHI	-	0.004
Within $1.01 – 2.00 of minimum wage	0.017	0.015
…and not offered own EHI	-	0.010
…and not eligible for own EHI	-	0.002
…and eligible for own EHI	-	0.003
Within $2.01 – 3.00 of minimum wage	0.020	0.017
…and not offered own EHI	-	0.010
…and not eligible for own EHI	-	0.003
…and eligible for own EHI	-	0.004
More than $3 above minimum wage	0.093	0.067
…and offered own EHI	-	0.038
…and not eligible for own EHI	-	0.010
…and eligible for own EHI	-	0.019
Unweighted sample size	200,655	47,239

Note: The survey years included in the March sample are 1996 through 2003 while the February subsample includes 1997, 1999, and 2001.
EHI= Employee health insurance.

Table A4	Distribution of all full-time private sector workers by insurance coverage and wage relative to minimum if uninsured (rows sum to 1.000)

	Fraction of workers with						
				No insurance; by proximity to minimum wage:			
	Own employer health insurance	Other health insurance	No insurance	≤ $1	$1.01 - $2	$2.01 - $3	>$3
Total	0.666	0.172	0.162	0.032	0.017	0.020	0.093
Age:							
22 – 24	0.475	0.198	0.327	0.079	0.045	0.054	0.149
25 – 34	0.648	0.146	0.206	0.039	0.021	0.025	0.121
35 – 44	0.677	0.184	0.139	0.025	0.014	0.016	0.085
45 – 54	0.707	0.184	0.109	0.020	0.011	0.013	0.065
55 – 64	0.730	0.164	0.106	0.022	0.011	0.011	0.062
Family structure:							
Single male, no kids	0.661	0.071	0.268	0.042	0.025	0.031	0.169
Married male, no kids	0.755	0.135	0.110	0.015	0.009	0.012	0.075
Single male, kids	0.578	0.082	0.340	0.061	0.034	0.041	0.204
Married male, kids	0.724	0.150	0.126	0.019	0.011	0.014	0.083
Single female, no kids	0.727	0.081	0.192	0.049	0.023	0.026	0.095
Married female, no kids	0.597	0.302	0.101	0.021	0.012	0.013	0.055
Single female, kids	0.649	0.079	0.272	0.074	0.037	0.045	0.118
Married female, kids	0.505	0.399	0.096	0.029	0.014	0.013	0.041
Education:							
Less than 9 years	0.396	0.099	0.169	0.074	0.070	0.193	0.396
9 – 11 years	0.518	0.139	0.092	0.047	0.051	0.153	0.518
High school graduate	0.643	0.177	0.032	0.019	0.024	0.106	0.643
Some college	0.673	0.193	0.021	0.011	0.016	0.086	0.673
College graduate	0.754	0.166	0.008	0.005	0.006	0.061	0.754
Post-college	0.806	0.149	0.004	0.002	0.002	0.038	0.806
Race:							
White non-Hispanic	0.695	0.187	0.118	0.019	0.010	0.014	0.075
Black	0.650	0.125	0.225	0.045	0.025	0.031	0.125
Hispanic white	0.496	0.119	0.385	0.105	0.053	0.054	0.174
Other	0.640	0.167	0.193	0.040	0.018	0.020	0.115
Establishment size:							
1 – 9	0.351	0.305	0.344	0.074	0.034	0.037	0.200
10 – 24	0.496	0.238	0.267	0.052	0.027	0.034	0.154
25 – 99	0.640	0.178	0.182	0.038	0.019	0.024	0.102
100 – 499	0.731	0.148	0.122	0.021	0.012	0.017	0.071
500 – 999	0.763	0.140	0.097	0.016	0.010	0.012	0.059
1,000+	0.781	0.125	0.094	0.017	0.011	0.012	0.054
Industry							
Agro/for/fish	0.365	0.196	0.439	0.153	0.067	0.059	0.160
Mining	0.813	0.086	0.101	0.010	0.002	0.011	0.079
Construction	0.544	0.160	0.296	0.020	0.017	0.025	0.234
Mfg	0.796	0.104	0.101	0.018	0.010	0.014	0.059
Trade	0.579	0.202	0.220	0.061	0.029	0.031	0.099
TCPU	0.778	0.109	0.114	0.012	0.008	0.011	0.082
FIRE	0.739	0.179	0.082	0.008	0.005	0.009	0.060
Services	0.622	0.218	0.161	0.031	0.018	0.020	0.091
Public administration	0.758	0.118	0.125	0.020	0.007	0.011	0.087
Unweighted sample size	134,054	35,974	30,627	5,940	3,202	3,832	17,653

