Evaluation of the California Paid Family Leave Program

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About this Report

This report was prepared by Christine Pal Chee, PhD and Joe Nation, PhD for the Bay Area Council Economic Institute. Dr. Chee's and Dr. Nation's contributions to this publication were as paid consultants, and not part of their Stanford University duties or responsibilities.

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Glossary

Term	Definition
AB	Assembly Bill
ACS	American Community Survey
ATUS	American Time Use Survey
BLS	Bureau of Labor Statistics
CDC	Centers for Disease Control
CDPH	California Department of Public Health
DI	Disability Insurance
EDD	Employment Development Department
FMLA	Family Medical Leave Act
NLSY	National Longitudinal Survey of Youth
PFL	Paid Family Leave
SB	Senate Bill

Executive Summary

We conducted an evaluation of California's Paid Family Leave (PFL) Program from 2004-2018 using data from the California Employment Development Department, U.S. Census Bureau, U.S. Centers for Disease Control, and the California Department of Public Health.

Our work focused on PFL program utilization and how it has changed over time, the impact of PFL on labor force participation, and the impact of PFL on firms, particularly firm labor costs and exit rates.

KEY FINDINGS

- PFL participation has grown, especially among men
- PFL use is concentrated among large firms
- Suggestive evidence that PFL has increased employment among new mothers
- Reductions in labor costs for small firms when workers use PFL
- PFL does not appear to increase firm exit rates (i.e., firms ceasing operations)

ADDITIONAL FINDINGS

PFL Program Utilization

- PFL program participation has grown on average 5% per year from 2004-2018.
- Total authorized spending for the program in 2018 was $951 million, equivalent to 0.5% of the state's total budget. (PFL does not rely on state funds, but instead is funded with worker payroll contributions.)
- Bonding claims account for roughly 90% of all PFL claims.
- Male participation and time off in the PFL program have steadily increased over time. If trends continue, the number of men participating in PFL will be the same as women in 2025.

Impact of PFL on Employment

- Employment of new mothers, relative to their female counterparts, increased following the introduction of PFL. The effect is driven by new mothers ages 30 and older. In particular, for new mothers ages 30-34, employment increased approximately 8%. There is no change in the employment of fathers.
- The observed increase in employment of new mothers may be due to the PFL program itself, as well as other factors such as more family-friendly workplace norms or policies. Our analysis does not allow us to disentangle these effects.
- There is no evidence that PFL reduced the employment of either new mothers or new fathers.

Firms Affected by PFL

- Use of PFL is concentrated among large firms. Just 7% of firms employing 25 or fewer workers ever had any worker use PFL, compared to 93% of firms employing 250 or more workers.
- Among firms that have PFL use, smaller firms are less likely to have workers using PFL in any quarter. Firms employing 25 or fewer workers with PFL use have workers using PFL in 6% of all quarters, or roughly once every four years, compared to 55% of all quarters for firms employing 250 or more workers.
- PFL use varies by industry with the most use in public administration (62% of all firms), utilities (25%), education services (23%), manufacturing (22%), mining (21%), and management of companies and enterprises (21%). These are generally industries with higher wages.

Impact on Firm Labor Costs and Exit Rates

- PFL does not appear to increase firm exit rates. Firms that have PFL use are not more likely to cease operations within one year of having any worker use PFL.
- Small firms experience a reduction in labor costs when workers use PFL. Firms employing 25 or fewer workers experience, on average, a 14% decrease in per worker labor costs when workers use PFL.

I. INTRODUCTION

In 2004, California implemented the nation's first Paid Family Leave (PFL) program. Funded by worker payroll deductions, PFL currently provides up to six weeks of paid leave for workers to bond with a new child or to care for a seriously-ill family member. Combined with the state's Disability Insurance (DI) program, PFL allows women to take a total of 12-14 weeks of paid leave after childbirth or adoption.[1] In 2019, Governor Newsom signed SB 83, extending PFL from six to eight weeks, effective July 1, 2020. The Governor's long-term goal is to expand access to the PFL program and provide six months of bonding for every new child.[2]

Despite PFL's successes, a Governor's PFL Task Force required by SB 83 reports that only half of eligible mothers and only one-fourth of eligible fathers took PFL in 2017. [3] Virtually no workers earning less than $20,000 annually took PFL. The Task Force identified low benefits and lack of job protection as the primary reasons for not participating in the PFL Program. To address these issues, the Governor's Task Force is exploring a number of initiatives, including increasing the wage replacement rate from 60-70% to 75-90% (based on income), guaranteeing job protection for all workers who take PFL, providing additional support to small businesses with employees taking PFL, and finding ways to expand PFL Program participation for self-employed workers and employees of small businesses.

