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Article

Employer-Reported Access to Paid Parental Leave: A study of San Francisco's Paid Parental Leave Ordinance

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ABSTRACT

Background: A growing body of research finds that paid leave policies have significant population health benefits for workers and their families, but the lack of a national paid leave policy in the United States leaves most workers without access to any paid leave. In 2017 San Francisco implemented the nation's first fully paid leave policy, mandating that covered employers provide up to six weeks of leave to care for a new child. The objective of our study is to examine how the San Francisco Paid Parental Leave Ordinance (PPLO) affected paid leave access, including among workers in low-wage industries. *Methods*: We surveyed Bay Area employers in 2018, the year after PPLO took effect. We estimated difference-in-differences models of changes in access to paid leave before versus after implementation of the PPLO in San Francisco compared to surrounding counties. *Results:* Availability of paid leave in San Francisco firms increased from 45% in 2016 to 79% following implementation of the PPLO. This is significantly more ($p < 0.05$) than the increase from 32% to 47% in surrounding counties. Compliance was lowest (67%) among low-wage firms. We found minimal evidence of self-reported negative effects on employers. Overall, 82% of firms supported the PPLO. *Conclusions:* San Francisco's experience demonstrates the feasibility of using local policy to increase parental leave access.

1. Introduction

Paid family leave policies can have significant benefits for workers and their families. Past research links paid family leave policies with increased breastfeeding (Hamad et al., 2018; Huang & Yang, 2015; Pac et al., 2019), fewer low birthweight and small-for-gestational-age births (Rossin, 2011; Stearns, 2015), decreased infant hospitalizations (Pihl & Basso, 2019), and decreased infant mortality rates (Tanaka, 2005). Several of these studies focused specifically on California's recent paid family leave expansions (Hamad et al., 2018; Huang & Yang, 2015; Pac et al., 2019; Pihl & Basso, 2019; Stearns, 2015). Recent studies also suggest that the health benefits of paid leave extend beyond infancy, including reduced likelihood of childhood abusive head trauma, obesity, ADHD, hearing problems, and ear infections (Klevens et al., 2016; Lichtman-Sadot & Bell, 2017). One study using data from the Survey of Health, Ageing and Retirement in Europe (SHARE) found an association between exposure to more generous maternity leave at the time of first birth and reduced depressive symptoms among these mothers in older age (Avendano et al., 2015). Although these studies vary in their design and methodological rigor, collectively they suggest that support during the transition to parenthood provided by paid leave policies potentially benefits the health of both mothers and children throughout the life course.

Whether parental leave is *paid* is a consequential policy design feature. Studies of unpaid leave policies have demonstrated only limited benefits, concentrated among socioeconomically advantaged groups (Nandi et al., 2018). Indeed, unpaid or partially paid leave policies may increase health and other disparities by only benefiting mothers who can afford to use them (Nandi et al., 2018; Rossin, 2011). Policies to increase access to fully paid leave have been rare in the U.S., although several states are experimenting with such efforts. This paper explores how leave access was affected in the first two years after passage of the most far-reaching local policy to date: San Francisco's Paid Parental Leave Ordinance (PPLO). To better understand support for and barriers to expanding such policies, we then describe employer-level self-reported early effects of and attitudes toward the mandate.

1.1. Paid family leave context in the United States

The U.S. remains the only high-income country without a federal

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paid leave policy, leaving employer-provided benefits packages as the primary means through which workers can access paid leave. The 1993 Family and Medical Leave Act (FMLA) mandates that covered employers provide eligible employees up to 12 weeks of unpaid, job-protected leave to care for a new child, a seriously ill family member, or one's own serious illness. Coverage and eligibility restrictions mean that just over half (59%) of U.S. workers are eligible for job-protected leave through the FMLA (Klerman, 2012, p. 174). According to the most recent National Compensation Survey conducted by the U.S. Bureau of Labor Statistics, almost 90% of workers had access to some period of *unpaid* family leave (U.S. Department of Labor & U.S. Bureau of Labor Statistics, 2019), though a worker who takes this leave does not necessarily have a guaranteed job upon their return to work.

Far fewer workers have access to paid family leave through their jobs. In 2016, 58% of U.S. employers offered some form of paid maternity leave to female employees, mostly in the form of temporary disability insurance plans and almost never fully paid, while only 15% offered paid paternity leave to male employees (Matos et al., 2017, p. 79). Excluding temporary disability insurance plans, which are only available to birth mothers and typically require employees to opt in before pregnancy, just 19% of all workers have access to paid family leave dedicated to care for a sick family member or new child (U.S. Department of Labor & U.S. Bureau of Labor Statistics, 2019). Access to paid leave is even less common among lower-income workers, non-professional workers, part-time workers, and workers in smaller firms (U.S. Department of Labor & U.S. Bureau of Labor Statistics, 2018). In California, where the state's Paid Family Leave (PFL) program provides partial wage replacement (including for parental child bonding leave) to most private-sector workers, take-up varies according to individual and employer characteristics: workers in the lowest income quartile and in small firms (who are also least likely to qualify for job protection), are underrepresented among PFL claimants (Bana, Bedard, & Rossin-Slater, 2018). The past few years have seen increasing attention to paid leave in California, as the longest running program in the U. S. (Bailey et al., 2019; Bartel et al., 2018; Baum & Ruhm, 2016; Hamad et al., 2018; Lichtman-Sadot & Bell, 2017; Pac et al., 2019; Pihl & Basso, 2019; Rossin-Slater et al., 2013)

In the absence of federal paid leave policy, various state and municipal governments have enacted their own such policies. California's PFL program, which was passed in 2002 and began benefits distribution in 2004, assesses a payroll tax to finance partial wage replacement for up to six weeks of caregiving leave. This PFL program built on California's pre-existing State Disability Insurance (SDI) program (which includes coverage for partially-paid pregnancy-related disability leave), to include leave for the purposes of bonding with a new child or caring for a sick family member. Since 2002, seven additional states (New Jersey, Rhode Island, New York, Washington, Massachusetts, Connecticut, Oregon) and the District of Columbia have passed similar paid family and medical leave legislation. In addition to these state laws, dozens of cities and counties across the country have passed paid parental leave policies for their own municipal employees (National Partnership for Women & Families, 2018).

1.2. San Francisco's Paid Parental Leave Ordinance (PPLO)

In 2017, San Francisco began implementing a pathbreaking policy that is singular in its mandated provision of fully-paid leave to all qualifying employees of covered employers. Building on the preexisting statewide PFL program that pays only partial wages, the San Francisco PPLO requires covered employers to provide supplemental wage replacement increasing pay to 100% (up to a cap of $2133/week) for employees taking up to six weeks of leave to bond with a new child. When PPLO went into effect, the statewide PFL program provided 55% wage replacement, increasing in 2018 to 60% for workers earning above one-third of statewide average weekly wages and to 70% for workers earning below this threshold (Rules Implementing the Paid Parental, 2016). Birth parents are eligible for both six to eight weeks of leave through the SDI program and six weeks of PFL, though PPLO only covers the latter part (Fig. A1).

Covered employers include those in the private sector with employees who work in San Francisco and who have at least 20 employees worldwide. Coverage began with larger employers (50 or more employees) on January 1, 2017; expanded to those with 35 or more employees on July 1, 2017; and to those with 20 or more employees on January 1, 2018. Covered employees must have started working for the employer at least 180 days prior to the leave and work in San Francisco for a covered employer at least 8 h per week and 40% of their weekly hours (relevant for employees who work at multiple locations) and be eligible for California PFL benefits. These programs provide leave for mothers, fathers, and other legal guardians, including those of newly adopted or foster children. Unlike the SDI and PFL programs, the PPLO-mandated supplemental compensation is not financed by payroll taxes but instead is an unfunded mandate, with each employer required to self-finance the supplemental compensation for their own leave-taking employees.

The PPLO is the first and, to date, only US policy that requires fully paid leave for private-sector workers, and to do so with an employer mandate. To date, all other public policies that cover paid leave for private-sector workers in the US are social insurance programs, with funds collected through employer and/or employee payroll taxes being distributed to workers across all covered firms. The novel approach taken by San Francisco has not yet been studied in terms of how it affects paid leave offerings and whether employers make other changes that could affect low-wage workers (e.g., benefits and compensation reductions and/or changes in hiring decisions).

1.3. Hypothesized PPLO effects

Neoclassical labor market theory predicts that some employers will choose to offer benefits such as paid parental leave even in the absence of a government mandate (Summers, 1989). These may be firms that experience productivity gains from offering those benefits; e.g., in the case of paid parental leave, research has found higher employee retention when paid parental leave is available (Waldfogel et al., 1999), thus firms with high hiring and training costs may find it profitable to offer paid leave voluntarily. Theory also predicts voluntary benefits if the employees themselves prefer to substitute the benefits for reduced compensation in other dimensions.[1] Empirically, high-wage industries are more likely to voluntarily offer paid leave benefits (U.S. Department of Labor & U.S. Bureau of Labor Statistics, 2019), and anecdotally this may partially be due to both high employee replacement costs as well as employee preferences. Based on prior paid family leave research, we therefore anticipate that pre-PPLO, the San Francisco employers voluntarily offering paid parental leave will be those with higher wage workers.

To develop hypotheses regarding the impact of PPLO, we consider two key factors. First, the mandated pay is likely to be most burdensome in the types of firms that were least likely to voluntarily offer benefits: firms with lower hiring and training costs, which are also disproportionately low-skilled/low-wage employers. Low-wage employees may also be less likely to value or demand their legal benefits. Second, complying with the law imposes some administrative burden, such as backfilling work if employees increase leave-taking, as well as

[1] For example, research on mandated health insurance maternity benefits has found that benefit costs in competitive labor markets may be passed on to the relevant employee demographic groups (such as women of childbearing age) in the form of lower wages (Gruber, 1994). Relevant to the current example, Colla et al. (2017) also found that San Francisco firms in non-traded service industries such as restaurants were able to pass-through a substantial share of mandated health care cost increases to consumers in the form of price increases.

coordinating benefits with the state PFL program. These compliance costs are likely to be relatively more burdensome among smaller employers, who have leave-taking employees less regularly and hence whose benefit managers will be less familiar with state and PPLO requirements, thus they are more likely to be non-compliant due to lack of awareness.

For these reasons, we predicted that PPLO should increase paid parental leave benefit offering among covered firms in San Francisco, but that smaller and lower-wage employers would be less likely to be fully compliant with the required benefit offering. We similarly predicted that higher-wage firms would be more likely to report positive employee impact (such as improved employee retention and morale), and that smaller employers will be more likely to report administrative challenges in complying with PPLO. In terms of potential adverse self-reported profitability impacts, we predicted that these were more likely in low-wage employers for whom minimum wages or union contracts may limit pass-through of costs to lower wages. Finally, we anticipated that overall employer support for PPLO will be a function of the above factors, thus we predict lower employer support among smaller and lower-wage firms.

While the *direction* of these effects can be predicted from theory, it is helpful to consider related empirical studies in order to predict the potential *magnitude* of effects. A survey of small businesses (less than 100 employees) conducted by Lake Research Partners for Small Business Majority in 2017 found broad support for both national and state paid leave legislation (Small Business Majority & Center for American Progress, 2017). One reason for such high support may be that the short duration of most leaves allows the majority of employers (56%) to deal with an employee on leave with a relatively low-cost solution: temporarily reassigning work to other employees (Small Business Majority & Center for American Progress, 2017). In California, which has the longest-running paid leave program in the U.S., employers reported that the state's PFL policy has had minimal impact on their business operations, and most report that it either had a neutral or positive effect on productivity, profitability, turnover, and employee morale (Appelbaum & Milkman, 2011). Consistent with the above predictions, larger employers were more likely to report positive outcomes than smaller employers. Similarly, employers in Rhode Island reported no change in productivity or their perceptions of employee morale, cooperation, or attendance after implementation of that state's PFL policy (Bartel et al., 2016). In general, support for PFL has been widespread among employers in states with paid leave policies. Recent surveys of small- and medium-sized employers in Rhode Island, New Jersey, and New York have found broad support for their states' enacted or upcoming policies, with a majority favoring or strongly favoring the programs (Bartel et al., 2016, 2017). More specifically in San Francisco, research on the city's Paid Sick Leave Ordinance found substantial administrative burden and some adverse profitability impact, but nevertheless overall high levels (71%) of employer support (Colla et al., 2014); the mandated sick leave durations though were much shorter than parental leave.

2. Data

We analyzed the Bay Area Parental Leave Survey of 2018 Employers, a cross-sectional telephone and online survey of private employers conducted from June through October of 2018 (see Appendix A for complete survey) when San Francisco-based respondents had been covered by PPLO for between six and twenty-two months.[2] Respondents were human resources managers or similarly knowledgeable employees at establishments in San Francisco and the five surrounding Bay Area counties (Alameda, Contra Costa, Marin, San Mateo, and Santa Clara). Employers were sampled from a database of private establishments developed and maintained by Dunhill International.

We recruited from establishments in San Francisco and surrounding counties with 20 or more employees worldwide (for establishments that are part of a chain, size was measured at the firm level as this determines PPLO eligibility, but interviews were conducted with managers at the local establishment), stratified by industry wage level. To ensure their adequate representation, we oversampled larger employers (i.e., those with 100+ employees worldwide) and employers from industries that disproportionately employ low-wage workers (accommodation and food service and selected retail[3]). Establishments from surrounding Bay Area counties were drawn from a parallel sampling frame and ex-post weighted to match those within San Francisco on industry wage level and employer size. The survey included questions regarding employer knowledge, attitudes, and practices related to parental leave; perceived effects on profitability, productivity, morale, recruitment, and retention; and changes in compensation or hiring resulting from PPLO. Respondents were directed to answer all questions with regard specifically to the sampled establishment at which they work. Study participants were offered a $25 gift card for completing the 15-min survey. Our main analyses include 297 employers who completed our survey (AAPOR[4] response rate of 21.2%). Secondary analyses include an additional 49 employers with incomplete responses (for whom we do not know current or past policy offering, but who did respond to questions about PPLO or their recent experiences with a leave-taking employee).