Table A5 Cumulative fraction of uninsured full-time private sector workers within a certain amount of minimum wage

	Gap between worker's wage and the minimum wage										
	$0.25	**$0.5**	**$0.75**	**$1.00**	**$1.50**	**$2.00**	**$2.50**	**$3.00**	**$3.50**	**$4.00**	**>$4.00**
Total	0.096	0.126	0.148	0.196	0.251	0.300	0.362	0.425	0.485	0.529	1.000
Age:											
22 – 24	0.120	0.160	0.183	0.242	0.316	0.380	0.465	0.543	0.622	0.675	1.000
25 – 34	0.092	0.121	0.143	0.191	0.242	0.290	0.354	0.413	0.476	0.526	1.000
35 – 44	0.087	0.114	0.134	0.178	0.229	0.276	0.329	0.388	0.441	0.479	1.000
45 – 54	0.092	0.120	0.142	0.187	0.239	0.284	0.342	0.405	0.457	0.494	1.000
55 – 64	0.107	0.144	0.166	0.212	0.267	0.312	0.362	0.415	0.466	0.504	1.000
Family structure:											
Single male, no kids	0.077	0.103	0.119	0.159	0.207	0.253	0.310	0.369	0.431	0.480	1.000
Married male, no kids	0.074	0.092	0.108	0.137	0.183	0.217	0.263	0.324	0.381	0.422	1.000
Single male, kids	0.078	0.108	0.129	0.180	0.217	0.280	0.349	0.400	0.473	0.524	1.000
Married male, kids	0.064	0.089	0.108	0.149	0.193	0.232	0.288	0.344	0.398	0.447	1.000
Single female, no kids	0.132	0.169	0.199	0.253	0.316	0.371	0.441	0.507	0.568	0.609	1.000
Married female, no kids	0.108	0.141	0.166	0.209	0.269	0.326	0.387	0.455	0.511	0.550	1.000
Single female, kids	0.134	0.173	0.197	0.271	0.346	0.405	0.491	0.568	0.636	0.678	1.000
Married female, kids	0.139	0.185	0.222	0.298	0.380	0.443	0.510	0.576	0.633	0.670	1.000
Education:											
Less than 9 years	0.170	0.220	0.257	0.334	0.421	0.480	0.548	0.618	0.685	0.732	1.000
9 – 11 years	0.120	0.167	0.199	0.268	0.338	0.405	0.482	0.554	0.615	0.660	1.000
High school graduate	0.079	0.110	0.129	0.177	0.233	0.284	0.351	0.415	0.478	0.522	1.000
Some college	0.088	0.107	0.125	0.158	0.200	0.242	0.298	0.360	0.421	0.471	1.000
College graduate	0.061	0.071	0.081	0.101	0.131	0.160	0.194	0.237	0.278	0.313	1.000
Post-college	0.051	0.066	0.073	0.097	0.118	0.133	0.157	0.176	0.203	0.224	1.000
Race:											
White non-Hispanic	0.081	0.102	0.119	0.157	0.203	0.246	0.302	0.361	0.417	0.460	1.000
Black	0.079	0.118	0.137	0.199	0.250	0.308	0.380	0.447	0.517	0.568	1.000
Hispanic white	0.134	0.176	0.209	0.272	0.349	0.409	0.480	0.549	0.611	0.655	1.000
Other	0.106	0.143	0.168	0.206	0.257	0.302	0.354	0.403	0.468	0.512	1.000
Establishment size:											
1 – 9	0.119	0.151	0.171	0.214	0.265	0.311	0.363	0.419	0.475	0.518	1.000
10 – 24	0.094	0.124	0.146	0.195	0.250	0.297	0.361	0.423	0.488	0.537	1.000
25 – 99	0.096	0.129	0.154	0.206	0.261	0.310	0.377	0.440	0.498	0.544	1.000
100 – 499	0.072	0.102	0.124	0.173	0.226	0.273	0.344	0.413	0.474	0.518	1.000
500 – 999	0.084	0.109	0.123	0.165	0.214	0.264	0.330	0.392	0.451	0.507	1.000
1,000+	0.084	0.111	0.134	0.184	0.246	0.302	0.366	0.432	0.495	0.534	1.000
Industry											
Agro/for/fish	0.168	0.226	0.270	0.348	0.443	0.501	0.567	0.636	0.709	0.742	1.000
Mining	0.015	0.049	0.068	0.094	0.104	0.115	0.180	0.222	0.269	0.312	1.000
Construction	0.027	0.038	0.044	0.069	0.096	0.124	0.163	0.210	0.261	0.310	1.000
Mfg	0.079	0.111	0.129	0.177	0.228	0.275	0.343	0.410	0.473	0.521	1.000
Trade	0.141	0.182	0.215	0.277	0.348	0.407	0.477	0.548	0.609	0.653	1.000
TCPU	0.052	0.067	0.076	0.104	0.144	0.176	0.226	0.276	0.336	0.378	1.000
FIRE	0.059	0.066	0.073	0.095	0.116	0.154	0.202	0.265	0.322	0.369	1.000
Services	0.095	0.125	0.146	0.194	0.251	0.305	0.371	0.432	0.493	0.536	1.000
Public administration	0.071	0.107	0.124	0.160	0.197	0.219	0.258	0.303	0.344	0.382	1.000