This report to the Governor's PFL Task Force offers findings on the effect of Paid Family Leave to date, to inform what the possible effects of expanding the PFL program would be. This document contains the following additional sections:

- Section II provides additional background on California's DI and PFL programs
- Section III reviews the literature on the effect of PFL programs on workers and employers
- Section IV identifies the research objectives of this report
- Section V describes data sources used in the analyses
- Section VI reports our findings.

[1] New mothers can receive up to six weeks (for normal delivery) or eight weeks (for Cesarean section) of leave through the DI program after delivery to recover from childbirth. In addition, pregnant women can choose to take up to 4 weeks of leave through the DI program before her due date.

[2] As detailed in Section II, this six-month goal reflects total paid leave if both parents receive the maximum leave from DI and PFL, consisting of 18 weeks for mothers and eight weeks for fathers.

[3] See First5 California, "Paid Family Leave Expansion Needs Echoed by California Voters and Governor Newsom," Jan. 10, 2020. Retrieved from http://www.ccfc.ca.gov/pdf/about/news_events/pr/pr-2020-01-10-Paid-Family-Leave-Expansion-Needs.pdf.

II. BACKGROUND

Paid Family Leave

In 2002, Governor Davis signed into law Senate Bill (SB) 1661,[4] creating the nation's first paid family leave program. SB 1661 provides, as part of the state's DI program, up to six weeks of wage replacement for all workers in the state to take time off to bond with a new child (Bonding),[5] or to care for a seriously-ill[6] spouse, domestic partner, child, parent, parent-in-law, grandparent, grandchild, or sibling (Care).[7] SB 1661 took effect on July 1, 2004. Since its enactment, several other states[8] have followed suit and implemented similar laws.[9]

In 2019, Governor Newsom signed into law SB 83, which expands PFL benefits from six to eight weeks starting on July 1, 2020. As noted in the Introduction, SB 83 also requires a Governor's Task Force to develop a proposal that increases the total amount of leave, when combined with DI benefits, to six months. The Task Force is required to address worker job protection and wage replacement rates up to 90 percent for low wage workers, and to provide an overall plan to implement and fund these expanded benefits.[10]

California's PFL program provides eligible workers up to six weeks of paid time off within a 12-month period.[11] (As discussed directly below, women who give birth are eligible for additional time off through the state's DI program.) Workers must meet several eligibility criteria:[12]

- Workers must be "attached" to the labor market, i.e., employed, looking or registered for employment, or have an active Unemployment Insurance claim in payment status within 90 days of their last work day
- Workers must experience a loss of wages due to the leave
- Workers must have sufficient earnings in a 12-month "base period" (5-18 months before the claim begins)

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[4] Leginfo, "SB 1661."Retrieved from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1661.

[5] Includes new birth, adoption, and foster children parents.

[6] Seriously ill indicates an illness, injury, or impairment that requires at-home or in-patient care in a medical facility and treatment by a health provider.

[7] Care for an ill parent-in-law, grandparent, grandchild, or sibling took effect on July 1, 2014 after the signing of SB 770 in 2013.SB 1123, signed in 2018, expands eligibility to include care for workers with a family member deployed overseas in the military effective on January 1, 2021.

[8] These include Connecticut, Massachusetts, New Jersey, New York, Rhode Island, Oregon, Washington, and the District of Columbia.

[9] Of note, California's PFL program differs significantly from the federal Family and Medical Leave Act (FMLA), signed into law in 1993.FMLA applies to private sector employers with 50 or more and most public sector employers regardless of employee count; however, FMLA contains additional geographic and employee income restrictions. FMLA provides job-protected leave from work for certain family and serious medical reasons for up to 12 weeks, but it is unpaid. Unlike PFL, leave takers must also pay for health benefits. See Department of Labor, "What's the Difference?" Retrieved from https://www.dol.gov/sites/dolgov/files/OASP/legacy/files/PaidLeaveFinalRuleComparison.pdf.