2.1. Key variables

The primary outcome of interest is whether employers increased access to paid leave through (1) offering a new paid family or parental leave policy or (2) expanding an existing policy following implementation of PPLO. Study participants were asked to report whether employer-paid parental leave (i.e., leave to care for a newborn or adopted child) or employer-paid family caregiving leave (i.e., leave to care for a family member related to either illness or a new child) was offered to all, some, or none of their employees at the time of the study in 2018. The key paid leave offering dependent variable analyzed below in Tables 2 and 4 is defined as employer paid parental or caregiver leave including either fully- or partially-paid leave for any duration of time,

[2] To develop our survey, we first conducted a series of in-depth telephone interviews with a convenience sample of 12 employers in San Francisco, including smaller employers and those in the hospitality and service industries. We then adapted questions, with permission, from two existing surveys of employers. Finally, we pilot tested our survey with a sample of San Francisco employers and refined the final survey instrument. The authors are grateful to Carrie Colla, Arun Dube, and Vicki Lovell for sharing the 2009 Bay Area Employer Health Benefits Survey and to Jane Waldfogel, Ann P. Bartel, Christopher Ruhm, and Maya Rossin-Slater for sharing the 2017 Survey of Employer Experiences with Family Leave.

[3] Employers in accommodation and food service industries include those with 2-digit Standard Industrial Classification (SIC) codes 58 (Eating & Drinking Places) and 70 (Hotels & Other Lodging Places). Selected retail includes SIC codes 52 (Building Materials & Gardening Supplies), 53 (General Merchandise Stores), 54 (Food Stores), 56 (Apparel & Accessory Stores), 59 (Miscellaneous Retail). These were selected based on our assessment of the proportion of low-wage workers within each group.

[4] We calculated our response rate using the American Association for Public Opinion Research (AAPOR) method.

for at least some classes of employees. We asked respondents to report other types of paid leave such as sick leave, vacation, or flexible paid time off separately. In addition, we analyzed which San Francisco employers report policies compliant with the PPLO-mandated level of parental leave. Study participants were also asked to report whether their employers had made changes to their paid leave policies since 2016 (the year PPLO was enacted), and this retrospective report was used to measure changes in paid leave-offering. Employers without a prior policy that reported implementing a new paid parental leave policy or starting to provide pay were characterized as having a "new policy"; employers that expanded eligibility to employees who did not previously qualify for paid parental leave or increased the wage replacement rate or leave duration were characterized as having an "expanded policy."

The above leave-offering primary outcomes of interest were measured among both San Francisco employers and comparison employers in surrounding counties, in order to estimate the difference-in-differences models described below. To further understand the effects of PPLO, we also asked San Francisco employers to self-report several secondary outcomes which we report descriptively. First, among San Francisco employers with new or expanded paid leave policies, we asked whether in response to those policy changes they made other pay or benefit changes (to measure potential unintended consequences if employers were financing increased paid leave by cutting other forms of compensation): reduced sick or vacation time or converted it to paid parental leave, reduced paid leave benefits for non-parents, decreased or delayed pay raises or bonuses, changed hiring practices, or raised prices or otherwise passed on costs to customers. Second, for employers in San Francisco, we also measured support for PPLO with the question, "What is your firm's attitude about the Paid Parental Leave Ordinance?" (Very Supportive, Somewhat Supportive, Neither Supportive or Opposed, Somewhat Opposed, Very Opposed). We also asked about difficulty in understanding the legal requirements of PPLO, calculating the wage replacement rate, and administratively complying with PPLO (including recordkeeping and notification requirements). Finally, we asked all San Francisco employers, "How has complying with the Paid Parental Leave Ordinance affected your firm's": profitability, productivity, employee retention, customer service, and employee morale (Much Better, Better, About the Same, Worse, Much Worse). Although these survey questions do not allow precise quantification of these effects for example on profits, the employers' perception of these effects is important for understanding reasoning behind employer opposition to or support for such policies.

To reduce potential misclassification due to retrospective recall bias, we interviewed human resources representatives who are expert in their company's policies and for whom knowledge of available benefits is an essential job function. We further minimize the possibility of misclassification by asking direct, prompted (as opposed to open-ended) questions which have been shown to improve accuracy in surveys of occupational conditions and, most critically, to act as an effective aid to recall that equalizes reporting across groups (Teschke et al., 2000). We asked about changes over a relatively short time period (asking in 2018 about changes made since 2016); because changes in available benefits do not change frequently, we expect that this will further minimize potential misclassification (only 8% reported "don't know" when asked about policy changes since January 2016).

As a sensitivity check, because not all employers had experienced a paid leave event in the relatively short post-PPLO period, we also re-examined key variables among the subset of employers who reported having an employee take parental leave in the past year as compared to those employers that did not experience a leave. We also asked these employers additional questions describing their experience with their most recent leave-taking employee (within the past year) in terms of the type and duration of leave taken, whether and how much of their leave was paid, how work was covered while the employee was on leave, and how difficult it was for the employer to arrange coverage and cover the costs associated with the leave.

Covariates used for both subgroup analyses and as statistical controls in all adjusted models are reported in Table 1: employer size (20–99 vs. 100 or more employees); whether the employer belonged to an industry that disproportionately employs low-wage workers (accommodation and food services and selected retail); share of part-time workers (>75th percentile or ≤ 75th percentile); share of female workers (>75th percentile or ≤ 75th percentile); share of employees hired within the last year (>75th percentile or ≤ 75th percentile); and an indicator for whether the employer is part of a chain of establishments (i.e., a multi-establishment firm).

2.2. Descriptive statistics

Table 1 presents descriptive statistics for the main sample. In total, representatives from 137 employers in San Francisco and 160 employers located across the five surrounding counties completed the survey. The weighted distribution of employer sizes (across all locations, for employers with multiple sites) and the percentage of employers in low-wage industries, with a high share of female workers, or a high share of newly hired workers was similar in the participating San Francisco employers versus those located in surrounding counties. Employers in San Francisco were less likely than those in surrounding counties to have a high share of part-time employees (15.8% vs. 25.3%) and more likely to belong to a chain of establishments (63.3% vs. 49.6%). We also observe in Table A1 that employers in low-wage industries have a similar size distribution to those in other industries, but are more likely to have high shares of part-time and newly hired workers; because these other characteristics could confound observed differences by low-wage industry status, we report both unadjusted and adjusted results for key comparisons, as described below.

Table 1
Firm characteristics, by location (N = 297).

Characteristics	Proportion of Firms (N, weighted %)				
	SF		Non-SF		Cluster p-value
All firms	137	48.5%	160	51.5%	
Firm characteristics					
Firm size					
20-34	25	21.4%	31	23.8%	
35-49	17	14.4%	22	17.6%	
50-99	18	15.5%	28	19.7%	
100-499	48	31.4%	49	24.5%	
500+	29	17.4%	30	14.3%	
Industry					
Low-wage[1]	38	25.0%	51	30.5%	
Non-low wage	99	75.0%	109	69.5%	
Part time share					**
>75th percentile	23	15.8%	43	25.3%	
<=75th percentile	111	84.2%	115	74.7%	
Female share					
>75th percentile	32	24.6%	26	17.9%	
<= 75th percentile	102	75.4%	130	82.1%	
Share new (hired in past year)					
>75th percentile	32	21.4%	42	24.8%	
<= 75th percentile	102	78.6%	115	75.2%	
Chain of establishments[2]					*
Yes	89	63.3%	89	49.6%	
No	46	36.7%	71	50.4%	

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. SF=San Francisco. [1]Low-wage industries include accommodation and food services and selected retail.[2]Chain defined as having >1 establishment per firm. P-values from weighted logit models using wild cluster bootstrapping to account for county-level clustering.

3. Empirical methods

3.1. Current paid leave access

We first describe the prevalence of employer-provided leave access and paid leave policy characteristics among employers at the time of the post-PPLO survey in 2018, comparing employers in San Francisco to those in surrounding counties. We then compare knowledge and characteristics of San Francisco employers by whether or not they were in compliance with the PPLO-mandated level of leave offering. We characterized employers as compliant if they offered paid parental or family caregiver leave to both mothers and fathers for at least six weeks, and during this period the employer paid at least 30% wage replacement (which would raise low-wage workers to 100% replacement when combined with the state PFL wage replacement, as required by the PPLO). We test for significant differences in characteristics of compliant versus non-compliant employers using weighted logit models. Note that this is not an exact measure of compliance, as the complex PPLO rules precluded asking employers about compliance for all employer-employee situations; instead, this is an upper bound on compliance.

3.2. Association of PPLO with employer-paid leave access

3.2.1. Overall changes in paid leave offering

We describe the San Francisco employer prevalence and patterns of paid leave offering in 2016 pre-PPLO versus 2018 post-PPLO to measure the increase in leave offering. To account for other potential influences on increased paid leave offering besides PPLO, we also examine the increase in offering from 2016 to 2018 in surrounding counties not subject to PPLO or PPLO-like mandates. None of the surrounding Bay Area counties we include in our control group experienced any relevant policy changes during the study period. We then estimated the San Francisco changes attributable to PPLO using a difference-in-differences (DD) approach (Angrist & Krueger, 1999). The DD estimator conceptually subtracts the change in paid leave offering prevalence in surrounding Bay Area counties from the observed change in San Francisco. Although we only observe the firms in the post-PPLO period, we use retrospective recalled changes in leave-offering to measure pre-PPLO offering; it would have been preferable had a pre-PPLO survey been available instead, but we note above and in the Discussion why we believe recall bias is likely to be non-differential across counties. We implement the DD model with weighted linear probability models of outcome Y in employer i as a function of whether the employer is located in the county c of San Francisco (SF), time t pre-vs $post$-PPLO, with the DD effect of interest being the coefficient on the $SF*post$ interaction:

$$Y_{ict} = \beta_0 + \beta_1 SF_c + \beta_2 Post_t + \beta_3 SF_c * Post_t + \beta_4 Z_{ic} + \varepsilon_{ict}$$

We further control for a set of employer characteristics Z (although as seen in Figs. A3, A4 and A5, the results are not sensitive to these controls). Under the assumption that in the absence of PPLO the trends in the introduction and expansion of paid leave policies in San Francisco would have been parallel to those observed in surrounding Bay Area counties, the resulting DD estimate corresponds to the increase in paid leave policies that is likely attributable to PPLO itself. We know of no other data source that measures county-level trends in paid leave offering, so we test this pre-PPLO parallel trends assumption by comparing trends in parental leave use from California PFL claims data. Fig. A2 shows that in the years leading up to the PPLO, annual PFL claims for bonding purposes for parents in San Francisco increased at a similar rate to those in surrounding Bay Area counties. A formal test for differential time trends using a Poisson model of counts of leave claimants confirmed that time trends were not significantly different. While this pre-trend analysis of leave-taking is informative, we cannot definitively show parallel trends in paid leave offering due to data limitations, thus our results should be interpreted as correlations that are *suggestive* of a causal effect. We test for significant differences in DD effects by subgroups of employer characteristics using fully interactive models.

3.2.2. Changes by baseline offering status

We also examined new paid leave policy adoption among the subset of employers with no baseline 2016 paid leave policy, and then examined expansions in paid leave policies among those employers that did offer at least some paid leave at baseline. We compare the probability of self-reported adoption (or expansion) in San Francisco versus surrounding counties using linear probability models, controlling for employer characteristics (employer size, industry wage level, share of part-time workers, share of female workers, share of employees hired within the last year, and whether the employer is part of a chain of establishments). We also test for greater paid leave policy expansion in San Francisco among subgroups defined by each employer characteristic, including employer size and industry wage level.

3.3. Impact on employers

To understand how expanding paid leave policies or complying with PPLO was perceived by employers to impact operations, employees, and customers, we descriptively examined the proportion of employers reporting each outcome and then compared subgroups using weighted unadjusted and adjusted linear probability models.

3.4. Experience with leave-taking employees

Finally, to examine the experiences of employers in San Francisco who have had an employee take leave, we compare the proportion of employers in each response category using weighted logit models. Respondents were asked to report on their most recent experience with a female employee taking leave, a male employee taking leave, or both (if applicable). We separately report responses for employers who described their experience with a female or male employee (employers who reported both are therefore included in both sets of comparisons). As a sensitivity analysis, we also conduct sub-group analyses comparing key PPLO impact variables among employers with a recent leave-taking event versus employers not experiencing a recent leave.

3.5. Complex survey methods

For all of our analyses, we incorporated weights that account for sampling variation and survey non-response. Weighted responses are representative of private San Francisco employers with at least 20 employees, with employers outside San Francisco weighted to match the San Francisco distribution. For estimating standard errors and confidence intervals in an application such as this with a single treated cluster (San Francisco) and small number of total clusters (six counties), Colin Cameron and Miller (2015) discuss a number of potential approaches. The now standard approach of reporting post-estimation cluster-robust standard errors as implemented for example by Stata's "cluster" option has been shown to perform poorly with this few clusters; in our application these clustered standard errors are almost uniformly smaller than non-clustered "robust" standard errors. In tables in which we report confidence intervals, we conservatively report them as calculated from ex-post (non-clustered) robust standard errors. This approach is still likely to underestimate true confidence intervals when comparing San Francisco with comparison counties. Thus for these cross-county comparisons we also report p-values using the wild cluster bootstrap resampling method with Webb weights, using the Stata *boottest* command implemented with the score approach as appropriate for our binary dependent variables (Colin Cameron & Miller, 2015; Roodman et al., 2019). For analyses that use only San Francisco employers there is no similar clustering concern, thus we report the usual ex-post robust standard errors with those results. Our regressions are estimated using linear probability models, as to our knowledge the above-described appropriate p-value estimation for logit coefficient estimates has not

yet been implemented and validated for *marginal effect* inferences from logit models, and marginal effects are more readily interpretable than raw logit coefficients. For comparison purposes we have re-estimated our adjusted models using logit regressions and find marginal effects that are virtually identical to the linear probability effects reported (results not shown). Furthermore, we report bivariate summary statistic differences (for example in Tables 1 and 2) based on unadjusted logit models. All analyses were conducted in Stata version 14.0 (College Station, TX: StataCorp LLC). All study procedures were approved by the Institutional Review Boards of the University of California - Berkeley and Portland State University.

Table 2
Paid leave policy characteristics in 2018 post-PPLO, by location (N = 297).