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel A: Full Sample, Uninsured Definition 1 (includes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Total	0.024	0.036	0.048	0.040	0.243	0.368	0.501	0.415
Age:								
22 – 24	0.061	0.084	0.117	0.091	0.312	0.430	0.600	0.467
25 – 34	0.025	0.040	0.057	0.045	0.212	0.345	0.484	0.382
35 – 44	0.021	0.032	0.043	0.037	0.243	0.366	0.491	0.428
45 – 54	0.018	0.026	0.033	0.029	0.249	0.360	0.465	0.413
55 – 64	0.015	0.024	0.031	0.026	0.252	0.393	0.521	0.437
Family structure:								
Single male, no kids	0.030	0.050	0.069	0.033	0.194	0.317	0.437	0.210
Married male, no kids	0.012	0.019	0.026	0.027	0.179	0.292	0.401	0.412
Single male, kids	0.042	0.062	0.086	0.096	0.213	0.318	0.440	0.488
Married male, kids	0.015	0.023	0.032	0.033	0.180	0.276	0.397	0.410
Single female, no kids	0.035	0.053	0.068	0.039	0.309	0.466	0.606	0.343
Married female, no kids	0.018	0.024	0.034	0.036	0.313	0.424	0.609	0.635
Single female, kids	0.050	0.069	0.094	0.098	0.338	0.468	0.637	0.662
Married female, kids	0.025	0.037	0.048	0.048	0.334	0.493	0.631	0.640
Education:								
Less than 9 years	0.143	0.211	0.262	0.246	0.395	0.583	0.724	0.680
9 – 11 years	0.070	0.106	0.142	0.120	0.315	0.477	0.640	0.540
College graduate	0.008	0.013	0.019	0.023	0.101	0.160	0.236	0.285
Post-college	0.004	0.006	0.008	0.012	0.097	0.133	0.176	0.259

