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Effects of the San Francisco Employer Health Spending Mandate

by

Carrie Hoverman Colla

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Health Services & Policy Analysis

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of the

University of California, Berkeley

Committee in charge:

Professor William H. Dow, Chair

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Abstract

Effects of the San Francisco Employer Health Spending Mandate

By

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Doctor of Philosophy in Health Services & Policy Analysis

University of California, Berkeley

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San Francisco implemented a major health initiative in 2008, becoming the first city to put into practice a pay-or-play employer health spending mandate and creating Healthy San Francisco, a “public option” to promote affordable universal access to care. The health spending requirement is in addition to a requirement San Francisco instituted in 2006 for firms to provide paid sick leave to workers. This research combines public and new survey data sources to illustrate how employers in San Francisco reacted to the Paid Sick Leave Ordinance and the Health Care Security Ordinance. Evidence from the first year of implementation of the Health Care Security Ordinance and the first two years after implementation of the Paid Sick Leave Ordinance shows that employer benefit mandates are feasible, and can expand benefits without significant job loss.

Background

San Francisco was the first area to require employers to provide paid sick leave by implementing the Paid Sick Leave Ordinance in 2007. Workers must accrue a minimum of one hour of paid sick leave for every 30 hours worked. The employer health spending requirement compels all businesses with employees working in the geographical bounds of San Francisco with more than 20 employees nationwide to contribute to health care for their workers, either through their own plan or by contributing to Healthy San Francisco. In 2010, the employer spending requirement amounts to about \$4,140 per full-time worker per year in a large firm (with more than 100 employees) and about \$2,767 per full-time worker per year in a medium size firm (with 20-99 employees). This compares to U.S. annual average premiums from the 2009 Kaiser/HRET Employer Health Benefit Survey for employer-sponsored insurance of \$4,824 for single coverage.

Employees at firms who choose to “pay” and contribute to the public option, Healthy San Francisco, receive a 75% discount on program participation fees if they qualify for Healthy San Francisco. San Francisco residents with an income at or below 500% of the Federal Poverty Level (for one person \$54,150; for a family of four \$110,250) are eligible to enroll in Healthy

San Francisco. Healthy San Francisco is free if an enrollee is below 300% of the federal poverty line and their employer contributes to the program. Healthy San Francisco is administered by the Department of Public Health and is a reinvention of the San Francisco health care safety net. Healthy San Francisco enables and encourages residents to access primary and preventive care by providing a Medical Home and primary physician to each program participant, as well as specialty care, urgent and emergency care, laboratory, inpatient hospitalization, radiology, and pharmaceuticals.

Healthy San Francisco had 51,541 residents enrolled as of March 2010; this compares to an estimated 60,000 uninsured adults in the city when Healthy San Francisco began in July 2007, indicating high demand for the program not only from employers but also from individuals. Enrollees have a choice of about 25 facilities for their Medical Home, including community health centers, such as North East Medical Services (which sees 23% of Healthy San Francisco patients at 4 locations) and private facilities such as Kaiser Permanente San Francisco Medical Center (4%). In March 2009, the Kaiser Family Foundation conducted an independent survey to gauge the opinions and experiences of Healthy San Francisco's first wave of participants. Participants reported high levels of satisfaction (94% were at least somewhat satisfied with the program) and endorsement of Healthy San Francisco (92% would recommend to a friend and the same share think other cities should create similar programs).

Data and Methods

This dissertation primarily draws upon a new dataset collected by the University of California, Berkeley, the 2008 Bay Area Employer Health Benefits Survey (N=1,043). National Research, LLC conducted telephone interviews with employee benefit managers in San Francisco and surrounding counties during August 2008 – January 2009. The survey asked firms about their health benefit offerings in 2007 before the employer spending requirement went into effect, in addition to 2008 changes in benefits, in order to measure both baseline offerings and post-implementation changes. It also asked firms about their responses to the Paid Sick Leave Ordinance and asked about their sentiments towards the laws. In addition to these data, the University of California, Berkeley also collected a smaller survey of restaurants in San Francisco in early 2009 asking about Health Care Security Ordinance specific surcharges (N=142).

In addition to these new survey data, data from the Quarterly Census of Employment and Wages (QCEW) are used to study labor market effects of the Health Care Security Ordinance. Quarterly data on employment and earnings were pulled for the period January 1990 to June 2009 from the Bureau of Labor Statistics for the following industries: all private employment, retail establishments, accommodation and food services, and restaurants.

The identification strategy of this research relies on a difference-in-difference framework, comparing trends in San Francisco to trends in surrounding counties using a spatial discontinuity approach before and after implementation of the mandate as well as reporting descriptive data on

San Francisco trends. The difference-in-difference method controls for common trends in the local area that vary along observable firm characteristics. The labor market effects analysis also controls for differences in trends in metropolitan centers of the 25 largest MSAs in the United States compared to peripheral counties.

Results

Health Benefit Coverage Prior to HCSO Implementation

Chapter 3 discusses the landscape of health benefit offering in 2007, prior to implementation of the Health Care Security Ordinance, and changes firms made to benefits in the first year of implementation. In San Francisco, 93% of firms offered health benefits to some of their workers at baseline in 2007, and among those firms who offered insurance, about 77% of workers in those firms were covered. This was similar to proportions offering in surrounding Bay Area counties and on a national level; in 2008 91% of firms with 20 or more employees offered benefits to workers, and 93% of firms with 20 or more employees in urban areas offered health benefits. Despite this high proportion of firms offering insurance, 75% of firms had to make a change either in number of employees covered or in generosity of benefits in order to comply with the San Francisco Health Care Security Ordinance.

Healthy San Francisco

Data from the 2008 Bay Area Employer Health Benefits Survey indicate that twenty-one percent of San Francisco employers subject to the mandate are contributing to Healthy San Francisco for some workers. This can be confirmed using public data: as of November 2009, 1,040 employers had elected to pay into the public option, out of approximately 4,400 total non-exempt employers (estimated from County Business Patterns data), yielding administrative estimates of public option demand that are quite similar to the survey-based estimates of 21%. Employers with more low-income, part-time, or sicker workers should be incentivized to utilize the public option because of greater city subsidies for these populations, but relationships between these characteristics and contribution to Healthy San Francisco were not observed in the first year of implementation (Chapter 4). Perhaps over time employers will learn to behave more strategically in response to incentives in the Health Care Security Ordinance.

Crowd-Out

One of the most common fears surrounding discussion of a public option in health reform is crowd-out of private insurance policies by the public option. Despite broad use of Healthy San Francisco during the first year of implementation, there is little evidence of crowd-out of private insurance policies. Firms in San Francisco were no more likely to stop offering health benefits or to restrict health benefits than firms in surrounding counties, indicating that firms are not dropping private coverage in favor of Healthy San Francisco. In fact, San Francisco firms were less likely than firms in surrounding counties to reduce benefits in some way: either by

increasing the employee premium, raising the deductible, dropping coverage, or restricting benefits. Instead, San Francisco firms are expanding private coverage: about 20% of San Francisco firms said that they have already raised the employer contribution for one or more of their health insurance plans and about 28% of San Francisco firms said they had already added new health insurance offerings in response to the mandate or were very likely to in the next year (Chapter 3).

Employer responses to a pay-or-play mandate will differ according to perceived costs and benefits of each choice. In deciding whether or not to drop or restrict private coverage in favor of the public option, the perceived benefits of a public option such as Healthy San Francisco are particularly important. Healthy San Francisco is in many ways a repackaging of the relatively generous set of public health services previously available in San Francisco, although that is changing as private providers such as Kaiser have now also become care delivery options for program enrollees. Safety net usage may also be perceived as more legitimized now that it has clear copayments and authorizations, as well as medical homes for enrollees. But the fact that access is limited only to San Francisco implies that this will necessarily be perceived as an inferior option to private coverage for many employers and employees, and thus crowd-out is likely to be lower here than if a true Medicare-like “public option” were introduced at a national level. Nevertheless it will be interesting to see if the use of this program by employers rises or falls with time and development of the program.

Reactions to Health Care Security Ordinance

Firms are choosing a variety of strategies to comply with the mandate in addition to contributing to Healthy San Francisco (Chapter 3). Most firms are altering their private benefit offerings in some way to comply. After adjusting for firm characteristics, significantly more firms in San Francisco than surrounding counties were likely to start offering health insurance in 2008 if they did not offer in 2007, or to begin offering a Health Reimbursement Account (HRA). HRAs are an attractive option for employers seeking to minimize their costs as they are employer-owned, and the employer can recapture any unspent funds at the end of the year or upon termination of employment. Also, firms can contribute to an HRA based on the number of hours an employee works, rather than having a fixed cost such as traditional health insurance. Firms with a greater proportion of female, temporary, and low-wage workers were more likely to offer a new HRA in 2008 (Chapter 4). Restaurants were also more likely to offer an HRA. Firms with more female workers may be likely to use an HRA as a supplement to spousal coverage. The Office of Labor Standards Enforcement is currently studying use of HRAs to determine whether they meet the goal of "providing access to affordable health care" to those who work in San Francisco. HRAs are not health insurance and thus do not reduce the financial risk of a serious health event, they simply set aside pre-tax money for health care spending.

Firm Sentiments Regarding the Health Care Security Ordinance

Most San Francisco employers (64%) were supportive of the Health Care Security Ordinance in the first year of implementation despite needing to make changes to comply (Chapter 3). The proportion of firms in support was also similar among eating and drinking establishments (despite the perception from the Golden Gate Restaurant Association) and those firms who had to increase the number of workers covered under existing plans. Support was only slightly lower in the small subset of firms that did not offer health insurance in 2007 and those who found it difficult to comply with the Ordinance.

Labor Market Effects

Neoclassical economic theory predicts that firms could absorb the additional cost of the mandate by reducing wages, pay raises, or bonuses, reducing other non-mandated benefits (e.g. retirement or dependent health insurance coverage), reducing the number of employees or by reducing the number of hours each employee works. If the market is not perfectly competitive, firms can also pass costs along to consumers. Early evidence suggests that the job losses that some hypothesized have not materialized despite a high initial minimum wage in San Francisco (\$9.79) and mandated sick leave benefits (Chapter 5). This is true even when focusing on the most impacted sectors, such as retail and restaurants. Any unemployment effect would be most likely for workers earning at or near the minimum wage because their marginal productivity may not be equal to their new hourly compensation. In the 2008 Bay Area Employer Health Benefits Survey, only around 3% of workers in firms with 20 or more employees earned less than 10 dollars per hour. However, within the restaurant and retail industry groups, the Bay Area Employer Health Benefits Survey shows that about 25% of the workers earned less than 10 dollars an hour and a majority of establishments were in the most impacted group, with a gap in health benefit spending per worker of at least 50 cents per hour.

While restaurants don't seem to be changing employment, hours or wages in response to the mandate, some restaurants are absorbing the costs in other ways. Due to the geographic nature of restaurant choice, the industry is not perfectly competitive, and a 2009 San Francisco restaurant survey shows that about a quarter of San Francisco restaurants are passing the costs of the mandate directly onto consumers through a line-item surcharge of about 4% (Chapter 5). The lack of employment and wage effects is similar to studies of minimum wage effects in San Francisco and the effect of the employer mandate to provide health benefits in Hawaii.

Reactions to the Paid Sick Leave Ordinance

The 2007 Paid Sick Leave Ordinance significantly increased the proportion of firms offering paid sick leave from 82% in 2006 to 92% in 2008 (Chapter 6). 26% of San Francisco firms reported changing some aspect of their sick leave policy between 2006 and 2007 in order to comply with the Ordinance. Few affected San Francisco employers reduced other leave policies in response to the Ordinance. On net, 25% of employers reported higher absenteeism and 9% reported lower presenteeism. Lower profitability was reported by 36% of affected

employers, while customer service improved among 9% and employee morale improved among 16%. Approximately 8% of all firms and 15% of small firms remained out of compliance with the Paid Sick Leave Ordinance in 2008.

Conclusions

Related pay-or-play mandates have been proposed at the state and national level, but to date there is very little evidence on how they perform in practice, including impact on wage and labor markets, crowd-out, or employer benefit choices once implemented. Massachusetts and Hawaii are the only states with employer mandates in place and they differ significantly in character from the San Francisco mandate. In 2014, the federal Patient Protection and Affordable Care Act will assess all U.S. employers with more than 50 employees that do not offer coverage and have at least one full-time employee who receives a premium tax credit a fine. This is a form of a pay-or-play mandate similar to the one in San Francisco, and is about the same magnitude as the San Francisco mandate for medium size firms, but there is no public option associated with paying the fine.

Lessons from the San Francisco mandates can help policymakers determine what to expect with implementation of a national-level benefit mandate. First, pay-or-play mandates of this size are feasible; employers in San Francisco have been able to absorb the extra cost of providing health benefits without significant negative effects on employment or earnings. Some firms in industries where most competitors are also subject to the mandate, such as restaurants, have been able to pass the costs of the mandate directly along to consumers. Second, employers are likely to choose the lowest-cost option available. In the San Francisco case, this has largely played out through use of HRAs, Healthy San Francisco, and mini-medical plans, which are designed to just meet the health spending requirement. Finally, despite most employers having to make changes in their benefit policies to comply with the mandate, most employers are supportive of the Health Care Security Ordinance. This bodes well for implementation of the national employer mandate in 2014.

The 2009 Bay Area Employer Health Benefits Survey will allow follow-up of employers a year and a half to two years into implementation of the Health Care Security Ordinance. The 2009 survey contains additional questions on how firms are absorbing the costs of the health spending requirement, so these data will provide additional insight into effects on other benefits and the labor market. In future work, it will be important to study the medium-term effects of the San Francisco Health Security Ordinance on the labor market, firm size (firms close to the 20 or 100 employee thresholds may decide to stay at 19 or 99 employees due to the discontinuity in mandated costs), and the number of uninsured in San Francisco.

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Introduction to Benefit Mandates and San Francisco Labor Initiatives

Chapter 1

An important health care issue that has garnered increasing attention over the past decade is the rising proportion of Americans without health insurance or other health-related protections. In 2008, 46 million Americans, or 17.4 percent of the non-elderly population, were uninsured at the national level (Kaiser Family Foundation 2009) and only 52% of employees received paid sick leave benefits (Lovell 2006). The uninsurance problem is particularly acute in California, the state with the eighth largest proportion of uninsured in the nation (20.5%) and the largest number of uninsured (6.6 million) (California Healthcare Foundation 2009). California's poor performance is driven in part by the low and declining proportion of the population with employer-sponsored health insurance. The proportion with employer-sponsored health insurance in California declined from 64.6% in 1988 to 55.6% in 2008 (the proportion was 61.1% in 2008 in the U.S., California Healthcare Foundation 2009). Because 62 percent of the uninsured have a full time job and 9 percent have a part time job (California Health Interview Survey 2007), one change that has been proposed on local, state and national levels is an employer mandate to provide health insurance. Many of the proposals take the form of "pay-or-play" mandates, where the employer has to either provide benefits on their own ("play") or pay the government a fee in lieu of providing benefits.

San Francisco's Health Care Security Ordinance has received national attention as one of the most far reaching local health initiatives in the country. Implemented in early 2008, the policy includes a health spending mandate on employers and the creation of a low-cost health access plan by the county health department. Similar pay-or-play ideas have been incorporated into many proposals at the state and national level, but to date there is little evidence on how such a mandate would perform in practice. In addition to the Health Care Security Ordinance, San Francisco is on the frontier of stringent employer health benefits and labor policies due to two other recent laws: The Minimum Wage Ordinance, and The Paid Sick Leave Ordinance. While employer mandates exist in two states: Hawaii and Massachusetts, these differ significantly in character and are different than pay-or-play proposals at the national level.

This dissertation exploits a new source of data, the Bay Area Employer Health Benefits Survey, an employer-level survey collected in 2008 explicitly for the purpose of studying the San Francisco health care and paid sick leave ordinances. In addition, I utilize public data to evaluate labor market responses. The San Francisco policy offers an opportunity to examine the impact of a health spending and paid sick leave benefit requirement on employer benefit decisions and labor and product market functioning in response to these decisions. The results of the San Francisco experiment can provide important lessons for policymakers at all levels of government. Specific research questions to be investigated are:

- How many and which types of firms needed to make changes to their benefit plans to comply with the Health Care Security Ordinance?
- How did employer health benefit offerings change in response to the pay-or-play mandate? Do they expand or contract coverage, or strategically respond by low-cost offerings such as Health Reimbursement accounts?
- Which types of firms choose to pay into Healthy San Francisco instead of offering private health benefits?
- How do employer sick leave offerings change in response to a mandate to provide sick leave benefits to workers? Is there an effect on profitability or other benefits, such as retirement?
- How do firms absorb the cost of the additional benefits? Do they choose to lay off workers, reduce hours per worker or wages, or pass costs onto consumers?

The San Francisco Paid Sick Leave Ordinance

Proposition F, the San Francisco Paid Sick Leave Ordinance, was adopted by San Francisco voters on November 7, 2006, with 61% of voters voting in favor of the measure. It is the first mandatory paid sick leave policy in the country. As of February 5, 2007, all employers must provide paid sick leave to each employee (including part-time and temporary workers) who performs work in San Francisco. It will provide paid leave to an estimated 115,000 workers who didn't receive it prior to the law-- 23 percent of the city's private-sector workforce, according to the Institute for Women's Policy Research (Lovell 2006).

According to the Ordinance, paid sick leave begins to accrue 90 calendar days after the employee's first day of work. For every 30 hours worked, an employee accrues one hour of paid sick leave. For employees of employers for which fewer than 10 persons work for compensation during a given week, there is a cap of 40 hours of accrued paid sick leave. For other employers, there is a cap of 72 hours of accrued paid sick leave. Accrued paid sick leave does not expire; it carries over from year-to-year. Sick leave can be used when the employee is ill or injured or for the purpose of receiving medical care, treatment, or diagnosis, or to aid or care for a family member or designated person when that person is ill, injured, or receiving medical care, treatment, or diagnosis. If an employer has a paid leave policy that may be used for the same purposes as paid sick leave and is sufficient to meet the accrual requirements, the employer is not required to provide additional paid sick leave (City and County of San Francisco 2007).

The San Francisco Health Care Security Ordinance

Effective January 9, 2008, the Health Care Security Ordinance (HCSO) requires San Francisco employers to make health care expenditures for their non-exempt employees and mandates the Department of Public Health to create a Health Access Plan, now called Healthy San Francisco. Beginning on January 9, 2008, employers in San Francisco with fifty or more workers were required to meet a minimum spending requirement for health care services for each

of their employees. In 2008, employers with 50-99 workers were required to spend a minimum of \$1.17 an hour per employee on health care services. Employers with 100 or more workers were required to spend \$1.76. In April 2008, the requirement was extended to for-profit employers with 20-49 workers. Non-profits with less than 50 employees are exempt from the spending requirement. An essential feature of the mandate is that the spending requirement must be met for each individual employee (regardless of where the employee is a resident), not just on average across employees in a firm (City and County of San Francisco 2007). The number of employees in the firm is measured on a nationwide basis and is based on the weekly average number of persons performing work for compensation during that quarter. All employees performing work within the geographic boundaries of San Francisco must be covered, regardless of where the employer is located. Beginning January 1, 2009, the health care expenditure rate for employers with 20 to 99 employees increased to \$1.23 per hour; for employers with 100 or more employees, the rate increased to \$1.85 per hour. Beginning January 1, 2010, the health care expenditure rate for employers with 20 to 99 employees increased to \$1.31 per hour; for employers with 100 or more employees, the rate is \$1.96 per hour.

Companies have to meet the spending requirement for all workers, except for managerial, supervisory, and confidential employees who earn over \$76,851 per year (\$80,397 in 2009-2010). Employees who are eligible for Medicare and/or CHAMPUS/TRICARE (veterans' benefits) are also exempt. Employers pay based on hours worked by part-time as well as full-time workers, up to a cap of 172 hours per month. Employees working less than 10 hours per week (8 hours after 2009) and those working less than 90 days are exempted from the law. Finally, workers who verify that they receive dependent coverage may opt out voluntarily by signing a waiver form.

Employers have a wide range of options to satisfy the obligation to make the required health care expenditures. They may spend the funds on a third-party health provider (including medical, dental or vision insurance), reimburse employees directly for their health expenses, set up a health savings or health reimbursement account, or pay the funds to the City for their employees' access to health care through participation in "Healthy San Francisco" or a medical reimbursement account.

When the employer chooses to pay the funds to the City, money for employees who are San Francisco residents will be put toward the Healthy San Francisco program. Employees receive a 75% discount on quarterly program participation fees if they qualify for Healthy San Francisco. The cost of the program is subsidized for low- and moderate-income individuals and small- and medium-sized businesses. Enrollment fees are calculated based on the income of the employee compared to the federal poverty level (there is no fee up to 300% of the federal poverty level), and are not based on demographic or health risk. This means that if an employer is signing up a part-time worker under the public plan, the employer will pay only a pro-rated amount for that worker based on how many hours they work, whereby the city picks up a bigger tab for part-time workers and low-income workers. For employees who are not San Francisco

residents or who otherwise don't qualify for Healthy San Francisco, at the employee's request the money may be deposited into an individual medical reimbursement account that can be used to pay for out-of-pocket medical expenses.

Healthy San Francisco is a program operated by the San Francisco Department of Public Health designed to make health care services accessible and affordable to uninsured San Francisco residents. The program is designed to replace the patchwork system in place for the uninsured – a system made up of emergency rooms (primarily St. Luke's and SF General) and SF Department of Public Health and community outpatient clinics. Healthy San Francisco assigns individuals to a primary care doctor, nurse or medical assistant at one of the City's public or nonprofit clinics, delivers acute care and specialty services through a network—including San Francisco General Hospital and the city's nonprofit hospitals—and covers prescription drugs and home health care. The plan does not cover services provided outside of San Francisco. The city estimated that the program will cost approximately \$200 million annually, or \$2,400 per uninsured resident per year. The program is financed through a combination of employer, individual and City of San Francisco contributions. As of March 2010, there are 51,541 Healthy San Francisco enrollees.

Prior to the Ordinance, data indicate that the health insurance landscape in San Francisco was similar to that on the national level. Data from the 2007 California Health Interview Survey estimated that approximately 60,000 San Franciscans aged 18-65 were uninsured (11%, Kaiser Family Foundation 2009). In addition, 120,000 San Franciscans were without health insurance for at least part of the previous year (San Francisco Health Plan 2006). Most of those who have health insurance were employed (56% or 46,000 people) and worked more than 20 hours per week (46%). A majority (56%) of the working uninsured were employed in businesses with less than 10 workers. Approximately 11% of the uninsured were aged 18-24, 48% are aged 25-39, and 41% are aged 40-64. The most common reasons cited by workers who work for wages for being uninsured included the employer not offering health benefits (69%), not being eligible for coverage (15%), or declining to accept coverage offered (17%) (San Francisco Health Plan 2006).

Golden Gate Restaurant Association Lawsuit

In November of 2006, the Golden Gate Restaurant Association filed a lawsuit challenging the employer spending requirement portion of the HCSO under the Employee Retirement Income Security Act (ERISA). The first hearing was on November 2, 2007, where the district court ruled the spending requirement was invalid. On January 9, 2008, the first day of implementation, the Court of Appeals granted the City's Motion for a Stay, which allowed the law to be implemented, pending the City's appeal of the District Court's decision. On September 30, 2008, the Court of Appeals reversed the District Court's ruling and upholding the spending mandate. On June 8, 2009, the Golden Gate Restaurant Association filed a petition with the U.S. Supreme Court, requesting the Court to rule on the legality of the spending requirement. On

October 5, 2009, the Court requested the Solicitor General to file a brief expressing the federal government's views on the petition. The Court will decide whether to hear the case after reviewing the Solicitor General's brief. Despite this uncertainty, the employer spending requirement has continued to be in effect since implementation on January 9, 2008 (City and County of San Francisco 2010).

Theoretical Background on Benefit Mandates

The basic economic theory that informs a discussion of effects of mandated benefits is the theory of equalizing differences, first attributed to Adam Smith in *The Wealth of Nations* (1776). The theory suggests that in a competitive marketplace, wages will equilibrate to take into account monetary and nonmonetary advantages or disadvantages among jobs (Rosen 1986). This means that the dollar value of any fringe benefits or leave provided to an employee is part of a total compensation package, and will be “passed through” to the money wage. That is, for an increase in benefits, employers will decrease the money wage by an equivalent amount if the worker values the benefit at its cost.

Firms are profit-maximizing; therefore an employer will offer prospective employees a compensation package that is designed to attract the number and kinds of workers it wishes to hire, based on their marginal productivity. Employees contrast compensation packages offered by employers, so each compensation package is likely to be influenced by market conditions and the practices of other employers in the market. Employers are more likely to offer benefits and to make greater contributions in communities with tighter labor markets, less concentrated labor purchasers, greater union penetration, and a greater share of workers in big business and a small share in regulated industries (Marquis & Long 2001). Employers’ most important criteria for selecting benefit plans are price (cost) and value to employees. The firms least likely to offer coverage or other benefits are those with lower-wage workforces, greater turnover, no unions, and a large proportion of part-time employees (Gabel, Claxton, Holve, et al. 2003). Theory predicts that mandated spending on health care benefits and the cost of paid sick leave will be passed through to the hourly wage for those employees who previously were not offered paid sick leave or health benefits. Economic theory predicts that for those previously not offered benefits who earn the minimum wage, there may be some disemployment in this worker category for those workers whose marginal productivity is below the cost of their compensation package.

Employer Responses to Benefit Mandates

Employers in San Francisco must decide how they will comply with the Health Care Security Ordinance. As mentioned above, there are multiple options. First, they can provide health, vision, or dental insurance. Second, they can reimburse employees directly for their medical expenses. Third, the employer can set up a health reimbursement or health savings account in the employee’s name and make contributions to the account. Finally, the employer

may choose to pay the Health Spending Requirement directly to the City of San Francisco. The benefits of offering insurance directly include pre-tax treatment of employer-paid health premiums and the effects of pooling on the administrative load. Based on models by Bundorf (2002) and Dranove, Spier & Baker (2000), employers decide whether to offer health insurance, how much to contribute, and which plans to offer based on the total cost to the employer per worker, and the value of the package to the employee. The value of the each benefit to the employee is operationalized using an individual rationality constraint, that the worker be willing to accept the job given the other jobs they are offered.

The employer will offer the cost minimizing benefit package if the sum of the value that employees in the firm place on this benefits package is greater than the cost to the employer offering the benefit. This may mean that firms hiring workers with uniformly weak preferences for health insurance and firms in which the costs of providing coverage are higher will be less likely to offer health insurance before the mandate is in place. Employees may have weak preferences for health insurance because the cost exceeds the value: either they are healthy, or living at or near sustenance and health care is a lower priority.

In reality there are many existing distortions from a theoretically perfectly competitive market. One of the most important deviations, and one particularly relevant to San Francisco, is a minimum wage law. For 2008, the minimum wage was \$9.36, significantly higher than the federal rate of \$6.55. In 2009-2010, the minimum wage in San Francisco is \$9.79 an hour, while the federal rate is \$7.25. In addition, all employers in San Francisco must provide paid sick leave to each employee. If workers do not have productivity equal to the minimum wage in addition to the cost of the fringe benefits including health insurance and paid sick leave benefits, these workers will become unemployed and the overall employment level will decrease (Bundorf 2002), or employers will find other ways to absorb costs such as reducing number of hours or passing costs along to the consumer in non-competitive markets. The San Francisco Health Care Security Ordinance mandates that employers must provide health benefits in addition to the minimum wage – so it is an effort by the city to increase total compensation for those at the minimum wage, and possibly an effort to shift compensation from wages to benefits for those above the minimum wage and reduce “free-riding” on uncompensated care in the health care system.

In addition, other deviations from a competitive labor and compensation market exist. For example, moral hazard increases the cost of insurance beyond its value to consumers, employer-sponsored insurance premiums are exempt from taxes (lowering the cost of insurance to workers), employers differ in underlying cost of providing health insurance, and the cost of offering each worker a different health insurance plan would be prohibitive. These preexisting problems within our insurance market may cause concern for extending a faulty system through policy, but San Francisco has decided that as a society it values universal health care enough to warrant extending the employer system.

This dissertation is organized into seven chapters describing employer responses to benefit mandates. Chapter 2 describes the Bay Area Health Benefits Survey and data. Chapter 3 summarizes employer health benefits in San Francisco at baseline (2007) in order to estimate the number of firms who will need to make changes to their health benefit offerings to comply with the law. Chapter 3 also describes changes employers made six months to one year into implementation of the Health Care Security Ordinance in order to comply. Chapter 4 examines the role of employer and employee characteristics in health benefit decision making by employers. Chapter 5 studies how firms chose to absorb the additional costs of the health spending requirement. Chapter 6 examines firm responses to the Paid Sick Leave Ordinance. Chapter 7 concludes.

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Data and Survey Methods

Chapter 2

The primary data source for this analysis is the 2008 Bay Area Employer Health Benefits Survey, conducted in 2008 by the University of California, Berkeley. National Research, LLC was contracted to complete the interviews. National Research conducted telephone interviews with employee benefit managers during August 2008 – January 2009. The survey was designed to be similar to the Kaiser Family Foundation/HRET employer health benefits survey (and used the same survey firm) with relevant additions to analyze the San Francisco market and the Health Care Security Ordinance. The survey asked firms about their health benefit offerings in 2007 before the employer spending requirement went into effect, in addition to 2008 changes in benefits, in order to measure both baseline offerings and post-implementation changes. This characteristic of the survey may introduce recall bias, as the survey asks employers to recollect details of health benefit plans from the prior year. However, since health benefit plans are updated infrequently (usually annually), the magnitude of such bias is likely to be limited.

The sampling frame consisted of all 2,886 for-profit San Francisco firms with more than 20 employees according to a Dun and Bradstreet database of firms, of which we interviewed 523. During the same period, we also surveyed 310 firms with more than 20 employees from areas surrounding San Francisco to serve as a control group (Alameda, Contra Costa, Marin, and Santa Clara counties). These were completed from a randomly chosen selection of 2,227 for-profit firms in these counties with 20 or more employees. In addition, we sampled another 146 non-profit firms in San Francisco with greater than 50 employees and interviewed 20 of them. Finally, we sampled 931 San Francisco firms with 4-19 employees and interviewed 190 of them, resulting in a total sample size of 1,043. We requested to interview the person at the firm most familiar with health benefits; this created some difficulty in multi-establishment firms whose benefits offices were sometimes far from San Francisco and potentially unfamiliar with San Francisco laws.

Using the Council of American Research Organization (CASRO) method, the overall response rate was 21%. An additional 639 firms in San Francisco and 371 firms in comparison counties with 20 or more employees refused to participate in the survey but answered one question: “Does your firm currently offer health benefits to at least some of your employees?” The percent offering health insurance was 94% in our completed sample with 20 or more employees as compared to 91% in the sample refusing to participate; thus while the low response rate is concerning, evidence suggests that systematic differences in health insurance offering were small when comparing responders and non-responders among those firms with whom we made phone contact. The section on Evaluation of Non-Response Bias Using Annual Reporting Forms below contains further information comparing with firms that did not respond to even the basic question regarding benefit offering (primarily firms for whom we did not have a valid phone number to reach a respondent).

In studying non-response by SIC industry group, I found that one group had a significantly higher response rate (Agriculture, Forestry, And Fishing (SIC group 0)), and one group had a significantly lower response rate (SIC Transportation, Communications, Electric, Gas, and Sanitary Services (SIC group 4)) in the overall sample. In the control group, Transportation, Communications, Electric, Gas, and Sanitary was not statistically different, but the Other Services SIC group had a statistically lower response rate. In large San Francisco for-profit firms, Agriculture, Forestry, And Fishing firms and Other Services firms had statistically higher response rates. In addition, firms with over 2,000 employees also had a statistically lower response rate.

Due to these differences in non-response, for the analyses in Chapters 3 and 4 I weighted by single-digit industry group, profit status, employer size, and whether the employer is inside or outside of San Francisco. These chapters use data on firms with 20 or more employees, because smaller firms would not be subject to the Health Care Security Ordinance. I created these weights using data on our sample and the population of firms in San Francisco and surrounding counties using the Dun and Bradstreet database, provided by Survey Sampling Inc and County Business Patterns (from the U.S. Census, <http://censtats.census.gov/cbpnaic/cbpnaic.shtml>). The employer size groups that I used were 20-30 employees, 30-49 employees, 50-99 employees, and greater than or equal to 100 employees. I created these categories using firm size at site as reported by Dun and Bradstreet. Because the survey did not sample non-profit firms outside of San Francisco or non-profit firms with 15-39 employees within San Francisco I was not able to weight up to these populations. There are 84 weight groups with complete observations, with the number of observations in each group ranging from 1 to 80 and the weights ranging from 1.8 to 158.8.

For the sick leave analyses in Chapter 6, I used a slightly different weighting procedure because some of the weight group cells were missing for the sick leave questions. These analyses also included the small firms with less than 20 employees and excluded non-profit firms. For the chapter on the Paid Sick Leave Ordinance, I created employer rake weights based on firm size at site using expanded size categories (4-14 employees, 15-19 employees, 20-30 employees, 30-49 employees, 50-99 employees, 100-199 employees, 200-499 employees, and greater than 500 employees), location (inside or outside San Francisco), and one-digit SIC industry group to make our sample representative of the population of firms in the survey counties. Rake weighting uses iterative post-stratification to match the marginal distribution of our survey sample to the known population margins. I used information from the Dun and Bradstreet database for all of the sampling estimation.