Characteristics	Proportion of Employers (N, weighted %)				
	SF		Non-SF		Cluster p-value
Offered paid parental[1] leave to any employees					**
Yes	108	79.1%	76	47.5%	
No	29	20.9%	84	52.5%	
Among employers that offered paid parental leave					
Policy includes fathers					+
Yes	92	94.9%	50	86.9%	
No	5	5.1%	7	13.1%	
Policy includes all job titles					+
Yes	86	86.2%	47	80.8%	
No	12	13.8%	10	19.2%	
Duration of paid leave offered to mothers					
Equal to paid leave time accrued	12	14.2%	11	24.3%	
<6 weeks	9	10.2%	10	22.5%	+
6–11 weeks	49	50.7%	15	27.0%	+
12+ weeks	25	24.9%	15	26.2%	
Duration of paid leave offered to fathers					
Equal to paid leave time accrued	8	9.4%	10	22.2%	
<6 weeks	17	18.9%	12	25.3%	
6–11 weeks	54	55.8%	16	30.1%	+
12+ weeks	15	15.9%	12	22.4%	+
Wage replacement rate - mothers[2]					
None	5	6.1%	3	6.6%	
1–29%	1	1.0%	1	2.8%	
30–99%	52	54.5%	20	39.4%	
100%	33	34.9%	20	46.4%	
DK/not sure	3	3.5%	3	4.8%	
Wage replacement rate - fathers					
None	5	6.1%	6	13.0%	
1–29%	1	1.0%	1	2.9%	
30–99%	52	55.1%	17	35.9%	+
100%	32	34.2%	19	43.3%	
DK/not sure	3	3.5%	3	4.9%	
Duration of *unpaid* leave offered to mothers					
<12 weeks	21	23.6%	13	24.2%	
12 weeks	32	33.0%	17	33.9%	
>12 weeks	23	25.2%	11	18.4%	
unlimited	16	18.2%	10	23.5%	
Duration of *unpaid* leave offered to fathers					
<12 weeks	28	31.5%	15	27.8%	
12 weeks	38	37.2%	17	34.5%	
>12 weeks	11	13.3%	7	12.9%	
unlimited	16	18.0%	10	24.8%	

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Notes: SF=San Francisco; DK = don't know. [1]Parental leave includes employer-provided parental or family leave and can be fully or partially paid. This is distinct from other types of paid leave, such as vacation, sick, or flexible paid time off. [2]These cut-offs are based on the statewide PFL replacement rate of 60-70% of wages, depending on income, which leaves employers responsible for 30–40%. Firms that provide <30% wage replacement are not in compliance with the PPLO. P-values from weighted logit models using wild cluster bootstrapping to account for county-level clustering.

4. Results

4.1. Current employer-paid leave access

In 2018, post-PPLO, employers in San Francisco were significantly more likely to report that they offered employer-paid parental or family leave to all or some of their employees compared to employers in surrounding counties (Table 2). Most, but not all, employers in San Francisco and surrounding counties who offered employer-paid parental leave reported that leave was available to fathers and to all job titles. The distribution of the duration of employer-paid leave offered to both mothers and fathers differed between San Francisco and surrounding counties: employers in San Francisco were more likely to offer between six and eleven weeks to both male and female employees than employers elsewhere and, correspondingly, less likely to offer shorter durations. The percentage of employers offering 12 weeks or more did not differ between San Francisco and other Bay Area employers. San Francisco employers (versus other Bay Area employers) were more likely to offer between 30 and 99% wage replacement (which includes the 30–40% range mandated by PPLO) to male employees, but differences for female employees were not statistically significant.

Assessing these policy characteristics in combination, Table 3 shows that just over half (53.3%) of San Francisco employers were fully compliant with all three of the key PPLO requirements: a) including fathers; b) providing at least 30% wage replacement for both mothers and fathers; and c) covering at least six weeks for both mothers and fathers. Table 3 further compares PPLO knowledge among San Francisco's compliant versus non-compliant employers. The 46.7% of employers that were non-compliant (i.e., covered by PPLO but not currently offering any or the required level of paid parental leave) were significantly less likely to report that PPLO applies to their workplace and more likely to report being unsure about whether they were covered. This is despite the fact that based on their self-reported characteristics (private employer operating in San Francisco with 20+ worldwide employees), they should indeed be subject to PPLO. These non-compliant firms reported greater familiarity with PPLO. Overall, firm characteristics in Table 3 were strikingly similar between compliant versus non-compliant employers, though larger employers were somewhat overrepresented among compliers.

4.2. Association of PPLO with employer-paid leave access

4.2.1. Overall changes in paid leave offering

Changes between 2016 and 2018 in access to employer-paid leave are described in Table 4. Within San Francisco, we observed a large increase in the proportion of employers offering paid leave to employees in 2018 versus those same employers' retrospective reports for 2016 (79% vs. 45%, respectively). We also observed an increase in the proportion of employers in surrounding Bay Area counties offering paid leave to employees in 2018 versus 2016 (47% vs. 32%, respectively). Results from our difference-in-differences (DD) analysis indicate that the change in the proportion of employers offering paid leave in San Francisco likely attributable to PPLO (i.e., in 2018 vs. 2016) was greater than the change in surrounding counties by 20 percentage points ($p < 0.05$). It is unclear why leave offering in the surrounding counties increased this substantially over this period since no leave policies were passed in the Bay Area outside San Francisco; this may partially reflect spillovers from publicity or job market competition from San Francisco, in which case the DD estimate would be a lower bound on the full PPLO effect.

The change in the proportion of San Francisco employers offering paid leave versus surrounding counties was most pronounced among large employers (100 or more employees; 24 percentage points, $p < 0.10$), non-low wage employers (23 percentage points, $p < 0.10$), employers with a lower share of newly hired workers (24 percentage points, $p < 0.01$), and chains (25 percentage points, $p < 0.05$) (Table 4). Subgroup interaction models did not reveal significantly different effects of

Table 3
Employer knowledge and characteristics among SF firms, by compliance (N = 137).

Characteristics	Proportion of Firms (N, weighted %)				
	Non-compliant		Compliant[1]		p-value
All covered firms	63	46.7%	74	53.3%	
Does the Paid Parental Leave Ordinance apply to your workplace?					
Yes	42	67.9%	63	86.1%	*
No	3	5.9%	4	5.5%	
Not sure	14	26.2%	6	8.4%	*
How familiar is your company with San Francisco's Paid Parental Leave Ordinance?					
Not familiar at all	4	7.7%	1	1.7%	
Slightly familiar	6	10.2%	1	1.7%	+
Moderately familiar	21	34.8%	17	25.3%	
Very familiar	24	34.3%	34	44.5%	
Extremely familiar	8	13.0%	21	26.8%	+
Other kinds of leave offered[2]					
Sick leave	61	98.0%	68	95.5%	
Vacation	59	94.6%	66	92.0%	
Flexible paid time off	50	77.6%	55	72.0%	
Unpaid leave	58	92.0%	68	95.5%	
Difficulty understanding legal requirements	25	46.6%	22	31.4%	
Difficulty understanding responsibilities	25	47.3%	24	33.7%	
Difficulty administratively complying	24	44.2%	26	38.3%	
Firm characteristics					
Firm size					
20-34	12	21.9%	13	20.8%	
35-49	12	21.9%	5	7.7%	*
50-99	9	16.6%	9	14.5%	
100-499	18	24.5%	30	37.5%	
500+	12	15.1%	17	19.4%	
Industry					
Low-wage[3]	18	25.2%	20	24.8%	
Non-low wage	45	74.8%	54	75.2%	
Part time share					
>75th percentile	8	11.8%	15	19.4%	
<=75th percentile	54	88.2%	57	80.6%	
Female share					
>75th percentile	15	26.1%	17	23.4%	
<= 75th percentile	47	73.9%	55	76.6%	
Share new (hired in past year)					
>75th percentile	12	20.5%	17	22.2%	
<= 75th percentile	50	79.5%	55	77.8%	
Chain of establishments[4]					
Yes	39	56.8%	50	69.1%	
No	24	43.2%	22	30.9%	

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. [1]Firms were characterized as compliant if they were in San Francisco and offered paid parental or family leave to any employees that a) included fathers; b) provided at least 30% wage replacement for both mothers and fathers; and c) covered at least six weeks for both mothers and fathers. [2]Includes leave offered to all or some employees. [3]Low-wage industries include accommodation and food services and selected retail. [4]Chain defined as having >1 establishment per firm. P-values from weighted logit models.

PPLO by employer characteristics (not shown). Overall, the offer prevalence in San Francisco was lowest among low-wage employers, with still only 67% offering paid leave in 2018 post-PPLO.

4.2.2. Changes by baseline offering status

In Table 5, we distinguish between those employers that did versus those that did not offer any paid family or parental leave at baseline in 2016. We examine employer characteristics that were associated with new paid leave policies among employers that did not offer in 2016, and with expanded paid leave policies among employers that did offer in 2016. Across all employers with no baseline policy, we find that PPLO was associated with substantial increases in the percentage of employers offering new paid leave policies in San Francisco versus surrounding Bay Area counties (40 percentage points, $p < 0.05$).

In subgroup analyses, the effects of PPLO on employers without an existing paid leave policy in 2016 appear to have been fairly consistent across strata of employer characteristics. The relationship was more pronounced in non-low-wage employers (48 percentage points, $p < 0.05$), but the difference by wage level was not statistically significant in our sample.

We additionally examined the impact of PPLO among employers that already offered paid leave in 2016 and find that, overall, employers in San Francisco were marginally more likely to expand their existing policies than employers in surrounding Bay Area counties (17 percentage points, $p < 0.10$) (Table 5). This difference was larger among low-wage employers (48 percentage points, $p < 0.05$), but again the difference in effect size by wage level is not statistically significant. Employers that do not employ a high share of female workers (29 percentage points, $p < 0.05$) and employers with a high share of new workers (38 percentage points, $p < 0.10$) in San Francisco were more likely to expand an existing policy.

4.3. Impact on employers

4.3.1. Employers that expanded or implemented new policies

Of San Francisco employers that expanded or implemented new policies, 9.2% raised prices (Fig. 1); this was significantly more common in low-wage industries (26.7% vs. 3.6% in non-low wage industries, $p < 0.05$; Appendix Table A2; Appendix Figure A3). Relatively few employers (9.6%) reported making changes in employee compensation or hiring decisions. The most common compensation change reported overall was converting other leave time to parental leave (7.8%). Notably, not a single respondent reported reducing paid leave benefits for non-parents or decreasing or delaying pay raises or bonuses.

4.3.2. Support for PPLO among covered employers

Overall, 82.2% of employers covered by PPLO (i.e., private employers with at least 20 employees) supported or strongly supported PPLO (Fig. 2); this did not vary significantly by employer characteristics (Appendix Table A3; Appendix Figure A4). Just under half of employers (43.4%) reported that they would be more supportive of PPLO if it were funded by a payroll tax (like the statewide PFL program) rather than an employer mandate. Again, this did not vary by employer characteristics.

4.3.3. Difficulty complying with PPLO among covered employers

Approximately half (53.1%) of employers reported any difficulty with PPLO (Fig. 3); this was somewhat higher among employers with a high share of part-time workers (Appendix Table A3; Appendix Figure A4). The most commonly reported was difficulty administratively complying (42.8%), followed by difficulty understanding responsibilities (39.2%), and difficulty understanding legal requirements (38.6%).

4.3.4. Effects of complying with PPLO

The vast majority of employers covered by PPLO reported no change in profitability (91.6%), productivity (87.3%), employee retention (82.5%), customer service (91.3%), or employee morale (70.6%) (Fig. 4; Appendix Table A4). Reported changes in employee morale were wholly positive, with 29.4% reporting better employee morale; not a single employer reported worse employee morale in response to PPLO. Similarly, very few employers reported worse customer service (0.5%), employee retention (0.6%), or productivity (2.9%). Among those reporting any change in profitability, responses were more evenly split between better (2.4%) and worse (6.0%). These results remained relatively stable across employer characteristics; however, chain restaurants were significantly more likely to report improvements in employee morale (36.9% vs. 18.8% in non-chain restaurants, $p < 0.05$). These results did not change after adjusting for employer characteristics (Appendix Figure A5).

Table 4
Paid family/parental leave offer rates, by year (N = 285).

	San Francisco offer rate, weighted % [95% CI]					Non-San Francisco offer rate, weighted % [95% CI]					DD (SF vs. non-SF)			
Characteristics	2016, weighted %	2018, weighted %	Adjusted difference [95% CI]		p-value	2016, weighted %	2018, weighted %	Adjusted difference [95% CI]		p-value	Adjusted difference-in-difference	Cluster p-value	R^2	N
All firms	0.45	0.79	0.34	[0.26–0.43]	***	0.32	0.47	0.15	[0.09–0.21]	***	0.20	*	0.1	285
Firm size														
20–99 employees	0.45	0.74	0.29	[0.17–0.41]	***	0.29	0.43	0.14	[0.07–0.22]	**	0.15	*	0.1	139
100+ employees	0.44	0.84	0.40	[0.28–0.52]	***	0.38	0.54	0.16	[0.06–0.25]	**	0.24	+	0.2	146
Industry														
Low-wage[1]	0.33	0.67	0.31	[0.15–0.48]	***	0.25	0.46	0.21	[0.09–0.33]	**	0.10	*	0.2	86
Non-low wage	0.49	0.83	0.35	[0.25–0.45]	***	0.36	0.48	0.12	[0.05–0.19]	**	0.23	+	0.2	199
Part time share														
>75th percentile	0.52	0.89	0.37	[0.15–0.59]	**	0.27	0.43	0.16	[0.03–0.28]	*	0.22	+	0.2	65
<=75th percentile	0.43	0.77	0.34	[0.25–0.43]	***	0.34	0.49	0.15	[0.07–0.22]	***	0.19	+	0.2	220
Female share														
>75th percentile	0.43	0.71	0.30	[0.12–0.48]	**	0.39	0.51	0.13	[-0.01-0.27]	+	0.17	+	0.2	57
<= 75th percentile	0.45	0.81	0.36	[0.26–0.46]	***	0.30	0.46	0.15	[0.09–0.22]	***	0.20	*	0.2	228
Share new (hired in past year)														
>75th percentile	0.67	0.87	0.20	[0.04–0.37]	*	0.31	0.47	0.17	[0.03–0.30]	*	0.04		0.3	70
<= 75th percentile	0.38	0.76	0.38	[0.28–0.48]	***	0.33	0.48	0.14	[0.07–0.21]	***	0.24	**	0.1	215
Chain of establishments[2]														
Yes	0.45	0.82	0.37	[0.26–0.48]	***	0.35	0.49	0.13	[0.05–0.21]	**	0.25	*	0.2	172
No	0.43	0.73	0.29	[0.15–0.44]	***	0.29	0.46	0.17	[0.07–0.26]	**	0.12		0.1	113

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. SF=San Francisco; CI = confidence interval; DD = difference-in-difference. [1]Low-wage industries include accommodation and food services and selected retail; [2]Chain defined as having >1 establishment per firm. Coefficients, confidence intervals, and p-values from weighted linear probability models using robust standard errors for within county comparisons and wild cluster bootstrapping to calculate DD p-values. Adjusted difference models control for employer characteristics (employer size, industry, part-time share, female share, share newly hired, and whether the establishment was part of a chain).