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel A: Full Sample, Uninsured Definition 1 (includes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Race:								
White non-Hispanic	0.017	0.027	0.039	0.031	0.183	0.287	0.410	0.324
Black	0.036	0.056	0.085	0.068	0.211	0.329	0.494	0.395
Hispanic white	0.093	0.140	0.184	0.166	0.300	0.452	0.594	0.537
Other	0.038	0.056	0.072	0.064	0.260	0.382	0.492	0.437
Establishment size:								
1 – 9	0.073	0.107	0.142	0.123	0.241	0.352	0.465	0.403
10 – 24	0.042	0.067	0.094	0.079	0.201	0.320	0.450	0.377
25 – 99	0.031	0.049	0.070	0.058	0.208	0.328	0.471	0.391
100 – 499	0.020	0.030	0.042	0.034	0.219	0.339	0.469	0.384
500 – 999	0.012	0.016	0.026	0.021	0.163	0.229	0.369	0.289
1,000+	0.016	0.025	0.036	0.028	0.225	0.357	0.509	0.407
Industry								
Agriculture/forestry/fishing	0.145	0.220	0.266	0.226	0.372	0.567	0.684	0.583
Mining	0.005	0.006	0.011	0.017	0.068	0.090	0.156	0.244
Construction	0.014	0.029	0.050	0.040	0.054	0.115	0.197	0.156
Manufacturing	0.014	0.022	0.032	0.027	0.205	0.321	0.479	0.396
Trade	0.058	0.084	0.114	0.096	0.314	0.458	0.619	0.523
TCPU	0.010	0.020	0.030	0.024	0.107	0.210	0.317	0.262
FIRE	0.012	0.018	0.025	0.020	0.174	0.275	0.380	0.296
Services	0.026	0.040	0.056	0.046	0.213	0.328	0.458	0.376
Public administration	0.024	0.040	0.044	0.036	0.149	0.241	0.265	0.219
Unweighted sample size	47,239	47,239	47,239	47,239	5,747	5,747	5,747	5,747

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel B: Subsample with detailed health insurance information, Uninsured Definition 1 (includes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Total	0.028	0.043	0.059	0.049	0.219	0.337	0.470	0.391
Age:								
22 – 24	0.074	0.107	0.150	0.113	0.292	0.422	0.589	0.443
25 – 34	0.030	0.049	0.070	0.057	0.194	0.316	0.452	0.366
35 – 44	0.024	0.037	0.052	0.045	0.215	0.329	0.457	0.400
45 – 54	0.020	0.030	0.040	0.035	0.218	0.320	0.428	0.378
55 – 64	0.018	0.028	0.038	0.031	0.228	0.359	0.491	0.408
Family structure:								
Single male, no kids	0.036	0.060	0.084	0.040	0.184	0.303	0.426	0.201
Married male, no kids	0.013	0.021	0.031	0.032	0.150	0.251	0.368	0.380
Single male, kids	0.052	0.080	0.109	0.121	0.207	0.321	0.436	0.484
Married male, kids	0.017	0.026	0.039	0.040	0.156	0.245	0.362	0.374
Single female, no kids	0.041	0.061	0.082	0.046	0.283	0.420	0.567	0.316
Married female, no kids	0.021	0.029	0.043	0.045	0.264	0.374	0.543	0.572
Single female, kids	0.060	0.087	0.123	0.130	0.289	0.423	0.595	0.627
Married female, kids	0.031	0.046	0.059	0.060	0.300	0.454	0.580	0.591
Education:								
Less than 9 years	0.158	0.234	0.299	0.279	0.364	0.539	0.690	0.644
9 – 11 years	0.082	0.124	0.170	0.144	0.293	0.443	0.610	0.514
High school graduate	0.029	0.046	0.066	0.054	0.202	0.318	0.458	0.371
Some college	0.020	0.031	0.044	0.035	0.179	0.278	0.395	0.317
College graduate	0.007	0.011	0.016	0.012	0.138	0.213	0.297	0.224
Post-college	0.003	0.003	0.005	0.004	0.095	0.113	0.162	0.146