The 2008 Bay Area Employer Health Benefits Survey asked questions on the following topics:

1) Nature of health plans: By type of plans (e.g. HMO, PPO, HRA, HSA, mini-medical plan, cafeteria plan),

- a) Overall cost of plan (average enrollee employer and employee monthly premium contributions)
 - b) Overall enrollment – single and family (number of enrollees or percentage of insured employees by plan for top three plans)
 - c) Deductibles (per single enrollee in each of top three plans)
 - d) Maximum out of pocket expenditures (per single enrollee in each of top three plans)
 - e) Eligibility (waiting times to become eligible for health benefits, part-time worker eligibility, temporary worker eligibility)
 - f) Self-insurance
 - g) Month of open enrollment
 - h) Number of years offering health insurance
- 2) Importance of reasons for not offering health insurance, including high premiums, employee turnover, employees have other coverage, administrative hassle, doesn't matter for employee recruitment, firm size, new firm, and presence of seriously ill employee.
- 3) Insurance changes in 2008 including: changing employee contribution, change employer contribution, add high deductible plan, increase deductible, restrict benefits, offer an HRA, offer a mini-medical plan, add new insurance offerings, pay into Healthy San Francisco (SF firms only)
- 4) Information on sick leave policies, including availability, accrual, daily absenteeism rates, changes in sick leave policy over the 2006-2007 period, and changes in daily absenteeism rates over this period.
- 5) Detailed wage, hours, and tenure distribution
- a) Distribution of number of employees working part-time (under 10 hours, between 10 and 29 hours, 30 or more hours per week)
 - b) Number of temporary workers
 - c) Number of unionized workers
 - d) Number hired in past year
 - e) Number of employees left firm in the past year
 - f) Job vacancies

g) Number of workers in wage categories (\$15.00 per hour or more, \$12.00-\$14.99 per hour, \$10.00-\$11.99 per hour, \$9.36-\$9.99 per hour, under \$9.36 per hour)

6) Overall demographic information—number in age categories (under 18, 18-25, 26-50, 50-64, over 65), race/ethnicity (percent white, black, Hispanic, other), gender (percent female).

Using the information detailed above, I created variables for firm characteristics to control for differences across bay area comparison firms and San Francisco, and to study employer characteristics as determinants of decision-making surrounding the mandate. The variables for firm characteristics were created using data from our survey, and industry was taken from the Dun and Bradstreet database, provided by Survey Sampling. The employer characteristics included

1. Indicator variables for nationwide firm size (20-50 employees, 50-100 employees, 100-200 employees, 200 to 2,000 employees, and over 2,000 employees). These variables were created using three questions from our survey:
 - “What is the total number of employees at your location (include temporary and contract employees)?”
 - “Are there any other company branches or locations in the United States?”, and
 - ”What is the total number of employees nationwide (include temporary and contract employees)?”
2. An indicator variable for non-profit status in San Francisco firms. This was taken from the survey question, “Is this a for-profit company?” with a few exceptions. I found that the profit status reported by the firm did not match the profit status from Dun and Bradstreet in 68 cases, and went by what the firm responded to us, rather than the Dun and Bradstreet information except in 5 cases, where I confirmed that the firm was in fact for-profit.

Some firm benefit choices also merit explanation in the way they were coded for my analyses. These variables are detailed below. If not mentioned below, the variables were coded directly from the survey questions. The characteristics of the study sample are described in Table 1 below. The large San Francisco firms group includes those subject to the mandate (for-profit firms with ≥ 20 employees and non-profit firms with ≥ 50 employees).

Health Benefit Choices

1. Firms were coded as likely to begin offering insurance in the next year if they answered the question, “How likely is it that you will offer health insurance in 2008?” with “very likely” or “somewhat likely.” Firms were coded as unlikely to begin offering if they responded “not too likely” or “not at all likely.”

2. The mandated per worker-hour amount was determined by nationwide employer size. In 2008, it was \$1.17 for firms with 20-99 employees, and \$1.76 for firms with 100 or more employees. Non-profit firms with up to 50 workers were exempt, and from 50-99 workers the mandated requirement was \$1.17. The requirement was the same for firms with 100 or more employees.
3. The mandated percent of workers who must be covered was 100- the proportion who work less than 10 hours a week (because the law in 2008 stated that these workers were exempt) – $(1/4) \times$ the proportion of workers hired in the past year (because those who work less than 90 calendar days are exempt). For those who were missing the proportion of new workers (N=67) or the proportion of those working less than 10 hours a week (N=4), I assume there are no exempt workers in these categories.
4. To generate the gap in eligibility, I subtract the percent of workers eligible for care from the figure calculated in #3. If it is less than 0, I censor it at 0. The same is done for the percent of workers who are covered, which assumes none of the employees waive their right to health benefits. If the firm does not offer insurance, their gap is the figure for the percentage of workers who are mandated to be covered calculated in #3.
5. To generate the average gap in per-worker-hour spending by the employer at baseline, first the hourly contribution to a single plan is calculated by dividing the monthly premium by 172, the maximum hours allowed per month (according to the law) for each plan (up to three) surveyed. I calculated the proportion of workers who are currently uncovered and nonexempt (according to our calculation above in #3). Then, I enrollment-weighted the plans with the non-covered workers (who were given a gap value equal to that of the mandated amount). The formula for this calculation was $\text{spending gap in plan 1} \times \text{proportion of workforce enrolled in plan 1} + \text{spending gap in plan 2} \times \text{proportion of workforce enrolled in plan 2} + \text{spending gap in plan 3} \times \text{proportion of workforce enrolled in plan 3} + \text{mandated amount (either \$1.17 or \$1.76 depending on size of firm)} \times \text{gap in covered workers}$. The proportions were normalized to total 100%.
6. Due to the number of assumptions inherent in the calculation of number of firms in compliance at baseline, I calculated upper and lower boundaries on this figure. The upper bound assumed 50% of workers hired in the last year were hired in the last 90 days and that all those workers who are currently uncovered sign waivers due to alternative sources of coverage. The bottom of the range assumes that all workers who are currently uncovered need to be covered under the new law.
7. Being supportive of the HCSO meant that the employer responded to the question “How supportive is your firm of this health care security ordinance?” with the answer: “very

supportive” or “somewhat supportive”. Finding it difficult to comply meant that the employer responded to the question “How difficult was it for your firm to comply with the ordinance?” with “very difficult” or “somewhat difficult”.

Evaluation of Non-Response Bias Using Annual Reporting Forms

I was able to merge the 2008 Bay Area Employer Health Benefits Survey disposition to data from the 2008 Annual Reporting Forms from the City of San Francisco. 913 of the firms in our disposition file matched data from the city based on name of business, and 203 of the firms who completed our survey matched a reporting form. Of these, we were able to characterize the differences between responders and non-responders to the 2008 Bay Area Health Benefits Survey. Of the firms who matched reporting forms and completed our survey, 90% reported that they contributed to a group insurance plan, 24% reported that they contributed to Healthy San Francisco, 24% reported that they contributed to a health spending account, and 21% said that they reimbursed employees directly for health expenses. Of those firms who matched our disposition but did not complete the Bay Area Health Benefits Survey, 82% reported that they contribute to group health insurance, 30% reported they contribute to Healthy San Francisco, 29% contributed to a health spending account, and 15% reimbursed employees directly for health related expenses. After adjusting for firm characteristics, those who responded to our survey were not significantly different in proportion contributing to the city option or health reimbursement accounts, but were significantly different in contributing to group insurance (more likely), self insurance (less likely), and direct reimbursement (somewhat more likely). Overall, the proportion contributing to Healthy San Francisco was similar across all firms who submitted the 2008 Annual Reporting Form (19.3%) and in our survey (20.7%). Compliance rates were similar in the group who responded (78%) and those who did not respond (76%). As mentioned above, firms in our survey were more likely to be smaller than the overall distribution of firms in the City’s database.

San Francisco Restaurant Survey

Data on restaurant surcharges due to the Health Care Security Ordinance in San Francisco were collected by the University of California, Berkeley in early 2009. The sample included 340 restaurants in San Francisco, and completed 142 interviews (response rate of 42%). The survey simply asked whoever answered the phone at the restaurant whether they had a surcharge attributed specifically to health benefits, and if so, the amount of the surcharge.

Additional Public Data Sources

In order to investigate the effects on jobs and wages empirically, Chapter 5 analyzes the Quarterly Census of Employment and Wages (QCEW), which is a near census of the working population based on unemployment insurance records. Chapter 5 compares employment and weekly wage trends in San Francisco to those of neighboring counties and to other large metropolitan statistical areas in the United States that did not implement any comparable new

employer mandate. Quarterly data on employment and quarterly data on wages were pulled for the period January 1990 to June 2009 from the Bureau of Labor Statistics. The data are based on ES-202 filings that every establishment is required to submit quarterly for the purpose of calculating payroll taxes related to unemployment insurance. Because 98 percent of workers are covered by unemployment insurance, the QCEW constitutes a near-census of employment and earnings.

Chapter 5 focuses on the private sectors most impacted by the employer requirement for the years 2002-2009: Retail Establishments (NAICS codes 44-45, 9% of private employment in 2009), Accommodation and Food Services (72, 14% of private employment), Eating and Drinking Places (722, 10% of private employment), and all private industries (10) because these industries have high proportions of minimum wage workers.

Table 1: Characteristics of Study Sample

	Large San Francisco Firms		Small San Francisco Firms		Comparison Firms	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
	N=474		N=258		N=310	
<u>Insurance Offerings in 2007 (Before Implementation of Health Care Security Ordinance)</u>						
Offered Health Insurance	93%	26%	74%	44%	94%	24%
Waiting Period for Health Insurance (months)	2.11	1.76	--	--	2.66	2.44
Minimum Hours per Week to be Eligible for Health Insurance	28.58	7.68	--	--	29.19	6.30
Temporary Worker Eligible for Health Insurance at Firm (% Firms)	11%	32%	--	--	9%	29%
Offered 1 Health Insurance Plan in 2007 (% Firms)	36%	48%	--	--	36%	48%
Offered 2 Health Insurance Plans in 2007 (% Firms)	32%	47%	--	--	39%	49%
Offered ≥3 Health Insurance Plans in 2007 (% Firms)	20%	40%	--	--	14%	35%
Monthly Employer Premium for Single Enrollee for Most Popular Plan (\$)	\$ 319.64	\$ 139.69	--	--	\$ 289.92	\$ 161.60
Average Monthly Employer Premium Across Single Enrollee Plans (\$)	\$ 323.63	\$ 145.57	--	--	\$ 301.78	\$ 168.42
Monthly Employee Premium for Single Enrollee for Most Popular Plan (\$)	\$ 50.51	\$ 69.47	--	--	\$ 51.09	\$ 64.16
Average Monthly Employee Premium Across Single Enrollee Plans (\$)	\$ 55.14	\$ 69.98	--	--	\$ 57.27	\$ 67.63
Hourly Contribution to Health Benefits for Most Popular Plan	\$ 1.90	\$ 0.86	--	--	\$ 1.73	\$ 1.00
Hourly Contribution to Health Benefits for Most Popular Plan (<100 Employees)	\$ 1.78	\$ 0.81	--	--	\$ 1.75	\$ 1.08
Hourly Contribution to Health Benefits for Most Popular Plan (≥100 Employees)	\$ 2.03	\$ 0.90	--	--	\$ 1.71	\$ 0.89
Deductible (\$)	\$ 270.32	\$ 446.97	--	--	\$ 369.33	\$ 706.62
Out of Pocket Maximum (\$)	\$4,072.75	\$14,379.78	--	--	\$2,181.79	\$5,944.18
Offered HSA (% Firms)	14%	35%	--	--	17%	38%
Offered ≥1 Self-Insured Plan (% Firms)	16%	36%	--	--	15%	36%
Offered HMO (% Firms)	63%	48%	--	--	74%	44%
Offered PPO (% Firms)	56%	50%	--	--	54%	50%
Offered POS (% Firms)	5%	21%	--	--	2%	16%
Offered HRA (% Firms)	6%	23%	--	--	4%	21%
Employees Enrolled in HRA (% of Employees in those firms with an HRA)	33%	38%	--	--	40%	40%
Offered Taft-Hartley Plan in 2007 (% Firms)	2%	15%	--	--	4%	20%
Offered Section 125 Cafeteria Plan for Electing Benefits (% Firms)	44%	50%	--	--	46%	50%

	Large		Small		Comparison Firms	
	San Francisco Firms		San Francisco Firms		Comparison Firms	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
	N=474		N=258		N=310	
Firm Characteristics						
Non-profit (% Firms)	12%	33%	13%	33%	0%	0%
Firm is part of chain (>1 establishment, % Firms)	73%	45%	16%	36%	53%	50%
Firm has Onsite Health Clinic (% Firms)	11%	32%	--	--	10%	30%
Firm has Unionized Workers (% Firms)	9%	29%	2%	14%	15%	36%
Employees Live in County of Firm (% of Employees)	64%	30%	60%	31%	73%	27%
Employees Working ≤10 Hours per Week (% Employees)	3%	11%	5%	14%	4%	13%
Employees Working 12-29 Hours per Week (% Employees)	8%	17%	16%	24%	11%	18%
Employees Working ≥30 Hours per Week (% Employees)	87%	24%	79%	28%	84%	27%
Temporary Employees (% of Employees)	4%	15%	8%	20%	3%	10%
New Employees in Past Year (% of Employees)	20%	18%	20%	21%	18%	20%
Employees Stopped Working in Past Year (% of Employees)	17%	18%	16%	19%	17%	22%
Firm has a Job Vacancy (% Firms)	32%	47%	16%	37%	30%	46%
Employees Paid ≥\$12.00 per Hour (% of Employees)	87%	27%	89%	26%	81%	30%
Employees Paid \$10.00-\$12.00 per Hour (% of Employees)	5%	15%	7%	18%	7%	15%
Employees Paid ≤\$10.00 per Hour (% of Employees)	6%	21%	4%	15%	11%	24%
Female Employees (% of Employees)	47%	27%	48%	28%	40%	26%
Employees Under Age 18 (% of Employees)	1%	3%	0%	3%	1%	4%
Employees Age 18-25 (% of Employees)	17%	20%	15%	19%	18%	21%
Employees Age 26-50 (% of Employees)	68%	24%	63%	28%	64%	22%
Employees Age 51-64 (% of Employees)	12%	18%	18%	24%	14%	14%
Employees Over Age 65 (% of Employees)	2%	5%	3%	7%	2%	4%
White Employees (% of Employees)	50%	31%	56%	32%	44%	28%
Black Employees (% of Employees)	8%	14%	3%	8%	5%	9%
Hispanic Employees (% of Employees)	20%	28%	16%	21%	30%	27%
Firm is in SIC Agriculture, Forestry, And Fishing (0) (% Firms)	0%	5%	1%	10%	1%	10%
Firm is in SIC Mining & Construction (1) (% Firms)	5%	21%	5%	22%	6%	25%
Firm is in SIC Manufacturing (2) (% Firms)	4%	20%	2%	15%	4%	19%
Firm is in SIC Manufacturing (3) (% Firms)	1%	9%	1%	7%	10%	31%
Firm is in SIC Transportation, Communications, Electric, Gas, And Sanitary Services (4) (%)	2%	16%	3%	17%	4%	20%
Firm is in SIC Wholesale and Retail Trade (5) (% Firms)	24%	43%	30%	46%	30%	46%
Firm is in SIC Finance, Insurance, And Real Estate (6) (% Firms)	16%	37%	8%	27%	7%	25%
Firm is in SIC Recreational Services (7) (% Firms)	25%	43%	18%	39%	20%	40%
Firm is in SIC Other Services (8) (% Firms)	23%	42%	32%	47%	18%	38%
Firm has 0-10 Employees (% Firms)	0%	0%	58%	50%	0%	0%
Firm has 10-19 Employees (% Firms)	0%	0%	39%	49%	0%	0%
Firm has 20-49 Employees (% Firms)	30%	46%	4%	19%	36%	48%
Firm has 50-99 Employees (% Firms)	16%	37%	0%	0%	19%	40%
Firm has 100-199 Employees (% Firms)	20%	40%	0%	0%	15%	36%
Firm has 200-1,999 Employees (% Firms)	21%	41%	0%	0%	18%	38%
Firm has ≥ 2,000 Employees (% Firms)	12%	33%	0%	0%	11%	32%

Notes: The large San Francisco firms group includes those subject to the mandate (for-profit firms with ≥20 employees and non-profit firms with ≥50 employees). All comparison firms have ≥ 20 employees and are for-profit.

How do employers react to a pay-or-play mandate? Evidence from San Francisco

Chapter 3

Abstract

Background: Implemented in early 2008, San Francisco's Health Care Security Ordinance has received national attention as the most far-reaching local health reform in the United States. The policy consists of a pay-or-play health spending mandate per worker hour on employers and the creation of a low-cost health access plan by the county to strengthen the safety net. Similar pay-or-play ideas have been incorporated into many other reform proposals at the state and national level in the U.S., but to date there is little evidence on how such mandates would perform in practice. This study evaluates employer-level responses to a pay-or-play mandate.

Data Sources: 2008 Bay Area Employer Health Benefits Survey (N=1,043).

Analytic Approach and Methods: Descriptive data on baseline health insurance offering and generosity in San Francisco firms are analyzed to determine the proportion of firms who needed to make changes to benefit packages in order to comply with the Ordinance. Difference-in-difference estimators are used comparing trends in San Francisco before and after the Ordinance was implemented to firms in surrounding Bay Area counties to determine early effects on employer insurance benefit offering.

Principal Findings: Most firms in San Francisco (93%) subject to the mandate offered insurance to some employees prior to the implementation of the pay-or-play mandate. However, because the mandate applies for each employee rather than as a percentage of total payroll, almost all targeted firms had to make a change to their benefit offering (75%). Only a small portion of the firms were unaware of the mandate six months after implementation. Employer changes included covering more of the premium, revising insurance offerings, as well as paying the city fee in lieu of providing insurance (21%). A notable portion of firms chose to meet the mandate by paying into health reimbursement accounts. There is no significant evidence of employers dropping or restricting insurance coverage. Most San Francisco employers (64%) are supportive of the law.

Implications for Policy: Many recent national and state health reform proposals have included employer pay-or-play mandate provisions, but modeling the expected effects of those provisions has been difficult given little previous experience. The San Francisco mandate differs substantially from those in Hawaii and Massachusetts, and responses have differed as well. This research suggests that the details of such mandates may indeed have crucial implications for the effects of the mandate.

How do employers react to a pay-or-play mandate?

Evidence from San Francisco

On July 18, 2006, San Francisco took the first steps towards achieving universal health care coverage in the city by passing the Health Care Security Ordinance (HCSO) into law. Part of this reform was a pay-or-play type of minimum employer health spending requirement which became effective on January 9, 2008 and now covers all private sector employers hiring 20 or more workers. Additionally, the city created a low-cost health access plan called “Healthy San Francisco” which both strengthened the safety net and provided a “public option” for employers to fulfill their health spending requirement. Although this public option is not formally insurance, it is tantamount to a generous public insurance policy, with the significant caveat that it is restricted to a network of providers located only within San Francisco (Katz 2008).

Operated by the San Francisco Department of Public Health, Healthy San Francisco was launched in July of 2007 and offers affordable access to select public and private facilities within the city of San Francisco for uninsured San Francisco residents. Employers can meet their spending requirement through providing insurance to workers, paying into Health Savings Accounts or Health Reimbursement Accounts, or by paying into the public “Healthy San Francisco” program. In this sense, the policy is similar to “pay or play” mandates that have been widely discussed in the context of national and state level health reform.

Employer health insurance mandates have garnered increasing attention as Massachusetts has implemented state-level health reform and Congress and the White House consider nationwide reform. There are many unresolved questions as to how an employer mandate would perform in practice, but there is little evidence to inform projections of employer response at the state or national level. Do employer mandates reduce the number of employees without health insurance? When given different options, how do employers choose to comply with the mandate? If one of these options is paying into a public program, how many and what type of employers opt to “pay” into a public plan, as opposed to “play”—i.e., meet the spending requirement through providing employees with insurance or health accounts? Using the unique policy innovation implemented in San Francisco, we provide initial evidence on these questions.

Hawaii and Massachusetts are the only two states so far yielding evidence on employer mandates, although Massachusetts’ employer requirement is fairly minimal (a \$295 annual “fair share” contribution) (www.mass.gov). Since 1974, Hawaii has required all employers to provide health care benefits to any employee who works 20 hours a week or more (there is no “pay” option). San Francisco is the first effort to enact an employer health spending mandate at the municipal level. Massachusetts’ reform, like reform in San Francisco, was also associated with an eligibility expansion for public health coverage. However, Massachusetts stands alone in also implementing an individual mandate to carry insurance. While the San Francisco mandate differs significantly in character from the Massachusetts and Hawaii mandates, evidence from these

states is relevant to forming hypotheses on effects of an employer mandate in other geographic areas.

Using a pre-post comparison from a Massachusetts household survey, Long and Masi found no evidence of dropped coverage or restricted eligibility, and no major changes in the scope of benefits, network of providers, cost to employees or quality of available care under health plans (2008). They also found that employer sponsored coverage had expanded due to increased take up among employees. Gabel and colleagues completed their own survey of Massachusetts employers, and found that the percentage of firms with 3 or more employees offering health benefits increased from 73 to 79 percent, there was an increase in firms offering Section 125 plans, and Massachusetts employers were less likely than other US firms to indicate plans to terminate coverage or restrict eligibility (Gabel et al. 2008, Gabel, Whitmore, Pickreign 2007). Evidence from Massachusetts indicates that despite prior research indicating crowd-out may occur when a public program such as that in San Francisco is created (Cutler and Gruber 1996, Gruber and Simon 2008), there was an expansion in private coverage. However, in the Massachusetts case it can be difficult to sort out the effects of the employer mandate separately from that of the individual insurance mandate. In contrast, San Francisco does not have such an individual mandate, but imposes a strong employer mandate, allowing clearer interpretation of the effects of a pay-or-play requirement.

Researchers have also studied how the Hawaii employer mandate has affected coverage levels using the United States or individual states as a comparison group. The Hawaiian plan is an employer mandate without a “pay” option, which is useful for isolating insurance coverage effects, but cannot help in predicting the crowd-out or selection behaviors when a public option is available. Research on the Hawaii mandate has shown that the mandate reduced uninsurance and had few negative effects, though the amount of the reduction is disputed (Buchmueller, DiNardo, Valletta 2009, Dick 1994, Lee et al. 2005, Lewin and Sybinsky 1993, Neubauer 1993, Thurston 1997). However, there is some evidence that employers avoid the mandate by hiring part time workers, indicating labor market distortions. In San Francisco such substitution toward part-time workers would be unlikely, given that the mandate applies to all employees working 8 hours or more (as well as temp and contract workers) (Buchmueller, DiNardo, Valletta 2009, Lee et al. 2005, Thurston 1997).

The San Francisco reforms offer a unique opportunity to advance our understanding of the effects of these reforms. One key feature is that surrounding Bay Area counties offer natural comparison groups that allow for stronger research designs than have been possible for Hawaii and Massachusetts. Second, the nature of the policy allows us to answer some questions that were not possible to answer using either or both of the other policy interventions. For example, the use of a public plan in the “pay” option in San Francisco allows us to evaluate how employers choose these options, something that the Hawaiian experience cannot speak to. Moreover, given the minimal nature of the fee paid by non-offering employers in Massachusetts, inferences from that state may be difficult to generalize to more stringent pay-or-play mandates

such as those considered in under current national reform discussions. There is also little evidence on how employers change their health plans in response to a mandate, how employers choose to comply with a mandate, or the role of Health Reimbursement Accounts (HRAs) and Health Savings Accounts (HSAs). Finally, it is always possible that the nature of the effects may relate to the unique characteristics of Hawaii and Massachusetts. Although the same is true when focusing on a particular city like San Francisco, evidence from multiple cases helps paint a more representative picture about the effects of employer mandates.

The San Francisco Health Care Security Ordinance

After its passage, the HCSO was challenged under the Employee Retirement Income Security Act (ERISA) by the Golden Gate Restaurant Association, leading to a postponement of implementation. However, the court upheld the employer spending requirement and it became effective on January 9, 2008 for employers with 50 or more employees, and April 1, 2008 for for-profit employers with 20-49 employees. The employer spending requirement varies by employer size and profit status. In 2008, the Ordinance required employers in San Francisco with 20-99 workers nationwide to meet a minimum spending requirement of \$1.17 for health care services for each of their employees. Employers with 100 or more workers nationwide were required to spend \$1.76 per hour per worker. On January 1, 2009, this rate was increased to \$1.23 per hour for employers with 20-99 employees and \$1.85 for firms with 100 or more employees. For-profit employers with fewer than 20 employees and non-profit employers with fewer than 50 employees are exempt from the spending requirement (about 25% of San Francisco workers at for-profit firms are employed at exempt firms).¹ A key feature of the HCSO compared to some other employer mandates is that the employer must spend this minimum amount not as an average percent of payroll, but rather for each and every non-exempt employee. This feature implies that the San Francisco employer mandate is substantially more stringent than the key pay-or-play proposals currently under consideration in Congress.

Employers may spend the funds on a third-party health provider (including medical, dental and vision insurance), reimburse employees directly for their health expenses, create health savings or health reimbursement accounts, or pay the funds to the City for their employees' access to health care through participation in Healthy San Francisco. Some limited classes of workers are exempt from the mandate: managerial, supervisory, and confidential employees who earn over \$72,450 per year, employees who are eligible for Medicare and/or CHAMPUS/TRICARE, and employees working less than 10 hours per week are exempt. Finally, workers who verify that they receive dependent coverage may opt out voluntarily.

Conceptual Framework

Under the San Francisco Health Care Security Ordinance, firms must decide whether to offer private health benefits or pay into the public plan. If they offer private benefits, employers must decide how much to contribute, and which types of benefits to offer. In a competitive labor

market with a fixed labor supply, theory predicts the imposition of an employer mandate to provide health benefits will shift the labor demand curve downward and wages and employment will fall. However, if employees value the additional benefit at its cost, labor supply will shift outward and employment will not fall (though wages will fall by the value employees place on the benefit). In equilibrium, if the value employees place on health insurance is equivalent to the employers' costs of providing insurance, wages will be reduced by the full cost of the benefit and employment will be unchanged. It follows that an employer's benefit decisions are based largely around local labor market conditions, the cost of the benefits, and the value that employees place on different types of benefits and wages (Bundorf 2002, Dranove, Spier & Baker 2000). The cost and value of the benefit package is influenced by firm and employee characteristics, such as employer size or the health profile of employees.

Pay-or-Play Decision

When there is no mandate to provide coverage, an employer will offer a private benefit package if the sum of the value that employees in the firm place on this benefit package is greater than the cost to the employer offering the benefit. Under a pay-or-play mandate, the choice becomes whether to offer private coverage or pay into the public option, Healthy San Francisco. The employer will pay into Healthy San Francisco if the total compensation costs are lower when paying the minimum benefit to the City than when offering private benefits. Conversely, the employer will begin or continue to offer private health benefits if the total compensation costs are lower, that is, if they are able to pass more of the costs along to the worker in the form of reduced wages. This may mean that firms hiring workers with uniformly weak preferences for private health insurance and firms in which the costs of providing coverage are higher will be less likely to offer private health benefits. Historically, the firms least likely to offer coverage or other benefits are those with lower-wage workforces, greater turnover, no unions, and a large proportion of part-time employees (Gabel, Claxton, Holve, et al. 2003). Employers are more likely to offer benefits and to make greater contributions in communities with tighter labor markets, less concentrated labor purchasers, greater union penetration, and a greater share of workers in big business and a small share in regulated industries (Marquis & Long 2001).

Crowd Out

Under an employer mandate with a public option, some firms may choose to drop their private coverage policies if they feel that the public option and private coverage are substitutes to employees and the public option is less expensive (Cutler & Gruber 1996). In this case, Healthy San Francisco and private health insurance are not likely to be perceived as substitutes in the first year of implementation: Healthy San Francisco has a limited provider network, there may be stigma associated with public programs, enrollment may be perceived as difficult, and Healthy San Francisco may be perceived as temporary. All of these factors may reduce the value of the public option to employees. In addition, employees must themselves enroll in Healthy San

San Francisco after the employer makes a contribution on their behalf. If the employee does not enroll or does not attribute the reduced participation fees to the employer, they will not perceive any value from the benefit, and employers will not pass on any of the costs to wages. However, if employees are part-time or low-income there are significant subsidies for enrollment in Healthy San Francisco, which may increase its value to workers. Healthy San Francisco quarterly enrollment fees are based on a sliding scale, with greater subsidies for low-income workers. In addition, after employers pay into Healthy San Francisco for part-time workers, these employees are eligible to receive benefits at a 75% discount, the same rates as full time workers. Healthy San Francisco is also community rated, so firms with higher risk profiles may find significant cost savings in Healthy San Francisco compared to the private market. Workers in these categories may place higher value on Healthy San Francisco benefits, and firms with more part-time, low-wage, or high risk employees may be more likely to choose the public option.

Health Reimbursement Accounts

In addition to traditional private insurance and Healthy San Francisco, employers have the option of putting the required funds in a Health Reimbursement Account for the employee. HRAs are attractive to employers because the employer owns the account and can take back unused funds at the end of the year or upon termination of employment. In addition, the employee may be more likely to attribute these payments to the employer, enabling the employer to pass the additional costs onto wages over time.

Market Distortions

In reality there are many distortions already existing from a theoretically perfectly competitive market. For example, moral hazard increases the cost of insurance beyond its value to consumers, employer-sponsored insurance premiums are exempt from taxes (lowering the cost of insurance to workers), employers differ in underlying cost of providing health insurance, and the cost of offering each worker a different health insurance plan would be prohibitive. One of the most important deviations from the competitive market, and one particularly relevant to San Francisco, is a minimum wage law. For 2008, the minimum wage was \$9.36, significantly higher than the federal rate of \$6.55. In 2009-2010, the minimum wage in San Francisco is \$9.79 an hour, while the federal rate is \$7.25. In addition, all employers in San Francisco must provide paid sick leave to each employee. If workers do not have productivity equal to the minimum wage in addition to the cost of the fringe benefits including health insurance and paid sick leave benefits, these workers will become unemployed and the overall employment level will decrease (Bundorf 2002), or employers will find other ways to absorb costs such as reducing number of hours or passing costs along to the consumer in non-competitive markets. The employer spending requirement in San Francisco amounts to about \$2,415 annually for an employee in a medium size firm (20-99 employees) and \$3,633 annually for an employee in a large firm (≥ 100

employees). This represents a substantial increase in compensation: 12% for a minimum wage worker in a medium size firm and 18% for a minimum wage worker in a large firm.

Study Data and Methods

The primary data source for this analysis is the 2008 Bay Area Employer Health Benefits Survey, conducted in 2008 by the University of California, Berkeley. National Research, LLC was contracted to complete the interviews.² National Research conducted telephone interviews with employee benefit managers during August 2008 – January 2009. The survey was designed to be similar to the Kaiser Family Foundation/HRET employer health benefits survey (and used the same survey firm) with relevant additions to analyze the San Francisco market and HCSO. The survey asked firms about their health benefit offerings in 2007 before the employer spending requirement went into effect, in addition to 2008 changes in benefits, in order to measure both baseline offerings and post-implementation changes. This characteristic of the survey may introduce recall bias, as the survey asks employers to recollect details of health benefit plans from the prior year. However, since health benefit plans are updated infrequently (usually annually), the magnitude of such bias is likely to be limited.

Our sampling frame consisted of all 2,886 for-profit San Francisco firms with more than 20 employees according to a Dun and Bradstreet database of firms, of which we interviewed 523. During the same period, we also surveyed 310 firms with more than 20 employees from areas surrounding San Francisco to serve as a control group. In addition we sampled another 146 non-profit firms in San Francisco with greater than 50 employees and interviewed 20 of them. The overall response rate was 21%. An additional 639 firms in San Francisco and 371 firms in comparison counties refused to participate in the survey but answered one question: “Does your firm currently offer health benefits to at least some of your employees?” The percent offering health insurance was 94% in our completed sample as compared to 91% in the sample refusing to participate; thus while the low response rate is concerning, evidence suggests that systematic differences in health insurance offering were small. All results reported below are weighted to reflect the population distribution of firm characteristics in the surveyed counties.³

Our analysis begins by categorizing the degree to which firms were already in compliance with the health spending requirements at the 2007 pre-HCSO baseline, or conversely how large of a change they would have to make to their health benefit spending to comply with HCSO. First, we consider the percent of employees eligible for health coverage, and then the percent of employees taking up coverage. To then calculate how many employees still need to be offered coverage and paid for, we calculate the proportion of workers required to be covered under the mandate by estimating the proportion of workers exempted due to being part-time or new employees.⁴ An “eligibility gap” is then created by subtracting from this the percentage of workers covered by insurance prior to the employer mandate. By then adding to the eligibility gap the proportion of workers who were *eligible* in 2007 but opted to not take up coverage, we

calculate the “coverage gap.” This gap represents the additional percentage of workers who will need to be covered under the mandate unless they sign a waiver.