4.4. Experience with leave-taking employees

To further explore the above results indicating that the impact of PPLO was relatively neutral on employers, we examined the subset of employers who reported having an employee take parental leave in the past year. Thirty-eight percent of employers reported having an employee take parental leave in the past year; this did not differ by geography. Both male and female employees in San Francisco and surrounding counties used a variety of leave types–sick leave, vacation/personal time, maternity/disability leave (women only), and maternity/paternity/bonding leave–to care for their new child (Table 6). Employers in San Francisco were more likely to report that a female employee had used maternity/disability and maternity/bonding leave compared to employers elsewhere, though neither reached statistical significance ($p < 0.10$). In line with our results regarding the increase in paid leave offering in response to PPLO, employers in San Francisco were more likely to have provided pay to their employees, though this was only significant among female employees. Leave duration varied substantially between male and female employees, with women taking longer leaves on average than men. This was true across the Bay Area, though women in San Francisco were more likely to have taken 24 weeks or longer than women in surrounding counties (36.2% vs. 13.3%, $p < 0.10$), and no San Francisco employer described a female employee taking six weeks or less. Employees in San Francisco received pay for a higher percentage of their leaves than did employees elsewhere.

Across all groups, the most common way employers covered work for a leave-taking employee was by temporarily assigning the work to other employees, though this was less common for men in San Francisco compared to elsewhere (66.5% vs. 85.7%, $p < 0.10$). About one-third of cases reported that arranging coverage was "somewhat difficult"; a larger share (approximately 40% across all groups) reported that arranging coverage was "a little difficult" or "not difficult at all." Relatively few employers reported difficulty covering the costs associated with paid leave.

As a sensitivity analysis we also analyzed the impact of new paid leave policies and of complying with PPLO, comparing the sub-sample of employers that experienced a recent leave versus those that did not experience a leave (not shown). Employers that experienced a recent leave were no more likely to report changes in compensation, support for or difficulty with PPLO, or changes in operational outcomes than employers that did not experience a leave.

4.5. Cost analysis

To further interpret employer perspectives on PPLO costs, we calculated the cost of the employer mandate in three different scenarios (Table 7). The actual costs depend on specific circumstances, so we depict representative cases to illustrate the range of costs. Column (1) shows an upper bound example: an employee in 2018 earning the maximum eligible salary (approximately $2209/week in 2018, which translates to $55/hour for a full-time worker). Over six weeks of leave, that results in total pay of $13,254. At the 2018 state PFL replacement rate of 60 percent, the employer would be responsible for 40% of this amount, or $5302. This is an upper bound but would nevertheless be a substantial new cost for the employer. We note though that if this is the employer's average wage then the cost of this will be only a small

Table 5
Paid leave policy changes, by baseline offer (N = 297).

Characteristics	Among firms with NO baseline (2016) policy, Proportion with New Policy[1] (N = 183)						Among firms WITH baseline (2016) policy, Proportion that Expanded[2] (N = 114)					
	SF, weighted %	Non-SF, weighted %	Adjusted difference	Cluster p-value	R^2	N	SF, weighted %	Non-SF, weighted %	Adjusted difference	Cluster p-value	R^2	N
All employers	**0.62**	**0.22**	**0.40**	*	**0.2**	**177**	**0.33**	**0.18**	**0.17**	+	0.1	108
Employer size												
20–99 employees	0.53	0.20	0.33	+	0.12	91	0.30	0.14	0.15		0.1	48
100+ employees	0.72	0.26	0.47	*	0.2	86	0.36	0.23	0.20		0.2	60
Industry												
Low-wage[3]	0.51	0.28	0.14		0.26	61	0.36	0.13	0.48	*	0.4	25
Non-low wage	0.67	0.19	0.48	*	0.3	116	0.32	0.20	0.14		0.1	83
High part time share												
>75th percentile	0.77	0.21	0.52	+	0.39	42	0.47	0.18	0.02		0.5	23
<=75th percentile	0.59	0.23	0.36	*	0.2	135	0.31	0.19	0.13		0.1	85
Female share												
>75th percentile	0.50	0.21	0.43	*	0.39	34	0.09	0.24	−0.25		0.5	23
<= 75th percentile	0.66	0.22	0.42	*	0.2	143	0.42	0.14	0.29	*	0.2	85
Share new (hired in past year)												
>75th percentile	0.62	0.24	0.38	+	0.26	38	0.45	0.17	0.38	+	0.4	32
<= 75th percentile	0.62	0.22	0.43	**	0.2	139	0.29	0.19	0.09		0.1	76
Chain of establishments[4]												
Yes	0.67	0.21	0.48	*	0.3	103	0.34	0.24	0.09		0.1	69
No	0.53	0.23	0.29	+	0.12	74	0.34	0.11	0.12		0.2	39

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. SF=San Francisco; CI = confidence interval. [1]New policy includes implementing a new policy or starting to provide pay; [2]Expansion defined as increasing wage replacement rate, increasing duration of paid leave, or expanding eligibility; [3]Low-wage industries include accommodation and food services and selected retail; [4]Chain defined as having >1 establishment per employer. Employers that reported implementing a new paid parental leave policy or starting to provide pay were characterized as having a "new policy"; employers that expanded eligibility to employees who did not previously qualify for paid parental leave or increased the wage replacement rate or leave duration were characterized as having an "expanded policy"; employers that did not make any of these changes but reported currently offering paid leave were characterized as having an "existing policy"; and employers that did not make any changes and reported no current paid leave policy were characterized as having "no policy". Coefficients, confidence intervals, and p-values from weighted linear probability models using wild cluster bootstrapping to account for county-level clustering. Adjusted difference models control for employer characteristics (employer size, industry, part-time share, female share, share newly hired, and whether the establishment was part of a chain).

percentage of payroll, since on average 2.5% of workers are expected to take leave in any given year (according to estimates based on our survey). If one out of 40 workers paid at this $55/hour wage takes leave in a year, this averages out to a cost of 0.12% of payroll, or the equivalent of raising compensation for all of these workers by $0.06/hour.

At the other extreme of the cost distribution are employers hiring minimum wage workers. The San Francisco minimum wage is $15/hour as of July 1, 2018, thus column (2) shows similar calculations for a full-time worker earning $15/hour, for whom the employer cost of PPLO-mandated leave pay would be $1440 in 2018. At this average wage this is equivalent to raising the minimum wage workers' wages by only $0.02/hour (0.12% of payroll).

Finally, starting in 2018 the state PFL contribution rose to 70% replacement rate for workers earning up to one-third of the statewide average weekly wage, which at a $15 minimum wage is equivalent to a part-time worker with less than 26.8 h per week (i.e., earning up to $402/week). The employer's cost for this worker's leave would be 30% of wages, or $724, which at this average wage would be 0.06% of payroll, equivalent to an average raise of $0.01 for these minimum wage workers. Based on these calculations, it is not surprising that few employers reported reduced profitability as a result of the PPLO mandate.

5. Discussion

Our study provides suggestive evidence that San Francisco's PPLO expanded workers' access to paid parental leave through employers. Based on prior research that has shown a range of health benefits from increasing access to paid leave, PPLO has potentially important population health implications for low-income workers for whom partially-paid leave was financially unfeasible.

Both at baseline in 2016 and post-PPLO in 2018, paid leave access was lower among low-wage employers, consistent with our hypotheses. In these low-wage employers, paid leave access increased by 10 percentage points after PPLO took effect. Despite these gains, more than one-fifth of all San Francisco covered employers and one-third of low-wage employers did not offer paid parental leave at the time of our survey. Even more striking is the fact that almost half of San Francisco covered employers either did not offer any paid parental leave or offered parental leave that did not meet the minimum requirements of PPLO to provide at least 30% wage replacement for six weeks for both mothers and fathers. This non-compliance appears to be at least partially driven by difficulty understanding the legal requirements, which resulted in many employers not knowing whether or not they were covered. Consistent with our hypotheses, non-compliance was lower among larger firms who likely had more sophisticated human resources departments and more experience with eligible employees. The low post-PPLO paid leave offering in San Francisco's low-wage employers (accommodation and food services and selected retail) merits further research. Workers in these jobs may already face a range of job-related stressors that impact their health during pregnancy (Mozurkewich et al.,

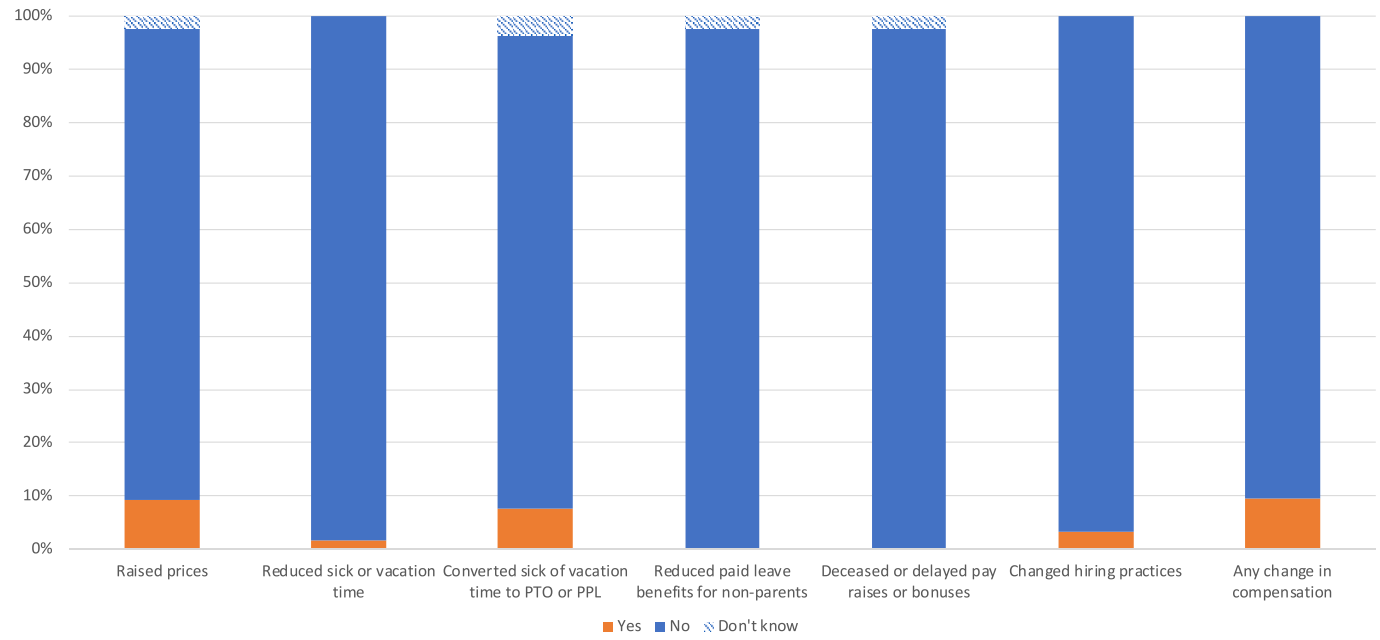

Fig. 1. Employer-reported PPLO-induced changes in compensation or prices, among San Francisco firms with new or expanded paid leave policies (N = 68).
Source: Bay Area Parental Leave Survey of 2018 Employers.
Notes: No firms reported reducing paid leave for non-parents or decreasing or delaying pay raises or bonuses. Any change in compensation includes reducing sick or vacation time, converting sick or vacation time to paid time off, or changing hiring practices.

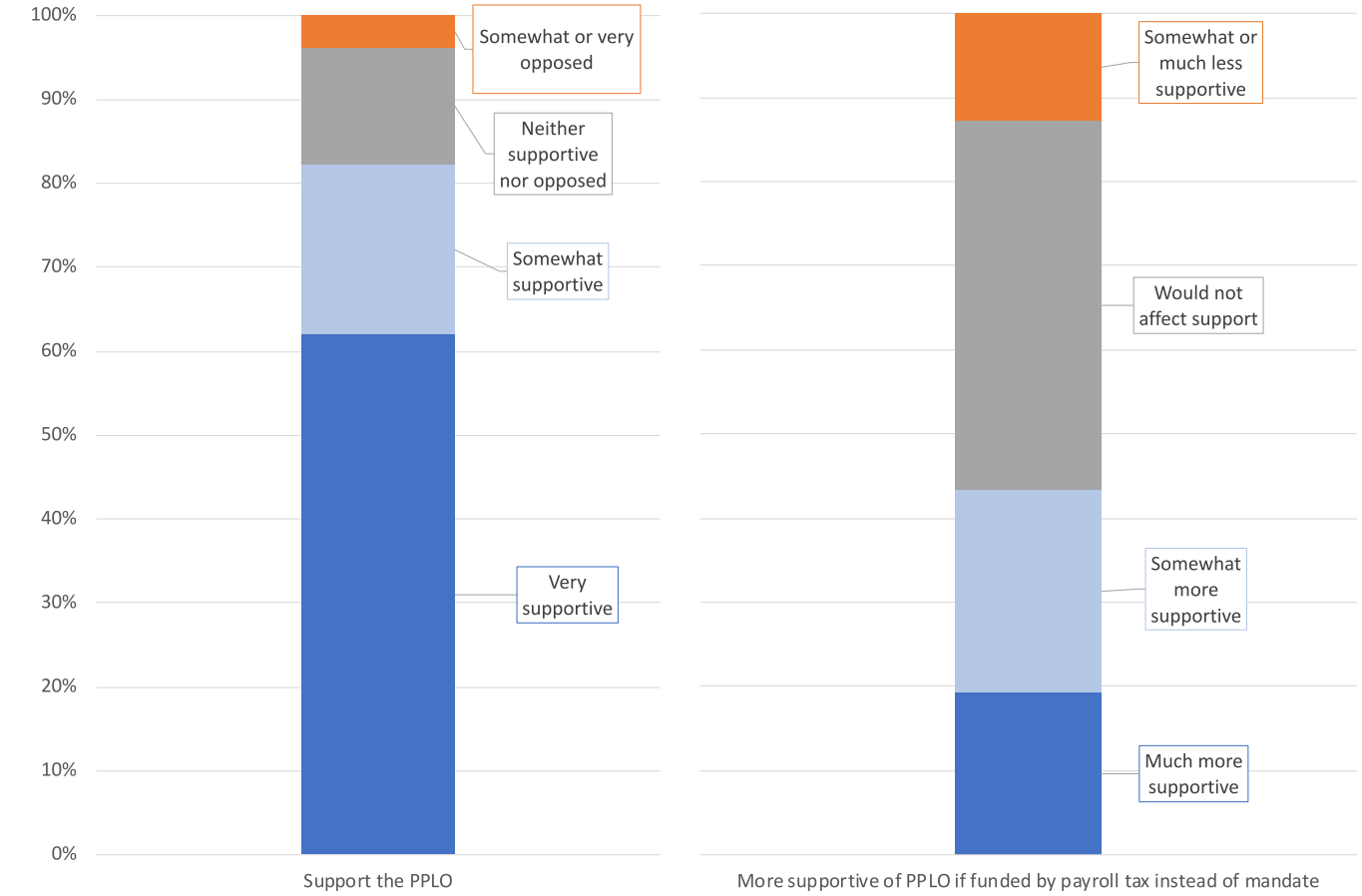

Fig. 2. Percentage of San Francisco firms reporting support for PPLO (N = 157).
Source: Bay Area Parental Leave Survey of 2018 Employers.
Notes: PPLO=SF Paid Parental Leave Ordinance.