[10] Leginfo, "SB 83." Retrieved from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB83 and Department of Labor, "Fact Sheet #28: The Family and Medical Leave Act." Retrieved from https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/whdfs28.pdf.

[11] The six weeks can be taken consecutively or separately or taken when the employee is working part-time.

[12] In addition, workers must not be in custody as a result of a criminal conviction.

- Workers must have earned at least $300 in their base period during which the state withheld deductions.

PFL awards eligible workers minimum or maximum weekly benefits. SB 1661 originally provided a wage replacement rate of approximately 55%, which AB 908 raised effective January 1, 2018 to 60% for higher-income (quarterly income greater than $5,741.66) workers and 70% for lower-income (quarterly income between $929 and $5,741,66) workers.[13] Workers with quarterly income less than $929 receive a $50 weekly benefit. The maximum weekly PFL benefit is $1,300.PFL and DI, described below, receive funding through a statutory payroll contribution rate, currently a combined 1.0% for annual wages up to $122,909.[14]As such, there is no direct state funding for PFL.

Opposition and Concerns About Expanded PFL

Opposition to the PFL expansion has come primarily from business interests and largely over the last few weeks as the coronavirus pandemic has resulted in a steep economic decline. Some business organizations point to the expansion's potential burden, especially on small businesses, the possibility of up to 26 weeks of protected leave when combined with the federal CARES Act, and the potential for increased litigation for PFL violations. Business organizations have also expressed concerns about additional employer costs from mandated benefits, the hiring of temporary workers, and overtime to employees.[15]

Disability Insurance

In addition to PFL, workers in California are eligible to receive Disability Insurance wage replacement benefits due to a non-work-related illness or injury.[16] Established in 1946, DI provides partial wage replacement if workers are unable to work. DI includes elective surgery, pregnancy, childbirth, and other related medical conditions.

Workers must meet several eligibility criteria, similar to those for PFL, to be eligible for DI benefits:

- Workers must be unable to perform work for at least eight days and under the care of a medical provider within the first eight days of disability
- Workers must be employed or actively looking for work
- Workers must have lost wages due to their disability
- Workers must have earned at least $300 during which their base period, a 12-month "base period" (5-18 months before the claim begins) during which the state withheld deductions.

DI provides weekly benefits based on income levels during the employee's base period and which are identical to PFL benefits. The minimum benefit is $50 (with the highest quarterly earnings of less than $928.99). With quarterly earnings between $929 and $5,741.66, the DI benefit is approximately 70 percent of earnings. With quarterly earnings of more than $5,741.66,

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[13] See EDD, "Overview of California's Paid Family Leave Program 2020," pp. 17-18 for the evolution of California's PFL program. Retrieved from https://www.edd.ca.gov/pdf_pub_ctr/de2530.pdf.

[14] There are additional rate provisions covering rate changes based primarily on the financial health, i.e., the "Adequacy Rate," of the state's DI Insurance Fund.S ee EDD, "Overview of California's Paid Family Leave Program 2020,": pp. 7-8. Retrieved from https://www.edd.ca.gov/pdf_pub_ctr/de2530.pdf.

[15] "Paid Family Leave Trailer Bill Language," letter to Keely Bosler, May 20, 2020.

[16] Workers' Compensation benefits typically cover job-related injuries or illnesses.

the weekly benefit amount is approximately 60 percent of earnings, up to a maximum of $1,300 per week.

When combined with benefits from the PFL program, new birth mothers[17] can receive up to 16 weeks of paid leave: four weeks of DI prepartum,[18] six weeks of DI postpartum, and six weeks of PFL. SB 83 provisions expand this total to 18. Mothers with a C-section delivery receive an additional two weeks postpartum, or up to 18 weeks currently and 20 weeks starting July 1, 2020. In births with complications, with physician approval, a birth mother can receive up to 52 weeks of DI leave.[19]

[17] New fathers are ineligible for DI benefits resulting from a spouse's pregnancy. Based on email conversations with EDD staff, April 20, 2020.