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel B: Subsample with detailed health insurance information, Uninsured Definition 1 (includes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Race:								
White non-Hispanic	0.017	0.027	0.039	0.031	0.183	0.287	0.410	0.324
Black	0.036	0.056	0.085	0.068	0.211	0.329	0.494	0.395
Hispanic white	0.093	0.140	0.184	0.166	0.300	0.452	0.594	0.537
Other	0.038	0.056	0.072	0.064	0.260	0.382	0.492	0.437
Establishment size:								
1 – 9	0.073	0.107	0.142	0.123	0.241	0.352	0.465	0.403
10 – 24	0.042	0.067	0.094	0.079	0.201	0.320	0.450	0.377
25 – 99	0.031	0.049	0.070	0.058	0.208	0.328	0.471	0.391
100 – 499	0.020	0.030	0.042	0.034	0.219	0.339	0.469	0.384
500 – 999	0.012	0.016	0.026	0.021	0.163	0.229	0.369	0.289
1,000+	0.016	0.025	0.036	0.028	0.225	0.357	0.509	0.407
Industry								
Agriculture/forestry/fishing	0.145	0.220	0.266	0.226	0.372	0.567	0.684	0.583
Mining	0.005	0.006	0.011	0.017	0.068	0.090	0.156	0.244
Construction	0.014	0.029	0.050	0.040	0.054	0.115	0.197	0.156
Manufacturing	0.014	0.022	0.032	0.027	0.205	0.321	0.479	0.396
Trade	0.058	0.084	0.114	0.096	0.314	0.458	0.619	0.523
TCPU	0.010	0.020	0.030	0.024	0.107	0.210	0.317	0.262
FIRE	0.012	0.018	0.025	0.020	0.174	0.275	0.380	0.296
Services	0.026	0.040	0.056	0.046	0.213	0.328	0.458	0.376
Public administration	0.024	0.040	0.044	0.036	0.149	0.241	0.265	0.219
Unweighted sample size	47,239	47,239	47,239	47,239	5,747	5,747	5,747	5,747

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel C: Subsample with detailed insurance information,
Uninsured Definition 2 (excludes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Total	0.024	0.036	0.048	0.040	0.243	0.368	0.501	0.415
Age:								
22 – 24	0.061	0.084	0.117	0.091	0.312	0.430	0.600	0.467
25 – 34	0.025	0.040	0.057	0.045	0.212	0.345	0.484	0.382
35 – 44	0.021	0.032	0.043	0.037	0.243	0.366	0.491	0.428
45 – 54	0.018	0.026	0.033	0.029	0.249	0.360	0.465	0.413
55 – 64	0.015	0.024	0.031	0.026	0.252	0.393	0.521	0.437
Family structure:								
Single male, no kids	0.030	0.050	0.069	0.033	0.194	0.317	0.437	0.210
Married male, no kids	0.012	0.019	0.026	0.027	0.179	0.292	0.401	0.412
Single male, kids	0.042	0.062	0.086	0.096	0.213	0.318	0.440	0.488
Married male, kids	0.015	0.023	0.032	0.033	0.180	0.276	0.397	0.410
Single female, no kids	0.035	0.053	0.068	0.039	0.309	0.466	0.606	0.343
Married female, no kids	0.018	0.024	0.034	0.036	0.313	0.424	0.609	0.635
Single female, kids	0.050	0.069	0.094	0.098	0.338	0.468	0.637	0.662
Married female, kids	0.025	0.037	0.048	0.048	0.334	0.493	0.631	0.640
Education:								
Less than 9 years	0.143	0.211	0.262	0.246	0.395	0.583	0.724	0.680
9 – 11 years	0.070	0.106	0.142	0.120	0.315	0.477	0.640	0.540
High school graduate	0.025	0.037	0.052	0.042	0.220	0.334	0.469	0.372
Some college	0.016	0.025	0.035	0.028	0.199	0.305	0.431	0.347
College graduate	0.006	0.010	0.013	0.010	0.161	0.251	0.343	0.257
Post-college	0.002	0.003	0.004	0.003	0.123	0.150	0.197	0.174

Table A6	The fraction of full-time private sector workers who are at risk, based on wages and demographics Panel C: Subsample with detailed insurance information, Uninsured Definition 2 (excludes those who decline insurance)