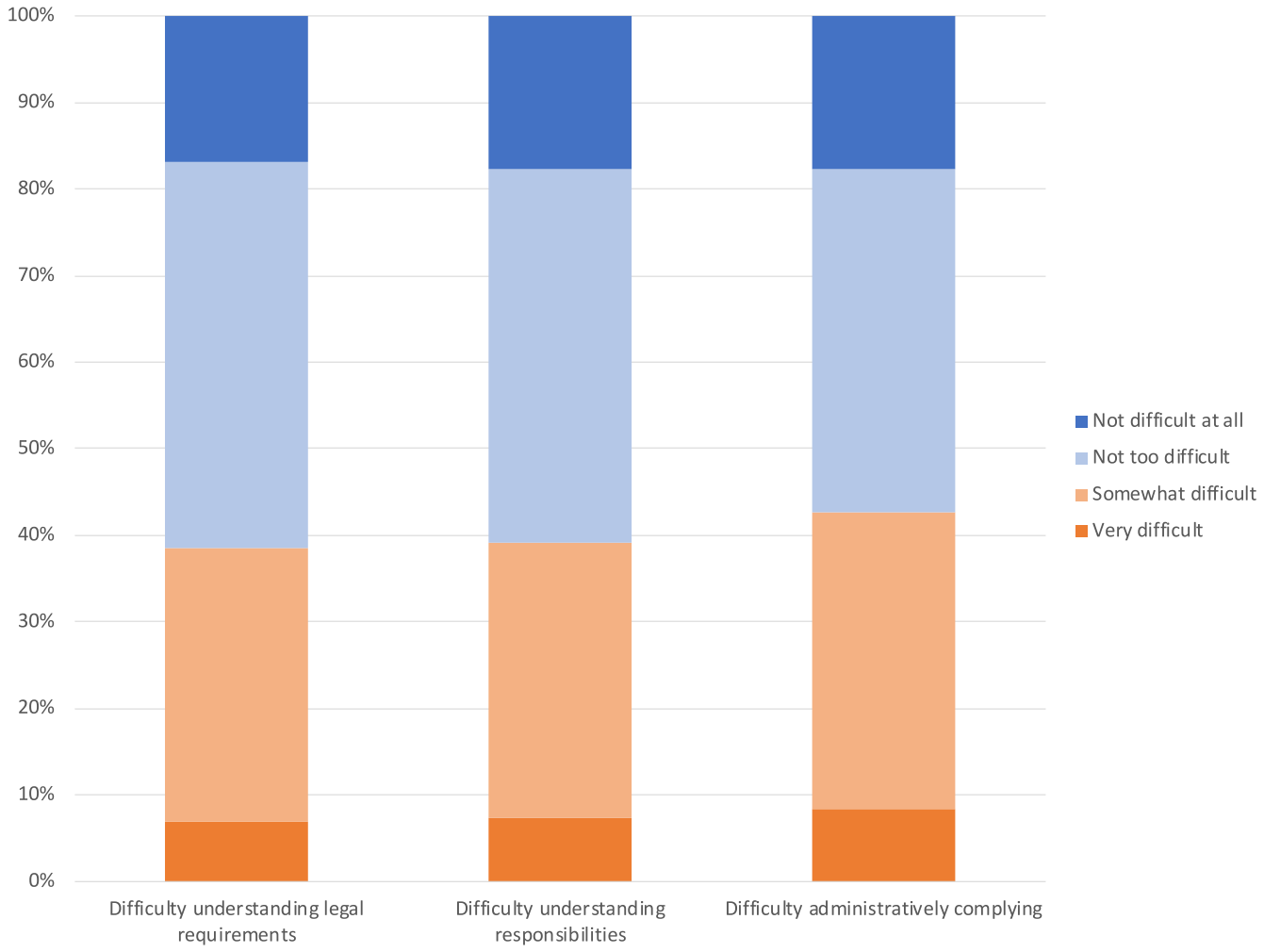

Fig. 3. Percentage of San Francisco firms reporting difficulty with PPLO (N = 157).
Source: Bay Area Parental Leave Survey of 2018 Employers.
Notes: PPLO=SF Paid Parental Leave Ordinance.

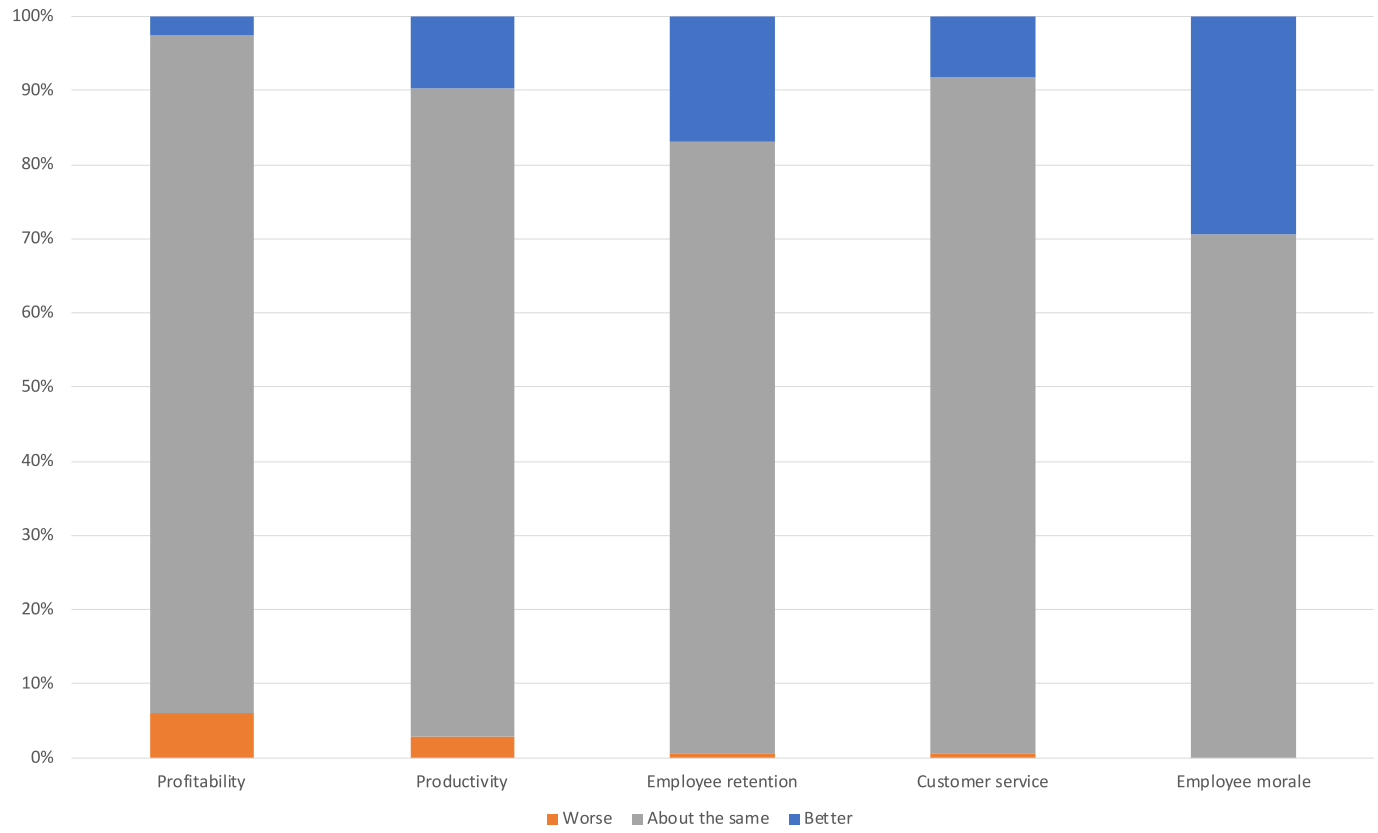

Fig. 4. Employer-reported PPLO-induced changes in profitability, productivity, employee retention, customer service, and employee morale, among San Francisco firms (N = 157).
Source: Bay Area Parental Leave Survey of 2018 Employers.
Notes: PPLO=SF Paid Parental Leave Ordinance.

2000; Palmer et al., 2013), making access to paid leave potentially even more important from a population health perspective. This also suggests a role for more robust educational outreach to these smaller and lower-wage employers.

Overall our results indicate that an unfunded employer mandate has the potential to significantly increase access to paid leave, though the complexity of San Francisco's version of the mandate may have blunted its intended effect. Consistent with prior research (Appelbaum & Milkman, 2011; Bartel et al., 2016, 2017), employers in San Francisco reported minimal negative impacts and high support for this policy, despite approximately half of employers having difficulty complying with the ordinance. This is also consistent with prior research on other employer mandates in San Francisco, such as the Paid Sick Leave Ordinance and Health Care Security Ordinance, which had only modest negative impacts and high support from employers (Colla et al., 2013, 2014). This has significance for paid leave expansions elsewhere, as San Francisco's particular policy design puts a much greater financial burden on employers than most existing or proposed state policies. Our examination of the subgroup of employers who recently had an employee take parental leave helps to clarify these findings. Similar to the study conducted by Small Business Majority (Small Business Majority & Center for American Progress, 2017), the most commonly used strategy for covering the work of a leave-taking employee was to temporarily reassign it to other employees. Most employers reported little difficulty both covering the work and the costs associated with paid leave. Surprisingly, the impact of and support for the policy were relatively similar across employer subgroups. We did not find support for our hypotheses that smaller and lower-wage employers would report more challenges and negative impacts, and commensurately lower support, as compared with their larger and higher-wage counterparts.

Our analysis of PPLO also indicated that the average employer costs of PPLO are low: on average, parental leave costs an employer 0.06%–0.12% of payroll, or $0.01 to $0.06/hour across all employees. However, with an employer mandate (as opposed to a payroll tax of the type that funds California's and most other states' PFL programs), this cost may in actuality fall differentially across employers, with some more likely to hire workers of childrearing age. Furthermore, smaller employers will have more variability across years in the percent of their employees taking leave at any given time, and thus may perceive a greater burden. Different employers will, of course, have different perceptions of the extent to which these amounts are a burdensome mandate or instead a benefit cost that they are willing to absorb (especially if their local competitors are paying for a similar benefit). The potential cost to employers may be reduced though to the extent that they take advantage of two provisions in the state and local laws. The statewide PFL law allows employers to require an employee to use up to two weeks of accrued vacation before PFL begins. PPLO further allows employers to apply up to two weeks of the employee's accrued but unused vacation to offset the cost to them of the supplemental wage replacement. Hence, our estimates provide an upper bound of what employers may actually be required to pay.

Despite its requirement that covered employers self-finance the mandated paid parental leave, support for PPLO was high among the employers surveyed, even among small employers and those in low-wage industries who we had predicted would be less supportive. That said, many employers would prefer to spread the costs of paid leave more evenly: almost half of survey respondents said that their support for PPLO would increase if it were a social insurance model funded by a payroll tax increase, rather than an unfunded mandate.

While very few employers overall reported changing hiring practices after adding or expanding paid leave offerings, approximately one in 17 low-wage employers did report such a change. Our survey did not

Table 6
Experience with employee taking parental leave, by geography and gender of leave-taker (N = 130[1]).