[18] The length of DI prior to birth can extend to more than four weeks since the date of birth is estimated. In short, there is no "maximum entitlement" or "cap" for DI pregnancy claims. According to state birth data from the Centers for Disease Control, about 11% of new mothers in California have gestational periods of more than 40 weeks, suggesting those that roughly the same number may receive up to six weeks of DI prepartum. See CDC, "Births Data Summary." Retrieved from https://wonder.cdc.gov/wonder/help/natality.html.

[19] Employment Development Department, "Disability Insurance — Forms and Publications," Retrieved from https://edd.ca.gov/disability/DI_Forms_and_Publications.htm. In some cases, DI benefits can last more than 52 weeks if benefits are reduced over the life of the claim.

III. LITERATURE REVIEW

This literature review includes findings from previous research on the effect of PFL on workers and employers. We focus on evidence on paid, rather than unpaid, family leave policies. References are included in Appendix A.

Effects on Workers

Most research on the effect of PFL has focused on workers' leave taking, employment, and earnings.

Leave Taking and Duration

Previous research has shown that CA PFL has increased leave taking and leave duration. For example:

- Women who gave birth immediately after CA PFL implemented in 2004 were 18 percentage points more likely to use paid leave, compared to mothers who gave birth before CA PFL was implemented (Bailey, et al., 2019).
- CA PFL doubled leave taking among mothers of children under one year of age, with the largest effects for the least advantaged mothers (i.e., those who were unmarried, minority, or had low levels of education) (Rossin-Slater et al. 2013; Bartel et al. 2018).
- CA PFL increased mothers' leave duration by 5 weeks and fathers' leave duration by less than 1 week (Baum, Ruhm 2016).
- A majority of women who take bonding leave take the full six weeks provided, and most men take 2-5 weeks (Bedard, Rossin-Slater 2016).

Employment and Earnings

Previous research has also shown that CA PFL increased labor force attachment (i.e., remaining in the labor force) and wages. For example:

- CA PFL increased mothers' likelihood of being employed 9-12 months after childbirth and resulted in higher work hours and wages during the child's early years of life (Baum, Ruhm 2016; Rossin-Slater et al. 2013)
- Workers who remain in the labor market four quarters after taking CA PFL are most likely to be at their pre-claim employer (Bedard, Rossin-Slater 2016).
- CA PFL increased the probability of employees with low-skilled jobs returning to their pre-claim employer (Appelbaum, Milkman, 2011).

Public Assistance

In addition, there is evidence that both men and women who take paid leave are less likely to receive public assistance and food stamps (Houser, Vartianian 2012).

Recent Research Findings

A recent study finds little evidence that CA PFL increased women's employment, wages, or attachment to employers (Bailey, et al., 2019). In fact, the study finds that taking PFL reduced new mothers' employment by 7% and lowered annual wages by 8% six to ten years after giving birth. The authors posit that these findings are due to increased investments in children among mothers who take leave. Taking additional leave to care for a new child might encourage mothers to invest even more in their children, and less in their careers, in subsequent years. Or, taking additional leave might result in greater "specialization" in childcare by mothers.

It is important to note that this study's findings may also be driven by its research design, which compared mothers who gave birth and took PFL immediately after the implementation of CA

PFL to mothers who gave birth immediately before the implementation of CA PFL. Participation in CA PFL has not been universal. Mothers who took PFL immediately after it became available were aware of the benefit and willing and able to take leave at a 60-70% wage replacement rate. They might have also been more likely to take additional time off work to care for their children than other mothers. This would suggest that while the study's findings may hold for the group of mothers who took PFL immediately after the program's implementation, the effect identified by the study would not necessarily -- and not likely – be observed for all mothers who take leave. The overall effect of an expansion of PFL would likely be different, as additional mothers and fathers take PFL.

Effects on Employers

In general, previous research has shown that leave policies resulted in positive or no negative effects on employers.

Family Medical Leave Act

Employers generally did not report difficulty implementing Family Medical Leave Act (FMLA) specifically. For example:

- 75% of firms with 50 or more employees reported it was "easy" or "somewhat easy" to comply with FMLA (Jorgensen, Applebaum 2014).
- Among small firms that complied with FLMA, 34% reported positive business effects, 65% reported no effects, and less than 1% reported negative effects (Jorgensen, Applebaum 2014).
- Some employers cited record-keeping, coordination of state and federal policies, and coordination with other employer policies as a burden (Phillips 2002).

