X. THE NEXT WAVE: CITYWIDE MINIMUM WAGE LAWS AND EXPANDED LIVING WAGE ORDINANCES IN PRACTICE AND RESEARCH

Wage and Employment Impacts of a Citywide Minimum Wage

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A *citywide* minimum wage of $8.50 was implemented in San Francisco in February 2004. To estimate the effects of this policy, we surveyed and compared restaurants in San Francisco and in the East Bay before and after the new policy. Employers with fewer than ten employees are phased into the new minimum over a two-year period, creating an additional dimension of comparison. Results suggest that the policy increased wages significantly among covered restaurants and compressed wages. Comparisons with the control groups provided no evidence of employment loss or increased business closure among affected firms.

Overview of the San Francisco Minimum Wage

In November 2003, San Francisco voters passed, by a 60-to-40 margin, a ballot proposition to enact a minimum wage covering *all* employers in the city. The new minimum, to be adjusted annually for cost of living, was set at $8.50 per hour, an increase of more than 26 percent over the California minimum wage of $6.75. This mandate, which became effective in late February 2004, constitutes both the highest minimum wage in the United States today and

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in U.S. history (using the CPI-U-R-S series). It is also the first implemented municipal minimum wage in a major city (excluding the District of Columbia); other cities, such as Santa Fe, have also introduced comparable policies.

In a prospective study, Reich and Laitinen (2003) surveyed 450 San Francisco establishments. Because about 45 percent of workers employed in the city commute from adjacent areas and about 20 percent of employed San Francisco residents commute to workplaces outside the city, household-based data sets are considerably less useful than establishment-based data. Reich and Laitinen found that approximately 54,000 low-wage workers, amounting to 10.6 percent of the city's private sector workforce, would receive wage increases, either directly or indirectly, and that the cost to an average establishment would be about 1.1 percent of its operating costs. They also found that about 30 percent of restaurant workers would receive increases.

Proponents of the $8.50 minimum wage cited the especially high cost of living in San Francisco and the growth of low-wage employment in what is a relatively high-income city. Reich and Laitinen found that low-paid employment had grown in the 1990s while overall San Francisco employment remained stationary. Much of the employment growth was concentrated in tourism services, retail and food services, and business and personal services that cater to affluent households and that must be located in the city. Restaurant employment in the city has trended upward since 1987, while the statewide minimum wage increased from $3.35 to $6.75 (in current dollars).

San Francisco in 2000 had passed and implemented a set of *living-wage* programs, covering city contractors and leaseholders only, at a minimum wage of about $10.25 per hour. About two-thirds of the workers covered under the living-wage programs are employed by the city as homecare workers or work outside the city at the city-owned airport. The city contractors affected were concentrated among nonprofit providers of social services and for-profit employers of security guards, janitors, and landscape workers; approximately 5,000 of these workers had received wage increases as a result (Reich, Hall, and Jacobs 2003). Employers of workers at restaurants on city-owned land, such as at Fisherman's Wharf, were required only to offer health insurance. The new citywide policy thus increases the scale of affected workers by approximately tenfold and it brings restaurants under local wage standards for the first time.

Several aspects of the law and of the local economic geography make this minimum wage policy especially amenable to a "natural quasi-experiment" methodology. First, the new law provides for a two-year phase-in for businesses with ten employees or fewer (and nonprofits). These employers are not covered by the new requirement for the first year, but are mandated at $7.75 beginning in January 2005 and become fully subject to the citywide minimum in January 2006. This differential treatment provides a natural control group for measuring impacts of the policy, because citywide economic

trends affect both classes of businesses. Second, San Francisco's proximity to other large metropolitan areas without such a mandate (in particular the East Bay, including Oakland, Berkeley, and other nearby cities) offers the possibility of an additional control group. Such a strategy controls for any regional economic trends and for the possibility that firms may have migrated to nearby areas (but not for potential migration within San Francisco). The second control group also offers a means of checking for differential growth trends by firm size, which is difficult to assess in the first strategy. Finally, we can compare restaurants that were already providing above-minimum wages to their workers with the covered restaurants for whom the new minimum wage was binding.