A third type of compliance measure that we report is the “contribution gap,” which is based on the difference between post-HCSO mandated spending levels and pre-HCSO reported employer total health benefit spending in 2007. The baseline per-worker-hour spending contribution is calculated for each health plan the firm offers by dividing the single enrollee monthly employer premium by 172 work hours. For each plan the firm offers, this figure is then subtracted from either \$1.76 for firms with more than 100 employees nationwide or \$1.17 for nonprofit firms with more than 50 employees and for-profit firms with more than 20 employees nationwide. For firms with multiple plans we create a weighted average of these payment differences based on the enrollment in each health plan and the number of workers who were uncovered in 2007. This contribution gap measures the per worker hour increase in health spending that the firm will be required to make to comply with the employer mandate (assuming that spending does not decrease for any employees currently exceeding the minimum). Because we need to make various exemption assumptions to calculate these compliance measures, we also report ranges of compliance corresponding to upper and lower bound assumptions.⁵

A different set of analyses examines various strategies that San Francisco firms have reported adopting by 2008 or are highly likely to adopt for 2009. These include the proportion contributing to the Healthy San Francisco public option, the proportion expanding private coverage in various dimensions, and the proportion contracting private coverage. Contraction could be due to either crowd out, or the need to reduce generosity for some employees in order to finance increased spending for other employees. We report each of these means for the overall San Francisco sample of firms covered by the employer mandate, as well as for a subgroup of firms who we estimate should be least impacted (have a small eligibility gap so little increased spending is needed) and most impacted (have a large eligibility gap, requiring larger spending increases). Our initial hypothesis is that highly impacted firms would respond more to the HCSO, but it is possible that less impacted firms (that have already revealed strong preferences for employer health spending) could also exhibit substantial changes.

To investigate the extent to which health benefit changes were likely caused by HCSO rather than reflecting other local trends, we next report regression-adjusted comparisons of health benefit changes in San Francisco firms compared to similar firms in surrounding Bay Area counties not subject to the HCSO mandate using a difference-in-difference framework. The local difference-in-difference method controls for common trends in the local area (i.e., San Francisco and adjacent counties) that vary along observable firm characteristics. It is possible that firms in San Francisco may have experienced other non-mandate related shocks that might differ from the surrounding counties in our comparison group. However, other recent work in identifying treatment effects across policy borders shows that local comparisons are often able to remove potential bias present in cross-state comparisons (Holmes 1998, Dube, Lester, Reich forthcoming).

To generate comparable survey responses for firms within and outside of San Francisco, the survey questions analyzed in this section did not refer to the HCSO, but rather asked simply whether firms had adopted the relevant change between 2007 and 2008. Questions analyzed include both coverage expansions and coverage contractions. For each question we report the San Francisco proportion of firms adopting the change, and then the regression-adjusted change in comparison counties as an estimate of the degree of change that San Francisco firms would have adopted even in the absence of the HCSO. The difference between the San Francisco and comparison firms is our best estimate of the degree to which HCSO causally induced health benefit changes by 2008. We report results both for the full sample of firms size 20 and over, and also for the subset of highly impacted firms. Regressions controlled for firm size (number of employees), profit status, whether the firm is part of a chain, and indicators for one-digit SIC industry type. We used ordinary least squares models for continuous outcome variables and probit models with reported marginal effects for binary outcome variables with one exception. We used linear regression in the “plan to start offering insurance” regression because of substantial problems of perfect prediction in this small sample of non-offering firms. We report Huber-White heteroskedasticity-robust standard errors in all regression analyses.

Study Findings

Baseline Health Insurance Benefits

Most targeted firms already offered health benefits to some employees, but not to all employees covered by HCSO. In San Francisco, 93 percent of firms with 20 or more employees already offered health insurance to some employees in 2007 before the employer mandate was implemented (Exhibit 1). This differed somewhat by firm size: firms with 20-99 employees had a 90 percent offer rate compared to 95 percent for firms with 100+ employees. These statistics are similar to national averages: 91% of U.S. firms with 20 or more employees offer health benefits, and the rate rises to 93% if we limit the sample to this size group in urban areas (Kaiser/HRET 2008). After adjusting for firm characteristics, the percentage was statistically similar in comparison firms outside of San Francisco (94 percent overall), but lower in small San Francisco firms not subject to the mandate (80 percent). Like similar surveys, we found that the offer rate was slightly higher in our sample of completed interviews than among firms who refused to participate in the survey but answered just a single question about whether they offer insurance (Claxton et al. 2008). But the difference was tiny: in the larger sample including these non-responders, insurance was offered by 93 percent of firms size 20 and over in San Francisco.

As mentioned above, the mandate is per each worker in the firm, thus while most firms offered insurance to some employees, the eligibility rates are also important for measuring compliance. In San Francisco and comparison firms that offered insurance, about 86% of workers were eligible for benefits. Due to other forms of coverage or coverage refusal, 89% of eligible employees in San Francisco took up coverage (83% in comparison firms). This resulted in coverage for 77% of employees in San Francisco firms that offered health benefits (70% in

comparison firms outside the city). On average, San Francisco firms required a minimum of 29.2 hours per week of work to qualify for benefits in 2007. Under the first year of implementation of the Health Care Security Ordinance, any employees who work 10 hours per week or more on average need to be paid health benefits. In 2009, workers who work less than 8 hours a week on average are exempt.

Many plans offered in San Francisco at baseline did not meet the minimum health spending requirements of the mandate. The mean baseline monthly employer contribution for the most popular plan a company offered a single employee was \$320 for San Francisco firms and \$290 for comparison firms. In 2008, the average premium in the U.S. was \$392/month or \$4,704/year for single coverage (including employer and employee contributions, Claxton et al. 2008). The most popular plan across San Francisco firms with 20-99 employees had a mean hourly contribution of \$1.63 (based on a 172 hour work month). About 25 percent of surveyed firms in this group would not meet the minimum hourly benefit of \$1.17. Across San Francisco employers with more than 100 employees, the mean hourly contribution to the most popular plan was \$2.06. The required \$1.76 falls at about the 42nd percentile. Outside San Francisco, the mean hourly contribution for the most popular plan was \$1.69 and the median was \$1.66.

Exhibit 2 shows our three measures of compliance gaps for San Francisco firms at baseline before HCSO went into effect – based on eligibility, coverage, and enrollment-weighted payments for health benefits across all plans the firm offers. At baseline, about 58% of firms were in compliance with eligibility requirements, 35% were in compliance with coverage requirements, and 25% were in compliance with coverage and spending requirements. The mean gap in hourly spending requirements on a per worker basis was \$0.54. This figure describes how much an employer needs to pay assuming that the employer keeps existing plans in place and there is no redistribution from more generous plans to less generous plans. The 25% in compliance estimate relies on several assumptions; if we instead assumed that half of the workers hired in the last year were hired in the last 90 days, and all of those who were eligible for insurance in 2007 but did not take up benefits sign voluntary waivers, then this estimate would rise to 41%. Alternatively, baseline compliance would have been estimated as low as 17% if we assumed every employee needed to be covered under the health spending requirement (i.e., assuming no part-time or new employees and no waivers).

Changes in Health Benefits after Mandate Implementation (2008)

San Francisco firms are employing a variety of strategies to comply with the mandate (Exhibit 3). About 21% of firms are paying into Healthy San Francisco, about one-quarter of which also reported some other benefit change as well. Many of the firms who made a change to their health benefits did so by adding a new health insurance offering (28%). The new health insurance offering might include a Health Reimbursement Account (14%), a new high deductible health plan (10%), or a mini-medical plan (a plan with far lower benefits than a typical insurance plan, 9%). All of these changes are statistically significant except the proportion dropping a

health insurance plan, which is too small to be differentiated from zero. Exhibit 3 shows the overall proportion of San Francisco firms adopting each strategy, along with the proportions among the least impacted (those who were already in compliance at baseline according to our best point estimate) and the most impacted (those with a spending gap of at least \$0.50 per worker). Those most heavily impacted by the HCSO were significantly more likely to create a new high deductible plan (7%), pay into an HRA (21%) or increase the employer insurance contribution (28%) than the least impacted firms.

There is significant demand for the public option, with about one-fifth of firms paying into Healthy San Francisco for at least some employees. Firms are making use of the opportunity to pay into Healthy San Francisco to satisfy the mandate requirements. Of San Francisco firms in our sample, 21.2% responded that they were paying into Healthy San Francisco for their employees. The majority (87%) of those contributing pay into Healthy San Francisco for only some of their employees, not all firm employees. This figure suggests that employers are using the Healthy San Francisco public option for workers who are not eligible or taking up coverage at baseline. Only 13% of those who contribute to Healthy San Francisco do so for all of their workers.

According to the city's reports, as of August 8, 2009 there are 45,131 enrollees in Healthy San Francisco; this compares to an estimated 60,000 uninsured adults in the city when Healthy San Francisco began, indicating high demand for the program by not just employers but individuals as well (Healthy San Francisco website). As of April 2009, over 902 employers had elected to pay into the public option, out of an estimated 5,000 total covered employers, yielding administrative estimates of public option demand that are quite similar to our survey-based estimates of 21%. Among the employees being paid for approximately half live within San Francisco and hence are eligible for health care access through the Healthy San Francisco program, and half live outside San Francisco thus receive their payments through a city-run Health Reimbursement Account (SF Department of Public Health 2009).

About half of non-offering firms subject to the mandate are likely to begin offering insurance in 2008. Descriptively, 42% of non-offering firms in San Francisco who were subject to the mandate said they were very or somewhat likely to start offering insurance in 2008, as opposed to only 15% in comparison firms (but the sample size is small, with only 42 non-offering firms). When San Francisco firms were asked how they would respond to the mandate, responses were consistent with about half of non-offering eligible firms having already implemented or planning to implement insurance offering. Regression adjusted estimates for the full sample are displayed in Exhibit 4: our regression estimates show that 33% more firms in San Francisco began to offer insurance in 2008 compared to bay area firms not subject to the HCSO, a statistically significant difference.

San Francisco firms are significantly more likely than their bay area counterparts to begin offering a Health Reimbursement Account (HRA) after the mandate. Health

Reimbursement Accounts are attractive to employers because a) employers can deposit the exact amount of the mandate for each worker into the account, b) the employer owns the account and can take back unused funds at the end of the year or upon termination of employment and c) employees who live outside San Francisco are not eligible for Healthy San Francisco, which makes HRA's more attractive from their perspective. After adjusting for firm characteristics, firms subject to the mandate were more likely to offer a new Health Reimbursement Account in 2008 (15% of San Francisco firms added a new HRA as opposed to 7% in bay area firms). In the group most impacted by the HCSO, firms in San Francisco were 25% more likely to begin offering an HRA.

A smaller portion of firms in San Francisco have cut back employer sponsored health benefits over time. After adjusting for firm characteristics, fewer firms in San Francisco (11%) raised employee health insurance premiums by 25% or more, raised the deductible on a popular plan, dropped coverage or restricted benefits than would have absent the mandate (18%, Exhibit 4). In contrast, about 20% of San Francisco firms said that they have already raised the employer contribution for one or more of their health insurance plans, or are very likely to raise the contribution in the next year. There is also some evidence that the HCSO may be inhibiting the adoption of high deductible plans in San Francisco. After adjusting for firm characteristics, a slightly smaller portion of San Francisco firms (10%) added a new high deductible health plan (which tend to have lower monthly premiums) than otherwise would have occurred (14%). Also, a smaller proportion (3% vs. 8%) increased the deductible of a popular plan to over \$1,100 for singles in order to make it Health Savings Account qualified.

There is little evidence of crowd-out due to the introduction of improved safety net coverage. The unadjusted portion of firms dropping insurance in San Francisco (0.5%) is slightly lower than in the control group (2%). After adjustment for firm characteristics, the portion predicted in San Francisco with the treatment is not any higher than in surrounding counties (Exhibit 4). The unadjusted proportion of firms restricting benefits in 2008 is also not any higher in San Francisco (1.1% in San Francisco versus 2.0% in bay area firms). After regression adjustment, the difference is not significant. About 28% of San Francisco firms said they had already added new health insurance offerings in response to the mandate or were very likely to in the next year. Finally, although not reported in the Exhibit, less than 5% of firms who were offering coverage in 2007 and are now paying into the city option for some of their workers indicated that they have already dropped or are considering dropping private employer health insurance plans.

Most employers support the mandate, even among the highly impacted firms. After 6 months to a year into implementation, 14% of firms subject to the mandate were unaware of the regulation (Exhibit 5). This high awareness is likely in part due to the City's aggressive employer outreach efforts, which include mailing out notices to employers, distributing brochures in six languages, doing merchant walks, making radio public service announcements,

running bus shelter and print advertisements, and making presentations to employer and employee associations.

In terms of employer sentiment regarding the mandate, 41% of San Francisco employers felt it is very likely that the health spending requirement will still be in place in one year, while about 10% felt it is not likely. At the time of the survey there was still considerable uncertainty about the outcome of the legal challenges to the employer mandate, thus some employers may have refrained from planning major benefit changes in response to the mandate in this first year. Since the Healthy San Francisco public option may have been the simplest alternative for many employers, this uncertainty may have raised the use of the public option over what it might have been otherwise. But the uncertainty may also have restrained other employers from dropping insurance coverage in favor of the public plan. Longer-term follow-ups will be needed to better understand these competing effects of the uncertainty.

Most employers said that it was not difficult to comply with the mandate, while 17% thought it was very difficult to comply and 26% found compliance somewhat difficult. Among San Francisco restaurants surveyed, about 85% found it difficult to comply with the HCSO and 66% of those who were most impacted found it difficult to comply.

Despite the large percent of firms who needed to make changes to become compliant, the majority of firms (64%) were very or somewhat supportive of the mandate. Surprisingly, the proportion was similar among restaurants (61%), one of the groups whose industry association that was most vocally against the HCSO. The proportion of firms in support was also similar among firms that are most impacted by the HCSO (55%), while it was only slightly lower (51%) in the small subset of firms that did not offer health insurance in 2007.

Discussion

San Francisco firms subject to a mandated health spending requirement have altered their behavior in 2008 as compared to Bay Area comparison firms not subject to mandated spending. In the early stages of implementation, about one-fifth of employers are responding to the spending requirement by paying into the Healthy San Francisco public option for some employees. While comparison firms outside San Francisco are increasing employee contributions and switching to high deductible health plans, San Francisco firms subject to the mandate are adding new health insurance options. There is little evidence at this time of crowd-out due to the mandate, such as stopping offering insurance or restricting the generosity of benefits for some workers. There is some evidence that San Francisco firms are more likely to increase HRA offerings in response to the mandate. When we considered a highly impacted industry with a large share of minimum wage workers, restaurants, we did not see a differential employment trend in San Francisco as compared to surrounding areas. We do find evidence that restaurants are passing some of these costs on to consumers through surcharges.

It is still early to draw firm conclusions about how firms absorbed the added costs of the health spending requirement. Economic theory predicts that there may be impacts on employment, wages, prices, or other compensation benefits. Any disemployment effect would be most likely for workers earning at or near the minimum wage (currently \$9.79 in San Francisco). In our sample, around 3% of workers in firms with more than 19 employees earned less than 10 dollars an hour. One of the industries most impacted by the HCSO is the “Eating and Drinking Places” group. Within this group, our sample shows that 25% of the workers earn under 10 dollars an hour, and 68% of establishments are in our most impacted group, with a gap in health benefit spending per worker of at least 50 cents per hour. A related paper on this topic shows that the worries about substantial job losses from the employer spending requirement did not materialize during the first year the mandate was in place (Chapter 5). This was also true for highly impacted sectors such as restaurants, who seemed to have passed some of the cost of the mandate on to consumers through HCSO-specific surcharges (Chapter 5).

How relevant are these findings to the national context in terms of a pay-or-play employer mandate as part of reform efforts being considered in Congress? Given the limited evidence available from other settings it is important to study San Francisco’s experience carefully. But there are features of the San Francisco case that are important to bear in mind: geographic and political characteristics of San Francisco, and specific parameters of the employer health spending mandate. First, San Francisco has the unique trait of being a city and a county giving it broad municipal power. Second, the residents of San Francisco are largely high-income (median household income in 2008 was \$73,798), well-educated (81% high school, 45% bachelor degree or higher), and liberal (72% of white San Francisco residents and 46 of non-white residents identify themselves as liberal.) (City Data website, DeLeon 2002). Third, San Francisco is a peninsula, which makes the geographic labor and product markets more limited. Finally, it is important to bear in mind that San Francisco’s HCSO is on a per worker-hour basis, more firms will have to make changes than if the health spending requirement were as a percentage of payroll or if more workers were exempt due to part-time hours. Most firms in San Francisco will have to make a change to their health benefit policies due to the Health Care Security Ordinance, particularly in the eligibility of classes of workers such as temporary or part-time workers.

Employer responses to a pay-or-play mandate will also differ according to perceived costs and benefits of each choice, particularly the perceived benefits of a public option such as Healthy San Francisco. Healthy San Francisco is in many ways a repackaging of the relatively generous set of public health services previously available in San Francisco, although that is changing as private providers such as Kaiser have now also become care delivery options for program enrollees. Safety net usage may also be perceived as more legitimized now that it has clear copayments and authorizations, as well as medical homes for enrollees. But the fact that access is limited only to San Francisco implies that this will necessarily be perceived as an inferior option for many employers and employees, thus crowd-out is likely to be lower here than

if a true Medicare-like “public option” were introduced at a national level. Nevertheless it will be interesting to see if the use of this program by employers rises or falls with time and development of the program.

Finally, the San Francisco policy is occurring in a single city. Multi-establishment firms with locations outside the city may respond differently when confronted with a mandate in one of many locations, as opposed to a national mandate. San Francisco also has one of the highest minimum wages in the country (\$9.79 as of January 2009), though the difference is less striking after adjusting for the high general cost of living. The higher overall labor costs may influence the effects of the mandate, although *a priori* it is not clear in which direction. On the one hand, the additional costs due to the mandate may represent a smaller increase in overall costs. They also represent a smaller fraction of compensation, making it somewhat easier to absorb through lower wage income. On the other hand, coming on the heels of other mandates (such as the high minimum wage and 2007 newly enacted paid sick days requirements) might make it more onerous for businesses than would be the case nationally.

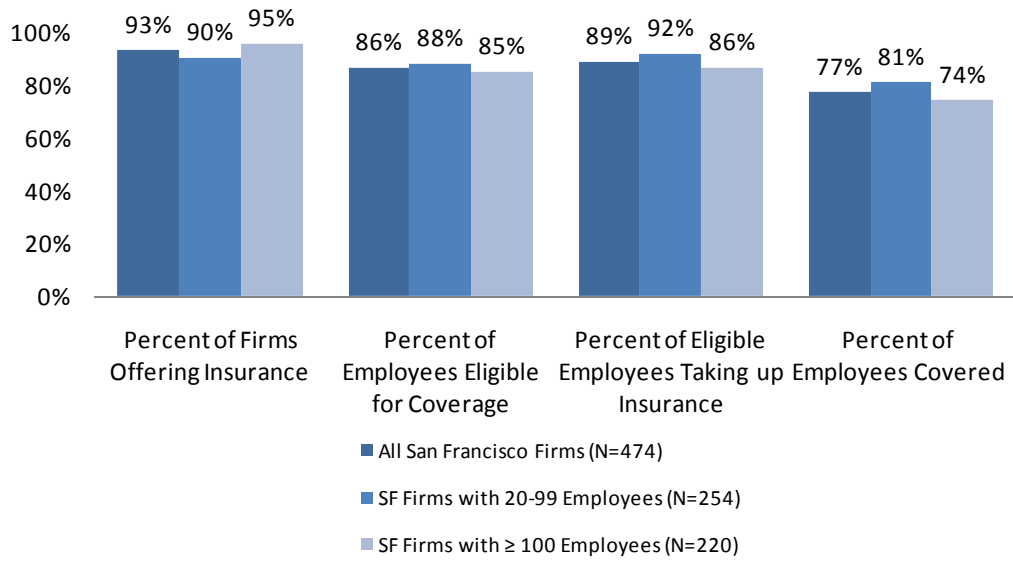
In future work, it will be important to study the medium and long-term effects of the San Francisco Health Security Ordinance on wages, firm size (firms close to the 20 or 100 employee thresholds may decide to stay at 19 or 99 employees due to the discontinuity in mandated costs), and the number of uninsured in San Francisco.

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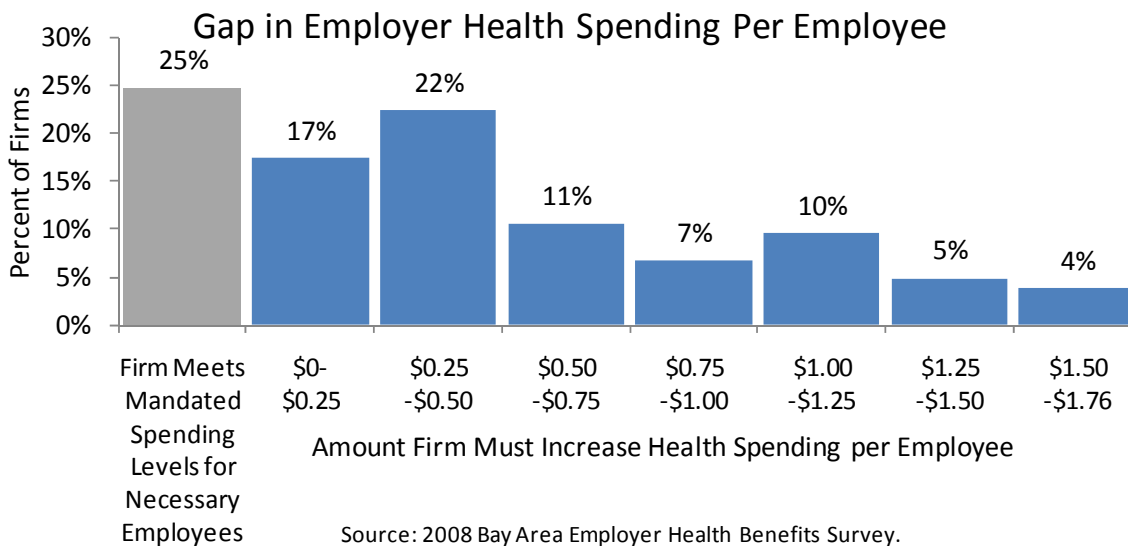
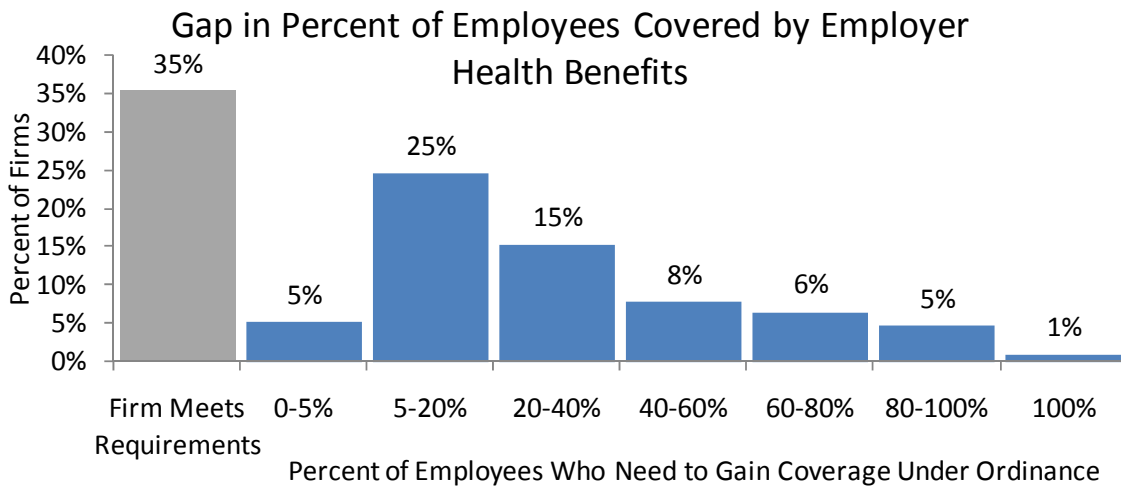
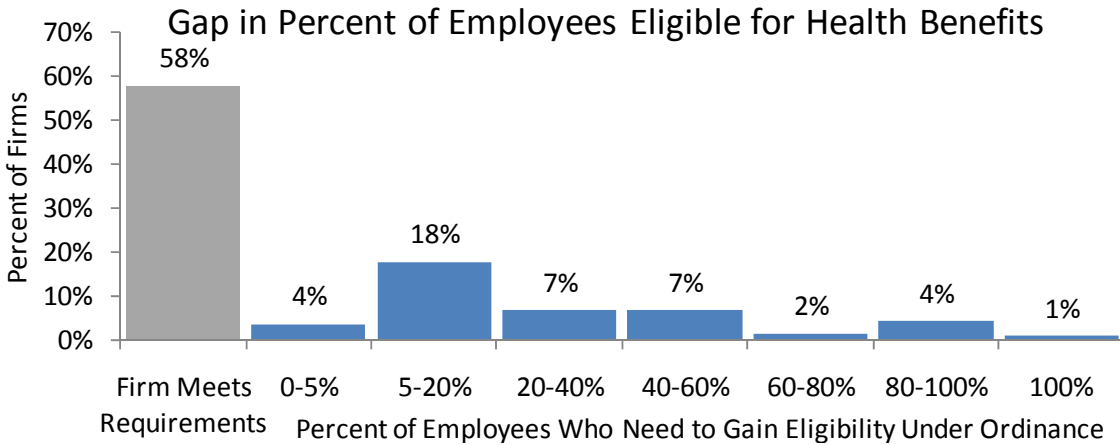
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Exhibit 1: 2007 Health Benefit Statistics



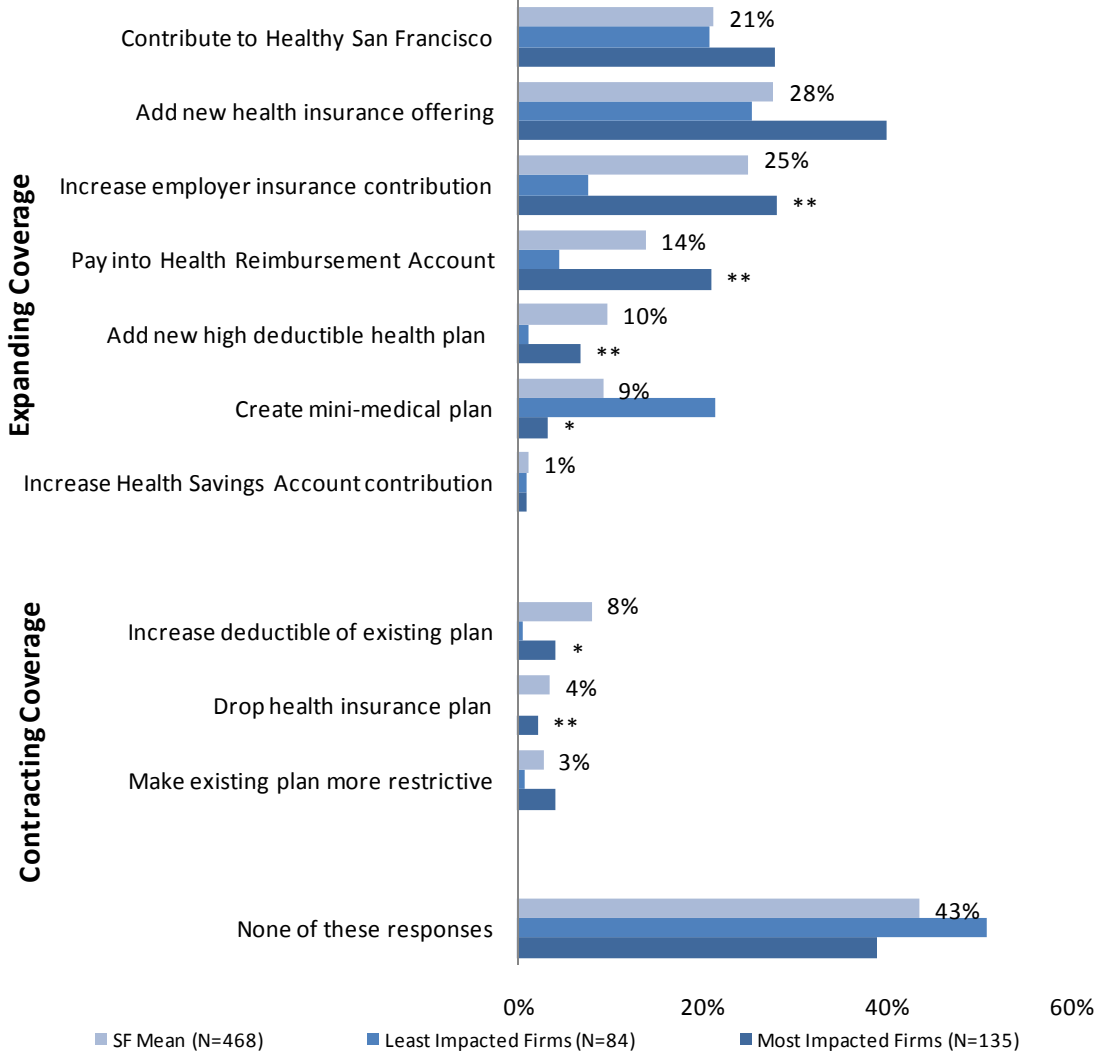
Source: 2008 Bay Area Employer Health Benefits Survey.

Exhibit 2: Health Care Security Ordinance Compliance Levels at Baseline (2007)



Source: 2008 Bay Area Employer Health Benefits Survey.

Exhibit 3: San Francisco Employer Responses to the HCSO



Source: 2008 Bay Area Employer Health Benefits Survey. Notes: "Yes" includes already implemented, definitely will implement, very likely to implement in next year. "No" includes somewhat likely, not too likely, not at all likely to implement in the next year. Least impacted firms are those without a spending gap at baseline, most impacted have a spending gap of at least \$0.50 per worker hour. The medium impact group is not displayed in the exhibit. **indicates significant difference between the most and least impacted group at the 5% level and * indicates difference at the 10% level.

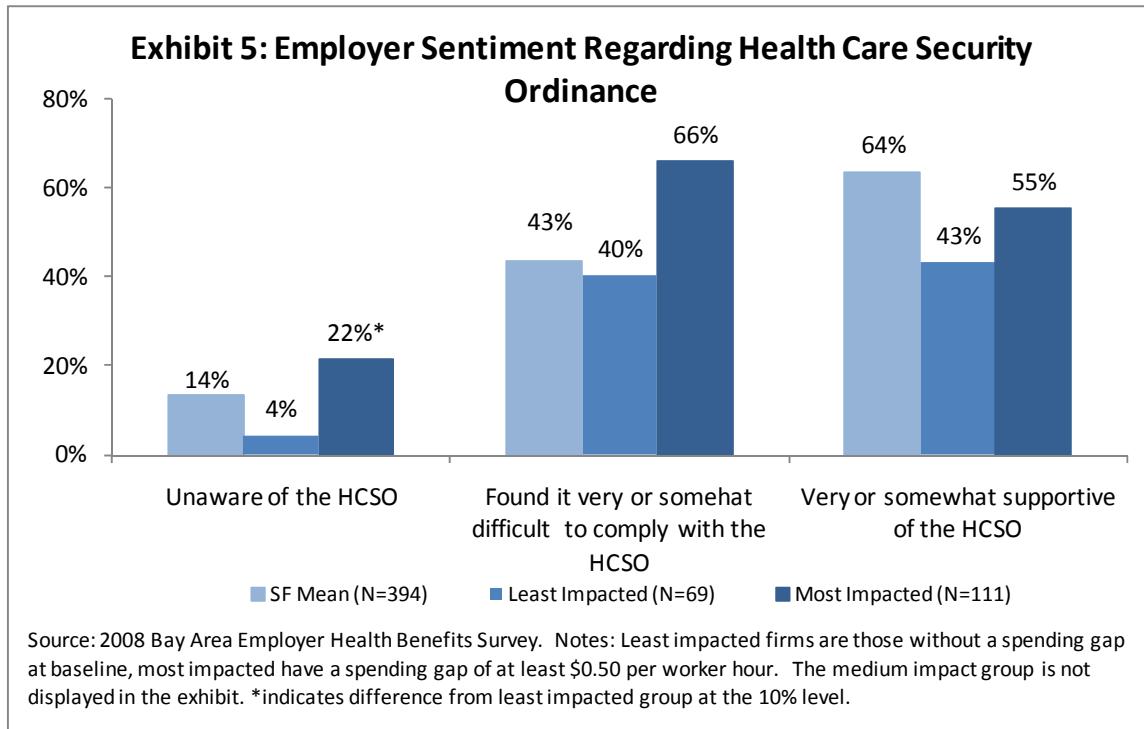
Exhibit 4: Effect of Mandate on Health Benefits

2008 Health Benefit Change	Full Sample			Most Impacted Firms
	San Francisco (SE)	Regression Adjusted Comparisons (SE)	Difference	Difference
Plan to Start Offering Insurance (of firms currently not offering)	41.72%	8.46%	33.25% * (17.95%)	33.25% * (17.95%)
New Health Reimbursement Account (of firms who did not offer an HRA in 2007)	14.52%	6.98%	7.54% ** (3.71%)	24.58% ** (7.76%)
Reduced Some Health Benefits (includes increasing employee premium, raising deductible, dropping coverage, or restricting benefits).	11.16%	17.87%	-6.72% * (3.69%)	3.65% (9.26%)
New High Deductible Health Plan	9.96%	13.67%	-3.71% (3.86%)	-5.59% (8.74%)
Raised Deductible of Popular Plan >\$1,100 (to become HSA-qualified)	3.42%	7.91%	-4.48% ** (1.72%)	-0.36% (1.32%)
Stopped Offering Health Insurance (of those who offered insurance in 2007)	0.48%	0.57%	-0.09% (0.12%)	-2.53% (2.91%)
Restricted Health Benefits	1.12%	0.54%	0.59% (0.80%)	1.36% (4.29%)

Source: 2008 Bay Area Employer Health Benefits Survey.

Notes: Adjusted for firm size categories, one-digit SIC code, profit status, and whether the firm is part of a chain.