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
Race:								
White non-Hispanic	0.014	0.022	0.031	0.024	0.205	0.316	0.440	0.343
Black	0.030	0.045	0.068	0.054	0.226	0.347	0.522	0.414
Hispanic white	0.085	0.125	0.160	0.145	0.326	0.478	0.612	0.554
Other	0.031	0.047	0.059	0.053	0.274	0.416	0.525	0.471
Establishment size:								
1 – 9	0.070	0.102	0.130	0.114	0.258	0.374	0.479	0.418
10 – 24	0.038	0.062	0.085	0.070	0.217	0.353	0.485	0.403
25 – 99	0.026	0.040	0.055	0.046	0.239	0.362	0.506	0.419
100 – 499	0.015	0.023	0.032	0.025	0.241	0.387	0.521	0.417
500 – 999	0.009	0.011	0.019	0.015	0.179	0.230	0.398	0.304
1,000+	0.012	0.018	0.025	0.020	0.260	0.393	0.557	0.436
Industry								
Agriculture/forestry/fishing	0.139	0.207	0.245	0.208	0.403	0.602	0.712	0.603
Mining	0.005	0.005	0.005	0.013	0.134	0.134	0.151	0.368
Construction	0.013	0.029	0.047	0.038	0.062	0.132	0.218	0.174
Manufacturing	0.011	0.017	0.024	0.019	0.245	0.366	0.511	0.417
Trade	0.049	0.071	0.094	0.079	0.346	0.499	0.657	0.557
TCPU	0.009	0.017	0.025	0.021	0.119	0.227	0.341	0.290
FIRE	0.009	0.014	0.020	0.015	0.195	0.306	0.419	0.310
Services	0.022	0.033	0.045	0.037	0.234	0.353	0.491	0.400
Public administration	0.024	0.040	0.040	0.034	0.195	0.316	0.316	0.272
Unweighted sample size	47,239	47,239	47,239	47,239	4,360	4,360	4,360	4,360

Table A6 The fraction of full-time private sector workers who are at risk, based on wages and demographics
Panel D: Comparison of top rows of Panels A, B, C

Fraction at risk defined relative to:	All workers				Uninsured workers			
Proximity to minimum wage to qualify as "at risk" for an uninsured worker:	$1	$2	$3	Individual-specific cost	$1	$2	$3	Individual-specific cost
Numerator:	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost	Uninsured, within $1	Uninsured, within $2	Uninsured, within $3	Uninsured, within ind. cost
Denominator:	All	All	All	All	Uninsured	Uninsured	Uninsured	Uninsured
March data; Uninsured includes decliners	0.032	0.049	0.069	0.069	0.196	0.300	0.425	0.429
February data; Uninsured includes decliners	0.028	0.043	0.059	0.049	0.219	0.337	0.470	0.391
February data; Uninsured excludes decliners	0.024	0.036	0.048	0.040	0.243	0.368	0.501	0.415

Table A7 Projected impact of insurance mandate on different groups

	Fraction of workers in this group who are uninsured	Average increase in hourly compensation for uninsured	Fraction of uninsured workers in this group losing jobs	Fraction of all FT workers in this group losing jobs
Total:	0.162	0.199	0.016	0.003
Age:				
22 – 24	0.327	0.155	0.015	0.005
25 – 34	0.206	0.160	0.012	0.002
35 – 44	0.139	0.302	0.019	0.003
45 – 54	0.109	0.138	0.019	0.002
55 – 64	0.106	0.243	0.022	0.002
Family structure:				
Single male, no kids	0.268	0.071	0.008	0.002
Married male, no kids	0.110	0.261	0.017	0.002
Single male, kids	0.340	0.270	0.013	0.004
Married male, kids	0.126	0.194	0.014	0.002
Single female, no kids	0.192	0.122	0.012	0.002
Married female, no kids	0.101	0.253	0.026	0.003
Single female, kids	0.272	0.294	0.027	0.007
Married female, kids	0.096	0.522	0.032	0.003
Education:				
Less than 9 years	0.506	0.236	0.027	0.013
9 – 11 years	0.344	0.168	0.015	0.005
High school graduate	0.180	0.127	0.014	0.002
Some college	0.134	0.373	0.017	0.002
College graduate	0.080	0.083	0.009	0.001
Post-college	0.046	0.064	0.014	0.001
Race:				
White non-Hispanic	0.118	0.182	0.014	0.002
Black	0.225	0.279	0.016	0.004
Hispanic white	0.385	0.193	0.017	0.007
Other	0.193	0.181	0.025	0.005
Establishment size:				
1 – 9	0.344	0.243	0.019	0.006
10 – 24	0.267	0.143	0.015	0.004
25 – 99	0.182	0.195	0.015	0.003
100 – 499	0.122	0.126	0.010	0.001
500 – 999	0.097	0.144	0.016	0.002
1,000+	0.094	0.244	0.017	0.002
Industry	0.439	0.251	0.018	0.008
Agro/for/fish	0.101	0.041	0.000	0.000
Mining	0.296	0.042	0.006	0.002
Construction	0.101	0.119	0.012	0.001
Mfg	0.220	0.335	0.025	0.006
Trade	0.114	0.305	0.005	0.001
TCPU	0.082	0.196	0.009	0.001
FIRE	0.161	0.148	0.016	0.003
Services	0.124	0.151	0.000	0.000
Public admin	0.162	0.199	0.016	0.003
Unweighted sample size	170,028	30,627	30,627	170,028