Sample Design and Methodology

The first wave of our study was conducted just before the new minimum wage went into effect; the second wave was conducted in November and December 2004. The sample is drawn from restaurants in San Francisco and the East Bay, which turn out to be quite similar in average size, size distribution, and in employment trends (Dube and Reich 2005). The average wage is somewhat higher in San Francisco, in a proportion similar to differences in housing costs. Restaurants with fewer than ten employees constitute about 60 percent of establishments and about 17 percent of workers in both San Francisco and the East Bay.

Focusing only on restaurants provides two advantages. First, comparing trends in the same industry allows us to rule out interindustry growth differentials that are unrelated to the minimum wage increase. Second, because restaurants disproportionately use minimum wage labor, this study design focuses on a sector in which the minimum wage has "bite." As a result, for a given sample size, we maximize the statistical power of any finding. A large part of the minimum wage impact literature has focused on this industry (or subsets, such as fast food establishments) partly for this reason.

The sample for the first wave consisted of 254 restaurants in San Francisco and 100 restaurants in the East Bay. We oversampled in San Francisco to be able to compare restaurants within the city by initial firm size. We chose firm size categories—four to eight current workers for small restaurants and fourteen to thirty-five current workers for midsize restaurants—to balance competing concerns. On the one hand, choosing restaurants too close to the cutoff (say, at eleven current employees) may cause us to observe a "spurious" decline in employment, insofar as restaurants try to evade the coverage of the mandate. Businesses with fourteen workers are much less likely to reduce their workforce to nine just to evade the mandate. Similarly, we chose a cutoff of smaller restaurants at eight workers to permit observation of employment growth, as well as decline, among restaurants not subject to the mandate. We

also truncated the initial size of "midsize" establishments at thirty-five current employees, because much larger restaurants (say, fifty or a hundred workers) may be different types of enterprises operating in markets with distinct dynamics.

The surveys were conducted via telephone using a CATI instrument and drawn from a Dun and Bradstreet list. The East Bay here refers to the 510 telephone area code, which includes all of Alameda County and a few areas to its north, in western Contra Costa County. The response rate was 38 percent for the first wave, comparable to the 42 percent response rate in Reich and Laitinen and in other similar surveys among a much broader range of establishments. Response rates were very similar in San Francisco and the East Bay and respondents mean employment levels in each of the size-locations cells were identical to those provided by Dun and Bradstreet for the nonrespondents.

The restaurants were resurveyed for the second wave; at the time of analysis, data from 299 restaurants of the original 354 in wave 1 were available. Some interviews were not yet complete, and additional information updates are forthcoming. Of the restaurants in the first wave, fifteen were confirmed to have closed; the rest (forty) were all in operation but either refused (eighteen) or were unable (twenty-two) to complete the survey in the second wave. The second-wave respondents and nonrespondents were similar in their reported employment and wages in wave 1. East Bay restaurants were somewhat more likely to respond (95 percent) than San Francisco restaurants (85 percent). To keep the panel balanced, the results here include only the observations with data for both waves.

The empirical methodology utilizes simple group means comparisons, as well as a regression specification controlling for region and firm size effects.

Group Means Comparisons

The first set of tests compares the change in outcome measures (such as log of employment) in the treatment group to any change in control groups.

$$H_0\text{: } E(y_{i,t+1} - y_{i,t} \mid \text{treatment}) = E(y_{i,t+1} - y_{i,t} \mid \text{control}).$$

Specifically, our control groups include (1) small San Francisco restaurants not covered by the law; (2) midsize East Bay restaurants not covered by the law; (3) midsize San Francisco restaurants who were not *affected* by the law as they were already paying above minimum wages.

Regression Specification

$$y_{i,t+1} - y_{i,t} = b_0 + b_1 \cdot MS_{i,t} + b_2 \cdot SF_i + b_3 \cdot SF_i \cdot MW_{i,t} \cdot MS_{i,t} + e_{it+1}$$

Here, $y_{i,t}$ is the outcome variable (such as log of employment) at firm i at time t. MS_{it} is a dummy variable which takes on 1 if firm i is in the 14–35 employees (midsize) category at initial time t; SF_i is a dummy variable which takes on 1 if firm i is in San Francisco; and MW_{it} is a dummy that takes on 1 if firm i had any workers under the new minimum wage workers at time t. The $SF_i \cdot MW_{it} \cdot MS_{it}$ interaction comprises our "treatment" group—firms in San Francisco for which the new minimum wage policy was binding. The coefficient of interest is $b_{3,}$ which represents the employment growth in affected restaurants (covered San Francisco restaurants with some workers below the new minimum), net of differences in growth due to firm size and region. A $b_3 < 0$ implies a negative employment effect.