Difference is marginal effect from probit regression. Weighted using employer sampling weights based on firm size, profit status, and industry. * Indicates significance at the 10% level using heteroskedasticity-robust standard errors, ** indicates significance at the 5% level. Most impacted group includes firms with a spending gap of at least \$0.50 per worker.



¹ Author calculations from Dun and Bradstreet database, provided by Survey Sampling, Inc.

² Funding for the survey was provided by the Robert Wood Johnson Foundation, the University of California Labor and Employment Research Fund, and the California Program on Access to Care.

³ Response rates differed only slightly by industry group and employer size, with somewhat lower response in the Transportation, Communications, Electric, Gas, And Sanitary Services SIC group and larger firms. We constructed employer expansion weights based on firm size at site, 1-digit SIC industry group and profit status. We used information from the Dun and Bradstreet database for constructing the weights with one exception. The exception affected 68 firms that Dun and Bradstreet labeled for-profit, but who answered that they were non-profit in our survey and who we confirmed were non-profit. We added these to the non-profit population in estimating sampling weights.

⁴ We subtract out the proportion of workers who worked less than 10 hours per week (because they were exempt from the mandate in the first year), and a quarter of those hired in the past year (because employees with less than 90 calendar days of work are exempt). The remaining workers are assumed to be eligible under the mandate, i.e. no voluntary waivers, and no other exemptions.

⁵ First, we do not know the number of workers hired in the last 90 calendar days; we only know the number of workers hired in the past year. We assume an even distribution of hiring over the year and use a quarter of those hired in the past year as an estimate for this group. Second, we do not know the joint distribution of tenure and hours. We assume that those who were exempt due to part-time work were not also newly employed. If the same workers who were recently hired work less than 10 hours per week, we would overestimate the number of exempt workers in the firm. Finally, we do not know the effect of waivers on exemption. Workers with another form of health care coverage can sign a waiver to exempt them from the health care spending requirement. If those who currently do not take up insurance sign waivers, we would be underestimating the number of exempt workers in the firm.

The Determinants of Firm Behavioral Responses under a Pay-or-Play Health Benefit Mandate

Chapter 4

Abstract

Background: Implemented in early 2008, San Francisco's Health Care Security Ordinance (HCSO) has received national attention as the most far-reaching local health reform in the United States. The policy consists of a pay-or-play health spending mandate per worker hour on employers and the creation of a low-cost health access plan by the county to strengthen the safety net. Employers choose whether to provide private health benefits or to pay into the city program, Healthy San Francisco. This paper focuses on employer characteristics which might make it more or less likely to be impacted by the Health Care Security Ordinance, make a change to health benefit offering, or make it more difficult for the employer to comply with the Ordinance.

Data Sources: 2008 Bay Area Employer Health Benefits Survey (N=1,043).

Analytic Approach and Methods: This analysis uses logit regression models and reports marginal effects of firm characteristics on firm decisions. Variables of interest include firm size, non-profit status, whether the firm is part of a chain, whether the firm is in the restaurant or retail industries, and whether the firm has unionized workers, proportion of workers who are female, proportion paid under \$10 per hour, paid between \$10 and \$12 per hour, proportion who work less than 10 hours per week, proportion who work 11-29 hours per week, proportion of temporary workers, and proportion of employees who are over age 65.

Principal Findings: Restaurants, firms with a higher proportion of low-wage workers, firms with a higher proportion of temporary workers, firms with a higher proportion of part-time workers, and smaller firms were more likely to have to make changes to their health benefit policies to comply with the Health Care Security Ordinance. Firms who didn't offer insurance at baseline, firms who contribute to Healthy San Francisco, restaurants, and firms with a greater proportion of female workers were significantly more likely to say they had more difficulty complying with the HCSO. Smaller firms and firms with more low-wage workers were significantly less likely to report difficulty complying. Smaller firms are less likely to pay into Healthy San Francisco than larger firms.

Conclusions: In the first year of implementation of the Health Care Security Ordinance, firms were not yet making strategic choices based on the incentives inherent in the law. This was particularly true of those firms opting to contribute to Healthy San Francisco. While firms with more low-wage and part-time workers should be incentivized to utilize Healthy San Francisco, these relationships were not observed. It may have been too early for firms to consider the cost and benefit trade-offs of their decisions and the political uncertainty due to the Golden Gate

Restaurant Association lawsuit may have caused firms to delay strategic decision making.

Introduction

In 2008, the city of San Francisco implemented a health spending requirement as part of the Health Care Security Ordinance that sought to reform the safety net in San Francisco and provide universal health care access to all San Francisco residents. This Ordinance had two main goals: First, to require employers to contribute to their employee health benefits through a pay-or-play mandate. Second, to create Healthy San Francisco, a program for all San Francisco residents to receive access to a medical home for primary care, as well as access to specialty care, urgent and emergency care, laboratory, inpatient hospitalization, radiology, and pharmaceuticals (Healthy San Francisco 2009).

To pay for the creation of Healthy San Francisco and the expansion of the safety net, the employer spending requirement in 2008 was \$1.17 per hour for all employees at firms with 20-99 employees nationwide, and \$1.76 per hour for all employees at firms with 100 or more workers nationwide. Non-profits with less than 50 employees are exempt from the spending requirement. An essential feature of the mandate is that the spending requirement must be met for each individual employee (regardless of where the employee is a resident), not just on average across employees in a firm (City and County of San Francisco 2007). Beginning January 1, 2009, the health care expenditure rate for employers with 20 to 99 employees was \$1.23 per hour; for employers with 100 or more employees, the rate is \$1.85 per hour. In 2010 the rate increased to \$1.31 per hour for employers with 20-99 employees; for employers with 100 or more employees, the rate is \$1.96 per hour.

Companies have to meet the spending requirement for all workers, except for managerial, supervisory, and confidential employees who earn over \$76,851 per year (\$80,397 in 2009-2010). Employees who are eligible for Medicare and/or CHAMPUS/TRICARE (veterans' benefits) are also exempt. Employers pay based on hours worked by part-time as well as full-time workers, up to a cap of 172 hours per month. Employees working less than 10 hours per week (8 hours after 2009) will be exempted. Finally, workers who verify that they receive dependent coverage may opt out voluntarily.

Employers have a wide range of options. They may spend the funds on a third-party health provider (including medical, dental and vision insurance), reimburse employees directly for their health expenses, set up a health savings or health reimbursement account, or pay the funds to the City for their employees' access to health care through participation in Healthy San Francisco or a medical reimbursement account.

When the employer chooses to pay the funds to the City, money for employees who are San Francisco residents will be put toward the Healthy San Francisco program. Employees receive a 75% discount on quarterly program participation fees if they qualify for Healthy San Francisco. The cost of the program is subsidized for low- and moderate-income individuals and

small- and medium-sized businesses. Enrollment fees are calculated based on the income of the employee compared to the federal poverty level (there is no fee up to 300% of the federal poverty level), and are not based on demographic or health risk. This means that if an employer is signing up a part-time worker under the public plan, the employer will pay only a pro-rated amount for that worker based on how many hours they work, whereby the city picks up a bigger tab for part-time workers. For employees who are not San Francisco residents or who otherwise don't qualify for Healthy San Francisco, at the employee's request the money may be deposited into an individual medical reimbursement account that can be used to pay for out-of-pocket medical expenses.

Researchers have examined the effects of pay-or-play benefit mandates on local insurance rates and on labor market effects such as employment or wages (Buchmueller, DiNardo, Valletta 2009, Dick 1994, Lee et al. 2005, Lewin and Sybinsky 1993, Neubauer 1993, Thurston 1997). Prior research has also examined the effect of employee preferences on employer health benefit decisions (Bundorf 2002). However, much less is known about the relationship between employer choices under a health spending mandate and employer characteristics. For policymakers considering pay-or-play mandates on a national scale, it is important to study these relationships to examine the incentives created for employers, whether expected and desired, or unexpected. For public health systems it will be important to predict the pay-or-play choice, and the proportion of patients and payments flowing into a public system such as Healthy San Francisco. Employer behavior and decisions are particularly important to study in the context of new benefit designs such as health spending accounts or direct reimbursement, both of which are in compliance with the San Francisco law. My objective is to examine the relationship between employer characteristics (including characteristics of the employees in the firm) and health benefit choices under a pay-or-play mandate. The following section introduces a model of benefit choices assuming profit maximizing firm behavior, and derives several key hypotheses of interest regarding firm behavior in response to the mandate, as a function of employee and employer characteristics. I then discuss the data and methods, and present results of empirical tests of these hypotheses using the local pay-or-play mandate in San Francisco and the 2008 Bay Area Employer Health Benefits Survey.

Background

The basic economic theory that informs a discussion of effects of mandated benefits is the theory of equalizing differences, first attributed to Adam Smith in *The Wealth of Nations* (1776). The theory suggests that in a competitive marketplace, wages will equilibrate to take into account monetary and nonmonetary advantages or disadvantages among jobs (Rosen 1986). This means that the dollar value of any fringe benefits provided to an employee are part of a total compensation package, and will be “passed through” to the money wage. That is, for an increase in benefits, employers will decrease the money wage by an equivalent amount if the worker values the benefit at its cost.

Firms are profit-maximizing so an employer will offer prospective employees a compensation package that is designed to attract the number and kinds of workers it wishes to hire, based on their marginal productivity. Employees contrast compensation packages offered by employers, so each compensation package is likely to be influenced by market conditions and the practices of other employers in the market. Employers are more likely to offer insurance and to make greater contributions in communities with tighter labor markets, less concentrated labor purchasers, greater union penetration, and a greater share of workers in big business and a small share in regulated industries (Marquis & Long 2001). Employers' most important criteria for selecting health plans are price (cost) and value to employees. The firms least likely to offer coverage were those with lower-wage workforces, greater turnover, no unions, and a large proportion of part-time employees (Gabel, Claxton, Holve, et al. 2003). Firms must first decide whether to offer health insurance or to pay the minimum mandated benefit to the city.

The benefits of offering health benefits include pre-tax treatment of employer-paid premiums and the effects of pooling on the administrative load encourage employers to offer benefits. Those firms who offer must also decide how to provide coverage in the most efficient manner, which may include more recent insurance innovations such as health spending accounts, high deductible health plans, or reimbursing employees directly for health expenditures.

Conceptual Framework

Based on models by Bundorf (2002) and Dranove, Spier & Baker (2000), employers decide whether to offer health benefits or pay into the public option, and which type of benefits to offer based on the total cost to the employer per worker, subject to the constraints that the worker be willing to accept the job (the individual rationality constraint).

Gruber sets up a simple theoretical model of compensating differentials, where each utility-maximizing worker has preferences over wage compensation (W) and health insurance (H). If utility of the outside compensation package [W' , H'] to the representative employee is U' , then the employer has to choose a cost-minimizing health benefit plan and wage structure [W_1, H_1, C_1] such that the utility of this plan to the worker $U_1 \geq U'$. The cost of the health plan per employee, C_1 , is a decreasing function of the number of employees (due to loading costs) and an increasing function of the health and demographic risks of the employees. In this case, the employer's total compensation cost, E_1 , when offering the cost minimizing plan on the market, [W_1, H_1] is $E_1 = \Sigma L (W_1 + C_1)$, where L represents the number of workers in the firm.

Alternatively, suppose that the employer does not offer health insurance ($H=0$). The theory of compensating differentials says that the wage differential $\Delta W = W_0 - W_1$ between these scenarios will optimally be equal to the value of the insurance to the employee so $U(\Delta W) = U(W_1, H=1) - U(W_1, H=0)$.

Thus far we have assumed that the firm is composed of workers all identical to the representative worker modeled above, but in fact the firm will be making decisions based on a heterogeneous workforce. The aggregate value to workers at the firm will be a function of number of low income workers (who value health benefits less (Bundorf 2002)), employee health and demographic risk, and other offers of insurance (such as spousal insurance, eligibility for Medicare or Medicaid). The employer's cost when not offering benefits ($H=0$) is simply $E_0 = \Sigma L (W_1 + \Delta W)$. Then the employer will offer health insurance if the total compensation costs for attracting the same labor pool are lower when offering than when not offering:

$$\text{Prob}(\text{offer HI}) = \text{prob}(E_0 - E_1 > 0) = \text{prob}(\Sigma L (W_1 + \Delta W) - \Sigma L(W_1 + C_1) > 0)$$

Which can be rewritten using the wage differential (or value to employees) as

$$\text{Prob}(\text{offer HI}) = \text{prob}(\Sigma L(\Delta W - C_1) > 0).$$

The employer will offer the health insurance if the sum of the value that employees in the firm place on this health benefits package is greater than the cost to the employer offering the benefit. This implies that firms hiring workers with uniformly weak preferences for health insurance and firms in which the costs of providing coverage are higher will be less likely to offer health insurance.

When a strict benefits mandate is imposed, the problem for the employer has changed, as the employer no longer has the choice of not offering any health benefits. The neoclassical theory of compensating differentials presented above implies that mandates make workers worse off; they restrict the choices that firms can make to provide the optimal benefit package. When market distortions are present though then this may not be true, such as when insurance markets suffer from adverse selection and/or subsidized safety net care is available. Furthermore, the San Francisco benefit mandate was accompanied by introduction of a new public option that would be available if a firm chose to simply make the new benefit contribution to the city, thus this new option is comprised of both a minimum benefit contribution, B , which is a cost to the employer and also a new subsidized public health care option for eligible employees.

After this mandate, the choice is to offer the cost minimizing plan $[W_1, H_1]$ (assuming that it meets the constraint imposed by the mandate), or to pay the minimum benefit to the City (B). Under the former, the employer's total compensation cost, E_1 , when offering the cost minimizing plan on the market, $[W_1, H_1]$ is still $E_1 = \Sigma L (W_1 + C_1)$, where L represents the number of workers in the firm, and $C_1 \geq B_1$.

Alternatively, if the employer chooses to pay the minimum benefit to the city, B , the employer's cost depends on how much the employee values the subsidized city option, $U(B)$ and how many workers are close to the minimum wage. The employer can lower the wage (ΔW_B) by the value of the benefit to the employee $U(B)$ while keeping the compensation package the same

if the worker is not at the minimum wage (\underline{W}). The employer cost when not offering insurance is now $E_B = \Sigma L (W_1 + \Delta W - \Delta W_B + B)$, with the constraint $W_1 + \Delta W - \Delta W_B > \underline{W}$. Again, the employer will offer health insurance if the total compensation costs are lower when offering than when paying the minimum benefit to the City:

$$\text{Prob}(\text{offer HI}) = \text{prob}(E_B - E_1 > 0) = \text{prob}(\Sigma L(W_1 + \Delta W - \Delta W_B + B) - \Sigma L(W_1 + C_1) > 0)$$

Which can be rewritten: $\text{Prob}(\Sigma L(\Delta W - \Delta W_B + B - C_1) > 0)$. Firms will respond to the incentives presented in the policy in a cost-minimizing way under political uncertainty. Given the inputs into the cost function for health insurance given above and the value of a private benefit (represented by ΔW) and the public benefit (represented by ΔW_B) to employees, this equation leads to the following hypotheses about the relationship between firm characteristics and health benefit offering:

1. Private insurance offer rates will be higher in larger firms before and after implementation of the mandate because the administrative cost of offering per worker is lower.
2. A higher proportion of workers who are over age 65 and eligible for Medicare will make it less difficult for firms to comply with the HCSO, and will make the firm likely to have a lower gap in required spending at baseline because they are exempt from the health spending requirement.
3. Employers with more part-time workers will be more likely to opt for Healthy San Francisco after implementation of the mandate (the public option). If an employer is signing up a worker under the public plan, the employer will pay only a pro-rated amount for that worker, whereby the city picks up a bigger portion of total costs for part-time workers.
4. Employers with more low-income workers may opt for Healthy San Francisco as these workers may value the employer payment into the city option more (perhaps because they see less social stigma in utilizing public clinics and hospitals or they receive larger subsidies). It may also be that these firms have more workers at the minimum wage constraint, forcing them to choose the cheapest option to comply with the law.
5. Employers with a large number of workers living outside of San Francisco are less likely to contribute to the City Option after implementation of the mandate because non-San Francisco residents are not eligible for Healthy San Francisco and cannot take advantage of City subsidies to the program.
6. Firms with a large pool of workers without insurance in 2007 will be more likely to offer an HRA after the mandate. Workers not insured through their employer are likely to be insured through a spouse; HRAs allow them to defray out-of-pocket costs for enrolling in a spousal plan. In addition, employers can recapture any unused funds at the end of the year.

Data and Methods

To study these hypotheses, The University of California, Berkeley collected the 2008 Bay Area Health Benefits Survey to examine employer behavior before and after the implementation of the Health Care Security Ordinance. National Research, LLC was contracted to complete the interviews. National Research conducted telephone interviews with employee benefit managers during August 2008 – January 2009. The survey was designed to be similar to the Kaiser Family Foundation/HRET employer health benefits survey (and used the same survey firm) with relevant additions to analyze the San Francisco market and Ordinance. The survey asked firms about their health benefit offerings in 2007 before the employer spending requirement went into effect, in addition to 2008 changes in benefits, in order to measure both baseline offerings and post-implementation changes. This characteristic of the survey may introduce recall bias, as the survey asks employers to recollect details of health benefit plans from the prior year. However, since health benefit plans are updated infrequently (usually annually), the magnitude of such bias is likely to be limited.

The sampling frame consisted of all 2,886 for-profit San Francisco firms with more than 20 employees according to a Dun and Bradstreet database of firms, of which we interviewed 523. During the same period, we also surveyed 310 firms with more than 20 employees from areas surrounding San Francisco to serve as a control group. In addition we sampled another 146 non-profit firms in San Francisco with greater than 50 employees and interviewed 20 of them. The overall response rate was 21%. An additional 639 firms in San Francisco and 371 firms in comparison counties refused to participate in the survey but answered one question: “Does your firm currently offer health benefits to at least some of your employees?” The percent offering health insurance was 94% in the completed sample as compared to 91% in the sample refusing to participate; thus while the low response rate is concerning, evidence suggests that systematic differences in health insurance offering were small. All results reported below are weighted to reflect the population distribution of firm characteristics in the surveyed counties. Response rates differed only slightly by industry group and employer size, with somewhat lower response in the Transportation, Communications, Electric, Gas, And Sanitary Services SIC group and larger firms. I constructed employer expansion weights based on firm size at site, 1-digit SIC industry group and profit status using information from the Dun and Bradstreet database with one exception. The exception affected 68 firms that Dun and Bradstreet labeled for-profit, but who answered that they were non-profit in the survey and who were confirmed to be non-profit. These firms were added to the non-profit population in estimating sampling weights.

Respondents were asked questions on firm characteristics and characteristics of employees. In addition, data on each firm from the Dun & Bradstreet database are available including location, size, profit status, and industry group. Indicator variables were created for binary questions and continuous variables were created for those questions which asked about the proportion of employees in a given category. The indicator variables for firm characteristics

that I created are: firm size (20-50 employees, 51-100 employees, 100-200 employees, 200-2,000 employees, greater than 2,000 employees), industry (9 variables for one-digit industry code), non-profit status, whether the firm is part of a chain, whether the firm is in the restaurant or retail industries, and whether the firm has unionized workers. The continuous firm characteristic variables that I examine are: proportion female, paid under \$10 per hour, paid between \$10 and \$12 per hour, work less than 10 hours per week, work 12-29 hours per week, temporary workers, and proportion of employees who are over age 65. The retail sector is defined as including the following SIC groups: apparel and other textile products (SIC 23), general merchandise stores (53), food stores (54), apparel and accessory stores (56), and miscellaneous retail (59). The restaurant industry is defined as eating and drinking places (SIC group 58).

A small set of the covariates were missing for a number of firms. The worst case was percentage of workers over 65, which was missing for 22% of firms. Percentage of workers in each pay category was also missing for 8% of San Francisco firms and 15% of non-San Francisco firms. Because of these missing characteristics, I imputed values for percentage of workers over 65 (for 22% of firms), percentage of workers in each pay category (11%), percentage of female workers (7%), percentage part time workers (2%), percentage temporary workers (6%), and percentage unionized workers (<1%) based on whether the firm was a restaurant or a retail establishment, SIC category, non-profit status, whether the firm was part of a chain, whether the firm was in San Francisco, and firm size.

Three of the outcome variables characterize the generosity of firm health benefits at baseline, before the Ordinance was implemented in 2008. These three measures compare firm baseline offering to post-Ordinance requirements. These measures include: gap in eligibility for health benefits the firm had to close after implementation to achieve compliance, gap in coverage the firm had to close to achieve compliance, and the gap in per-worker-hour spending the firm had to close to achieve compliance. These three gap measures are calculated using pre-implementation health benefit offer information, and therefore describe how large of a change firms had to make to comply with the Ordinance. To calculate these measures, I first compute the proportion of workers required to be covered under the mandate by estimating the proportion of workers exempted due to being part-time or new employees.¹ The eligibility gap is created by subtracting from this the percentage of workers covered by insurance in 2007. By then adding to the eligibility gap the proportion of workers who were eligible in 2007 but opted to not take up coverage, I calculate the gap in coverage. This gap represents the additional percentage of workers who will need to be covered under the mandate unless they sign a waiver. The third gap is based on the difference between post-Ordinance mandated spending levels and pre-Ordinance

¹ I subtract out the proportion of workers who worked less than 10 hours per week (because they were exempt from the mandate in the first year), and a quarter of those hired in the past year (because employees with less than 90 calendar days of work are exempt). The remaining workers are assumed to be eligible under the mandate, i.e. no voluntary waivers, and no other exemptions.

reported employer total health benefit spending in 2007. The baseline per-worker-hour spending contribution is calculated for each health plan the firm offers by dividing the single enrollee monthly employer premium by 172 work hours. For each plan the firm offers, this figure is then subtracted from either \$1.76 for firms with more than 100 employees nationwide or \$1.17 for nonprofit firms with more than 50 employees and for-profit firms with more than 20 employees nationwide. For firms with multiple plans I create a weighted average of these payment differences based on the enrollment in each health plan and the number of workers who were uncovered in 2007. This gap measures the per worker hour increase in health spending that the firm will be required to make to comply with the employer mandate (assuming that spending does not decrease for any employees currently exceeding the minimum). While the Ordinance applies to San Francisco firms only, these variables are computed for firms outside of San Francisco as well to characterize the generosity of health benefits in 2007.

Outcome variables reported for San Francisco firms only included whether the firm contributed to Healthy San Francisco in 2008, whether the firm added a new health benefit offering in 2008, whether the firm reported difficulty complying with the Ordinance, how difficult they found it to comply, whether the firm is supportive of the Ordinance, and how supportive the firm is of the Ordinance. For both San Francisco and other Bay Area firms, I have outcome variables for whether the firm offered insurance in 2007 (pre-implementation), whether the firm is in the high impact group (defined by a gap greater than 50 cents per worker hour in San Francisco), whether the firm would already have been in compliance at baseline (given 2007 health benefit generosity), whether the firm began offering a HRA in 2008, and whether the firm began offering any form of health benefits in 2008.

To observe the characteristics that made employers more or less likely to opt into each choice, I used probit models for binary choices (e.g. whether or not the firm was supportive of the Health Care Security Ordinance) and reported marginal effects, and used linear models for continuous variables (e.g. the gap in required spending at baseline). For those questions where firms inside and outside of San Francisco were asked questions, the model in the linear case was:

$$\begin{aligned} \text{Outcome}_i = & f(\text{Restaurant}_i, \text{Retail}_i, \text{Non-profit}_i, \text{Chain}_i, \% \text{Female}_i, \\ & \% \text{Paid Under } \$10_i, \% \text{Paid } \$10 \text{ to } \$12_i, \\ & \% \text{Work} \leq 10 \text{ hr/week}_i, \% \text{Work } 11\text{-}29 \text{ hrs/week}_i, \\ & \% \text{Temp}_i, \text{Unionized Workers}_i, \\ & 20\text{-}50 \text{ Employees}_i, 50\text{-}100 \text{ Employees}_i, 100\text{-}200 \text{ Employees}_i, 200\text{-}2000 \text{ Employees}_i, \\ & \text{San Francisco}_i, \text{SF} * \text{Restaurant}_i, \text{SF} * \text{Retail}_i, \text{SF} * \text{Non-profit}_i, \text{SF} * \text{Chain}_i, \text{SF} * \% \text{Female}_i, \\ & \text{SF} * \% \text{Paid Under } \$10_i, \text{SF} * \% \text{Paid } \$10 \text{ to } \$12_i, \\ & \text{SF} * \% \text{Work} \leq 10 \text{ hr/week}_i, \text{SF} * \% \text{Work } 11\text{-}29 \text{ hrs/week}_i, \\ & \text{SF} * \% \text{Temp}_i, \text{SF} * \text{Unionized Workers}_i, \\ & \text{SF} * 20\text{-}50 \text{ Employees}_i, \text{SF} * 50\text{-}100 \text{ Employees}_i, \text{SF} * 100\text{-}200 \text{ Employees}_i, \text{SF} * 200\text{-}2000 \\ & \text{Employees}_i, \end{aligned}$$

ε_i)

For those questions asked only of San Francisco firms (e.g. support for the Ordinance), the following equation was used.

$$\text{Outcome}_i = f(\text{Restaurant}_i, \text{Retail}_i, \text{Non-profit}_i, \text{Chain}_i, \% \text{Female}_i, \\ \% \text{PaidUnder\$10}_i, \% \text{Paid\$10to\$12}_i, \\ \% \text{Work} \leq 10 \text{hr/week}_i, \% \text{Work} 11\text{-}29 \text{hrs/week}_i, \\ \% \text{Temp}_i, \text{UnionizedWorkers}_i, \\ 20\text{-}50 \text{Employees}_i, 50\text{-}100 \text{Employees}_i, 100\text{-}200 \text{Employees}_i, 200\text{-}2000 \text{Employees}_i, \\ \varepsilon_i)$$

All regressions were weighted using the employer expansion weights, and Huber-White heteroskedasticity-robust standard errors are reported for all regression analyses.

Results

The top panel of Table 1 describes characteristics of the firms in the 2008 Bay Area Health Benefits Survey, by geographic location (inside or outside of San Francisco). A number of the firms Dun & Bradstreet reported as having 20 or more employees reported that they had less than 20, reducing the sample size to 474 firms in San Francisco. Unfortunately, the sampling frame did not include non-profit firms outside of San Francisco, but because many firm decisions depended on profit status, I included these firms in the study sample. With this exception, the firm characteristics are reasonably well balanced between San Francisco and Bay Area firms outside of San Francisco.

Descriptive Statistics

The bottom panel of Table 1 describes the outcome measures among firms in the sample. A large portion of the sample offered insurance in 2007 (93% in San Francisco and 94% outside of San Francisco), but on average San Francisco firms had to expand eligibility to 15% and coverage to 22% of their workforce. San Francisco firm health benefit plans were more generous than those outside San Francisco on average, but San Francisco firms had to expand hourly contributions per worker by an average of 46 cents. A fifth of firms in the sample contributed to Healthy San Francisco for some or all of their employees, and 28% of firms added a health benefit offering in 2008. On average, firms replied that it was “not too difficult” to comply with the mandate, while 43% thought it was somewhat or very difficult. The average firm indicated that they were “somewhat supportive” of the mandate; 64% said they were either somewhat or very supportive. A quarter of firms didn’t have to change their health benefit offerings after implementation of the Ordinance: their health benefit spending at baseline was already in compliance. However, 59% of San Francisco firms fell into the highly impacted

group, and had to raise health benefit contributions by 50 cents or more with the implementation of the Ordinance. More firms in San Francisco began offering an HRA in 2008 than outside San Francisco, and among those firms who did not offer health benefits in 2007, about half of San Francisco firms began offering benefits in 2008.

Baseline Behavior

Tables 2 and 3 provide details about characteristics of firms by baseline benefit generosity. Table 2 displays characteristics of San Francisco firms divided by impact groups. Those who felt little to no impact of the Ordinance were those already in compliance at baseline, who didn't need to make any changes. Those who felt the most impact of the Ordinance were those who had to raise health spending per worker-hour by 50 cents or more in order to be in compliance. Asterisks indicate significant differences between the groups.

Firms with more low-wage, part-time (non-exempt), temporary and unionized workers and smaller firms are significantly more likely to have gaps in eligibility and coverage (Table 3). In San Francisco, restaurants are more likely to have gaps in eligibility and coverage. In examining the relationship between generosity of benefits (as measured by the gap in per worker-hour spending at baseline), San Francisco firms have lower gaps (indicating more generous benefits), as do firms with a greater proportion of workers over 65. Smaller firms also have smaller gaps, reflecting the trend that premiums at smaller firms are more expensive. While restaurants are not more likely to show a significant difference in their spending gap at baseline, retail establishments outside of San Francisco have significantly higher spending gaps. Firms with larger proportions of low-income and part-time workers are significantly more likely to have less generous benefit packages.

Among firms in San Francisco, restaurants were significantly less likely to offer health benefits at baseline, as were smaller firms with 20-50 employees (Table 4, first set of columns). Firms with unionized workers were significantly more likely to offer health benefits. The most commonly cited reasons for not offering health insurance in San Francisco firms were that the premiums are too high (100% of non-offering firms though that the level of premiums was very or somewhat important), the administrative hassle of offering is too great (87%), and the firm can attract good employees without offering coverage (76%).

Response to Mandate

The only significant factors for contribution to Healthy San Francisco for employers were multi-establishment chains, and smaller firms (firms with 20-50 and 50-100 employees), who were less likely to use Healthy San Francisco to meet the mandate (Table 4). Of those firms who didn't offer health benefits in 2007, restaurants and firms with more temporary workers were significantly more likely to begin to offer insurance, while those with more low-wage workers were less likely to begin to offer health benefits. Many San Francisco firms chose to create a

new HRA to comply with the Ordinance (15% in San Francisco versus 6% in surrounding counties). Among those firms more likely to offer an HRA in San Francisco were restaurants, those firms with a greater proportion of female workers, those firms with a greater proportion of temporary workers, and firms with a greater proportion of workers earning between \$10 and \$12 dollars per hour.

Attitudes Toward Mandate

Table 5 indicates that those significantly more likely to report difficulty complying with the Health Care Security Ordinance included firms who didn't offer insurance at baseline (marginal effect 0.5, p=0.007), those who contributed to Healthy San Francisco (marginal effect 0.3, p-value 0.005), restaurants (marginal effect=0.5, p-value 0.0), retail establishments (marginal effect 0.4, p-value 0.025), and those with a greater proportion of female employees (marginal effect 0.5, p-value 0.03). Those firms with a larger proportion of workers paid less than \$10 per hour (marginal effect -0.97, p-value 0.01) and firms with 20 to 49 (marginal effect -0.3, p-value 0.02) or 50 to 100 employees (marginal effect -0.3, p-value 0.02) were significantly less likely to report difficulty complying with the Ordinance.

Non-profit, retail, and small (20-40 employee) firms in San Francisco were significantly more likely to report being somewhat or very supportive of the Ordinance. Firms with a larger proportion of low-wage workers were also more likely to be supportive of the Ordinance. There is no relationship between being a restaurant and being supportive or unsupportive of the Ordinance (61% are supportive).

Discussion

The associations between firm characteristics and baseline offer patterns in San Francisco were similar to those reported in prior research, with firms with more low-wage workers, part-time workers, and temporary workers required to increase the generosity of firm benefit offering following the implementation of the San Francisco Health Care Security Ordinance.

Health benefit offer rates were lower in the smallest firms in the sample (those with 20-50 employees) because with a smaller pool of workers these employers have higher administrative costs on a per-worker basis. However, because the San Francisco mandate is quite expensive, many larger firms' plans don't meet the minimum spending requirements for compliance. The mean per hour spending for the most popular plan in the group of San Francisco employers with more than 2000 employees was \$1.73, below the requirement of \$1.76 for firms of this size. All of the firms in this group in San Francisco offer health benefits, and many likely offer plans that have generous benefits. Further analysis would be useful to determine if existing plans below the spending requirement were indeed skimpy, or instead whether the minimum spending requirement for large firms has been set at an unduly onerous level.

Some of my hypotheses were confirmed, but many did not find support in the early period of implementation of the Health Care Security Ordinance, indicating that firms are not yet making strategic choices based on the incentives inherent in the law. This was particularly true of those firms opting to contribute to Healthy San Francisco. While firms with more low-wage and part-time workers should be incentivized to utilize Healthy San Francisco, I did not observe significant relationships between these characteristics and use of Healthy San Francisco in the data. The proportion of workers who live in San Francisco was also unrelated to use of Healthy San Francisco. As expected, larger firms were slightly more likely to offer insurance at baseline. Firms with more workers eligible for Medicare (over age 65) were less likely to report difficulty complying with the HCSO, and had lower gaps in eligibility, coverage and spending at baseline. Firms with greater coverage gaps at baseline were not any more likely to begin offering an HRA after the mandate.

While I did not observe all of the expected effects based on firm characteristics, it could be that it is simply too early for firms to be considering the cost and benefit trade-offs of contributing to Healthy San Francisco versus providing benefits privately, and the political uncertainty was too great to make strategic decisions this early in implementation. First, the Golden Gate Restaurant Association has a lawsuit pending against the City of San Francisco, and in the early days of implementation (when the survey was in the field), there was uncertainty about the future of the Ordinance and the need to immediately comply. There have been few penalties for firms who haven't complied with the law to date. It appears the 21% of firms I observe contributing to Healthy San Francisco are doing so for only some of their workers (69%), and may just be using it as a temporary measure to comply with the law for marginal workers not previously covered by private plans. It may be that at this early stage, the survey is only capturing those who are choosing to comply with the law, and not those for whom it is strategically advantageous to contribute to Healthy San Francisco. The results for firms offering a new HRA in 2008 may be subject to similar considerations. Anecdotal evidence indicates that employers may be choosing this option because of their ability to recapture unspent funds at the end of the calendar year. The result that firms in San Francisco with more female workers are choosing to offer an HRA indicates that the hypothesis regarding spousal insurance is confirmed; these workers may be using an HRA to offset the out-of-pocket costs for a pre-existing insurance plan.