	Female employee, weighted %			Male employee, weighted %		
	SF (N = 46)	Non-SF (N = 50)	Cluster p-value	SF (N = 35)	Non-SF (N = 53)	Cluster p-value
Which of the following types of leave did they take to care for their new child?[2]						
Sick leave	41.6%	34.7%		18.5%	22.5%	
Vacation/ personal time	57.0%	49.8%		38.9%	49.2%	
Maternity/ disability leave	84.9%	70.7%	+	–	–	
Maternity/ paternity/ bonding leave (including PFL)	72.8%	53.8%	+	68.1%	71.1%	
During the leave, did the employee receive any pay from the company?						
Yes, full pay from the company for the entire leave	10.5%	7.9%		38.4%	25.7%	
Yes, partial pay from the company	68.0%	40.0%	*	41.3%	25.6%	
No pay from the company	19.3%	40.7%		14.1%	44.2%	
Unsure	2.1%	11.4%	+	6.2%	4.5%	
Was the paid leave coordinated with the state's PFL program?						
No	10.5%	14.7%		34.8%	23.7%	
Yes	89.5%	85.3%		65.2%	76.3%	
Total duration of leave taken (weeks)						
<6	0.0%	7.0%		46.0%	43.9%	
6	0.0%	3.2%		15.6%	24.1%	
7-11	4.5%	7.1%		6.7%	5.4%	
12-15	22.0%	25.3%		12.9%	11.9%	
16-23	23.9%	30.6%		0.0%	1.1%	
24+	36.2%	13.3%	+	0.0%	0.0%	
Unable to estimate	13.4%	13.6%		18.9%	13.5%	
Percent of weeks taken that were fully paid						
0	6.5%	15.4%		0.0%	28.0%	
1–25%	17.3%	21.0%		5.7%	4.2%	
>25% & <100%	30.8%	6.7%	*	11.3%	12.1%	
100%	20.4%	25.9%		72.8%	47.1%	+
Unable to estimate	25.0%	31.1%		10.2%	8.5%	
How was the work covered while employee was on leave?[3]						
Temporarily assign the work to other employees	74.3%	67.3%		66.5%	85.7%	+
Hire an outside temporary replacement	13.6%	22.1%	*	2.9%	9.4%	
Hire a permanent replacement	0.0%	9.3%		0.0%	0.0%	
Put the work on hold until they returned from leave	4.9%	7.0%		9.6%	11.5%	
Have the employee perform some work while on leave	0.0%	8.8%		5.7%	4.1%	
How difficult was it for your company to arrange this coverage?						
Not difficult at all	14.3%	14.8%		9.6%	22.3%	+
A little difficult	24.0%	23.3%		27.6%	21.5%	
Somewhat difficult	31.6%	29.6%		32.3%	31.5%	
Difficult	11.1%	9.2%		1.9%	9.4%	
Very difficult	0.0%	3.1%		3.8%	4.0%	
Missing	19.1%	20.0%		24.8%	11.3%	+
How difficult was it for your company to cover the costs associated with paid leave?						
Not difficult at all	56.2%	43.1%		39.1%	50.9%	
A little difficult	14.7%	30.9%		15.6%	15.5%	
Somewhat difficult	19.4%	7.5%		20.6%	9.9%	
Difficult	5.5%	9.2%		0.0%	6.5%	
Very difficult	0.0%	0.0%		0.0%	2.9%	
Missing	4.2%	9.2%		24.8%	14.3%	+

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. SF=San Francisco; PFL=Paid Family Leave. [1]54 firms reported both male and female employees' leave-taking. [2]Respondents reported all forms of leave taken. [3]Respondents reported all ways the work was covered while employee was on leave. P-values from weighted logit models using wild cluster bootstrapping to account for county-level clustering.

Table 7
Estimated costs of 6-week bonding leave, 3 employee examples.

	2018 Maximum salary for benefits ($2209/week)[1]	2018 SF Minimum Wage (full time)[2]	2018 SF Minimum Wage (part time)[3]
Assumed hours/ week	40	40	26.8
Wage ($/hour)	55.23	15	15
Total salary over 6 week leave	$ 13,254.00	$ 3600.00	$ 2412.00
Employer's responsibility (replacement rate)	40%	40%	30%
Employer cost	$5301.60	$1440.00	$723.60
Leave cost as % of total payroll[4]	0.12%	0.12%	0.06%
Leave cost/hour, spread across all employees	$0.06	$0.02	$0.01

Note. [1]2018 Maximum salary at which benefits are capped is at $2209/week; [2]SF Minimum wage will be $15/hour as of 7/1/18; [3]Beginning 1/1/18, California AB908 increased the state replacement rate to 70% for workers earning up to 1/3 of the statewide average weekly wage (SAWW), thus reducing employer responsibility to 30% for those workers. The 2018 California SAWW was $1207, 1/3 of which is $402. At the minimum wage of $15/hour that is equivalent to working 26.8 h/week, or 67% of a 40-h week; [4]Assume one out of 40 takes leave per year, based on employer survey.

inquire about the nature of those changes, but previous literature suggests that employees perceived as most likely to use a policy may face hiring discrimination. One study found that California's PFL policy increased unemployment among young women, possibly due to discrimination (Das & Polachek, 2015). Arguably, policies that encourage equal take-up by fathers and mothers could reduce this risk, and PPLO contains two policy features that have been shown to encourage take-up among men: high wage replacement and non-transferrable leave (Hegewisch & Gornick, 2011). Two additional policy adjustments could further minimize incentives toward hiring discrimination: 1) expanding paid leave to cover family caregivers, as all existing state policies do, so new parents are not targeted; and 2) reducing the financial burden on individual employers through a social insurance financing structure (Rossin-Slater, 2017). The International Labour Organization (ILO) of the United Nations, which sets standards

for providing maternity leave as a basic human right at a minimum of 14 weeks at the rate of at least two-thirds pay, recommends that employers not be "individually liable for the cost of maternity benefits payable to women employed by them" precisely because of this risk of potential discrimination against women in the labor market (Addati et al., 2014, p. 204). However, the empirical impacts of such policy adjustments would need future study when implemented in an actual setting such as San Francisco.

Future research should also address limitations and further explore nuances raised by this early look at PPLO. We only sampled Bay Area employers, and only in a time of low unemployment; it will be important to study PPLO-like policies in times and places with weaker economies and/or conservative political tendencies. While none of the surrounding Bay Area counties we included in our control group experienced any relevant policy changes during the study period, a 2017 campaign to promote the statewide Paid Family Leave program may have increased leave offers across the state, potentially leading us to underestimate the impact of the PPLO. More generally, we cannot rule out the possibility of omitted variable bias due to other differential changes between San Francisco and surrounding counties during this period. We believe this type of omitted variables bias is likely to be minimal though, because other leave-affecting policies did not change differentially, and we do not expect major natural changes in hiring patterns, endogenous migration, or the population of eligible employees in San Francisco versus surrounding counties over a one or two-year period. Although detailed annual county-level employment data are limited, we attempted to identify differential changes that could have biased our observed effects using a variety of available data sources (Appendix Table A5). The number of private-sector firms, overall employment, employment among workers of reproductive age, and the percent of employed new parents who travel to another county for work each show only minor changes over this period, with negligible differences in these changes in San Francisco as compared to surrounding counties. Still, our results should be interpreted as correlations that provide suggestive, rather than definitive, evidence of a causal effect. We also cannot rule out external validity biases due to selection out of our sampling frame of those firms that may have gone out of business, though again the similar rates across counties of separations and new hires suggest such biases may be modest at most. Finally, our sample size was small, preventing us from detecting small-to modest-sized effects. A larger future survey with an expanded questionnaire could build on these findings to more deeply explore subgroup effects; employer attitudes, including why some employers are apparently non-compliant; hiring changes that may be discriminatory; and other responses to the mandate.

Like all retrospective studies, there is a risk of misclassifying changes in paid leave policies due to poor recall. We took several steps to minimize this concern, including surveying HR managers whose job it is to track benefits changes; focusing on a short recall window; and using clear, prompted questions that have been shown to improve accuracy in surveys of occupational conditions and, most critically, to act as an effective aid to recall that equalizes reporting across groups (Teschke et al., 2000). Still, it is possible that respondents did not accurately report changes in leave offering, which would lead to misclassification in the pre-PPLO period. It is hard to predict whether this would cause under-estimation or over-estimation of overall leave-taking changes, but if recall bias is similar in San Francisco and surrounding counties then this should not bias the DD results. If instead San Francisco employers are hyperaware of policy changes in the wake of PPLO and report changes more accurately, our results could be biased in unknown direction. While we cannot test this directly, San Francisco employers and those in surrounding counties were equally likely to select "don't know" to questions about policy changes, suggesting similar confidence in recall. Finally, our study is an early look at the effects of the PPLO, as interviews were conducted in mid-2018, when the smallest employers had been covered for less than one year and few had direct experience with an employee taking leave during that period. Future research, conducted after employers have more experience with the law, will be important to see if findings are replicated.

5.1. Conclusion

Access to paid leave is increasingly recognized as an important social determinant of health, yet little research explores how these policies operate on the ground, including employer responses. Importantly, many policy efforts around expanding paid leave aim to improve health, but employees may not universally benefit from these policy changes. In fact, an early examination of PPLO utilization shows little change in leave-taking, potentially due to low awareness of the policy among lower income households (Goodman et al., 2020). As more cities and states implement paid leave policies, the population health community should study alternative policy approaches to understand their implications for health equity and to identify the most promising opportunities for reducing disparities in access.

Declaration of competing interest

None.

CRediT authorship contribution statement

Julia M. Goodman: Conceptualization, Methodology, Software, Writing - original draft, Writing - review & editing, Visualization, Funding acquisition. **Holly Elser:** Software, Data curation, Writing - review & editing. **William H. Dow:** Conceptualization, Methodology, Formal analysis, Writing - review & editing, Funding acquisition.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssmph.2020.100627.

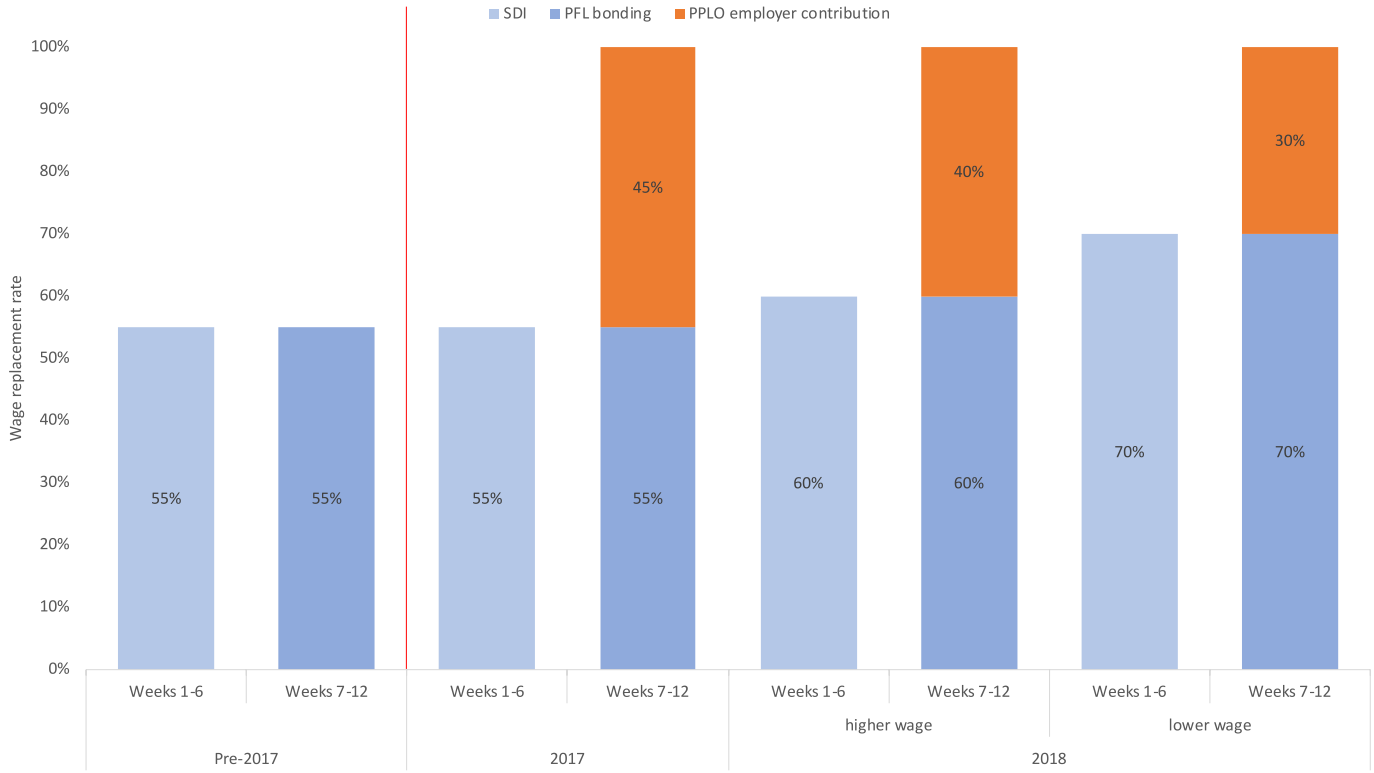

Fig. A1. Family leave compensation and replacement rate for 12-week parental leave.
Notes: SDI=State Disability Insurance; PFL=CA Paid Family Leave; PPLO=SF Paid Parental Leave Ordinance. Figure presented for birth mother with normal vaginal delivery (providing six weeks of CA SDI, versus eight weeks for women who deliver via Cesarean). "Higher wage" includes workers earning above 1/3 statewide average weekly wages; "lower wage" includes workers earning below that threshold. Employers are required to provide supplemental compensation such that the total amount employees receive (combining PPLO and SDI/PFL) equals 100% of their gross weekly wage, subject to a cap (Dow et al., 2017).

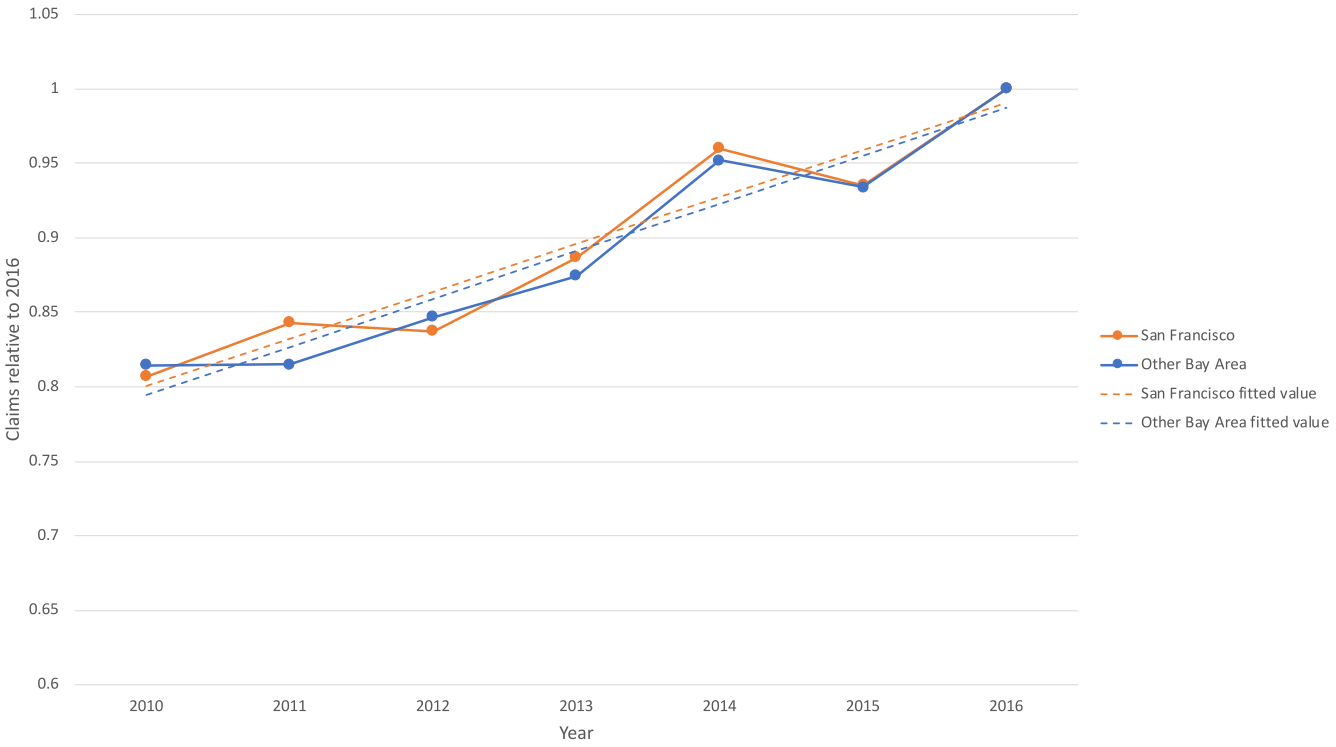

Fig. A2. Pre-PPLO paid parental leave claims in San Francisco and surrounding counties.
Source: Administrative claims for PFL bonding 2010–2016, CA Employment Development Department
Notes: PFL=CA Paid Family Leave; PPLO=SF Paid Parental Leave Ordinance. Claims include all PFL claims for the purpose of bonding made by males or females in San Francisco between 2010 and 2016 Claims for San Francisco (SF) and non-SF were each normalized to be shown relative to their 2016 values. Fitted values based on linear regressions of annual claims (relative to 2016 claims) as a linear function of continuous year, stratified by SF (vs non-SF).