Relation to the Literature

Our study is most closely related to Card and Krueger (1995), who used fast-food restaurants in New Jersey and Pennsylvania to evaluate the employment effects of a minimum wage law passed in New Jersey. Their results, which were very surprising at the time, suggested that the employment effects were either negligible or mildly positive. Neumark and Wascher (2000) used payroll data obtained from restaurants to dispute the results, arguing that survey data measurement error was substantial. Card and Krueger (2000) responded by using administrative data (ES-202 records) and found that their original conclusions remained largely valid.

Our paper differs from existing research both in scope and research design. First, we sample from the entire private restaurant sector in San Francisco and the East Bay. Second, we can control for some firm size effects, using the phased implementation of the policy. With only two waves of data, we cannot, however, control for reversion to the mean effects in firm size. Even without any policy treatment, firms that fell below the cutoff because of a prior random shock are more likely to increase employment and firms that were above the cutoff are more likely to reduce employment in the next time period. Consequently, our tests are biased toward finding negative employment effects.

Summary of Findings

We present comparisons of wave 2 to wave 1 in Figures 1–3. The bracketed lines at the tops of the bars in these figures represent 90 percent confidence intervals; standard errors generally are similar to those in Card and Krueger (1995). Figure 1 shows that wages increased significantly, especially at the $8.50 spike, in the treatment group of restaurants. Pay also increased, but in lesser proportions, in the small San Francisco restaurants, while pay did not change in the other control groups. Figure 1 also illustrates that the wage distribution became more *compressed* in the treatment group.

FIGURE 1
Wage Distribution—Waves 1 and 2

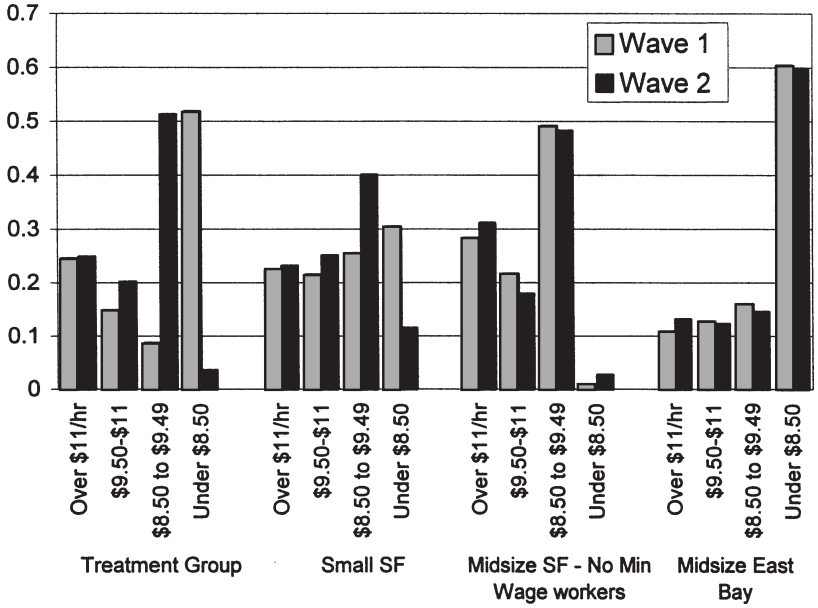
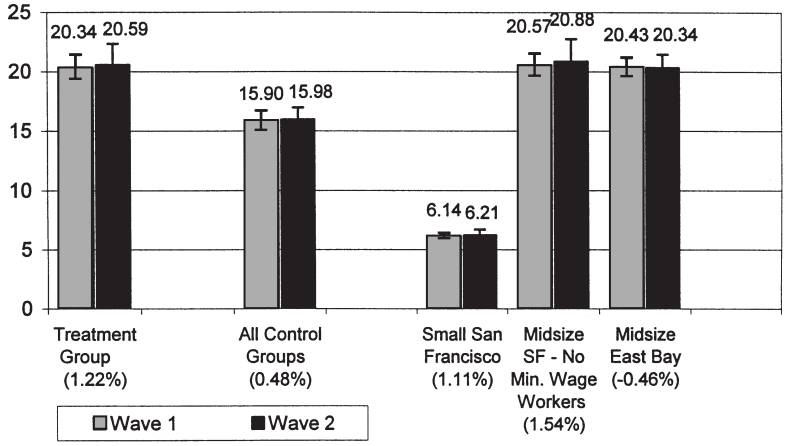