An alternative interpretation of the limited verification of the behavioral hypotheses is that the standard errors were often too large to reject that moderate sized behavioral patterns were different from zero patterns. Given typical response rates to employer surveys, and the fact that our survey attempted to interview virtually all large firms in San Francisco, this is a fundamental limitation of research projects focusing on the experience of a single city.

In future work, it will be important to study the associations between firm characteristics and strategic behavior over the medium and long-term. As firms comprehend and adjust to the

incentives in the Ordinance, they may be more likely to make profit maximizing choices. These choices may include effects on wages, firm size (firms close to the 20 or 100 employee thresholds may decide to stay at 19 or 99 employees due to the discontinuity in mandated costs), or strategically contributing to Healthy San Francisco or HRAs for particular worker types. Due to the 2010 passage of comprehensive national health reform, however, it is likely that the 2009 follow-up wave of the Bay Area Employer Health Benefits Survey will provide the last measure of behavior responding specifically to the San Francisco specific mandates.

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Table 1: Characteristics of Study Sample

	San Francisco Firms		Comparison Firms	
	Mean	Std. Dev	Mean	Std. Dev
	N=474		N=310	
Firm Characteristics				
Non-profit (% Firms)	12%	33%	0%	0%
Firm is part of chain (>1 establishment, % Firms)	73%	45%	53%	50%
Firm has Unionized Workers (% Firms)	9%	29%	15%	36%
Part-Time Categories				
Work ≤10 Hours per Week (% Employees)	3%	11%	4%	13%
Work 11-29 Hours per Week (% Employees)	8%	17%	11%	18%
Work ≥30 Hours per Week (% Employees)	87%	24%	84%	27%
Temporary Employees (% of Employees)	4%	15%	3%	10%
New Employees in Past Year (% of Employees)	20%	18%	18%	20%
Wage Categories				
Paid ≤\$10.00 per Hour (% of Employees)	6%	21%	11%	24%
Paid \$10.00-\$12.00 per Hour (% of Employees)	5%	15%	7%	15%
Paid ≥\$12.00 per Hour (% of Employees)	87%	27%	81%	30%
Female Employees (% of Employees)	47%	27%	40%	26%
Employees Over Age 65 (% of Employees)	2%	5%	2%	4%
SIC Group				
Agriculture, Forestry, And Fishing (0) (% Firms)	0%	5%	1%	10%
Mining & Construction (1) (% Firms)	5%	21%	6%	25%
Manufacturing (2) (% Firms)	4%	20%	4%	19%
Manufacturing (3) (% Firms)	1%	9%	10%	31%
Transportation, Communications, Electric, Gas, And Sanitary Services (4) (% Firms)	2%	16%	4%	20%
Wholesale and Retail Trade (5) (% Firms)	24%	43%	30%	46%
Finance, Insurance, And Real Estate (6) (% Firms)	16%	37%	7%	25%
Recreational Services (7) (% Firms)	25%	43%	20%	40%
Other Services (8) (% Firms)	23%	42%	18%	38%
Firm is a Restaurant (% Firms)	10%	30%	10%	30%
Firm is a Retail Establishment (% Firms)	8%	26%	8%	27%
Employer Size				
20-49 Employees (% Firms)	30%	46%	36%	48%
50-99 Employees (% Firms)	16%	37%	19%	40%
100-199 Employees (% Firms)	20%	40%	15%	36%
200-1,999 Employees (% Firms)	21%	41%	18%	38%
≥ 2,000 Employees (% Firms)	12%	33%	11%	32%
Outcome Measures				
Gap in Eligibility for Health Insurance (% Employees)	15%	26%	17%	26%
Gap in Health Insurance Coverage (% Employees)	22%	28%	28%	28%
Gap in Average Hourly Health Spending per Employee (\$)	\$0.46	\$ 0.50	\$0.57	\$ 0.49
Contributed to Healthy San Francisco in 2008 (% Firms)	21%	41%	--	--
Firm Added Health Benefit Offering in 2008 (% Firms)	28%	45%	--	--
Reported Difficulty (somewhat or very) Complying with Ordinance (% Firms)	43%	50%	--	--
Average Magnitude of Difficulty of Compliance (0=not at all to 3= very)	1.23	1.13	--	--
Supportive (somewhat or very) of Ordinance (% Firms)	64%	48%	--	--
Average Magnitude of Support for Ordinance (0=not at all to 3= very)	1.66	1.11	--	--
Offered Health Benefits in 2007 (% Firms)	93%	26%	94%	24%
Highly Impacted Firm (≥50¢ per worker-hour, % Firms)	59%	49%	82%	39%
Firm Met Ordinance Requirements before Implementation (% Firms)	25%	43%	11%	31%
Firm Began Offering HRA in 2008 (% Firms)	15%	35%	6%	24%
Firm Started Offering Health Benefits in 2008 (% of firms who did not offer in 2007)	42%	50%	15%	37%

Notes: Analysis includes employers with ≥20 employees.

Table 2: Characteristics of San Francisco Firms by Impact of Health Care Security Ordinance

	Least Impacted Group (N=84)		Most Impacted Group (N=135)	
	<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>
Restaurant (% Firms)	0.5%	7.3%	20.0%	40.2% **
Retail (% Firms)	0.4%	6.4%	7.8%	26.8% **
Non-profit (% Firms)	16.5%	37.3%	6.4%	24.6%
Firm is part of chain (>1 establishment, % Firms)	66.4%	47.5%	71.2%	45.5%
Female (% Employees)	47.0%	22.4%	44.5%	31.9%
Employees Paid Under \$10/hour (% Employees)	0.2%	2.3%	18.2%	33.5% **
Employees Paid Under \$10-\$12/hour (% Employees)	3.4%	13.5%	5.3%	13.6% **
Employees Working ≤10 Hours per Week (% Employees)	4.1%	12.6%	4.9%	13.4%
Employees Working 11-29 Hours per Week (% Employees)	4.0%	6.1%	12.2%	20.6% **
Employees Age ≥ 65 years (% Employees)	1.3%	4.1%	1.8%	4.6%
Temporary Employees (% Employees)	4.0%	9.9%	8.6%	23.2%
Firm has Unionized Employees (% Firms)	13.8%	34.6%	7.1%	25.7%
<u>Employer Size</u>				
20 - 49 Employees	33.7%	47.5%	30.4%	46.2% *
50 - 99 Employees	12.9%	33.8%	11.0%	31.4%
100 - 199 Employees	12.6%	33.4%	16.7%	37.4%
200 - 1,999 Employees	34.2%	47.7%	28.1%	45.1%
≥ 2,000 Employees	6.6%	25.0%	13.7%	34.6% *

Notes: Least impacted firms are those without a spending gap at baseline, most impacted have a spending gap of at least \$0.50 per worker hour.

Table 3: Effect of Firm Characteristics on Generosity of Health Benefits at Baseline

Baseline Health Benefit Offering	<u>Gap in Benefit Eligibility</u>		<u>Gap in Benefit Coverage</u>		<u>Gap in Health Spending</u> <u>per Worker-Hour</u>	
	Coeff	Std. Error	Coeff	Std. Error	Coeff	Std. Error
	(N=782)		(N=782)		(N=655)	
San Francisco	0.06	0.12	-0.06	0.13	-0.44	0.23 *
Restaurant	0.07	0.07	0.05	0.07	0.14	0.13
Retail Establishment	-0.04	0.07	-0.05	0.07	0.23	0.12 **
Chain (Multi-establishment)	-0.05	0.03	-0.05	0.04	-0.13	0.08
Proportion of Female Workers	-0.06	0.05	-0.07	0.06	-0.06	0.14
Proportion of Workers Paid < \$10 per Hour	0.21	0.11 *	0.33	0.09 **	0.36	0.19 *
Proportion of Workers Paid \$10-\$12 per Hour	0.05	0.13	0.07	0.11	0.41	0.22 *
Proportion of Workers ≤ 10 Hours per Week	-0.32	0.09 **	-0.46	0.09 **	-0.45	0.29
Proportion of Workers 11-29 Hours per Week	0.55	0.12 **	0.49	0.11 **	0.39	0.23 *
Proportion of Workers Over Age 65	-0.23	0.27	-0.35	0.33	-1.02	0.49 **
Proportion of Temporary Workers	0.29	0.17 *	0.30	0.13 **	0.13	0.26
Firm has Unionized Workers	0.07	0.04 *	0.01	0.04	-0.12	0.10
20 - 49 Employees	0.12	0.05 **	0.05	0.05	-0.46	0.14 **
50 - 99 Employees	0.10	0.05 **	0.05	0.05	-0.44	0.14 **
100 - 199 Employees	0.07	0.05	-0.05	0.05	-0.27	0.15 *
200 - 1,999 Employees	0.10	0.04 **	0.00	0.05	-0.18	0.14
SF Restaurant	0.18	0.09 *	0.25	0.09 **	0.17	0.18
SF Retail Establishment	-0.01	0.07	0.03	0.08	-0.29	0.16 *
SF Non-profit	0.01	0.03	-0.03	0.03	-0.09	0.09
SF Chain	0.05	0.06	0.02	0.06	0.11	0.11
SF Proportion of Female Workers	-0.05	0.12	0.01	0.12	0.10	0.26
SF Proportion of Workers Paid < \$10 per Hour	0.20	0.14	0.08	0.13	0.71	0.25 **
SF Proportion of Workers Paid \$10-\$12 per Hour	-0.08	0.17	0.13	0.18	-0.41	0.30
SF Proportion of Workers ≤ 10 Hours per Week	0.08	0.14	0.11	0.16	0.56	0.40
SF Proportion of Workers 11-29 Hours per Week	-0.40	0.16 **	-0.39	0.16 **	-0.11	0.30
SF Proportion of Workers Over Age 65	0.16	0.43	0.24	0.54	0.63	0.78
SF Proportion of Temporary Workers	0.14	0.26	0.08	0.26	0.22	0.43
SF Firm with Unionized Workers	-0.04	0.06	-0.03	0.06	0.03	0.13
SF Firm with 20 - 49 Employees	0.00	0.07	0.02	0.08	0.29	0.18
SF Firm with 50 - 99 Employees	-0.12	0.06 **	-0.11	0.07	0.24	0.20
SF Firm with 100 - 199 Employees	-0.04	0.06	0.07	0.07	0.10	0.18
SF Firm with 200 - 1,999 Employees	-0.10	0.06 *	0.02	0.07	0.11	0.19
Constant	0.04	0.06	0.24	0.06 **	0.91	0.16 **
R ²	0.34		0.35		0.31	

Notes: ** Indicates significance at the 5% level, * indicates significance at the 10% level.

Firms included in regression include San Francisco and comparison firms with ≥ 20 employees.

Table 4: Effect of Firm Characteristics on Firm Benefit Offer Behavior

	Firm Doesn't Offer Health Benefits in 2007		Firm Contributes to Healthy San Francisco		Firm Will Begin Offering Health Benefits in 2008	
	Coeff	Std. Error	Coeff	Std. Error	Coeff	Std. Error
	(N=474)		(N=380)		(N=43)	
Restaurant	0.22	0.10 **	0.04	0.12	0.49	0.18 **
Retail Establishment	-0.06	0.06	-0.25	0.16	-0.03	0.45
Non-profit Firm	--	--	0.11	0.09	--	--
Chain (Multi-establishment)	0.04	0.04	-0.10	0.05 *	-0.08	0.30
Proportion of Female Workers	-0.04	0.05	0.11	0.12	-0.07	0.27
Proportion of Workers Paid < \$10 per Hour	-0.15	0.10	0.14	0.26	0.34	0.29
Proportion of Workers Paid \$10-\$12 per Hour	0.33	0.22	0.00	0.21	0.39	0.27
Proportion of Workers ≤ 10 Hours per Week	0.05	0.13	-0.07	0.20	0.22	0.26
Proportion of Workers 11-29 Hours per Week	-0.14	0.20	-0.07	0.18	-0.56	0.31 *
Proportion of Workers Over Age 65	-0.11	0.10	0.30	0.43	0.67	7.65
Proportion of Temporary Workers	0.32	0.29	0.37	0.26	0.85	0.36 **
Firm has Unionized Workers	-0.06	0.03 *	0.03	0.08	0.32	0.22
20 - 49 Employees	0.08	0.05 *	-0.46	0.14 **	-0.30	0.53
50 - 99 Employees	-0.06	0.05	-0.44	0.14 **	-0.54	0.56
100 - 199 Employees	0.02	0.04	-0.21	0.14	-0.24	0.70
200 - 1,999 Employees	-0.03	0.04	-0.37	0.14 **	--	--
Proportion of Workers Live in San Francisco	--	--	0.05	0.09	--	--
Constant	0.12	0.10	0.49	0.18 **	0.27	0.56
R ²	0.35		0.16		0.42	

Notes: Regressions include San Francisco firms with ≥ 20 employees.

Non-profit indicator not included in select regressions because all of the non-profit firms in our sample offer health benefits.

** Indicates significance at the 5% level, * indicates significance at the 10% level.

Firm Begins Offering a
Health Reimbursement Account in 2008

	Marginal Effect	Std. Error
	(N=666)	
San Francisco	-0.04	0.03 *
Restaurant	-0.05	0.02 **
Retail Establishment	0.05	0.05
Chain (Multi-establishment)	0.01	0.01
Proportion of Female Workers	-0.07	0.03 **
Proportion of Workers Paid < \$10 per Hour	0.09	0.04 **
Proportion of Workers Paid \$10-\$12 per Hour	-0.13	0.07 **
Proportion of Workers ≤ 10 Hours per Week	0.02	0.04
Proportion of Workers 11-29 Hours per Week	0.08	0.05 *
Proportion of Workers Over Age 65	0.01	0.08
Proportion of Temporary Workers	-0.46	0.16 **
Firm has Unionized Workers	-0.01	0.01
20 - 49 Employees	0.02	0.03
50 - 99 Employees	0.01	0.03
100 - 199 Employees	-0.01	0.01
200 - 1,999 Employees	-0.01	0.01
SF Restaurant	0.99	0.00
SF Retail Establishment	-0.01	0.01 *
SF Non-profit	0.00	0.01
SF Chain	-0.01	0.01
SF Proportion of Female Workers	0.14	0.06 **
SF Proportion of Workers Paid < \$10 per Hour	-0.07	0.05 *
SF Proportion of Workers Paid \$10-\$12 per Hour	0.15	0.08 **
SF Proportion of Workers ≤ 10 Hours per Week	0.04	0.06
SF Proportion of Workers 11-29 Hours per Week	-0.07	0.06
SF Proportion of Workers Over Age 65	-0.05	0.15
SF Proportion of Temporary Workers	0.42	0.18 *
SF Firm with Unionized Workers	0.14	0.17 *
SF Firm with 20 - 49 Employees	0.00	0.03
SF Firm with 50 - 99 Employees	0.01	0.04
SF Firm with 100 - 199 Employees	0.09	0.12
SF Firm with 200 - 1,999 Employees	0.21	0.22 *
Coverage Gap	0.00	0.02
R ²	0.26	

Notes: Regression includes San Francisco and comparison firms with ≥20 employees.

** Indicates significance at the 5% level, * indicates significance at the 10% level.

Marginal Effects are reported from a probit model.

Table 5: Effect of Firm Characteristics on Difficulty with Compliance and Support for the Ordinance

	Firm Reports Compliance was Difficult		Firm Supports Health Care Ordinance	
	Marginal Effect	Std. Error	Marginal Effect	Std. Error
	(N=315)		(N=380)	
Firm Contributes to Healthy San Francisco	0.25	0.09 **	0.06	0.09
Firm Did Not Offer Health Benefits in 2007	0.51	0.09 **	-0.22	0.18
Restaurant	0.57	0.06 **	0.07	0.14
Retail Establishment	0.36	0.13 **	0.32	0.10 **
Non-profit Firm	0.06	0.12	0.22	0.10 *
Chain (Multi-establishment)	-0.02	0.09	0.11	0.09
Proportion of Female Workers	0.47	0.21 **	0.08	0.25
Proportion of Workers Paid < \$10 per Hour	-0.97	0.39 **	0.53	0.31 *
Proportion of Workers Paid \$10-\$12 per Hour	-0.13	0.36	0.14	0.35
Proportion of Workers ≤ 10 Hours per Week	0.15	0.35	0.17	0.31
Proportion of Workers 11-29 Hours per Week	-0.08	0.35	-0.15	0.27
Proportion of Workers Over Age 65	-1.33	1.19	0.39	0.83
Proportion of Temporary Workers	0.35	0.52	-0.51	0.42
Firm has Unionized Workers	-0.10	0.12	0.04	0.12
20 - 49 Employees	-0.33	0.12 **	0.25	0.13 *
50 - 99 Employees	-0.31	0.11 **	0.18	0.14
100 - 199 Employees	-0.21	0.12	0.16	0.14
200 - 1,999 Employees	-0.16	0.16	0.10	0.16
R ²	0.22		0.08	

Notes: Regression includes San Francisco firms with ≥ 20 employees.

** Indicates significance at the 5% level, * indicates significance at the 10% level.

Marginal effects are reported from a probit model.

**The Impact of San Francisco's Employer Health Spending Requirement:
Findings from the Labor Market**

Chapter 5

Abstract

Research Objective: To estimate the effect of San Francisco's employer health spending requirement (which went into effect in January 2008) on labor markets. We evaluate the impact on employment and payroll, and also pass-through of the cost to consumers.

Study Design: We use a difference-in-difference approach by comparing changes in trends in San Francisco to those of neighboring counties and other large MSAs that did not implement any comparable employer mandate. We used data on four counties surrounding San Francisco and 24 of the largest U.S. MSAs as control groups. Our pre-period consists of the Q1-2002 to Q4-2007, while the post-period consists of Q1-2008 to Q2-2009. The data come from the Quarterly Census of Employment and Wages collected by the Bureau of Labor Standards. We also surveyed restaurants in San Francisco to estimate the incidence of a mandate-specific surcharge imposed by some restaurants in the city.

Population Studied: We focused our attention on the private sector industries most impacted by the employer requirement: retail, accommodation and food services, eating and drinking places, as well as overall private sector employment. Due to minimum wage constraints, these low wage sectors are where wage offsets are less likely, but due to competitive pressures they are where some form of offset is mostly likely in the long run.

Principal Findings: Employment and wage patterns in San Francisco did not change appreciably following the policy as compared to control counties in most empirical specifications. This was true for the most affected industries, as well as overall private sector employment. The results are robust to inclusion of county-specific time trends, varying pre-periods, controls for core versus periphery county trends in MSAs, and alternative business cycle controls. Earnings patterns indicate no reduction in number of hours per employee. About 25% of restaurants surveyed imposed surcharges of around 4% of the bill.

Conclusions: In the 18 months following the implementation of the employer health spending requirement in San Francisco, there were no appreciable job losses or real wage reductions. Part of the incidence of the mandate fell on consumers as evidenced by the use of surcharges by many restaurants. While it is difficult to ascertain the external validity of the results from a single city, the results from San Francisco suggest that this employer health spending requirement did not substantially reduce employment or earnings in the first year and a half after implementation.

Introduction

In late 2006, San Francisco enacted ambitious healthcare legislation with a goal of attaining universal access to health care for the city's residents. This legislation, which went into effect in January 2008, provides families with access to a medical home to coordinate health care delivery in clinics and hospitals in the city through "Healthy San Francisco." Enrollees with incomes under 300 percent of the federal poverty level have heavily subsidized access, and those with higher incomes may buy into Healthy San Francisco at rates substantially lower than what they would pay for an individual policy in the private-insurance market (Healthy San Francisco website 2009).

As part of the initiative, San Francisco implemented a version of a "pay-or-play" employer mandate to finance health care for residents. It requires employers with 100 or more employees to contribute \$1.85 an hour in health spending towards each employee. For smaller firms between 20 and 99 employees, the hourly requirement is \$1.23 an hour; firms with fewer than 20 employees are exempt (San Francisco OLSE website 2009). This benefit represents a 13-19% increase over the minimum wage of \$9.79 in San Francisco for those who previously did not have health benefits. This is a substantial requirement—more stringent than the requirements in the federal Patient Protection and Affordable Care Act or the employer requirement in Massachusetts, and is similar in cost to the mandate in Hawaii (though Hawaii is not a pay-or-play mandate). Employers can meet this requirement by paying for insurance directly, paying into medical reimbursement accounts, or by paying into the City's Healthy San Francisco public option.

Healthy San Francisco has been met with great demand. Thus far, 51,000 adults have enrolled, compared to an estimated 60,000 who were previously uninsured as of 2007 (Healthy San Francisco website 2010, San Francisco Department of Public Health 2009). If estimates of the previously uninsured from the California Health Interview Survey are correct, this means that the number of uninsured in San Francisco without access to affordable health care has been greatly reduced in the first 2.5 years of Healthy San Francisco implementation. This is in addition to any expansions in private health benefits spurred by the employer mandate. Among covered businesses, roughly 20 percent have chosen to use the city's public option for at least some of their employees (County Business Patterns 2009, San Francisco Department of Public Health 2009).¹

In this paper, we provide evidence on the impact on the employer health spending requirement on jobs and earnings, as well as costs to consumers over the first 18 months of the policy's enactment. This is part of a multi-year research project we are conducting to better understand the effects of San Francisco's efforts.

¹ 960 employers have selected the City Option as of May 2009 and County Business Patterns (U.S. Census) reports 4392 establishments with more 20+ employees in San Francisco.

Effect on the Labor Market

A simple supply and demand framework is a useful starting point for analyzing the effects of an employer mandate to provide health benefits on the labor market (Summers 1989). A benefit mandate such as the Health Care Security Ordinance will cause the labor demand curve to shift in by the cost of the mandated benefit and the labor supply curve to shift out by an amount equal to the value of the benefit. While we would not expect nominal wages to fall among previously employed workers (Kahn1997), in a competitive marketplace where the cost of the benefit cannot be passed through to prices, the real wage is expected to fall over time through slower wage growth in existing workforce and lower wages for new employees.

The magnitude and timing of the wage change, and the effect of the mandate on employment, will depend on workers' valuation of the mandated benefit. In San Francisco, low-wage workers have subsidized access to care through Healthy San Francisco. If an employer pays into Healthy San Francisco for an employee, and the employee is within 300% of the federal poverty level, the quarterly program fees for Healthy San Francisco are free to that worker. For workers at the minimum wage, there will be no wage pass-through. From the minimum wage, the joint (employer and employee) surplus from paying into the city option is positive due to the subsidies up to 300% of the federal poverty limit, where it begins to decline due to increased program fees for those with income above this level. We are most likely to observe wage pass-through in workers above the minimum wage but below 300% of the federal poverty limit. However, this theoretical difference is small in practice and is unlikely to be observed in aggregate data. Using data from the 2008 Bay Area Employer Health Benefits Survey, we found that on average restaurants with more than 20 employees will have to increase their health spending by \$1.06 per worker hour and retail establishments will have to increase their health spending by \$0.58 per worker hour. If workers do not value the benefit at its cost or if the minimum wage is binding, the entire cost of the benefit will not be passed through to wages. If this is the case, neoclassical theory would predict that equilibrium employment would fall, potentially causing social welfare losses.

If a wage adjustment is not sufficient to offset the cost of the spending requirement, the marginal productivity of these workers may not equal the marginal cost and employers could act to reduce employment of these workers. This may happen through a reduction in the number of employees or through reducing the hours worked among existing employees. Thus neoclassical theory predicts some combination of three possible labor market effects: slower wage growth, decreased employment, and fewer paid hours per worker. The relatively large proportion of minimum wage workers in the restaurant industry and other highly impacted industries with low baseline insurance coverage implies that these firms may have difficulty reducing wages to pass on costs to employees, and hence could theoretically reduce employment. Previous work found around 4% of San Francisco's workforce were earning at the minimum wage, which currently stands at \$9.79 per hour. Using the 2008 Bay Area Employer Health Benefits Survey, we estimate that between 2.6 and 5% of workers are paid the minimum wage and did not have health

benefits in 2007, prior to implementation of the Health Care Security Ordinance. Finally, to the extent that there may be labor market frictions, we may expect an increase in compensation to reduce vacancies and turnover instead of equilibrium employment.

If the product market is not perfectly competitive, as in a local service industry like restaurants, firms may also try to pass the additional labor costs onto consumers through price increases. In this case, all restaurants with 20 or more employees have received the same input price shock so we might expect to see output prices in restaurants rise. Ability of restaurants to pass through additional input costs to consumers depends partly on the price elasticity of demand for restaurants. Estimated price elasticities of demand for restaurant food have varied from inelastic (0.18, Brown 1990) to quite elastic (1.63, Frank and Bernanke 2003 or 2.3, Anderson 2006). Restaurants have many substitutes, including grocery store food, but many close substitutes in this case (e.g. fast food) would have received the same demand shock, which could allow pass-through to prices if the market will tolerate price increases (approximately a quarter of eating and drinking establishments in San Francisco have 20 or more employees and 59% of workers in San Francisco restaurants work in restaurants with 20 or more employees, based on our calculations from Dun and Bradstreet data).

Finally, a majority of San Francisco restaurants with more than 20 workers offered health benefits to some workers prior to the mandate going into effect (64%, 2008 Bay Area Employer Health Benefits Survey). These restaurants were already competitive with the non-offering restaurants prior to the mandate, so they may have an advantage in the post-mandate period and may be able to expand to absorb employment losses in other less competitive firms that did not previously offer health benefits.

Background

Many empirical studies have examined the effect of benefit mandates on wages and employment. Hawaii and Massachusetts are the only states with a mandate for employers to provide health insurance, although Massachusetts' employer requirement is fairly minimal. Researchers have examined the impacts of the Hawaiian Prepaid Health Care Act of 1974, a mandate more similar in magnitude to the Health Care Security Ordinance, with no pay-or-play option, and much broader employee exemptions. Thurston found that between 1970 and 1990, the Hawaiian industries most affected by the insurance mandate had slower wage growth than other Hawaiian industries, but more rapid wage growth than the same industries nationally (Thurston 1997). Buchmueller, DiNardo, and Valletta (2009) studied a longer time period and found that while relative wages in Hawaii did fall, the effect was insignificant and the law did not reduce employment probabilities. However, they found a greater reliance on exempt workers (such as those working less than 20 hours per week).

Many benefit mandates apply to the benefit makeup of private insurance packages, rather than mandating the offer of insurance. Benefit mandate laws vary from state to state, with a few

mandated benefits at the federal level. Examples of state mandated benefits include mental health or substance abuse coverage. Early cross-sectional wage studies typically found that the presence of health insurance increased wages, not supporting the compensating differentials hypothesis (e.g. Monheit et al. 1985). However, a key omitted variable in the cross-sectional case is worker productivity, which is unfeasible to control for with observables. The most influential study on the effect of benefit mandates was completed by Gruber (1994), who used a natural experiment to study the effect of state maternity mandates on wages. He found that affected cohorts (single and married women aged 20 to 40 and married men in the same age range) paid the full cost of the mandates through reductions in wages.

Effects of workers compensation insurance mandates on wages and employment are also relevant to the study of benefit mandates. Empirical studies have examined the effects of workers compensation mandates on wages and found that most (83-100%) of the expected cost was borne by workers in the form of lower wages, and that the reduction in wages for employees at small firms could be greater (Gruber & Krueger 1991, Viscusi & Moore 1987). In terms of employment levels, Gruber and Krueger also found that higher workers compensation insurance costs had a negative but statistically insignificant effect on employment, with an implied elasticity of labor demand of about -0.5. Kaestner (1996) examined the effect of unemployment compensation insurance taxes and workers' compensation insurance mandates on the employment of youths and young adults and found that increases in labor costs reduced employment in teenagers, but not young adults.

A parallel body of research is that of effects of minimum wage laws on equilibrium employment levels. Aaron Yelowitz (2004) suggests that a health care spending mandate would lead to increased unemployment for workers at the minimum wage. However, other research such as by Dube, Naidu and Reich (2007) found no discernable minimum wage impact on employment in the restaurant sector in San Francisco. Generalizing the border-discontinuity method, Dube, Lester and Reich (forthcoming) estimate the effect of minimum wage changes across all cross-border contiguous county pairs over the 1990-2006 period, and found no dis-employment effects in restaurants or other low-wage sectors. Further evidence from the minimum wage literature suggests that modest increases in labor costs may not lead to noticeable changes in overall staffing patterns (Brown 1999, Card & Krueger 1994, Card & Krueger 2000). McArdle argues that the impact of any health spending requirement on employers will depend significantly on the details of that policy (1994).

Past research indicates that as health costs rise, firms substitute hours per worker for the number of workers employed (Cutler & Madrian 1998). However, this effect was not found in Hawaii and may not be applicable in this case given that the minimum spending requirements are based on the number of hours the employee works (Thurston 1997).

Data and Methods

Data and Sample Selection

This paper employs multiple public and new survey data sources. In order to investigate the effects on jobs and wages empirically, we analyzed the Quarterly Census of Employment and Wages (QCEW), which is a near census of the working population based on unemployment insurance records. We compared employment and weekly wage trends in San Francisco to those of neighboring counties and to other large metropolitan statistical areas in the United States that did not implement any comparable new employer mandate. Quarterly data on employment and quarterly data on wages were pulled for the period January 1990 to June 2009 from the Bureau of Labor Statistics (BLS). The dataset is based on ES-202 filings that every establishment is required to submit quarterly for the purpose of calculating payroll taxes related to unemployment insurance. Since 98 percent of workers are covered by unemployment insurance, the QCEW constitutes a near-census of employment and earnings.

We chose to focus our attention on the private sectors most impacted by the employer requirement for the years 2002-2009: Retail Establishments (NAICS codes 44-45, 9% of private employment in 2009), Accommodation and Food Services (72, 14% of private employment), Eating and Drinking Places (722, 10% of private employment), and all private industries (10). We chose these industries because they have high proportions of minimum wage workers: calculations from the 2008 Bay Area Employer Health Benefits Survey indicate that approximately 24% of workers in San Francisco eating and drinking places (Standard Industrial Classification (SIC) 58) and 20% of workers in San Francisco retail (SIC 23, 53, 54, 56, 59) are paid below \$10 per hour.

We chose to highlight the results from the time period of 2002 to 2009 for two reasons. In years before 2002, these data construct NAICS classes from underlying SIC industry groups, and many counties did not have data available for the Accommodation and Food Services and Eating and Drinking Places industries. In addition, in examining the data we found that this pre-period (2002-2007) in the comparison counties fit San Francisco the most closely. We used data on four counties surrounding San Francisco as a control group (Alameda, Contra Costa, Marin, and San Mateo) and constructed other comparable MSAs based on CBSA definitions for the 25 largest MSAs in the U.S. We chose to use the 25 largest MSAs because San Francisco is the 13th largest in the country. We define a “center county” to be a county that encompasses the urban center of the CBSA. A list of MSAs, the number of counties by MSA, and definitions of the center counties can be found in Appendix I.

Data on restaurant surcharges due to the Health Care Security Ordinance in San Francisco were collected by the authors in early 2009. We sampled 340 restaurants in San Francisco, and obtained 142 completed interviews (response rate of 42%). In addition, the

authors fielded the 2008 and 2009 Bay Area Employer Health Benefits Survey. Some calculations describing San Francisco employers are pulled from these data.

Identification Strategy

The Health Security Ordinance offers a quasi-experimental design with distinct control groups: counties in the peripheral areas outside San Francisco, and other U.S. MSAs of a significant size. Our identification strategy uses the San Francisco policy change as the exogenous variation, and considers covered firms that are economically affected as the “treatment group.” We draw control groups from the counties surrounding San Francisco (Alameda, Contra Costa, Marin, and San Mateo) and controls from the other 24 largest MSAs in the United States.² Our main identification strategy uses a spatial discontinuity approach: we compare San Francisco County to adjacent “peripheral” counties within the broader San Francisco MSA. However, we go beyond a simple discontinuity framework by allowing for the possibility that “core” and “peripheral” counties within MSAs have experienced differential trends. For this reason, we incorporate “core” and “peripheral” counties within the 24 largest MSAs in the U.S. as additional controls. Of the MSAs that we use in the control group, Washington, DC is the only county that has a higher minimum wage than surrounding areas. However, the gap between Washington, DC and surrounding counties in Maryland and Virginia is constant over time (\$1 above federal rate).

We begin by describing employment and wage trends after adjusting for inflation and seasonality. We imputed data for outliers that were more than four standard deviations away from the mean over the 1990 to 2009 period. We created weighted averages of employment and wages for the counties surrounding San Francisco and for core and peripheral counties of the other 24 comparison MSAs and indexed the data to Q4 2007 for all graphs. Chart 1 displays employment and wage trends in San Francisco, weighted averages of Bay Area peripheral counties (our primary control group), the 24 other largest MSA core counties, and peripheral counties of the other 24 MSAs (our additional control groups). The charts display similar trends over the period and validate the research design. We also report the simple ratio of outcomes of the core counties versus the peripheral counties for San Francisco and the other MSAs from 2002 to 2009 (Chart 2). Appendices II and III describe the same data during the entire data period available from 1990 to 2009. Appendix IV shows the ratio of San Francisco employment and wages to other MSAs, both for core and peripheral counties.