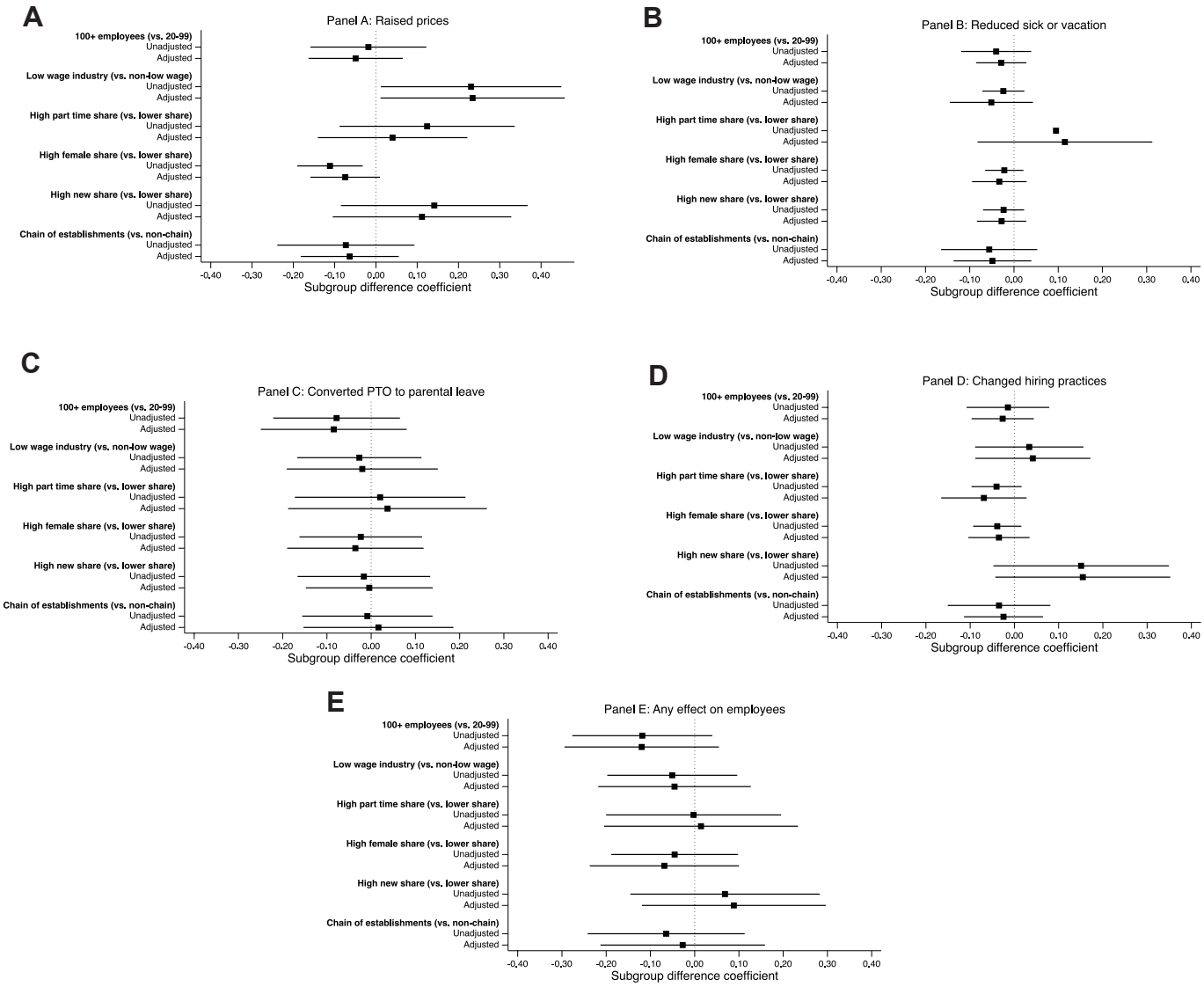

Fig. A3. a-e. Unadjusted and adjusted differences by employer characteristic in the proportion reporting each type of change, among San Francisco employers with new or expanded paid leave policies (N = 68).

Source: Bay Area Parental Leave Survey of 2018 Employers

Notes: Low-wage industries include accommodation and food services and selected retail; chain defined as having >1 establishment per employer. Coefficients and robust 95% confidence intervals from weighted linear probability models. E.g., the "subgroup difference coefficient" in the top line of Panel A indicates the proportion of firms in the size 100+ group that raised prices, minus the proportion of firms in the size 20–99 group that raised prices. Adjusted difference models report the same effect, controlling for all other employer characteristics listed in the figure.

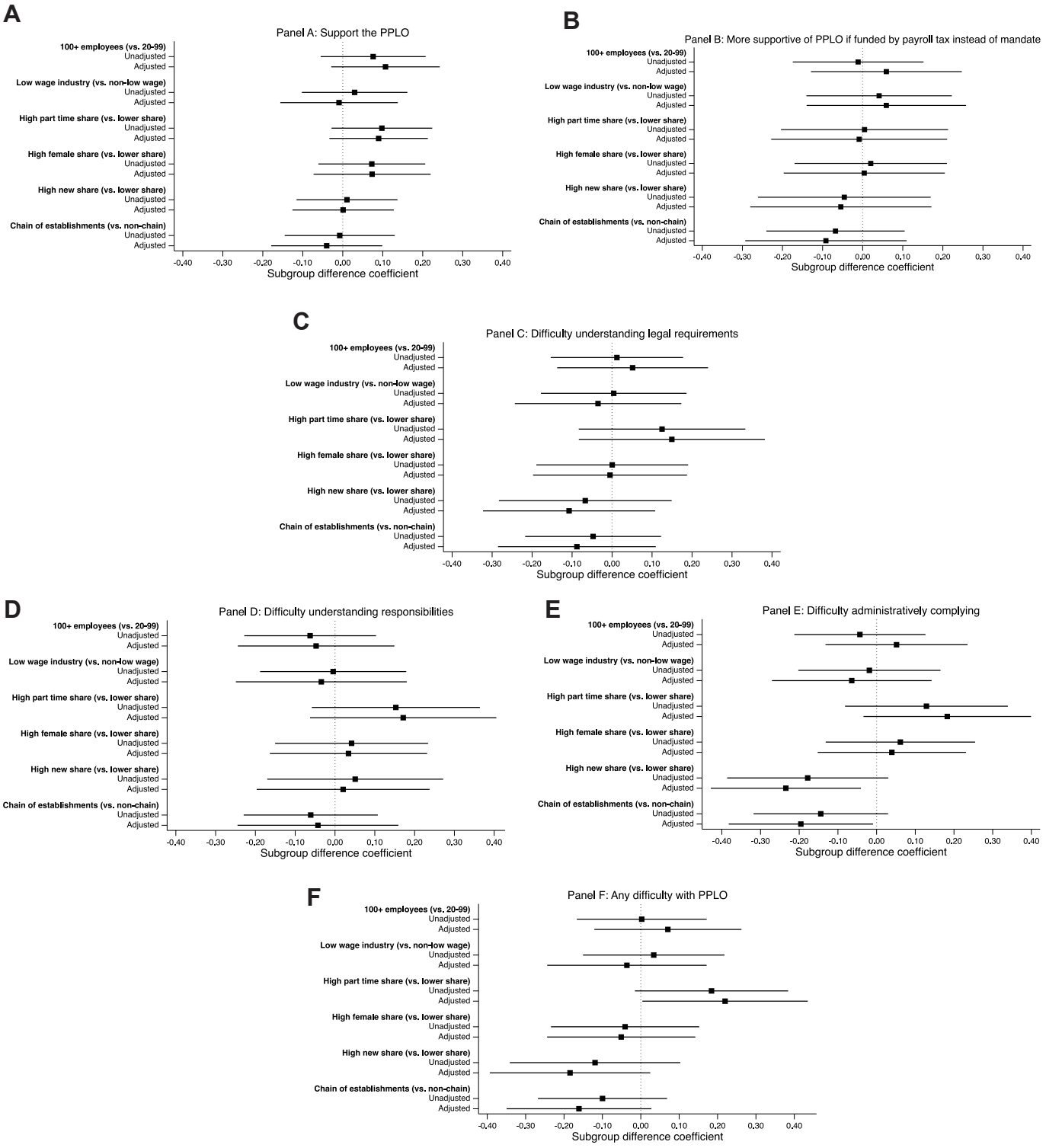

Fig. A4. a-f. Unadjusted and adjusted differences by employer characteristic in the proportion reporting each type of support for and difficulty with PPLO, among San Francisco employers (N = 157).

Source: Bay Area Parental Leave Survey of 2018 Employers

Notes: Low-wage industries include accommodation and food services and selected retail; chain defined as having >1 establishment per employer. Coefficients and robust 95% confidence intervals from weighted linear probability models. E.g., the "subgroup difference coefficient" in the top line of Panel A indicates the proportion of firms in the size 100+ group that support the PPLO, minus the proportion of firms in the size 20–99 group that support the PPLO. Adjusted difference models report the same effect, controlling for all other employer characteristics listed in the figure.

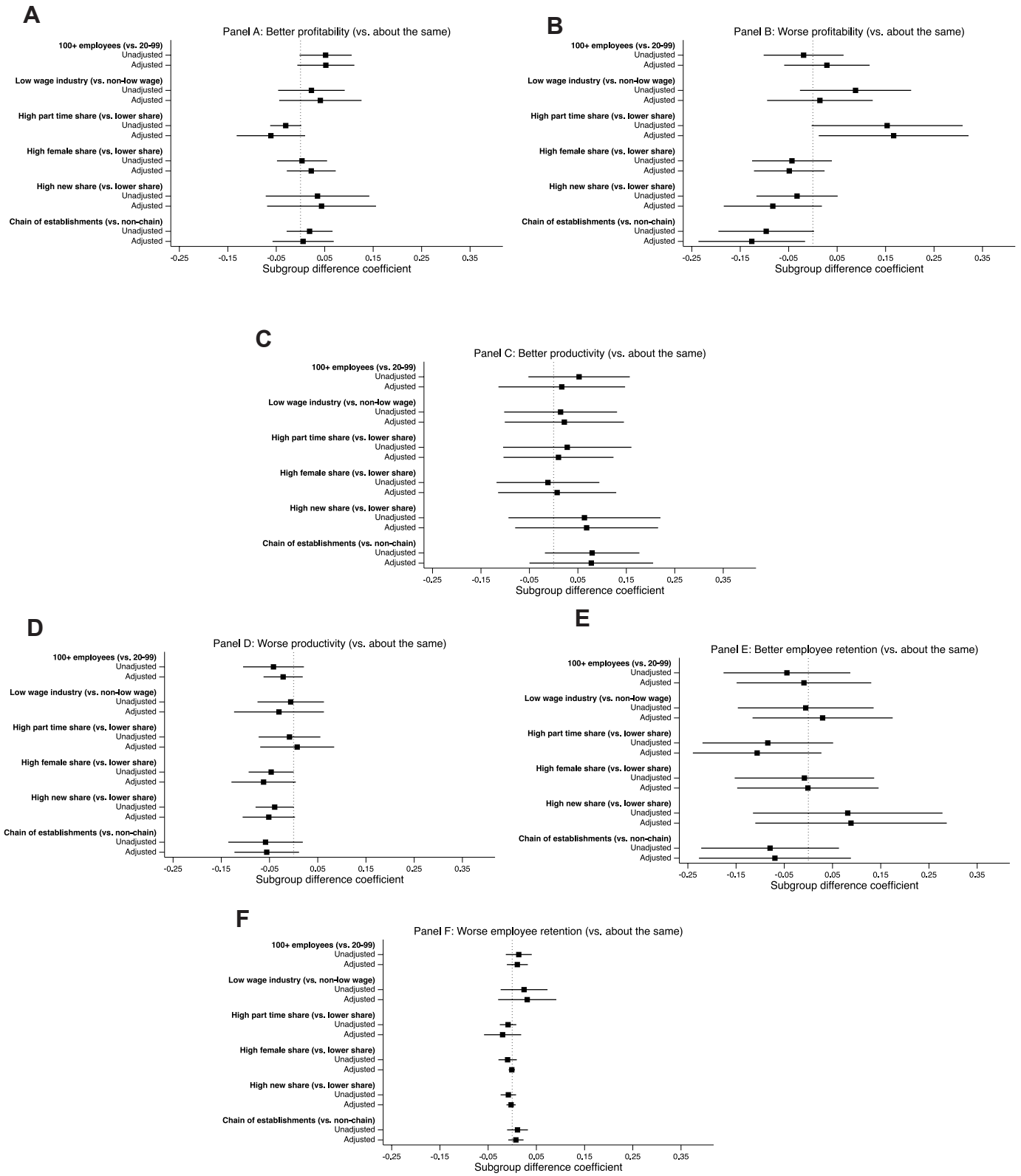

Fig. A5. a-i. Unadjusted and adjusted differences by employer characteristic in the proportion reporting each outcome, among San Francisco employers (N = 142).
Source: Bay Area Parental Leave Survey of 2018 Employers
Notes: Low-wage industries include accommodation and food services and selected retail; chain defined as having >1 establishment per employer. Coefficients and robust 95% confidence intervals from weighted linear probability models. E.g., the "subgroup difference coefficient" in the top line of Panel A indicates the proportion of firms in the size 100+ group that report better profitability, minus the proportion of firms in the size 20–99 group that report better profitability. Adjusted difference models report the same effect, controlling for all other employer characteristics listed in the figure.