Table A8	State Minimum Wage Laws in Effect by Year (in January)								
State	2003	2002	2001	2000	1999	1998	1997	1996	1995
AL	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
AK	$7.15	$5.65	$5.65	$5.65	$5.65	$5.65	$5.25	$4.75	$4.75
AZ	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
AR	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
CA	$6.75	$6.75	$6.25	$5.75	$5.75	$5.15	$4.75	$4.25	$4.25
CO	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
CT	$6.90	$6.70	$6.40	$5.65	$5.65	$5.15	$4.75	$4.27	$4.27
DE	$6.15	$6.15	$6.15	$5.65	$5.15	$5.15	$5.00	$4.25	$4.25
DC	$6.15	$6.15	$6.15	$6.15	$6.15	$5.25	$5.25	$5.25	$5.25
FL	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
GA	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
HI	$6.25	$5.75	$5.25	$5.25	$5.25	$5.25	$5.25	$5.25	$5.25
ID	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
IL	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
IN	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
IA	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.65	$4.65
KS	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
KY	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
LA	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
ME	$6.25	$5.75	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MD	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MA	$6.75	$6.75	$6.75	$6.00	$5.25	$5.25	$5.25	$4.25	$4.25
MI	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MN	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MS	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MO	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
MT	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NE	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NV	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NH	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NJ	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$5.05	$5.05	$5.05
NM	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NY	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
NC	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
ND	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
OH	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
OK	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
OR	$6.90	$6.50	$6.50	$6.50	$6.50	$6.00	$5.50	$4.75	$4.75
PA	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
RI	$6.15	$6.15	$6.15	$5.65	$5.15	$5.15	$4.75	$4.45	$4.45
SC	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
SD	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
TN	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
TX	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
UT	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
VT	$6.25	$6.25	$6.25	$5.75	$5.15	$5.15	$5.00	$4.50	$4.50
VA	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
WA	$7.01	$6.90	$6.72	$6.50	$5.70	$5.15	$4.90	$4.90	$4.90
WV	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
WI	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
WY	$5.15	$5.15	$5.15	$5.15	$5.15	$5.15	$4.75	$4.25	$4.25
Federal	**$5.15**	**$5.15**	**$5.15**	**$5.15**	**$5.15**	**$5.15**	**$4.75**	**$4.25**	**$4.25**

Table A9	Distribution of full-time private sector workers by insurance coverage and (if uninsured) wage relative to the minimum wage, for regions and selected states

	Northeast	Midwest	South	West	Total
Total	1.000	1.000	1.000	1.000	1.000
Own EHI	0.659	0.683	0.639	0.638	0.654
Other EHI	0.199	0.202	0.170	0.162	0.182
Uninsured, within $1 of min wage	0.025	0.018	0.039	0.050	0.033
Uninsured, $1-2 of min wage	0.013	0.011	0.021	0.023	0.017
Uninsured, $2-3 of min wage	0.015	0.015	0.025	0.023	0.020
Uninsured, $3+ min wage	0.090	0.071	0.106	0.104	0.093