Our two primary outcome measures are total employment and average earnings. The earnings measure is the average rate of pay for workers by industry. BLS divides the total payroll in each industry and county in a given quarter by the total employment level in each industry and county for that quarter, and then reports the average weekly earnings on a quarterly basis. The

² This methodology is based on previous work of comparing contiguous counties to assess minimum wage mandates. Dube, A., Lester, T.W., and M. Reich (forthcoming). “Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties.” *Review of Economics and Statistics*.

QCEW does not measure hours worked. However, we can partly address the possibility of an hour reduction, such as that claimed by the Golden Gate Restaurant Association (Mandelbaum 2009) by examining weekly earnings.

Using quarterly data between 2002 and the second quarter of 2009 for all 25 MSAs, we regress the outcome variables (employment and weekly earnings) on our key “treatment” variable, which is a 2008-2009 (after implementation of mandate) San Francisco interaction. We estimate these regressions separately for each industry. We use the log of monthly employment and log of average weekly wage as the dependent variables, so reported coefficients can approximately be interpreted as percentage changes in the dependent variables resulting from the policy.

The simplest difference-in-differences model begins by observing labor market outcomes for San Francisco and surrounding Bay Area counties before and after the implementation of the Health Care Security Ordinance. Subtracting the average change in the Bay Area counties from the average change in San Francisco County removes biases in second period comparisons between the two groups that could be the result from permanent differences, as well as biases from comparisons over time in the treatment group that could be the result of trends. This can be captured by estimating the following regression where t indexes quarter and c indexes county:

$$(1) Y_{tc} = \beta_0 + \beta_1 SF_c + \beta_2 Post_t + \beta_3 Post_t * SF_c + \epsilon_{tc}$$

$Post$ is an indicator for Q1 2008 - Q2 2009, SF is an indicator for San Francisco County, and β_3 is the coefficient of interest. These difference-in-differences coefficients are listed in Exhibit 1 by industry.

We build on this model by adding an additional set of controls: “core” and “periphery” counties within the other 24 largest MSAs in the United States. This allows us to do a triple difference, with β_7 as the coefficient of interest.

$$(2) Y_{tc} = \beta_0 + \beta_1 BayArea_c + \beta_2 CoreCounty_c + \beta_3 SF_c + \beta_4 Post_t + \beta_5 Post_t * BayArea_c + \beta_6 Post_t * CoreCounty_c + \beta_7 Post_t * SF_{cm} + \epsilon_{tc}$$

$CoreCounty$ indicates the county containing the urban center of the MSA, and $BayArea$ is an indicator for Alameda, Contra Costa, Marin, San Francisco, and San Mateo counties. This estimate starts with the time change in averages in San Francisco and then nets out the change in means for core counties in other MSAs and the change in means for the non-San Francisco counties in the Bay Area. This specification accounts for two kinds of potentially confounding trends: changes in employment and wages across MSAs that arise due to spatial heterogeneity across various areas in the U.S., and trends within MSAs due to evolving nationwide patterns of growth in core versus peripheral areas.

We further refine this triple difference analysis by including additional controls. If t denotes a quarter, c denotes a county and m denotes an MSA, for each industry we specify:

$$(3) Y_{tcm} = \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{Post}_t * \text{BayArea}_{cm} + \beta_3 \text{Post}_t * \text{CoreCounty}_{cm} + \beta_4 \text{Post}_t * \text{SF}_{cm} + \beta_5 \ln(\text{Population}_{tcm}) + \beta_6 \text{CoreCounty}_{cm} * \text{MSA}_m * \text{Season}_t + \rho_{tcm} + \eta_t + \mu_c + \varepsilon_{tcm}$$

where Post , SF , CoreCounty , and BayArea are as above, annual population is measured on the county-level from Census data, Season_t is an indicator for quarter: either quarter 1, 2 or 3 (4 is omitted), η_t is a vector of quarter fixed effects fully interacted by year, μ_c is a vector of county-specific effects, ρ_{tcm} is a vector of $\text{CoreCounty} * \text{quarter}$ fixed effects fully interacted by year and ε_{tcm} is an error term. The fixed-effects for each time-period (quarter and year) and each county make this a canonical “difference-in-difference-in-differences” setup. This estimate starts with the time change in averages for businesses in San Francisco County and then nets out the change in means for the non-San Francisco counties in the San Francisco MSA and the change in means for businesses in the core counties of control MSAs relative to peripheral counties. In other words, first, it sweeps out variation across MSAs, and uses only the local differences to identify the policy effect; secondarily, it accounts for arbitrary core-periphery trends over this period by using the other 24 MSAs. The results from this specification are displayed in the first column of Exhibit 2.

We continue to build on this model by adding an MSA by core-county linear time trend, τ_{qcm} to control for time trends that may differ within MSAs between core counties and peripheral counties,

$$(4) Y_{tcm} = \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{Post}_t * \text{BayArea}_{cm} + \beta_3 \text{Post}_t * \text{CoreCounty}_{cm} + \beta_4 \text{Post}_t * \text{SF}_{cm} + \beta_5 \ln(\text{Population}_{tcm}) + \beta_6 \text{CoreCounty}_{cm} * \text{MSA}_m * \text{Season}_t + \rho_{tcm} + \eta_t + \mu_c + \tau_{qcm} + \varepsilon_{tcm}$$

where $q \in \{1,3\}$ is a quarterly trend. Next, we further control for effects that might differ by MSA and time period by adding a vector of MSA-specific quarter fixed effects (η_{tm})

$$(5) Y_{tcm} = \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{Post}_t * \text{BayArea}_{cm} + \beta_3 \text{Post}_t * \text{CoreCounty}_{cm} + \beta_4 \text{Post}_t * \text{SF}_{cm} + \beta_5 \ln(\text{Population}_{tcm}) + \beta_6 \text{CoreCounty}_{cm} * \text{MSA}_m * \text{Season}_t + \rho_{tcm} + \eta_{tm} + \mu_c + \tau_{qcm} + \varepsilon_{tcm}$$

Our final specification drops the linear time trend from the model as it didn’t change the results substantially and we preferred an estimation technique less prone to overfitting the data.

$$(6) Y_{tcm} = \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{Post}_t * \text{BayArea}_{cm} + \beta_3 \text{Post}_t * \text{CoreCounty}_{cm} + \beta_4 \text{Post}_t * \text{SF}_{cm} + \beta_5 \ln(\text{Population}_{tcm}) + \beta_6 \text{CoreCounty}_{cm} * \text{MSA}_m * \text{Season}_t + \rho_{tcm} + \eta_{tm} + \mu_c + \varepsilon_{tcm}$$

We estimate this model over 30 quarters from 2002 to 2009 and 241 counties, yielding 7,230 observations per industry sector. All regressions are weighted by county population.

In addition to reporting traditional cluster-robust standard errors, we also report standard errors developed by Conley and Taber (2009). This methodology was developed for

circumstances where only a small number of policy changes are observed in the data and standard large-sample approximations used for inference may not be appropriate. This approach to inference uses asymptotic approximations that let the number of control counties grow large, while the number of treated county remains small. As Conley and Taber show, when the number of treated unit is small (in our case it is one), inference using the cluster-robust standard errors can be misleading. The Conley-Taber method is related to other recent papers that use a “randomization inference” approach (see Buchmueller, Dinardo and Valetta (2009), Abadie, Diamond, Hainmueller (2007)).

The key intuition behind Conley and Taber is that information from control counties may be used to consistently estimate the distribution of the treatment effect. In our case, although the control groups are uninformative regarding the treatment effect, they contain information about the distribution of the noise across counties.

To implement Conley-Taber based inference, we first partial out covariates (log of population, county effects, and MSA specific season effects). We then regress the residuals from this on a core county interaction with the post-period (2008-2009) for each MSA. Using these 24 point estimates of the treatment effects, we create a 95% confidence interval for the treatment coefficient in San Francisco. Intuitively, the Conley-Taber method allows us to answer the following question: just by chance alone, what are the odds that San Francisco would have seen a certain change in employment as compared to its neighbors? We can answer this question by comparing the other 24 MSAs core and periphery counties, and using this counterfactual distribution to form inference. There are certain assumptions that we need to make to answer this question: namely we have to assume that under the null, the distribution of the *difference* in outcomes between San Francisco and neighboring counties is (on average) the same as in the other MSAs.

Additionally, we perform a battery of robustness checks where we vary control counties, variables and pre-periods. First we look just at the simple before-and-after estimate in the San Francisco MSA. Second, we use only the core counties from the other 24 largest MSAs as the control group. Next, we consider a more extended pre-period, by using data from 1990 to 2007. (This is the longest pre-period we can utilize given data availability.). The final two specifications consider the possibility that the coincidence of the beginning of the recession and the enactment of the policy may contaminate our estimates. These specifications include a dummy variable for recession and a core county and recession interaction in case recessions tend to have a disproportionate effect on core county businesses. Recessions during the study period as defined by NBER are July 1990-March 1991, March 2001 - November 2001, and December 2007 - present. The equation for this specification is:

$$(7) \quad Y_{tcm} = \beta_0 + \beta_1 Post_t + \beta_2 Post_t * BayArea_{cm} + \beta_3 Post_t * CoreCounty_{cm} + \beta_4 Post_t * SF_{cm} + \beta_5 \ln(Population_{tcm}) + \beta_6 CoreCounty_{cm} * MSA_m * Season_t + \beta_7 Recession_t + \beta_8 Recession_t * CoreCounty_{cm} + \rho_{tcm} + \eta_{tm} + \mu_c + \varepsilon_{tcm}$$

where Recession_t is an indicator for the quarters including recessions as defined above. The final specification in the sensitivity analysis section uses only recessionary quarters as the pre-period.

Results

Overall, our results provide strong evidence that over the first 18 months of the enactment of the policy, there has not been any discernable reduction in employment or earnings in San Francisco. Our point estimates are virtually all positive, and using conventional standard errors we observe no significant effects in highly impacted sectors. Using the confidence intervals from the Conley-Taber inference methods we can statistically rule out losses of employment of greater than 1% or earnings decreases of greater than 2%.

Exhibit 1 describes employment and earnings trends in the Bay Area, in order to compare recent trends in San Francisco versus neighboring counties using seasonally adjusted data. The third column in each industry group compares San Francisco with employment trends in the other 24 largest U.S. urban core counties, and the fourth describes the peripheral counties around these urban centers. We found that employment in private industry in San Francisco was 5.1% higher between January of 2008 and June of 2009 (most recent data available) compared with 2002 to 2007, while employment in the SF neighboring counties (Alameda, Contra Costa, Marin, San Mateo) shrank by 0.9% compared to the pre-period (Exhibit 1). In other MSA counties, employment patterns were flat over this time period. The “difference” row shows the difference in employment levels between the pre- and post-periods. The difference between the pre and post period in San Francisco is more positive than the surrounding bay area counties and other MSA counties in each industry for employment and wages. The “difference-in-difference” row shows the differences between San Francisco and peripheral bay area counties after differencing out the pre-period comparisons. The final row with the triple difference also nets out differences between core and peripheral counties in other MSAs. Without further adjustment, these estimates are all indistinguishable from zero, and all positive with the exception of a small negative effect for all private industry earnings.

Exhibit 2 reports the labor market effects (i.e., the effect of the “treatment” variable on log employment and log earnings) from regression analyses using alternative specifications. After controlling for log of population, time and county fixed effects, time-core county fixed effects, and seasonal fixed effects, we did not find any evidence of negative employment effects in the four industry groups: indeed, the significant employment effects were always positive in sign, though they varied in magnitude and precision (column 1, equation 3 above). When we add a linear time trend for each MSA by core county group to this specification, two of the wage effects are negative – in restaurants and the all private sector (columns 2 and 3, equations 4 and 5 above). Adding just the additional control for MSA-time specific effects (without MSA-center time trends) yields a significantly negative effect of the policy only on private industry earnings (column 4, equation 6). However, when we adjust for the small treated sample using the Conley-Taber confidence interval calculation, we find that none of the employment and wage effects can

be differentiated from zero and using this method rules out small negative effects as significant (column 5). Because our outcome variable is average weekly earnings, this also indicates that employers also could not be simply cutting back on the number of hours that workers are employed per week.

Chart 3 displays these San Francisco coefficients compared to the parallel coefficients estimated for each of the other 25 MSAs. If San Francisco employment or earnings were adversely affected by the 2008 Ordinance then San Francisco should lie on the left side of these charts, since none of the other MSAs were affected by the Ordinance. Specifically, the Chart displays coefficients on the treatment period (2008-2009) in core counties in the 25 largest U.S. MSAs, compared to peripheral counties surrounding the urban county. These regressions also adjust for county population, core county-time fixed effects, county fixed effects, and seasonal controls. The graphs show that labor market effects in San Francisco during the treatment period were in the realm of changes during this period in other major metropolitan centers and in many cases San Francisco's labor market was less impacted by this recessionary period. Chart 3 provides the most powerful graphical evidence of a lack of employment and earnings effects from the San Francisco ordinance.

Robustness Tests

Exhibit 3 reports the labor market effects from a number of robustness tests. Again, we did not find evidence of significant negative effects on employment or earnings in these four industry groups. The first column displays our primary specification from Exhibit 2, equation 6 above. The next two specifications vary the control counties used in the analysis but use the same regression framework. Specification 2 includes control counties in the San Francisco MSA only (Alameda, Contra Costa, Marin, and San Mateo). The results are remarkably similar to the regressions controlling for other MSA trends. Additionally, we ran regressions including Santa Clara County (another county neighboring San Francisco, but which is classified as San Jose CBSA, the 29th largest CBSA in the U.S.) as a control, and the results did not change (results not shown). The third specification in Exhibit 3 uses other MSA core counties as the control group with time period fixed effects and finds similar results. Next, we vary the pre-period used in the analyses back to 1990, the earliest data available. This expands our dataset to 78 quarters for all counties. Again, there are no significant negative labor market effects in the San Francisco treatment period. Finally, we include recession controls in the last two specifications. Recessions during the study period as defined by NBER are July 1990-March 1991, March 2001-November 2001, and December 2007- present. We also include a core county recession dummy in these analyses in case recessions tend to have a disproportionate effect on businesses in the urban center, and specifically in case San Francisco urban-periphery relationships systematically differ from other MSAs during recessions. Specification 5 includes the recession controls in the 1990-2009 study period (equation 7 above), while specification 6 restricts the pre-period in the study sample to recession quarters only: Q3 1990- Q1 1991, Q2-Q4 2001, greatly restricting the sample size. This is the only regression that finds a significant negative

employment effect, on all private employment. However, the highly impacted industries we studied don't show significant negative effects in this specification, and number of quarters used in this analysis may be too small to assert much confidence in these estimates.

Product Market Impact

When firms competing locally are all subject to the same mandate, they can also pass on the costs to consumers. This is particularly the case for restaurants who only serve a local market; therefore, we conducted a survey of restaurants to quantify the prevalence and magnitude of such a surcharge. Indeed, some San Francisco establishments have instituted a specific surcharge to help defray the added costs. We found that 25% of restaurants in our completed sample had instituted such a specific surcharge (standard error of 3.7%). Using data from the 2009 Bay Area Employer Health Benefits Survey, we are able to calculate that a majority of the restaurants who have instituted these surcharges already offered health benefits in 2007, prior to the implementation of the Health Care Security Ordinance. Although the extent and form of the surcharge varied, most firms reported a charge of 4% on the bill, which was the mean, median and the mode for firms using proportional charges (the majority). Firms that did not impose a HCSO-specific surcharge may have adjusted their menu prices upwards.

Discussion

Although we should be cautious about generalizability using a single case study, the evidence thus far suggests that San Francisco employers did not decrease employment or wages appreciably in response to the health benefit mandate in the first 1.5 years into implementation. Adding information from a larger number of control cases increases confidence in inference, and indeed rules out small significant negative effects. According to the Conley-Taber method results, employment would have to decrease by more than 0.7% and earnings would have to decrease by more than 1.9% in order to be considered a significant change. It is important to note that the QCEW data consist of employment and earnings across all firms, including small firms not subject to the mandate, and reported effects are averages across all firm sizes. According to data from Dun and Bradstreet, 59% of restaurant workers work in firms with more than 20 employees. Given these parameters and the magnitude of changes necessary in these sectors described above (on average restaurants need to increase health spending by \$1.06 per worker hour and retail establishments need to increase health spending by \$0.58 per worker hour) we can rule out complete pass-through of these benefit increases to earnings. This is consistent with some other empirical evidence on the impacts of mandates. For example, a recent study found that Hawaii's pay-or-play mandate implemented in the 1970s also did not have negative effects on overall employment—although Hawaiian employers may have substituted toward part-time workers (under 20 hours per week) who were not required to be covered by the insurance mandate, which is a behavioral response unavailable in San Francisco (the San Francisco mandate covered all workers over 10 hours per week in 2008 and 8 hours per week in 2009). Given that average weekly earnings were also unaffected by the mandate, it

appears that firms are not reducing the number of hours worked per employee as a response to the mandate. The lack of employment effects is also consistent with the literature suggesting that employer cost increases due to related minimum wage increases do not have detectable negative employment effects. In fact, San Francisco's institution of a city-wide minimum wage in 2005 similarly had no appreciable impact on employment growth in affected sectors.

It remains to be seen whether the mandate-specific surcharges we observed will be a lasting feature in San Francisco, or whether the surcharge will simply be folded into menu prices. The latter is more likely if the surcharge reflects costs of adjusting nominal prices sharply due to either competitive or behavioral reasons, such as a desire to publicize the mandate to consumers. Either way, we interpret the evidence to suggest that some firms partly reacted to the health mandate by passing on the costs to consumers. We are fielding another survey of restaurants in 2010 to determine the longer-term prevalence of restaurant surcharges.

While such price increases may be possible in service industries that only compete locally such as restaurants, other San Francisco firms competing with firms in markets elsewhere may not have latitude for such price increases. With the exception of minimum wage workers, however, economic theory predicts that over time the costs of expanded benefits will be passed on to workers in the form of smaller wage increases. We will continue to follow up on the issue of wage pass through and employment to better understand how employer health mandates are absorbed in the labor market over longer time horizons.

Healthy San Francisco has succeeded in providing health services to 51,000 previously uninsured residents in the first two and a half years of implementation, in part by collecting fees from employers using the "pay" option under the employer mandate. Estimates prior to the introduction of Healthy San Francisco indicated that about 60,000 San Francisco residents were uninsured in 2007. Together with private benefit expansions, this may indicate that San Francisco is close to achieving universal access to health care. While theory indicates that over time workers pay for these additional benefits either through real wage reductions or lay-offs for low-wage workers, these effects have not occurred in San Francisco in the first year and a half into implementation of the employer health spending mandate. While San Francisco has many unique characteristics that make conclusions difficult to generalize (for example geographic location and demographic makeup of population), thus far the Health Care Security Ordinance has expanded coverage with little to no negative effects in the labor market.

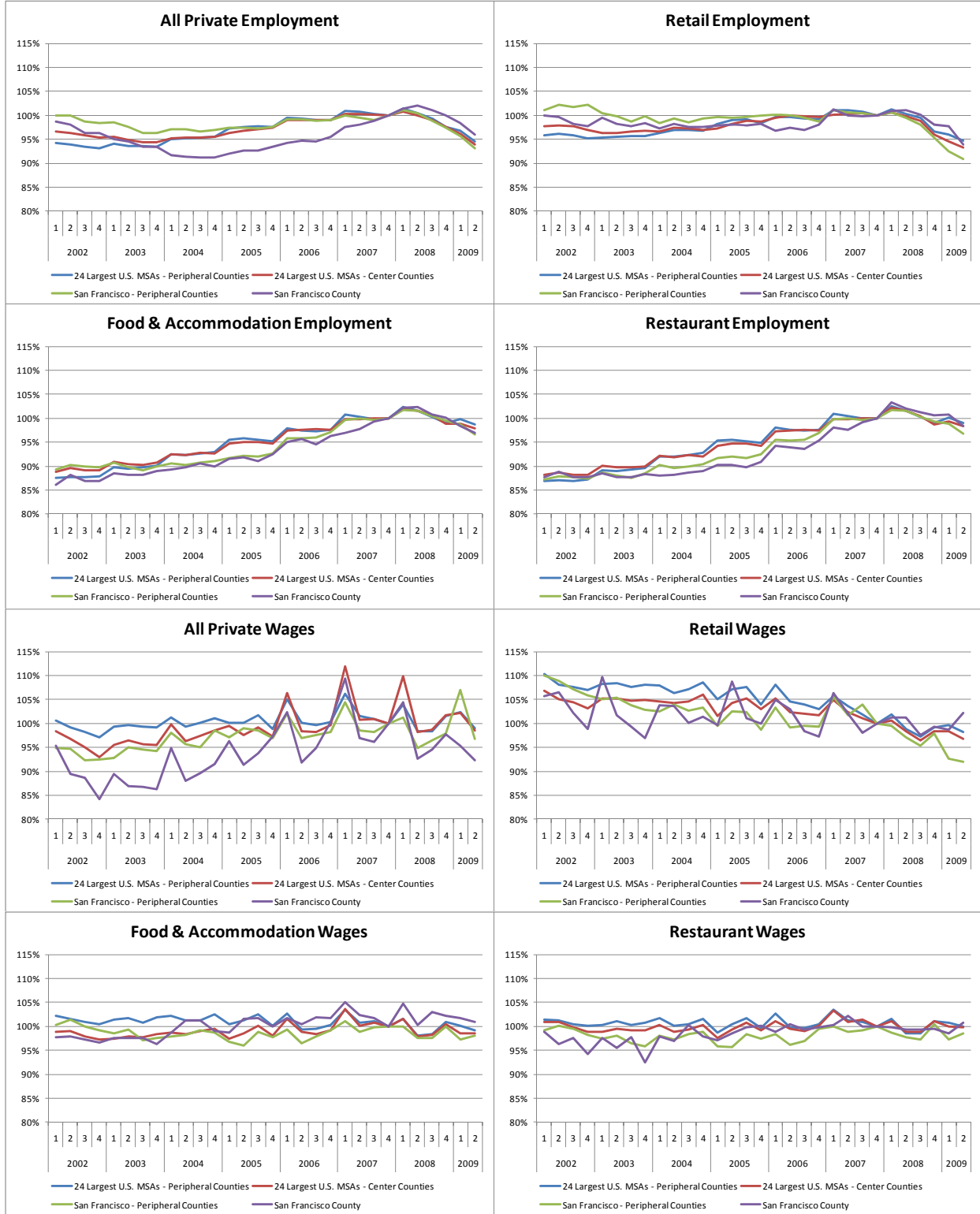
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Chart 1: Trends in Employment and Wages
San Francisco County, San Francisco Peripheral Counties, MSA Center Counties, MSA Peripheral Counties
2002-2009



**Chart 2: Ratio of Center County Employment and Wages to Peripheral Counties
San Francisco County, San Francisco Peripheral Counties, MSA Center Counties, MSA
Peripheral Counties
2002-2009**

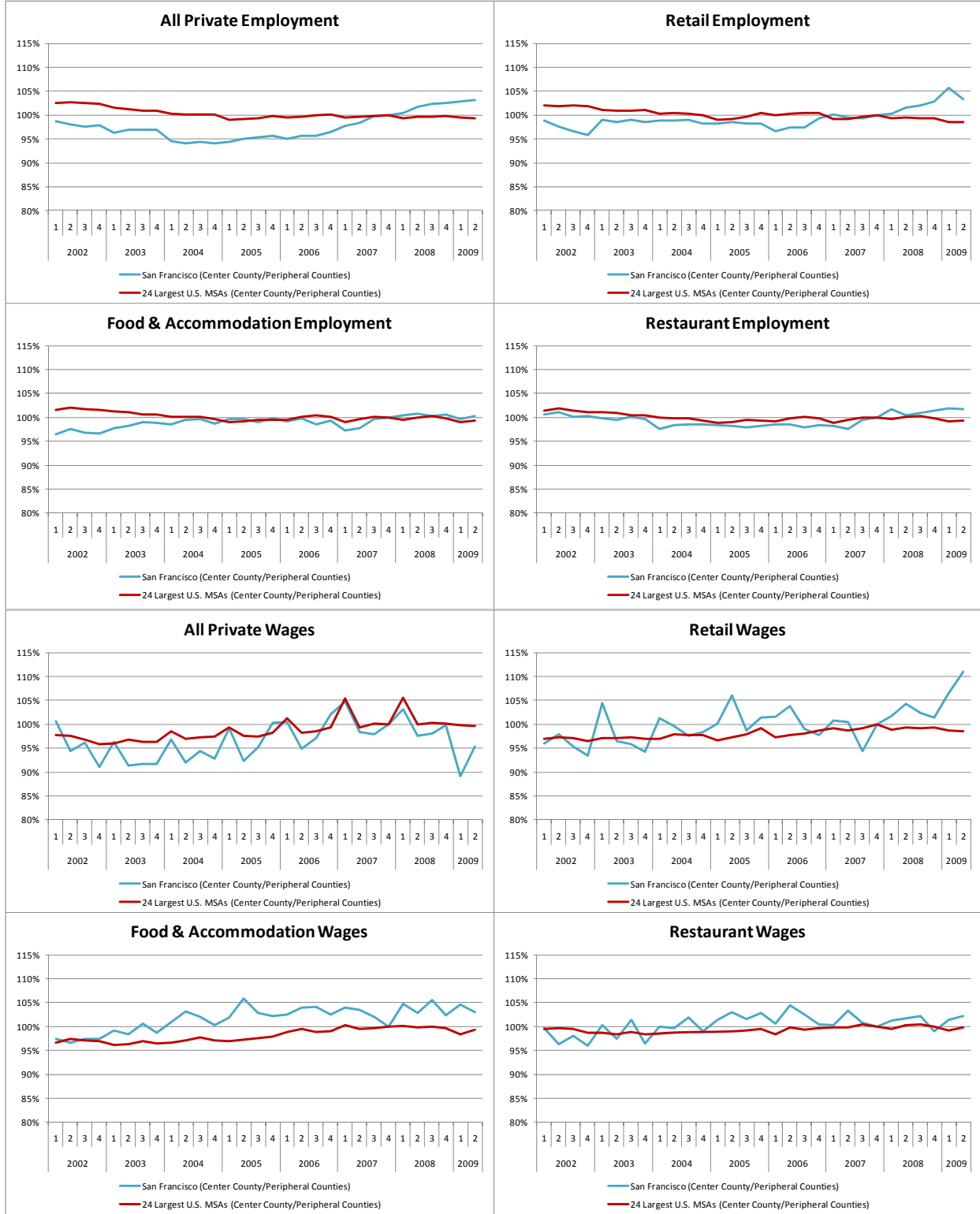


Exhibit 1: Employment Trends in the Bay Area and Large MSAs

Log of Employment	All Private				Retail			
	SF	SF Neighbors	MSA Centers	MSA Periphery	SF	Neighb	MSA Centers	MSA Periphery
January 2008 to June 2009 (Post)	13.06	12.79	14.02	12.23	10.68	10.72	11.83	10.29
January 2002 to December 2007 (Pre)	13.01	12.80	14.02	12.23	10.68	10.76	11.84	10.30
<i>Difference</i>	5.1%	-0.9%	0.0%	0.2%	0.1%	-3.9%	-1.4%	-0.9%
<i>Difference-in-Difference</i>		6.0%		-0.3%		4.0%		-0.5%
<i>Difference-in-Difference-in-Difference</i>				6.3%				4.5%
Log of Earnings	Accommodation & Food Services				Restaurants			
	SF	SF Neighbors	MSA Centers	MSA Periphery	SF	Neighb	MSA Centers	MSA Periphery
January 2008 to June 2009 (Post)	11.10	10.38	11.66	9.85	10.77	10.26	11.50	9.76
January 2002 to December 2007 (Pre)	11.02	10.31	11.61	9.79	10.66	10.18	11.44	9.69
<i>Difference</i>	8.8%	7.0%	5.4%	5.9%	10.3%	7.9%	6.0%	6.4%
<i>Difference-in-Difference</i>		1.8%		-0.5%		2.4%		-0.4%
<i>Difference-in-Difference-in-Difference</i>				2.3%				2.8%
Log of Employment	All Private				Retail			
	SF	SF Neighbors	MSA Centers	MSA Periphery	SF	Neighb	MSA Centers	MSA Periphery
January 2008 to June 2009 (Post)	7.25	7.03	6.88	6.74	6.61	6.44	6.29	6.23
January 2002 to December 2007 (Pre)	7.22	7.02	6.87	6.74	6.64	6.51	6.35	6.30
<i>Difference</i>	2.6%	1.3%	1.2%	-0.3%	-2.8%	-7.8%	-6.2%	-6.6%
<i>Difference-in-Difference</i>		1.4%		1.5%		4.9%		0.4%
<i>Difference-in-Difference-in-Difference</i>				-0.2%				4.6%
Log of Earnings	Accommodation & Food Services				Restaurants			
	SF	SF Neighbors	MSA Centers	MSA Periphery	SF	Neighb	MSA Centers	MSA Periphery
January 2008 to June 2009 (Post)	6.23	5.89	5.88	5.73	6.03	5.84	5.79	5.68
January 2002 to December 2007 (Pre)	6.21	5.89	5.88	5.74	6.02	5.84	5.79	5.69
<i>Difference</i>	2.2%	-0.4%	-0.3%	-1.2%	1.2%	0.0%	-0.4%	-0.7%
<i>Difference-in-Difference</i>		2.7%		1.0%		1.2%		0.2%
<i>Difference-in-Difference-in-Difference</i>				1.7%				1.0%

Notes: Regressions are weighted by county population.

Source: Seasonally adjusted quarterly data from the Quarterly Census of Employment and Wages, Bureau of Labor Statistics.

Exhibit 2: Regression Based Estimates
Effect of San Francisco Health Care Security Ordinance
2002 - Q2 2009

	(1)	(2)	(3)	(4)	(5)
Log of Employment					
All Private (N=7,200)					
Employment Effect	0.053	0.057	0.040	0.042	0.042
Standard Error	(0.015)	(0.011)	(0.005)	(0.007)	
95% CI Lower Bound	0.024	0.035	0.030	0.028	-0.007
95% CI Upper Bound	0.082	0.079	0.049	0.055	0.069
Retail (N=7,140)					
Employment Effect	0.039	0.037	0.021	0.035	0.035
Standard Error	(0.015)	(0.013)	(0.006)	(0.010)	
95% CI Lower Bound	0.010	0.012	0.010	0.016	-0.033
95% CI Upper Bound	0.068	0.061	0.033	0.055	0.082
Accommodation & Food Services (N=6,597)					
Employment Effect	0.016	0.012	-0.001	0.006	0.006
Standard Error	(0.014)	(0.008)	(0.005)	(0.006)	
95% CI Lower Bound	-0.010	-0.003	-0.011	-0.006	-0.032
95% CI Upper Bound	0.043	0.027	0.010	0.018	0.040
Restaurants (N=6,506)					
Employment Effect	0.016	0.041	0.027	0.002	0.002
Standard Error	(0.015)	(0.008)	(0.005)	(0.007)	
95% CI Lower Bound	-0.014	0.025	0.018	-0.011	-0.049
95% CI Upper Bound	0.045	0.057	0.037	0.015	0.039
Log of Wages					
All Private (N=7,200)					
Wage Effect	-0.005	-0.026	-0.025	-0.011	-0.011
Standard Error	(0.007)	(0.004)	(0.006)	(0.004)	
95% CI Lower Bound	-0.019	-0.034	-0.036	-0.019	-0.019
95% CI Upper Bound	0.010	-0.018	-0.014	-0.002	0.018
Retail (N=7,140)					
Wage Effect	0.043	0.022	0.018	0.038	0.038
Standard Error	(0.009)	(0.006)	(0.005)	(0.005)	
95% CI Lower Bound	0.026	0.010	0.009	0.028	0.004
95% CI Upper Bound	0.061	0.034	0.027	0.048	0.040
Accommodation & Food Services (N=6,597)					
Wage Effect	0.014	-0.006	-0.001	0.014	0.014
Standard Error	(0.008)	(0.007)	(0.006)	(0.005)	
95% CI Lower Bound	-0.002	-0.020	-0.012	0.003	-0.015
95% CI Upper Bound	0.030	0.009	0.010	0.024	0.036
Restaurants (N=6,506)					
Wage Effect	0.008	-0.021	-0.017	0.010	0.010
Standard Error	(0.007)	(0.006)	(0.004)	(0.006)	
95% CI Lower Bound	-0.006	-0.033	-0.025	-0.001	-0.024
95% CI Upper Bound	0.021	-0.010	-0.008	0.022	0.049
Control Specifications					
Quarter fixed effects	Y	Y			
MSA*Center Linear Time Trend.		Y	Y		
Quarter*MSA fixed effects			Y	Y	Y
Randomization Inference CI Calculation					Y

Source: Quarterly data from the Quarterly Census of Employment and Wages, Bureau of Labor Statistics.

County population estimates from the U.S. Census. Data from 25 largest U.S. MSAs included in regressions.

Notes: Employment effect is the regression coefficient associated with the SF*POST indicator. All regressions include county fixed effects, "center county"*time fixed effects, seasonal controls and population controls.

All regressions are weighted by annual county-level population.

Heteroscedasticity robust standard errors clustered at the MSA*Center county level are reported for specifications 1-4. The coefficients in specification 5 are equivalent to specification 4. Confidence intervals in specification 5 are calculated using the Conley-Taber method.