California Paid Family Leave

Previous research suggests that CA PFL also had positive or no negative effects on employers. For example:

- 90% of 250 surveyed firms reported CA PFL had positive or no effect on employee productivity, morale, and costs (Appelbaum, Milkman 2011)
- Two third of firms reported they dealt with leave-taking by assigning work temporarily to other workers; one third said they hired temporary workers (Appelbaum, Milkman 2011)
- There is no evidence of an increase in firm turnover or wage costs when leave taking rises (Bedard, Rossin-Slater 2016)

IV. RESEARCH OBJECTIVES

This evaluation of the CA PFL Program has the following research objectives:

- Describe PFL program utilization and how it has changed over time
- Estimate the impact of PFL on labor force participation
- Identify firms affected by PFL
- Estimate the impact of PFL on firm exit rates and labor costs.

V. DATA

We utilized data sets from four sources:

- California Employment Development Department (EDD)
- American Community Survey (ACS)
- Centers for Disease Control (CDC) Vital Statistics
- California Department of Public Health (CDPH)

EDD

We used two sets of administrative data from the EDD. The first contained all PFL and DI claims from July 2004 to December 2018.This first data set included the claim type (disability, bonding, care), beneficiary birth year and gender, claim and effective dates, benefit amount authorized, Weekly Benefit Amount (WBA), and claim duration. The second data set contained data on quarterly earnings for the universe of workers employed by an employer that reports to the EDD tax branch from January 2003 to December 2018. This data set also reports firm industry and size.

ACS

We used the American Community Survey (ACS), which has been conducted by the U.S. Census Bureau from 1999 to the present, to examine employment rates among new parents. The ACS is a national survey that collects information on social, economic, housing, and demographic characteristics about the nation's population. The ACS randomly selects addresses and surveys all individuals living at the selected household address. Addresses are selected throughout the year, giving a snapshot of the US population over a year time-period. The ACS includes information on sociodemographics, employment, income, family size, fertility, health insurance coverage and social program participation, military status, etc. We include data from 2000-2018.

CDC Vital Statistics

We used the CDC Vital Statistics database to identify the number and demographic characteristics of new birth parents. Using birth certificates, CDC's Vital Statistics reports the numbers of live births occurring within all states to U.S. residents and non-residents by state and county from 1995-2018. These data are collected and used to monitor population growth trends and other national health related goals and include additional detailed information, such as parent demographics, prenatal care, pregnancy history, method of delivery, medical risk factors, and related information. We use information on new mothers from 2004-2018.

California Department of Public Health

Because data on new fathers is not included in the CDC Vital Statistics data until recently, we requested data on the number and age of new fathers in California from th California Department of Public Health (CDPH).

VI. RESULTS

Research Objective 1: Describe PFL program utilization and how it has changed over time

Program Growth

California's PFL program grew from nearly 73,000 claims in 2004, its initial year, to nearly 256,000 in 2018 (Table 1), an average annual growth rate of 5.1%.[20] Between 2013-2018, the average annual increase in claims was higher at 6.5%, likely related to the state's "Moments Matter" campaign to increase PFL awareness.[21] The total amount authorized for PFL also increased over time, rising at an annual average rate of 9.7% from 2005-2018. This was driven in some part by the large annual increase, 14.1%, over the 2013-2018 period. This recent high growth rate reflects increases in both enrollment and benefits paid.[22]

PFL total expenditures ended the 2004-2018 period at just under $1 billion and remain relatively small compared with most items in the state's annual budget. For example, in 2018, PFL expenditures were equivalent to 7% of state spending on corrections, less than 2% of state spending on K-12 education, and about 0.5% of total state spending.[23] As noted earlier, PFL does not rely on state funds but, rather, is supported by worker payroll contributions.