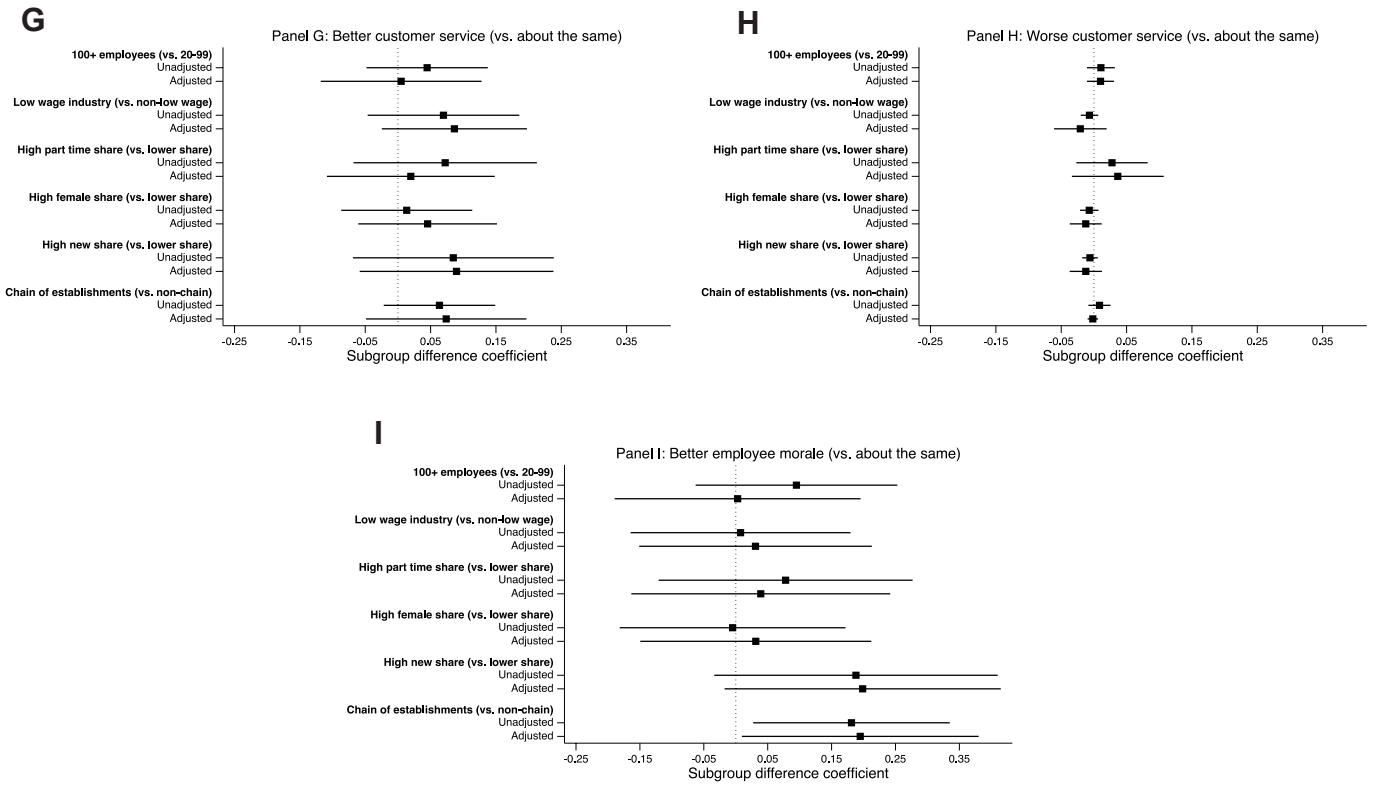

Fig. A5. (*continued*).

Appendix Table A1
Firm characteristics, by industry wage level (N = 297).

Characteristics	Proportion of Firms (N, weighted %)				
	Non-low wage		Low-wage[1]		p-value
All firms	208	72.2%	89	27.8%	
Firm characteristics					
Firm size					
20-34	38	22.7%	18	22.6%	
35-49	30	17.9%	9	11.2%	
50-99	31	17.7%	15	17.6%	
100-499	72	28.1%	25	27.2%	
500+	37	13.7%	22	21.4%	
Part time share					***
>75th percentile	26	11.4%	40	45.1%	
<=75th percentile	179	88.6%	47	54.9%	
Female share					
>75th percentile	46	23.6%	12	14.8%	
<= 75th percentile	157	76.4%	75	85.2%	
Share new (hired in past year)					*
>75th percentile	42	19.0%	29	33.8%	
<= 75th percentile	162	81.0%	58	66.2%	
Chain of establishments[2]					
Yes	123	55.2%	55	60.4%	
No	84	44.8%	33	39.6%	

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. SF=San Francisco. [1]Low-wage industries include accommodation and food services and selected retail.[2]Chain defined as having >1 establishment per firm. P-values from weighted logit and multinomial logit models.

Appendix Table A2
Unadjusted weighted percentage of firms reporting each type of change, among San Francisco firms with new or expanded paid leave policies (N = 68).

	Raised prices	Reduced sick or vacation time	Converted time	Decreased pay raises or bonuses	Changed hiring practices	Any of the changes in columns (2)–(5)[1]
	(1)	(2)	(3)	(4)	(5)	(6)
	Weighted %	Weighted %	Weighted %	Weighted %	Weighted %	Weighted %
Firm size						
20–99 employees	10.2%	0.0%	12.1%	0.0%	4.0%	16.1%
100+ employees (difference)	8.4%	4.0%	4.2%	0.0%	2.6%	4.2%
Industry						
Low-wage[2]	26.7%*	0.0%	5.8%	0.0%	5.8%	5.8%
Non-low wage	3.6%	2.4%	8.4%	0.0%	2.4%	10.8%
Part time share						
>75th percentile	19.4%	9.5%	9.5%	0.0%	0.0%	9.5%
<=75th percentile	7.0%	0.0%	7.5%	0.0%	4.0%	9.8%
Female share						
>75th percentile	0%**	0.0%	5.9%	0.0%	0.0%	5.9%
<= 75th percentile	11.1%	2.2%	8.2%	0.0%	3.9%	10.4%
Share new (hired in past year)						
>75th percentile	20.4%	0.0%	6.6%	0.0%	15.1%	15.1%
<= 75th percentile	6.3%	2.3%	8.2%	0.0%	0.0%	8.2%
Chain of establishments[3]						
Yes	7.0%	0.0%	7.6%	0.0%	2.1%	7.6%
No	14.2%	5.6%	8.4%	0.0%	5.6%	14.0%

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. [1]"Any change in compensation" includes firms that reduced sick or vacation time, converted time, decreased pay raises or bonuses, and/or changed hiring practices; [2]Low-wage industries include accommodation and food services and selected retail; [3]Chain defined as having >1 establishment per firm. p-values from weighted unadjusted linear probability models. Stars are for significance of comparisons of responses across firm categories.

Appendix Table A3
Unadjusted weighted percentage of firms reporting support for and difficulty with the PPLO, among San Francisco firms (N = 157).

	Support the PPLO	More supportive of PPLO if funded by payroll tax instead of mandate	Difficulty understanding legal requirements	Difficulty understanding responsibilities	Difficulty administratively complying	Any difficulty with PPLO[1]
	(1)	(2)	(3)	(4)	(5)	(6)
	Weighted %	Weighted %	Weighted %	Weighted %	Weighted %	Weighted %
Firm size						
20–99 employees	78.6%	43.9%	38.0%	42.2%	44.9%	53.0%
100+ employees	86.2%	42.8%	39.2%	36.0%	40.5%	53.2%
Industry						
Low-wage[2]	84.4%	46.4%	38.9%	38.9%	41.4%	55.6%
Non-low wage	81.5%	42.3%	38.5%	39.3%	43.2%	52.2%
Part time share						
>75th percentile	90.7%	44.3%	48.9%	51.7%	53.3%	68.2%+
<=75th percentile	80.9%	43.9%	36.4%	36.4%	40.5%	49.8%
Female share						
>75th percentile	88.1%	45.4%	38.9%	42.4%	47.4%	50.5%
<= 75th percentile	80.8%	43.4%	38.8%	38.2%	41.2%	54.5%
Share new (hired in past year)						
>75th percentile	83.5%	40.4%	33.4%	43.7%	28.4%+	43.7%
<= 75th percentile	82.5%	45.0%	40.1%	38.6%	46.2%	55.6%
Chain of establishments[3]						
Yes	81.7%	40.6%	37.3%	37.4%	37.6%	49.9%
No	82.5%	47.4%	42.1%	43.5%	52.1%	59.9%

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. PPLO=Paid Parental Leave Ordinance. [1]"Any difficulty with PPLO" aggregates columns (3)–(5); [2]Low-wage industries include accommodation and food services and selected retail; [3]Chain defined as having >1 establishment per firm. P-values from weighted unadjusted linear probability models. Stars are for significance of comparisons of responses across firm categories.

Appendix Table A4
Unadjusted weighted percentage of firms reporting each outcome, among PPLO-covered firms (N = 157).

	Profitability			Productivity			Employee retention			Customer service			Employee morale		
	Bet.	Same	Wor.	Bet.	Same	Wor.	Bet.	Same	Wor.	Bet.	Same	Wor.	Bet.	Same	Wor.
	Weighted %			Weighted %			Weighted %			Weighted %			Weighted %		
Firm size															
20–99 employees	0%+	92.9%	7.1%	7.0%	88.1%	4.9%	19.2%	80.8%	0.0%	6.1%	93.9%	0.0%	24.8%	75.2%	0.0%
100+ employees	4.9%	90.2%	4.9%	12.5%	86.5%	0.9%	14.5%	84.3%	1.2%	10.5%	88.5%	1.0%	34.3%	65.7%	0.0%
Industry															
Low-wage[1]	3.7%	84.2%	12.1%	10.8%	86.7%	2.5%	16.3%	81.7%	2.1%	13.3%	86.7%	0.0%	30.0%	70.0%	0.0%
Non-low wage	1.9%	94.4%	3.7%	9.3%	87.6%	3.1%	17.2%	82.8%	0.0%	6.3%	93.1%	0.6%	29.2%	70.8%	0.0%
Part time share															
>75th percentile	0%+	81.5%	18.5%+	12.0%	85.7%	2.3%	10.4%	89.6%	0.0%	13.8%	83.8%	2.4%	35.8%	64.2%	0.0%
<=75th percentile	3.0%	93.9%	3.1%	9.2%	87.7%	3.1%	18.7%	80.6%	0.7%	6.9%	93.1%	0.0%	28.0%	72.0%	0.0%
Female share															
>75th percentile	2.7%	94.3%	3.1%	9.3%	90.7%	0%+	16.5%	83.5%	0.0%	9.3%	90.7%	0.0%	29.3%	70.7%	0.0%
<= 75th percentile	2.3%	90.4%	7.3%	10.0%	85.8%	4.2%	17.2%	82.0%	0.8%	7.9%	91.5%	0.7%	29.7%	70.3%	0.0%
Share new (hired in past year)															
>75th percentile	5.3%	91.4%	3.3%	15.3%	84.7%	0%+	23.9%	76.1%	0.0%	15.3%	84.7%	0.0%	45.3%+	54.7%	0.0%
<= 75th percentile	1.8%	91.5%	6.7%	8.7%	87.8%	3.6%	15.7%	83.7%	0.7%	6.8%	92.6%	0.6%	26.5%	73.5%	0.0%
Chain of establishments[2]															
Yes	3.2%	94.4%	2.4%+	13.1%	86.1%	0.8%	14.0%	85.1%	0.9%	10.8%	88.5%	0.8%	36.9%*	63.1%	0.0%
No	1.2%	86.8%	12.0%	4.9%	88.7%	6.4%	22.1%	77.9%	0.0%	4.5%	95.5%	0.0%	18.8%	81.2%	0.0%

+p<0.1; *p<0.05; **p<0.01; ***p<0.001.
Source: Bay Area Parental Leave Survey of 2018 Employers.
Note. "Bet." includes "much better" and "better"; Same = "about the same"; Wor. = "worse" and "much worse." [1]Low-wage industries include accommodation and food services and selected retail; [2]Chain defined as having >1 establishment per firm. P-values from weighted unadjusted linear probability models separately comparing "better" to "about the same" and then "worse" to "about the same." No one reported worse employee morale; therefore, only one binary comparison of "better" vs. "about the same" was conducted.

Appendix Table A5
County-level employment trends

	San Francisco				Surrounding counties				Data source
	2016	2017	2018	% change	2016	2017	2018	% change	
Private sector establishments	58369	58941	59790	2%	197398	202373	207176	5%	QCEW
All private sector workers									QWI
Employment counts	622,777	632,583	647,015	4%	2,685,872	2,735,977	2,797,255	4%	
% new hires	14%	14%	15%		14%	13%	14%		
% separations	15%	15%	–		15%	15%	–		
Women aged 19–44 in the private sector									
Employment counts	182869	185364	190213	4%	610552	620645	631757	3%	
% new hires	19%	19%	20%		20%	19%	19%		
% separations	18%	17%	–		18%	18%	–		
Men aged 19–44 in the private sector									
Employment counts	200400	204375	208116	4%	741438	749955	761297	3%	
% new hires	18%	17%	19%		19%	18%	19%		
% separations	16%	16%	–		18%	17%	–		
% of births to women employed within county group (column B for SF employers and column G for surrounding counties)	77%	76%	–		83%	84%	–		BAPLS-M
% of births to partners employed within county	74%	75%	–		81%	85%	–		

Notes. QCEW = Quarterly Census of Employment and Wages; QWI = Quarterly Workforce Indicators; BAPLS-M = Bay Area Parental Leave Survey of Mothers, 2016–2017. BAPLS-M is a survey of mothers who gave birth in San Francisco and the surrounding Bay Area counties in 2016 or 2017 and weighted to account for non-response and oversampling of San Francisco, Spanish-speaking, and low-income women. (N = 1299).

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