Chart 3: Coefficients on Center County Treatment Period Variables

Employment and Wage Regressions

25 Largest U.S. MSAs

2002 to 2009

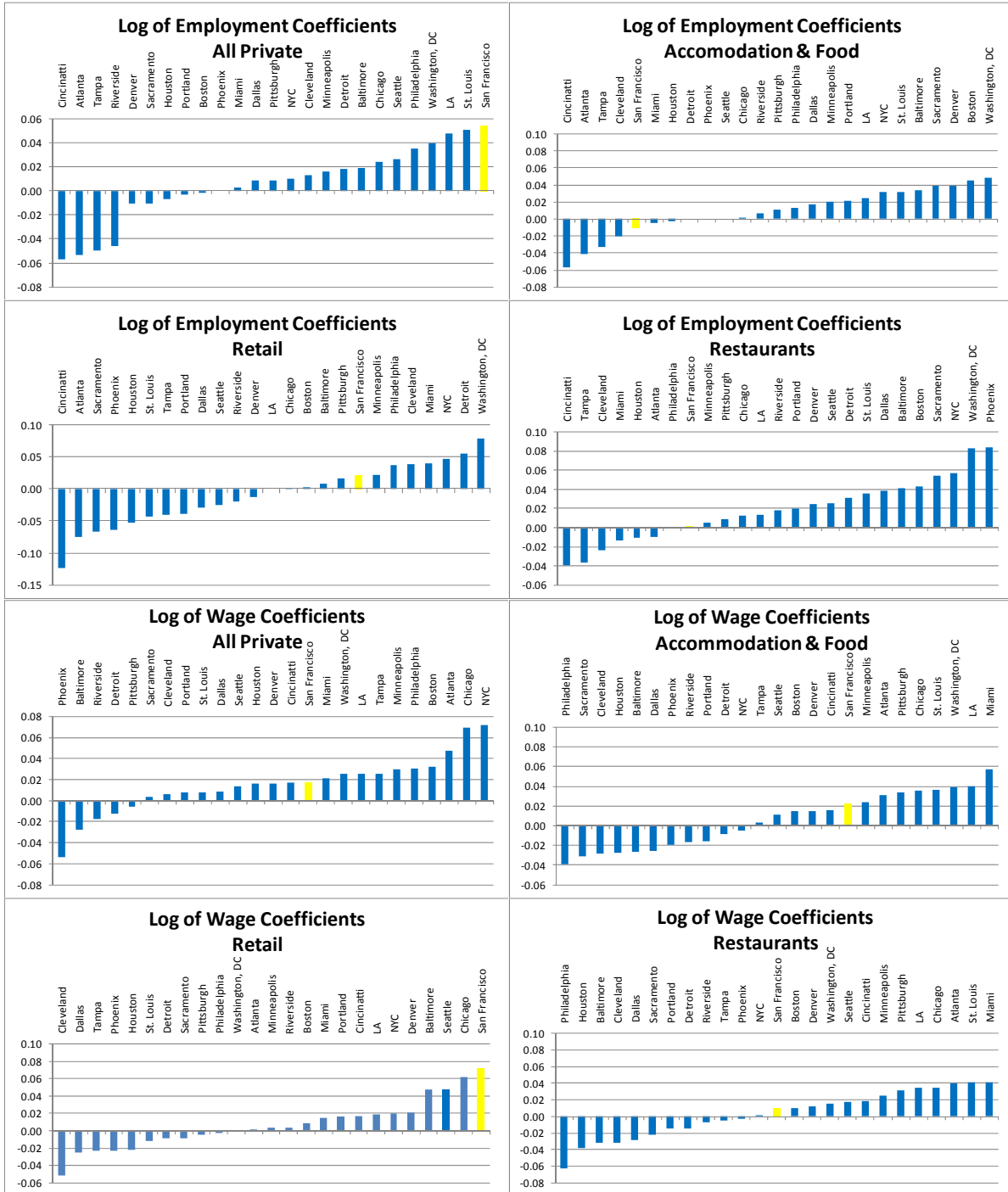


Exhibit 3: Robustness Analyses

Effect of San Francisco Health Care Security Ordinance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log of Employment							
All Private							
Employment Effect	0.042	0.055	0.041	-0.013	0.039	-0.013	-0.030
Standard Error	(0.007)	(0.010)	(0.009)	(0.009)	(0.005)	(0.009)	(0.009)
N	7,200	150	750	18,717	3,360	18,717	2,879
Retail							
Employment Effect	0.035	0.022	0.005	0.068	0.036	0.068	0.082
Standard Error	(0.010)	(0.009)	(0.010)	(0.017)	(0.005)	(0.017)	(0.024)
N	7,140	150	750	18,564	3,332	18,564	2,856
Accommodation & Food Services							
Employment Effect	0.006	-0.010	0.027	0.030	0.011	0.030	0.026
Standard Error	(0.006)	(0.012)	(0.007)	(0.014)	(0.003)	(0.014)	(0.018)
N	6,597	150	750	16,940	3,077	16,940	2,622
Restaurants							
Employment Effect	0.002	0.002	0.033	0.057	0.016	0.057	0.048
Standard Error	(0.007)	(0.014)	(0.008)	(0.014)	(0.003)	(0.014)	(0.018)
N	6,506	150	750	16,611	3,034	16,611	2,576
Log of Wages							
All Private							
Wage Effect	-0.011	0.008	0.012	-0.013	-0.023	-0.013	0.001
Standard Error	(0.004)	(0.015)	(0.007)	(0.011)	(0.004)	(0.011)	(0.017)
N	7,200	150	750	18,720	3,360	18,720	2,880
Retail							
Wage Effect	0.038	0.062	0.036	0.082	0.035	0.082	0.102
Standard Error	(0.005)	(0.014)	(0.007)	(0.007)	(0.003)	(0.007)	(0.009)
N	7,140	150	750	18,564	3,332	18,564	2,856
Accommodation & Food Services							
Wage Effect	0.014	0.023	0.025	0.003	0.014	0.003	0.020
Standard Error	(0.005)	(0.008)	(0.005)	(0.010)	(0.003)	(0.010)	(0.015)
N	6,597	150	750	16,935	3,077	16,935	2,622
Restaurants							
Wage Effect	0.010	0.013	0.016	0.017	0.001	0.017	0.027
Standard Error	(0.006)	(0.008)	(0.006)	(0.009)	(0.004)	(0.009)	(0.014)
N	6,506	150	750	16,605	3,034	16,605	2,576
Control Specifications							
25 Largest U.S. MSAs	Y			Y	Y	Y	Y
San Francisco MSA Only		Y					
25 Largest MSA Center Counties Only			Y				
Pre-period 2002-2007	Y	Y	Y				
Pre-period 1990-2007				Y		Y	
Pre-period 2006-2007					Y		
Quarter*MSA fixed effects	Y						
Quarter fixed effects		Y	Y				
Recession Controls						Y	
Pre-period is limited to recession quarters: Q3 1990 - Q1 1991, Q2 - Q4 2001							Y

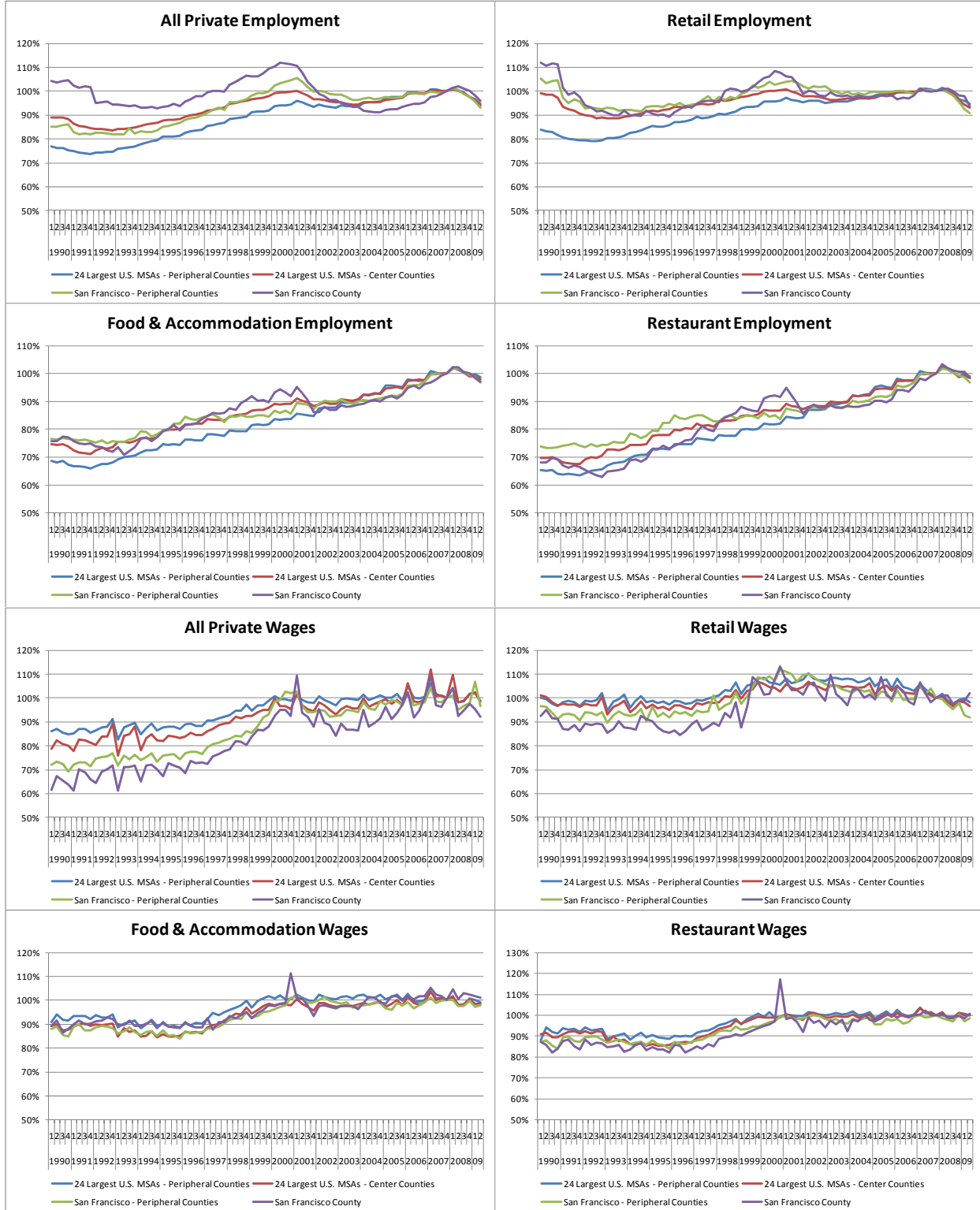
Source: Quarterly data from the Quarterly Census of Employment and Wages, Bureau of Labor Statistics. County population estimates from the U.S. Census.

Notes: Employment effect is the regression coefficient associated with the SF*POST indicator. All regressions include county fixed effects, center county*quarter fixed effects, seasonal controls, and population controls. All regressions are weighted by annual county-level population. Heteroscedasticity robust standard errors clustered at the MSA*Center county level are reported. Specification 2 reports autocorrelation robust Newey-West standard errors (7 quarter lag structure).

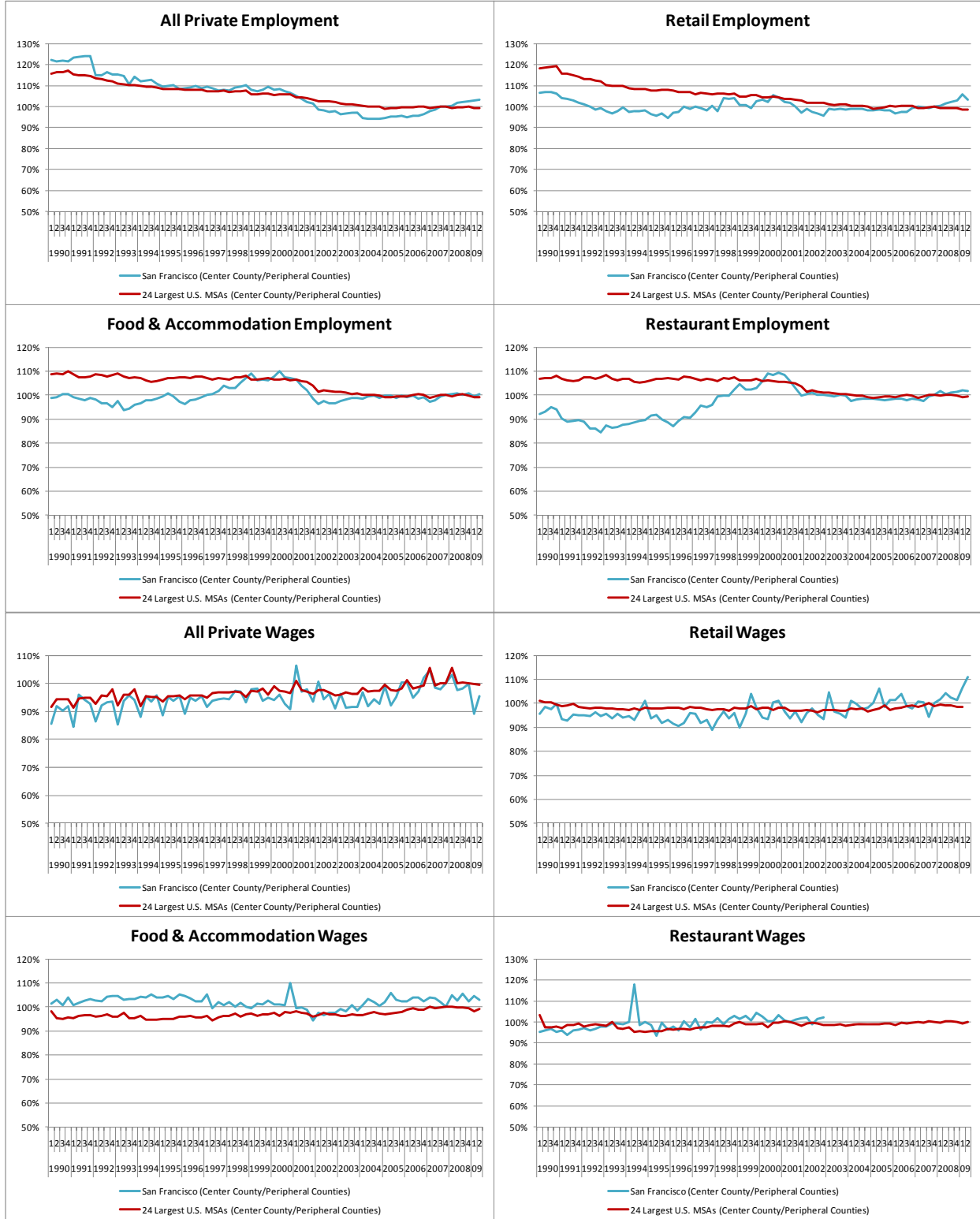
Appendix I: Center County Definitions

CBSA	Number of Counties	Rank by Size	Center City	Center County
Atlanta-Sandy Springs-Marietta, GA	28	8	Atlanta	Fulton
Baltimore-Towson, MD	7	19	Baltimore	Baltimore
Boston-Cambridge-Quincy, MA-NH	7	10	Boston	Suffolk
Chicago-Naperville-Joliet, IL-IN-WI	14	3	Chicago	Cook
Cincinnati-Middletown, OH-KY-IN	15	23	Cincinnati	Hamilton
Cleveland-Elyria-Mentor, OH	5	25	Cleveland	Cuyahoga
Dallas-Fort Worth-Arlington, TX	12	4	Dallas	Dallas
Denver-Aurora-Broomfield, CO	11	20	Denver	Denver
Detroit-Warren-Livonia, MI	6	11	Detroit	Wayne
Houston-Sugar Land-Baytown, TX	10	6	Houston	Harris
Los Angeles-Long Beach-Santa Ana, CA	2	2	Los Angeles	Los Angeles
Miami-Fort Lauderdale-Pompano Beach, FL	3	7	Miami	Miami-Dade
Minneapolis-St. Paul-Bloomington, MN-WI	13	16	Minneapolis	Hennepin
New York-Northern New Jersey-Long Island, NY-NJ-PA	23	1	New York	New York
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	11	5	Philadelphia	Philadelphia
Phoenix-Mesa-Scottsdale, AZ	2	12	Phoenix	Maricopa
Pittsburgh, PA	7	21	Pittsburgh	Allegheny
Portland-Vancouver-Beaverton, OR-WA	7	22	Portland	Multnomah
Riverside-San Bernardino-Ontario, CA	2	14	Riverside	Riverside
Sacramento--Arden-Arcade--Roseville, CA	4	24	Sacramento	Sacramento
San Francisco-Oakland-Fremont, CA	5	13	San Francisco	San Francisco
Seattle-Tacoma-Bellevue, WA	3	15	Seattle	King
St. Louis, MO-IL	17	17	St. Louis	St. Louis
Tampa-St. Petersburg-Clearwater, FL	4	18	Tampa	Hillsborough
Washington-Arlington-Alexandria, DC-VA-MD-WV	22	9	Washington	District of Columbia
	240			

Appendix II: Trends in Employment and Wages San Francisco County, San Francisco Peripheral Counties, MSA Center Counties, MSA Peripheral Counties 1990-2009



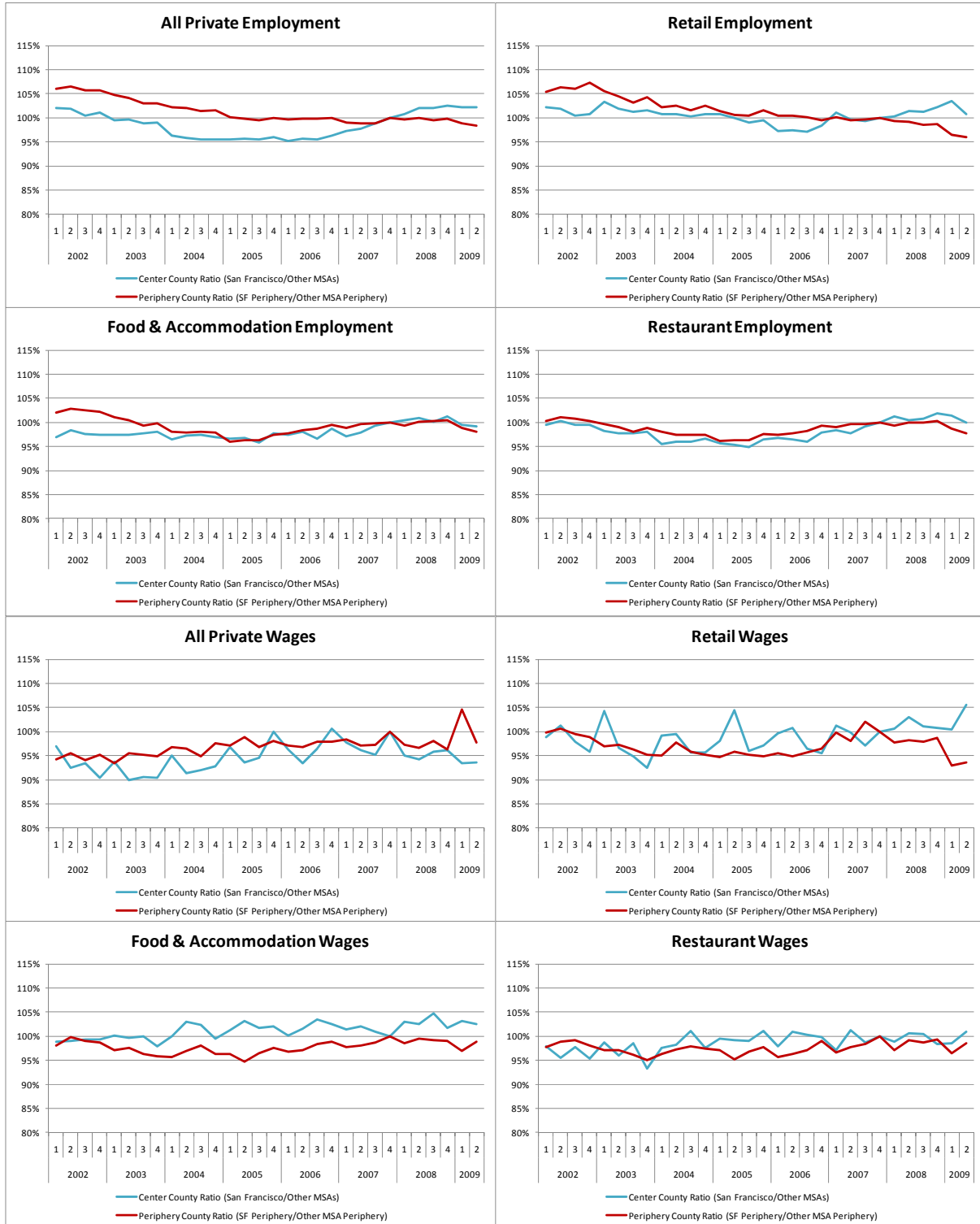
Appendix III: Ratio of Center County Employment and Wages to Peripheral Counties San Francisco County, San Francisco Peripheral Counties, MSA Center Counties, MSA Peripheral Counties 1990-2009



Appendix IV: Ratio of San Francisco Center and Peripheral Counties Employment and Wages to Other MSAs

San Francisco County, San Francisco Peripheral Counties, MSA Center Counties, MSA Peripheral Counties

2002-2009



Employer-Level Effects of the San Francisco Paid Sick Leave Policy

Chapter 6

Abstract

Objectives: To examine responses to San Francisco's 2007 Paid Sick Leave Ordinance (PSLO) as reported by employers.

Methods: We use the 2008 Bay Area Employer Health Benefits Survey to describe sick leave policies before and after the PSLO and impacts on firm operations.

Results: While 82% of San Francisco firms offered sick leave in 2006, 92% did so in 2008. As similar changes in sick leave policy did not occur in the Bay Area outside San Francisco during this period, the change in San Francisco can be attributed to the PSLO. 26% of San Francisco firms reported changing some aspect of their sick leave policy between 2006 and 2007. Few affected employers reduced other leave policies. On net, 25% of employers reported higher absenteeism and 9% reported lower presenteeism. Lower profitability was reported by 36%, while customer service improved among 9% and employee morale improved among 16%. 8% of all firms and 15% of small firms were out of compliance with the PSLO in 2008.

Conclusions: San Francisco's employer paid sick leave mandate resulted in substantially increased ability to take sick leave and reduced presenteeism.

Employer-Level Effects of the San Francisco Paid Sick Leave Policy

San Francisco has implemented several workplace standards in recent years. Starting with a city-wide minimum wage requirement in 2004, San Francisco continued along this path in November 2006 when 61% of voters in the city favored a mandatory paid sick leave policy, the first in the United States. An employer health insurance mandate also went into effect in 2008. There are benefits to be gained by the adoption of a paid sick leave policy: paid sick leave mitigates income loss and the threat of job loss for low-income workers during periods of illness or care for dependents (such as children or the elderly). In addition, paid sick leave may reduce stress caused by the possibility of income or job loss due to sickness and may have public health results such as reducing the hazard of spread of influenza and infectious diseases in the workplace or childcare facilities (Bhatia et al. 2008, Li et al. 1996, Potter et al. 1997). Paid sick leave increases the ability of those with chronic conditions to use preventive health care services such as doctor visits, which may prevent unnecessary hospitalization and reduce subsequent sickness absence (Davis et al. 2005). There may also be economic benefits of paid sick leave such as reduction in job turnover and limiting productivity decreases due to “presenteeism” or workers being on the job while sick (Lovell 2006). On the other hand, adding mandated benefits could have detrimental effects on wages, employment, and business profitability (Ruhm 1998).

In the United States, only 52% of employees receive paid sick leave benefits, and paid sick leave benefits vary substantially by occupation (Lovell 2006). The availability of paid sick days is lower for populations with greater need for medical and dependent care (Bhatia et al. 2008). While prior research shows that the availability of paid sick leave is associated with an increase in absenteeism, a reduction in presenteeism, decreases in job loss due to sickness, and increases in the ability to care for sick children (Aronsson, Gustafsson, Dallner 2000, Clemens-Cope et al. 2007, Denerley 1952, Earle, Ayanian, Heymann 2006, Earle, Heymann 2002, Goetzel et al. 2004, Gleason & Kneipp 2004, Grinyer & Singleton 2000, Heymann, Earle, & Egleston 1996, Heymann & Earle 1999, Heymann, Toomey, & Furstenberg 1999, Kivimäki et al. 2005, Kneipp 2002, Waldfogel 1999, Winkler 1980), there is little evidence on the effects of an employer mandate such as the San Francisco Paid Sick Leave Ordinance (PSLO). One exception is a recent study of how the PSLO affected costs, staffing, and operations of a small number of San Francisco firms (Boots, Martinson, Danzinger 2009). Researchers who interviewed a convenience sample of 26 firms that had to change their sick leave policy to comply with the PSLO found that most employers were able to implement the law with minimal business impact in the first year, but that impact varied by industry and employer size. In the first year, employers reported little benefit from reduced absenteeism, lower turnover, or improved morale.

The San Francisco Ordinance provides a unique research design to study changes in sick leave offer and accrual rates before and after the PSLO took effect. Using the 2008 Bay Area Health Benefits Survey, we sought to explore the magnitude of the impact of the PSLO, how

firms changed their benefit offering patterns to comply with the Ordinance, how absenteeism was affected in firms that were already in compliance with the Ordinance versus those that had to make changes to comply, and how employee and firm performance were affected by the Ordinance.

Beyond anecdotal evidence, which suggests that many firms may not be aware of the PSLO, and the interviews with employers mentioned above, little is known thus far about the impact of the Paid Sick Leave Ordinance on policies in San Francisco firms (DeBare 2008). This research seeks to inform policymakers about the impact of the Ordinance on employers in San Francisco and allow policymakers in other cities or states considering similar legislation to estimate the likely effects of such a policy.

The San Francisco Paid Sick Leave Ordinance

The Paid Sick Leave Ordinance went into effect on February 5, 2007, requiring employers to provide paid sick leave to all employees who perform work in San Francisco, including part-time and temporary workers. Paid sick leave must begin to accrue 90 calendar days after the employee's first day of work. Workers must accrue a minimum of one hour of paid sick leave for every 30 hours worked. For employees at firms with an annual average of fewer than 10 persons working during a given week, there is a cap of 40 required hours of accrued paid sick leave; for other employers, there is a cap of 72 hours of accrued paid sick leave. Accrued paid sick leave must carry over from year to year. Paid sick leave can be used when the employee is ill or injured or for the purpose of receiving medical care, treatment, or diagnosis, or to aid or care for a family member or designated person when that person is ill, injured, or receiving medical care, treatment, or diagnosis. If an employer has a paid leave policy that may be used for the same purposes as paid sick leave and is sufficient to meet the accrual requirements, the employer is not required to provide additional paid sick leave (Office of Labor Standards Enforcement 2007).

Conceptual Framework

Paid sick leave is part of an employee compensation package, and as such the PSLO has increased compensation for workers who did not formerly have leave by about 3% (if workers take advantage of all the sick leave they are offered). The main decisions employers have to make in response to a paid leave ordinance are whether to provide sick leave specifically or paid time off, and whether to reduce wages in light of the new benefit for workers who are above minimum wage.

In the short run, an increase in benefits such as paid sick leave increases the employer's compensation costs. In the long run however, economic theory predicts that the additional cost to the employer of offering these benefits will be passed through to other forms of employee compensation, such as the employee's cash wage. In the long run, though the mix of

compensation between wages and benefits may be altered, the value of the total package to the employee will not change. The amount of the cost the employer is able to pass through depends on the value of the benefit to the employee, and any changes in productivity that the leave policy produces. For example, implementing additional sick leave benefits may increase an employer's ability to find and retain enough high quality workers, and to keep them as productive as possible (Baughman, DiNardi, Holtz-Eakin 2003). There are four areas in which we might expect family benefits to affect productivity: morale, turnover rates, absenteeism and recruiting effectiveness. Changes in morale may directly change productivity levels by altering the pace and quality of individual work; they may also have intermediate effects on turnover and absenteeism. If additional benefits do help with recruiting effectiveness, then productivity should rise for two reasons. First, higher quality newly-hired workers will improve productivity directly. Second, there will be a cost-savings effect of reducing the time needed to fill vacant positions.

Employers must decide whether to offer leave specifically to be used for sick leave or to offer general paid time off. Paid time off may be more valuable to the worker because they can plan time off, but it may be more costly to the employer because of increased leave taking. The equilibrium compensation package offered by the employer will depend on the market power of employer relative to the employee, which in turn depends on unemployment and vacancy rates in San Francisco. The Paid Sick Leave Ordinance was implemented during a non-recessionary period in 2007. In fact, in January 2007, just before the PSLO was implemented, there were over a million job openings in the western portion of the U.S., the highest level since March 2001 (Bureau of Labor Statistics 2010). This may indicate that employers who previously did not offer leave may choose to offer a more generous paid time off policy.

Data and Methods

The data source for these analyses is the 2008 Bay Area Employer Health Benefits Survey, collected by the authors at UC Berkeley. National Research LLC conducted the survey using telephone interviews with employee benefit managers from August 2008 to January 2009. Funding for the survey was provided by the California Program on Access to Care, the University of California Labor and Employment Research Fund, the Institute for Women's Policy Research, and the Robert Wood Johnson Foundation. The survey collected information regarding firms' sick leave offerings in 2006, before the paid sick leave requirement went into effect, and 2008 policies in order to gauge baseline offerings and post-implementation changes. All of our analyses were completed at the establishment level.

Our main sampling frame consisted of all 2,886 for-profit San Francisco firms with 20 or more employees according to the Dun and Bradstreet database, of which we interviewed 453. During the same period, we also surveyed 310 firms with 20 or more employees from areas surrounding San Francisco to serve as a comparison group in select analyses. Comparison firms were drawn from Alameda, Contra Costa, Marin and Santa Clara counties. We also interviewed

164 small firms (with less than 20 employees) in San Francisco.¹ The response rate was 21%.² Non-responding firms that were reached were asked a single follow-up question about whether they offered health insurance; 94% of our main completed sample of firms over 20 employees reported offering insurance, compared to 91% of non-responders answering this question. Thus while the low response rate is a concern, non-responders were not radically different from the completed sample on observable characteristics, and all results were weighted for non-response.

We created employer rake weights based on firm size at site, profit status, location (inside or outside San Francisco), and one-digit SIC industry group to make our sample representative of the population of firms in the survey counties. Rake weighting uses iterative post-stratification to match the marginal distribution of our survey sample to the known population margins. We used information from the Dun and Bradstreet database for all of the sampling estimation.

In our survey, San Francisco firms were asked details about their absenteeism rates in 2006 and 2007, whether they changed their sick leave policy in 2007 (and if yes, how the sick leave policy changed), and whether they changed their vacation policy. For San Francisco firms that changed their policy, we asked how employee performance (morale, absenteeism, customer service, and presenteeism) changed for workers who gained paid sick leave (much better, better, about the same, worse, or much worse) and what effect the PSLO had on profitability. We asked comparison firms about their current leave policies (including paid time off, separate vacation and sick leave, just sick leave or just vacation time, or neither) and whether they offered sick leave in 2006.

Analyses

Effects of the San Francisco Sick Leave Ordinance are calculated by comparing offering status in 2006 and 2008 —before and after the ordinance took effect. In addition, we compare changes and 2008 offer status in San Francisco to surrounding counties. We study whether the Ordinance had a positive impact on firm offering of paid sick leave among San Francisco employers. We report changes made by firms in reaction to the PSLO, and how benefit managers think the Ordinance affected business operations such as employee morale and profitability.

Results

We estimate that the majority of San Francisco firms (82%) offered paid or unpaid sick leave in 2006, prior to the implementation of the Ordinance. Because firms were not asked directly about baseline paid time off that could be used for sick leave, we created a best estimate

¹ There are approximately 11,500 for-profit firms with less than 20 employees in San Francisco, of which we sampled 931 and interviewed 164.

² The response rate was calculated using the Council of American Survey Research Organizations (CASRO) method.

and a range (79%-87%) using our survey data on changes firms made between 2006 and 2007.³ Figure 1 displays our best estimate of baseline (2006) paid sick leave offering and the proportion of firms that changed their sick leave policies between 2006 and 2007, by sick leave offer status and employer size. Sick leave offer rates in 2006 vary by firm size with an offer rate of 79% in smaller firms and 92% in larger firms. Approximately 26% of firms reported that they changed their sick leave policy between 2006 and 2007. This figure was higher among firms that reported that they did not offer sick leave in 2006: 62% of those that did not offer sick leave in 2006 made a change to their policy in 2007. Smaller firms (4-19 employees) were less likely to make a change to their policy (19%) after the Ordinance went into effect than larger firms, perhaps reflecting lower awareness of the mandate. Only 41% of small firms that did not offer paid sick leave in 2006 made a change to their policy by 2008, which indicates that many small firms were not in compliance with the PSLO in 2008.

Table 1 displays the changes firms made between 2006 and 2007 among the 23% of firms that reported changing their policy to start paying workers while on sick leave in 2007. Among this set of firms, 88% also started allowing sick leave to be used to care for family members, 63% made more workers eligible for paid sick leave, 69% increased the paid sick leave accrual rate, 21% reduced the waiting time for sick leave accrual to begin, and 24% changed from a paid vacation to a general paid time off policy. Some observers had hypothesized that firms would partially finance the expanded sick leave by reducing other forms of leave, but only 6% of these firms reported reducing vacation accrual rates.

After implementation of the Paid Sick Leave Ordinance, 50% of San Francisco firms offered general paid time off that could be used for the purposes of the PSLO, while 43% offered paid sick leave (with or without separate vacation time) and 8% offered no paid sick leave (Figure 2). The distribution of paid sick leave varied by firm size, with smaller firms less likely to offer paid sick leave (15% of firms with 4-19 employees offered no paid sick leave), and 99% of firms with 100 or more employees offering paid sick leave.