Figure 2 shows that employment changes were insignificant within each of the treatment and control groups. Finally, as Figure 3 shows, the business closure rate was lower (3.4 percent) in the treatment group than in the rest of the sample (5.0 percent). Disaggregating, the closure rate was 6.0 percent for small San Francisco restaurants; 5.6 percent for midsize San Francisco restaurants that were already paying higher than the new minimum wage; and 3.2 percent for midsize East Bay restaurants.

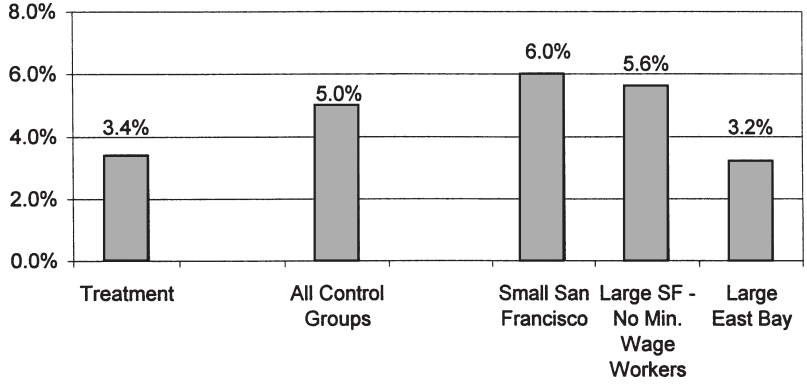
The estimates for the regression specification are reported in Table 1. Recapitulating, our treatment group comprises of San Francisco restaurants with more than ten workers in wave 1 *and* paying minimum wages (i.e. less than $8.50) to some of their workers at the time of the first wave. Here treatment is a discrete variable. The estimated treatment effect for average wages is statistically significant and its magnitude is around 6.6 log points, which is approximately equal to a 6.6 percent increase in the average wage at establishments in the treatment group. The effect on employment is numerically very small (a 0.07 log point reduction), and it is not statistically significant at conventional levels. Overall, the regression specification results mirror the comparisons of the simple group means presented earlier.

FIGURE 2
Average Employment: Waves 1 and 2



Note: Growth between waves 1 and 2 is in parenthesis. Growth was not significant different from zero for any of the groups.

FIGURE 3
Business Closure Rate



Conclusions and Further Research

The results that are presented here suggest that the citywide minimum wage in San Francisco did significantly increase pay and compress pay structure among restaurants covered and affected by the policy. We do not find evidence of significant employment loss as a result of the policy. In Dube and

TABLE 1
Difference in Difference Estimates (Waves 1 and 2)

Outcome Variable	Change in log Average Wage	Change in log Employment
Treatment coefficient (discrete)	0.0655**	–0.0007
Standard Error	0.0280	0.0616
Controls:		
San Francisco	Y	Y
Small	Y	Y

** indicates statistical significance at the 5 percent level. The treatment variable is (SF) × (Midsize) × (some minimum wage workers at wave1).

Reich (2005), we extend the analysis presented here to effects on provision of health insurance benefits, on part-time versus full-time employment, changes in hours of work for part-time and full-time employees, and comparisons of tipped and nontipped workers. There we also examine adjustments in employee tenure as well as effects on restaurant prices. Finally, we also conduct specification tests to test the sensitivity of the findings.

Note

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