	CA	MA	OR	WA
Total	1.000	1.000	1.000	1.000
Own EHI	0.620	0.652	0.702	0.698
Other EHI	0.155	0.227	0.154	0.154
Uninsured, within $1 min	0.065	0.019	0.049	0.032
Uninsured, $1-2 of min wage	0.026	0.012	0.020	0.023
Uninsured, $2-3 of min wage	0.026	0.011	0.012	0.015
Uninsured, $3+ min wage	0.108	0.080	0.063	0.079
Unweighted sample size	14,215	5,369	2,765	3,058

Table A10	Description of final sample selection
All observations present in both March and "outgoing rotation group" CPS samples	415,108
Restrict to workers	306,169
Restrict to private sector	222,468
Restrict to those with observed wages and pay periods	216,570
Restrict to those with observed establishment size	212,149
Restrict to those with health insurance information	206,799
Restrict to those with valid industry code	206,792
Restrict (usually) to those working ≥ 20 hours/week	180,815

Endnotes

1. Yelowitz ("The Cost of California's Health Insurance Act of 2003," EPI, 2003), for example, shows that costs and benefits of California's law depend crucially on the subsidy for low-income workers, the generosity of the plan required to fulfill the "play-or-pay" requirements, etc. See also Zedlewski et al., "Play-or-Pay Employer Mandates: Potential Effects," *Health Affairs*, Spring 2002; and Krueger and Reinhardt, "The Economics of Employer Versus Individual Mandates," *Health Affairs*, Spring 1994.
2. See, for example, Gruber and Krueger, "The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance," *Tax Policy and the Economy*, (1991); and Thurston, "Labor Market Effects of Hawaii's Mandatory Employer-Provided Health Insurance," *Industrial and Labor Relations Review*, October, (1997).
3. Yelowitz (2004) illustrates the importance of understanding the specifics of California's proposed mandate in order to estimate the proposal's cost.
4. If workers are required to take up the insurance, the degree to which workers value the benefits and the elasticity of labor supply and demand would determine the ultimate effect on wages (and the "incidence" of the mandate), as discussed below. See Summers (1989) for a discussion of how worker valuation affects the incidence of mandated benefits.
5. While hourly workers may be more susceptible to binding minimum wages than salaried workers, minimum wage laws apply to almost all salaried workers as well. We impute an hourly wage for those workers on salary using the usual hours worked per week and weekly wages from the CPS. Workers paid hourly are much more likely to be close to the minimum wage than those paid on salary, but we include both in our analysis.
6. It is not clear how accurate employees' reports of their establishment size are.
7. Of course, to the extent that the insurance they are currently offered is not generous enough to meet the requirements of the new mandate, the increase in cost generated by the mandate will still affect their wages and employment. The generosity of the required coverage must therefore be taken into account, as well as whether or not workers are required to take it up.
8. Many proposed mandates apply only to full-time workers. Employers might thus have the incentive to substitute away from full-time employees toward part-time employees. We ignore these dynamics. We are also implicitly assuming here that wages adjust independently of whether workers would have taken up insurance or not–insofar as there is no mechanism for employers to know ahead of time (when offering a wage and insurance package) whether a worker is going to take up that coverage or not.
9. In 1997, on average, wages represented about 75 percent of compensation, but there is evidence that non-wage compensation is a lower share of total compensation for low-wage workers and is dropping for them over time (Farber and Levy, 2000; and Pierce, 2001).
10. Bureau of Labor Statistics report of total private sector labor force.
11. This is a relatively conservative estimate of the sensitivity of employment to minimum wage laws. See Brown (1999) for a review of the wider range of estimates of this elasticity.

Selected Publications

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The Cost of California's Health Insurance Act of 2003, by Dr. Aaron Yelowitz, University of Kentucky, October 2003.

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Mandated Health Insurance, The Low Wage Employee, and the Distribution of Income, by Dwight R. Lee, University of Georgia, and Ronald S. Warren, University of Georgia, January 1993.

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