Similar changes in sick leave policy did not occur between 2006 and 2008 in the Bay Area outside San Francisco, and therefore these changes can be attributed causally to the effect of the PSLO and not to local trends. The 2008 San Francisco offer rates (noted above) are significantly higher than those of firms outside San Francisco and significantly different than San Francisco paid sick leave offer rates in 2006. Of firms with 20 or more employees, 3% of firms

³ For the best estimate, firms that offered paid sick leave in 2007 and said they did not make a change to their sick leave policy between 2006 and 2007 were coded as offering paid sick leave in 2006. We also assumed that firms offered paid sick leave in 2006 if they offered paid time off in 2008 and responded “no” to changing their sick leave policy from 2006 so that in 2007 workers were paid while on sick leave. This resulted in an estimate of 21 San Francisco firms in our survey that offered paid time off that could be used for sick leave in 2006, but answered “no” to offering sick leave in 2006. The lower end of the range was calculated using the response to the survey question “Did you offer sick leave in 2006?” The upper end of the range assumes that 15 additional San Francisco firms that reported that they did not offer sick leave in 2006 but offered paid time off in 2007 did offer paid sick leave in 2006.

in San Francisco and 21% of firms outside San Francisco did not offer paid sick leave in 2008. Among non-San Francisco firms not offering sick leave in 2006, only 2.8% offered paid sick leave by 2008, while 44% of San Francisco firms with 20 or more employees that did not offer paid sick leave in 2006 did offer paid sick leave in 2008.⁴

Figure 3 displays the effects of introducing a paid sick leave policy for those firms that did not offer paid sick leave in 2006 and changed their sick leave policy between 2006 and 2007. The data indicate some increase in leave-taking: 31% reported that absenteeism worsened due to workers using paid sick leave, while 7% reported an improvement in absenteeism. At the same time, approximately 14% of firms reported that paid sick leave reduced presenteeism – workers going to work sick – as compared to 5% that reported an increase in presenteeism. A substantial portion of these firms reported an improvement in morale among workers gaining paid sick leave (16%), while the rest reported that morale was about the same. Approximately 12% of firms reported that customer service had improved as a result of the introduction of paid sick leave. Many employers who started offering paid sick leave in 2007 reported that the introduction of the benefit had a small negative effect on business profitability (42%), while 5% reported a large negative effect, 42% reported no noticeable effect, and 11% reported a small positive effect.

Discussion

San Francisco's historic Paid Sick Leave Ordinance guarantees accrual and job-protected use of paid sick days for workers' and their families' health needs. Similar policies have now been enacted in Washington, DC, and Milwaukee, WI, and Congress and policymakers in 15 states are currently evaluating paid sick days policies (City of Milwaukee 2009, National Partnership for Women and Families 2009).⁵ The movement to ensure minimal access to paid sick leave has been likened to the campaign to enact the minimum wage: an effort to establish a floor below which no employer or worker may fall. When paid sick leave policies are targeted at vulnerable workers, such as low-wage mothers, and workers such as restaurant employees who have a lot of face-to-face contact with the public, these campaigns present a compelling image (Reiss, Rankin, Pietrangelo 2009, Hartmann 2007). Congressional proposals to create emergency paid sick leave policies to reduce the spread of the H1N1 virus in fall 2009 cited the potential importance of paid sick leave in protecting public health, and public opinion polling shows very high levels of support for paid sick leave policies (Smith 2008, Field Research Corporation 2008).

While a majority of San Francisco firms offered some kind of sick leave (paid or unpaid) prior to adoption of the Ordinance, workers gained a significant employment right in having access to paid sick leave established as a legal requirement, with protections against punitive

⁴ These calculations do not include firms that offer paid time off that can be used for sick leave.

⁵ An injunction has halted implementation of the Milwaukee referendum. The Washington, DC, and Milwaukee policies cover time off to respond to domestic violence.

responses from employers for use of that leave. This policy institutionalization can indemnify workers against cuts in voluntary benefit provisions, such as those occurring in the current economic downturn (Washington State Employment Security Department 2009). In addition, among firms with 20 or more employees roughly one in five workers in the counties surrounding San Francisco lack paid sick days (20.5%), compared to only one in fifty (2.6%) in San Francisco. Firms that started providing paid sick leave following enactment of the Ordinance also made other changes that are important for workers, such as increasing sick leave accrual rates (69%) or expanding permissible uses of sick leave to include family care (88%).

The San Francisco PSLO increased the offer rate in firms that did not offer sick leave in 2006 in San Francisco: Among firms with 20 or more workers, 44% of San Francisco firms not offering paid sick leave in 2006 offered in 2008, compared to firms in the counties surrounding San Francisco where 2% of those not offering in 2006 offered paid sick days in 2008. Due to the unique natural experiment offered by San Francisco's Ordinance, we can attribute these increases in offering to the PSLO. Further validity of our results can be gleaned from studying which firms made changes in response to the Paid Sick Leave Ordinance. We expected that a greater proportion of firms that did not offer sick leave in 2006 would make changes to their policies, and that changes in absenteeism would be greatest among those firms that were expected to be most impacted by the PSLO – those that did not offer sick leave in 2006 and those that changed their sick leave policy between 2006 and 2007. Confirming prior research, in this highly impacted group we found that 32% of firms thought that their absenteeism had increased between 2006 and 2007 as opposed to only 7% of firms in the low-impact group that did not make a change to their sick leave policy (Denerley 1952, Winkler 1980). Overall in San Francisco, 10% of firms replied that their absenteeism rate increased between 2006 and 2007.

Many firms reported small negative impacts of the PSLO on profitability, while some reported small positive profitability impacts. These judgments by benefit managers, who may or may not have accurate knowledge of firm profitability, should be interpreted in the context of other evidence. For instance, Boots, Martinson, and Danziger's interviews with a small sample of San Francisco employers found that the PSLO had "minimal impacts" for most employers, and San Francisco's restaurant industry association has been quoted as assessing that the PSLO "hasn't been a big issue" for local businesses (Boots, Martinson, Danziger 2009).

Our study indicates that few employers reduced the generosity of their leave programs following implementation of the Ordinance (for instance, by offering fewer days of leave). The small number of employers reducing sick leave generosity over this period may have done so to finance benefits for other employees becoming newly covered by sick leave, or alternatively may have been responding to larger economic forces that could have led to even larger benefit reductions in the absence of the mandate (Reiss, Rankin, Pietrangelo 2009). Importantly, there is little indication that employers reduced vacation leave in response to the sick leave mandate, suggesting that employers may not utilize a pure compensating (leave) differentials approach in

complying with new benefits mandates. We do not have any information in our survey regarding the extent to which sick leave costs led to reduced employee wages or lowered raises.

Besides the usual concerns regarding non-random response and recall bias, the limitations of our study arise from the city-specific nature of the policy. San Francisco could be different from comparison firms along characteristics that are not observable from our survey data. San Francisco may be somewhat unique in having had relatively high (paid or unpaid) sick leave at baseline: Our study finds that 82% of San Francisco firms offered paid or unpaid sick leave in 2006, while an analysis of the 2006 National Compensation Survey reported that only 59 percent of all US firms provide paid sick leave (Lovell 2008). If this is the case, the effects of a paid sick leave mandate on employers in the US overall might be different than those reported here.

This study offers an initial glimpse of some likely impacts of paid sick leave mandates on the configuration of employers' paid leave programs. As this is an area of active policy development, research is critically needed on many other aspects of paid sick leave policies. We lack a comprehensive analysis of the impact of paid sick leave on health outcomes and health care expenditures for workers and their families, for instance. Minimum paid sick leave standards may have the potential to short-circuit the spread of pandemic disease; this role warrants more attention from public health experts. In addition, impacts on employers such as implementation costs, changes in employee retention and productivity, and locational decisions are important outcomes for empirical analysis.

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Figure 1: Baseline Sick Leave Offering and Changes to Sick Leave Following PSLO Implementation

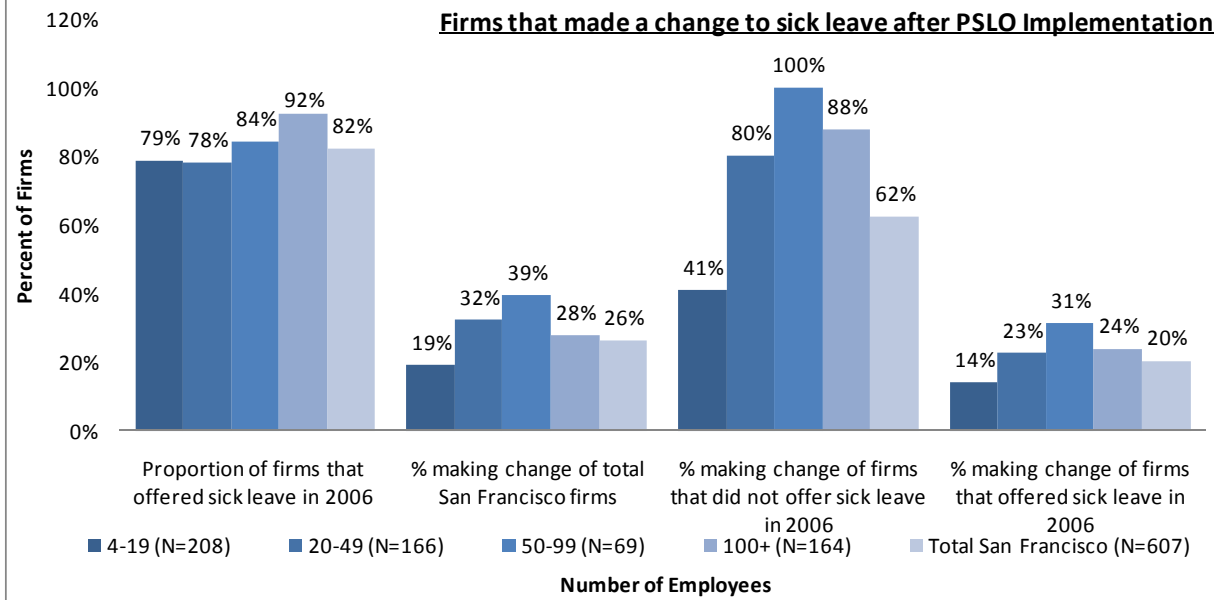


Table 1: Leave Policy Changes from 2006 to 2007

San Francisco firms that changed their policy to offer paid sick leave

	<u>Mean</u>
Workers can now use sick leave to care for family members	88.4%
More classes of employees were eligible in 2007	63.3%
Fewer classes of employees were eligible in 2007	14.2%
Higher accrual rate in 2007 (more days provided in 2007)	68.6%
Lower accrual rate in 2007 (fewer days provided in 2007)	13.0%
Shorter waiting period in 2007	20.8%
Longer waiting period in 2007	4.9%
Switched from paid vacation leave to a general Paid Time Off (PTO)	24.0%
Decreased vacation time	6.2%

Notes: Sample includes firms that changed their sick leave policy between 2006 and 2007 to offer paid sick leave (N=84).

Figure 2: San Francisco Sick Leave Offering, 2008

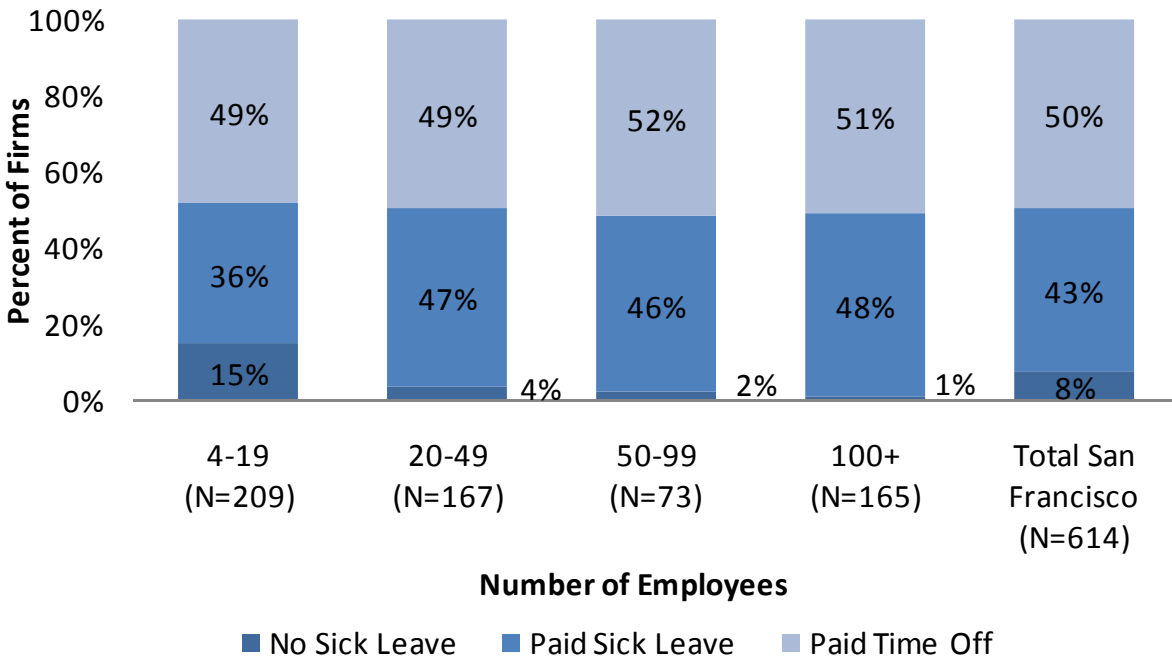
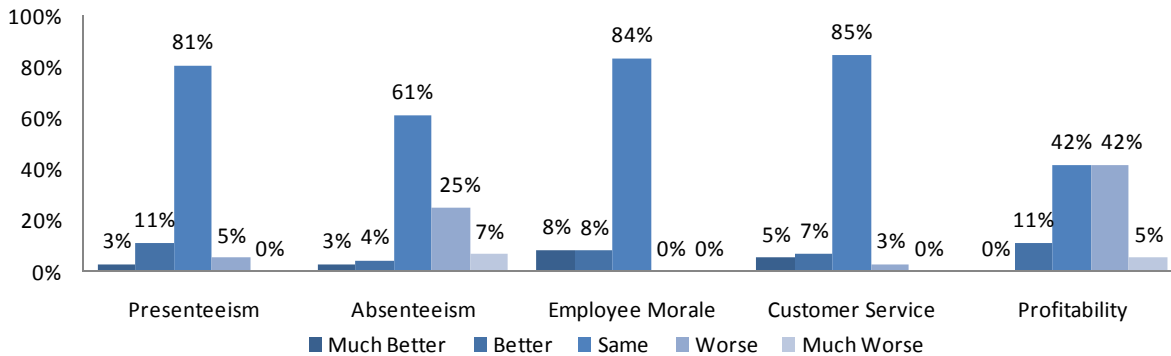


Figure 3: Changes in Employee and Firm Performance Due to Sick Leave Policy Changes



Notes: Sample includes San Francisco for-profit firms that did not offer sick leave in 2006 and that reported changing their sick leave policy between 2006 and 2007 (N=47).

Chapter 7

Discussion and Policy Implications

San Francisco implemented a major health initiative in 2008, becoming the first city to put into practice a pay-or-play employer health spending mandate and creating Healthy San Francisco, a “public option” to promote affordable universal access to care. The health spending requirement is in addition to a requirement San Francisco instituted in 2006 for firms to provide paid sick leave to workers. This research combines public and new survey data sources to show how employers in San Francisco reacted to the Paid Sick Leave Ordinance and the Health Care Security Ordinance. Evidence from the first year of implementation of the Health Care Security Ordinance shows that a pay-or-play mandate is feasible, and can expand coverage without resulting in significant job loss.

Summary of Findings

Using the 2008 Bay Area Employer Health Benefits Survey of employers from San Francisco and surrounding counties, this research compares trends in San Francisco before and after implementation of the paid sick leave and health care benefit mandates to comparable firms in surrounding counties using a difference-in-difference framework. The 2007 Paid Sick Leave Ordinance significantly increased the proportion of firms offering paid sick leave from 82% in 2006 to 92% in 2008. 26% of San Francisco firms reported changing some aspect of their sick leave policy between 2006 and 2007 in order to comply with the law. Few affected San Francisco employers reduced other leave policies in response to the paid sick leave requirement. On net, 25% of employers reported higher absenteeism and 9% reported lower presenteeism. Lower profitability was reported by 36% of affected employers, while customer service improved among 9% and employee morale improved among 16%. Approximately 8% of all firms and 15% of small firms remained out of compliance with the Paid Sick Leave Ordinance in 2008.

Prior to implementation of the Health Care Security Ordinance, 93% of firms in San Francisco subject to the health spending mandate offered health benefits to some of their workers at baseline in 2007, and among those firms who offered insurance, about 77% of workers in those firms were covered. These were similar to proportions both in surrounding Bay Area counties and at the national level; in 2008 91% of firms with 20 or more employees and 93% of firms with 20 or more employees in urban areas offered health benefits to their workers. Despite this high proportion of firms offering insurance, 75% of San Francisco firms subject to the mandate had to make a change either in number of employees covered or in generosity of benefits in order to comply with the San Francisco Health Care Security Ordinance. The 2008 survey did not capture information on use of waivers; the 2009 survey collects data on use of

waivers and future research should discuss changes in benefits for workers who were already covered by a non-employer plan.

Firms are choosing a variety of strategies to comply with the Health Care Security Ordinance. About 21% are contributing to Healthy San Francisco, the public option. Many firms are altering their private benefit offerings in some way to comply, and extending eligibility for coverage to more workers. After adjusting for firm characteristics, significantly more firms in San Francisco than surrounding counties were likely to start offering health insurance in 2008 if they did not offer in 2007 (firms in San Francisco were 33% more likely to begin offering health benefits), or to begin offering a Health Reimbursement Account (HRA, firms in San Francisco were 8% more likely to begin offering an HRA). HRAs are an attractive option for employers seeking to minimize their costs as they are employer-owned, and the employer can recapture any unspent funds at the end of the year or upon termination of employment. Also, firms can contribute to an HRA based on the number of hours an employee works, rather than having a fixed cost such as traditional health insurance. Firms with a greater proportion of female, temporary, and low-wage workers were more likely to offer a new HRA in 2008. Restaurants were also more likely to offer an HRA, perhaps because it is the lowest cost option to the firm. Firms with more female workers may be likely to use an HRA as a supplement to pre-existing spousal coverage. HRAs are not health insurance, they do not provide catastrophic coverage or substantially reduce financial risk, and they don't guarantee access to services or discounts provided by having network insurance. The Office of Labor Standards Enforcement is currently studying use of HRAs and the recapture of funds by employers to determine whether HRAs are meeting the goal of "providing access to affordable health care" to those who work in San Francisco (City of San Francisco 2010). If employers are not adequately providing information to workers about the HRA benefit, they may be able to recapture a majority of the funds at year-end and workers may not be receiving any health benefits. If this is the case, it could explain the lack of employment effects in high impact industries.

Most San Francisco employers (64%) were supportive of the Health Care Security Ordinance in the first year of implementation despite needing to make changes to comply. The proportion of firms in support was also similar among eating and drinking establishments (despite the perception from the Golden Gate Restaurant Association) and those firms who had to increase the number of workers covered under existing plans. Support was only slightly lower in the small subset of firms that did not offer health insurance in 2007 and those who found it difficult to comply with the Ordinance. This suggests that San Francisco is a very liberal city, even among business establishments. Efforts to replicate this type of ordinance in other cities might be less likely to obtain this level of support.

Economic theory predicts that firms could absorb the additional cost of the mandate by reducing wages, pay raises, or bonuses, reducing other non-mandated benefits (e.g. retirement or dependent health insurance coverage), reducing the number of employees or by reducing the

number of hours each employee works. If the product market is not perfectly competitive, firms can also pass costs along to consumers (e.g. if they are not competing with businesses outside San Francisco). Early evidence suggests that the job losses and wage reductions that some hypothesized would occur have not materialized despite a high initial minimum wage in San Francisco (\$9.79) and mandated sick leave benefits. This remains true even when focusing on the most impacted sectors, such as retail and restaurants. Any unemployment effect would be most likely for workers earning at or near the minimum wage because their marginal productivity may not be equal to their new hourly compensation. In the 2008 Bay Area Employer Health Benefits Survey, only around 3% of workers in firms with 20 or more employees earned less than 10 dollars per hour. However, within the restaurant and retail industry groups, our sample shows that about 25% of the workers earned less than 10 dollars an hour and a majority of establishments were in the most impacted group, with a gap in health benefit spending per worker of at least 50 cents per hour.

While restaurants don't seem to be changing employment, hours or wages in response to the mandate, some restaurants are absorbing the costs in other ways. Due to the geographic nature of restaurant choice, the industry is not perfectly competitive, and a 2009 San Francisco restaurant survey shows that about a quarter of San Francisco restaurants are passing the costs of the mandate directly onto consumers through a line-item surcharge of about 4%. The lack of employment and wage effects is similar to studies of minimum wage effects in San Francisco (Dube, Naidu, Reich 2007) and the effect of the employer mandate to provide health benefits in Hawaii (Buchmueller, DiNardo, Valletta 2009). The 2009 Bay Area Employer Health Benefits Survey contains additional questions on how firms are absorbing the costs of the health spending requirement, so these data will provide additional insight into effects on other benefits and the labor market.

The Public Option

Employees at firms who choose to “pay” and contribute to the public option, Healthy San Francisco, receive a 75% discount on program participation fees if they qualify for Healthy San Francisco. Healthy San Francisco is different than the public options proposed at the national level; it is not insurance, but access to participating facilities within the geographic boundaries of San Francisco. San Francisco residents with an income at or below 500% of the Federal Poverty Level (for one person \$54,150; for a family of four \$110,250) are eligible to enroll in Healthy San Francisco. Healthy San Francisco is free if an enrollee is below 300% of the federal poverty line and their employer contributes to Healthy San Francisco. Healthy San Francisco is administered by the Department of Public Health and is a reinvention of the San Francisco health care safety net. Healthy San Francisco enables and encourages residents to access primary and preventive care by providing a Medical Home and primary physician to each program participant, as well as specialty care, urgent and emergency care, laboratory, inpatient hospitalization, radiology, and pharmaceuticals. Data from the 2008 Bay Area Employer Health

Benefits Survey indicate that twenty-one percent of San Francisco employers subject to the mandate are contributing to Healthy San Francisco for some workers. This can be confirmed using public data: as of November 2009, 1,040 employers had elected to pay into the public option, out of an estimated 4,400 total non-exempt employers (County Business Patterns 2007), yielding administrative estimates of public option demand that are quite similar to survey-based estimates of 21%. Employers with more low-income, part-time, or sicker workers are predicted to be more likely to utilize the public option because of greater city subsidies for these populations, but relationships between these characteristics and contribution to Healthy San Francisco were not observed in the first year of implementation. Perhaps over time employers will learn to behave more strategically in response to incentives in the Health Care Security Ordinance.

San Francisco has transformed its safety net and the perception of its safety net with the introduction of Healthy San Francisco and what is a relatively small proportion of additional funding from employers. Before implementation, Healthy San Francisco was estimated to cost \$200 million annually. The City of San Francisco drew the majority of the funds (\$111 million or 55%) from money already being spent on health care services for the uninsured (Healthy San Francisco, undated) and was able to use state (\$45 million) and federal funds (\$24 million) for much of the remainder. The city estimates that it is currently collecting about \$63 million from employers in payments, and that about half of these payments are going towards Healthy San Francisco while half are going directly into Medical Reimbursement Accounts for employees who are ineligible for Healthy San Francisco.

Healthy San Francisco had 51,541 residents enrolled as of March 2010; this compares to an estimated 60,000 uninsured adults in the city when Healthy San Francisco began in July 2007. Although the number of uninsured in the city has undoubtedly increased during the current recession, there is clearly high demand for the program from not only employers but also individuals (Kaiser Family Foundation 2009). Enrollees have a choice of about 25 facilities for their Medical Home, including community health centers, such as North East Medical Services (which sees 23% of Healthy San Francisco patients at 4 locations) and private facilities such as Kaiser Permanente San Francisco Medical Center (4%). In March 2009 the Kaiser Family Foundation conducted an independent survey to gauge the opinions and experiences of Healthy San Francisco's first wave of participants, the vast majority of whom had incomes below the federal poverty line. Participants reported high levels of satisfaction (94% were at least somewhat satisfied with the program) and endorsement of Healthy San Francisco (92% would recommend to a friend and the same share think other cities should create similar programs). This indicates high levels of perceived quality of care and successful restructuring of the San Francisco safety net.

Despite broad use of Healthy San Francisco during the first year of implementation, there is little evidence of crowd-out of private insurance policies. Firms in San Francisco were no

more likely to stop offering health benefits or to restrict health benefits than Bay Area counterparts, indicating that firms are not dropping private coverage in favor of Healthy San Francisco. . In fact, San Francisco firms were less likely than firms in surrounding counties to reduce benefits in some way: either by increasing the employee premium, raising the deductible, dropping coverage, or restricting benefits. Instead, about 20% of San Francisco firms said that they have already raised the employer contribution for one or more of their health insurance plans and about 28% of San Francisco firms said they had already added a new private health insurance offering in response to the mandate or were very likely to in the next year.

Employer responses to a pay-or-play mandate will differ according to perceived costs and benefits of each choice, particularly the perceived benefits of a public option such as Healthy San Francisco. Healthy San Francisco is in many ways a repackaging of the relatively generous set of public health services previously available in San Francisco, although that is changing as private providers such as Kaiser have now also become care delivery options for program enrollees. Safety net usage may also be perceived as more legitimized now that it has clear copayments and authorizations, as well as medical homes for enrollees. But the fact that access is limited only to the geographic boundaries of San Francisco implies that this will necessarily be perceived as an inferior option for many employers and employees, thus crowd-out is likely to be lower here than if a true Medicare-like “public option” were introduced at a national level. Because Healthy San Francisco is not a close substitute for and would be less likely to take market share from private insurers, a national counterpart might reduce opposition by insurers and other lobbying groups in Washington. However, because it is not a close substitute, it would not do as much to increase competition and reduce prices as an insurance substitute. Nevertheless it will be interesting to see if the use of this program by employers rises or falls with time and development of the program.

Limitations

This study has many limitations that should be considered before generalizing the results to a national level or to other geographic areas. Widespread replication of a program of this type outside San Francisco may be difficult. First, this is a single case study and San Francisco is unique: it is both a city and a county giving it broad municipal power. In addition, although San Francisco has a substantial low-income population, on average it is a wealthy community. The median household income in 2008 was \$73,798, and the population is well-educated (81% high school, 45% bachelor degree or higher), and liberal (72% of white San Francisco residents and 46 of non-white residents identify themselves as liberal.) (City Data website, DeLeon 2002). San Francisco is also a peninsula, which makes the geographic labor and product markets more limited.

Second, the Health Care Security Ordinance has operated largely in an environment of political and legal uncertainty. In November 2006, the Golden Gate Restaurant Association filed

a lawsuit against the City challenging the employer spending requirement on the grounds that it conflicted with the federal Employee Retirement Income Security Act. After a December 2007 decision by the District Court to stop the implementation of the spending requirement, the Court of Appeals for the Ninth Circuit allowed implementation of the program on January 8, 2008. In June 2009, GGRA filed a petition with the U.S. Supreme Court requesting that the Supreme Court rule on the legality of the spending requirement. The Supreme Court invited the U.S. Solicitor General to file a brief expressing the federal government's views on the case. While the Supreme Court considers whether to hear the case, the Ninth Circuit's decision upholding the spending requirement continues to be in effect (City of San Francisco 2010).

Finally, most of these analyses are based on difference-in-difference analyses, which require firms in San Francisco to be similar to comparison areas along unobservable characteristics. In addition, the 2008 Bay Area Employer Health Benefits Survey carries other limitations such as non-random survey refusals, recall bias, and the fact that respondents in multi-site firms might not have good information on local reforms and responses.

Future Research

Anticipation of the implementation of the Patient Protection and Affordable Care Act provisions will likely shift decisions of employers away from Healthy San Francisco. Because they will have to provide benefits for employees by 2014 or pay a federal fine, more employers with more than 50 employees may begin offering private health benefits before 2014. In future work, it will be important to study the medium-term effects of the San Francisco Health Security Ordinance on the employer benefit decisions, the labor market, firm size (firms close to the 20 or 100 employee thresholds may decide to stay at 19 or 99 employees due to the discontinuity in mandated costs), and the number of uninsured in San Francisco. The long-term effects of the Ordinance cannot be easily studied due to the 2010 passage of comprehensive federal reform, but the interaction with that federal reform will also be important to study in and of itself.

The Employer Mandate Policy Landscape

Pay-or-play mandates have been proposed at the state and national level, but to date there is very little evidence on how they perform in practice, including impact on wage and labor markets, crowd-out, or employer benefit choices once implemented. Massachusetts and Hawaii are the only states with employer mandates in place and they differ significantly in character from the San Francisco mandate. Neither have a public option, and in both cases HRAs don't qualify as coverage. The Hawaii Prepaid Health Care Act of 1974 requires employers to provide a minimum level of health benefits for their workers but with no "pay" option. Massachusetts has an individual mandate and an employer mandate for health insurance, but the employer mandate is much less stringent than San Francisco's. The "fair share" contribution for employers who do not provide health insurance to their workers is only \$295 per year (In 2010, the San

Francisco employer spending requirement amounts to about \$4,140 per full-time worker per year in a large firm (with more than 100 employees) and about \$2,767 per full-time worker per year in a medium size firm (with 20-99 employees).

In 2014, the federal Patient Protection and Affordable Care Act will assess all U.S. employers with more than 50 employees that do not offer coverage and have at least one full-time employee who receives a premium tax credit a fee of \$2,000 per full-time employee, excluding the first 30 employees from the assessment. Employers with more than 50 employees that offer coverage but have at least one full-time employee receiving a premium tax credit, will pay the lesser of \$3,000 for each employee receiving a premium credit or \$2,000 for each full-time employee (Kaiser Family Foundation 2010). This is a form of a pay-or-play mandate similar to the one in San Francisco, and is about the same magnitude as the San Francisco mandate for medium size firms. Certain characteristics of the Patient Protection and Affordable Care Act are more difficult for employers to comply with than the San Francisco Ordinance, but other provisions make the law less onerous for employers.

Like Massachusetts and Hawaii, the national law neither includes a public option for access to health benefits, nor would an HRA qualify as coverage. Therefore, some of the lower-cost and commitment choices that employers made in the early days of the San Francisco Ordinance will not be available to firms to comply with the Patient Protection and Affordable Care Act. Those San Francisco firms currently offering HRAs in order to comply with the San Francisco law will need to begin offering more traditional insurance plans, as HRAs won't qualify for the individual mandate. Finally, workers are unlikely to attribute the fine an employer pays for not providing health insurance as a benefit of employment the way they might in San Francisco (because they automatically receive discounted Healthy San Francisco program fees). This will likely make employers less likely to choose the "pay" option since they will be less able to pass it along to wages in the long run. In essence, what qualifies as health coverage in the national plan is much more onerous than the San Francisco Ordinance.

On the other hand, some aspects of the national law will make it easy for firms to comply compared to the San Francisco Ordinance. For example, the national law considers a worker exempt for part time status if they work less than 30 hours a week, which will allow many more employees to qualify as exempt from the law. In San Francisco, employers have to make contributions for workers who work at least 8 hours per week. Research from Hawaii shows that under the national policy firms may switch to using more exempt part-time workers (Buchmueller, DiNardo, Valletta 2009). In addition, existing group and individual insurance plans are "grandfathered in" as acceptable coverage under the federal plan. This in conjunction with more categories of exempt workers indicates that the proportion of firms affected by the mandate will be much lower than in San Francisco since firms will not have to make changes in the generosity of benefits or cover some categories of marginal workers, such as those who work part-time.

It is unclear how the San Francisco Ordinance and Healthy San Francisco will interact with the Patient Protection and Affordable Care Act. It is likely that Healthy San Francisco will not meet the requirements for qualifying health coverage and so some of those currently enrolled in Healthy San Francisco will have to obtain more traditional insurance. The city has reported that 70% of Healthy San Francisco enrollees are under the poverty line, however, so many may be eligible for Medicaid (with a new income threshold of 133% of the poverty line for citizens) after the federal reforms. The situation is further complicated by the fact that there are many exemptions to the individual mandate – financial hardship, religious objections, American Indians, those without coverage for less than three months, undocumented immigrants, incarcerated individuals, those for whom the lowest cost plan option exceeds 8% of an individual's income, and those with incomes below the tax filing threshold. These San Francisco residents will still need Healthy San Francisco, and it may be that other cities will create a plan like Healthy San Francisco to bridge the gap for residents who fall into these categories. For example, according to the Congressional Budget Office (2010) undocumented immigrants account for about one-third of the 23 million individuals who are expected to remain uninsured. Healthy San Francisco provides benefits regardless of immigration status and could continue to cover this population after 2014. Mayor Gavin Newsom recently created a working group that will determine how health care reform will affect Healthy San Francisco.

Lessons from the San Francisco mandates can help policymakers determine what to expect with implementation of a national-level benefit mandate. First, pay-or-play mandates of this size are feasible; employers in San Francisco have been able to absorb the extra cost of providing health benefits without significant negative effects on employment or earnings. Some firms in industries where most competitors are also subject to the mandate, such as restaurants, have been able to pass the costs of the mandate directly along to consumers. Second, employers are likely to choose the lowest-cost option available. In the San Francisco case, this has largely played out through use of HRAs, Healthy San Francisco, and mini-medical plans, which are designed to just meet the health spending requirement. Finally, despite most employers having to make changes in their benefit policies to comply with the mandate, most employers are supportive of the Health Care Security Ordinance. This bodes well for implementation of the national employer mandate in 2014.

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