PFL Utilization and Benefits

Bonding claims reflect the vast majority of PFL activity (Table 2), registering 87.5% of all claims in 2018. In fact, the Bonding claims share has been consistent over time, ranging from 87.3% (2004) to 91.2% (2009) of all claims since 2004. The annual growth in Bonding claims from 2005-2018 averaged 5.0%, slightly less than the average growth in Care claims (5.3%). Both Bonding and Care claims grew at more rapid rates since 2013, likely due in part to expanded state outreach. Bonding claims increased 6.0% per year, while Care claims grew 10.5% over the same period.

[20] The 2004 figure reflects July-December. The growth rate reflects 2005, PFL's first full year, through 2018.
[21] The campaign spent $1 million in 2015, $2.5 million in 2016, and $3 million in 2017. The "Overview of California's Paid Family Leave Program." Retrieved from EDD.https://edd.ca.gov/pdf_pub_ctr/de2530.pdf, p. 19.
[22] As examples, the average Weekly Benefit Amount (WBA) increased from $419 in 2004 to $688 in 2018. Over the same period, the maximum WBA rose from $728 to $1,216.
[23] Department of Finance, "2017-18 State Budget: Enacted Budget Detail." Retrieved from http://www.ebudget.ca.gov/budget/publication/#/e/2017-18/BudgetDetail.

Table 1—PFL Utilization and Amount Authorized

Year	Number of Claims	Amount Authorized ($ millions)
2004	72,842	150.6
2005	134,423	286.2
2006	147,624	332.2
2007	160,424	374.9
2008	172,321	412.3
2009	163,126	408.1
2010	170,826	423.6
2011	180,500	443.0
2012	187,750	450.7
2013	186,951	492.4
2014	207,678	549.7
2015	226,385	676.6
2016	240,922	749.3
2017	245,447	799.8
2018	255,916	951.2

Notes: Table reports PFL program utilization using CA EDD PFL claims data from 2004-2018. The program took effective on July 1, 2004 so 2004 figures only include July-December of that year. All dollar amounts are reported in nominal dollars.

Table 2—PFL Utilization and Benefits by Leave Type

	All			Bonding		Care	
Year	# Claims	Average WBA ($)	Maximum WBA	# Claims	Average WBA ($)	# Claims	Average WBA ($)
2004	72,842	419	728	63,567	414	9,275	449
2005	134,423	438	840	118,144	432	16,279	480
2006	147,624	450	840	133,132	443	14,492	506
2007	160,424	466	882	144,544	460	15,880	526
2008	172,321	482	917	155,999	475	16,322	545
2009	163,126	499	959	148,690	493	14,436	564
2010	170,826	506	987	154,079	499	16,747	571
2011	180,500	511	987	161,978	503	18,522	575
2012	187,750	526	1011	167,071	519	20,679	580
2013	186,951	547	1067	167,558	540	19,393	608
2014	207,678	556	1104	186,209	550	21,469	615
2015	226,385	572	1104	201,126	564	25,259	632
2016	240,922	593	1173	213,063	586	27,859	647
2017	245,447	622	1216	217,284	615	28,163	671
2018	255,916	688	1216	223,949	680	31,967	743

Notes: Table reports PFL program utilization and benefit amounts calculated from CA EDD PFL claims data from 2004-2018. The program took effective on July 1, 2004 so 2004 figures only include July-December of that year. All dollar amounts are reported in nominal dollars.

Table 2 also shows that Care claimants on average received higher WBA's than Bonding claimants. For example, the average Care WBA in 2018 was $743, compared with $680 for Bonding. The average WBA for Care was higher than that for Bonding in all years, from 8.5% (2004) to 14.7% (2008) greater. This reflects the fact that Bonding claimants are typically younger and in earlier stages of their careers.

Table 3 shows slight differences in the average duration of leave for Bonding compared to Care claims by gender. Average duration for female bonding is 40 or 41 in all years. Male bonding average duration began in 2004 at 31, but has increased to 37 in 2018. The average duration for Care claims ranges from 32 (in several years) to 35 for females. Average duration for males in the Care program began in 2004 at 30, and has now climbed to 34.

Table 3—PFL Average Leave Duration by Leave Type (In Days)

	Bonding		Care	
Year	Female	Male	Female	Male
2004	40	31	34	30
2005	40	31	34	31
2006	40	31	32	30
2007	40	32	32	31
2008	40	32	32	31
2009	40	33	32	31
2010	40	33	32	31
2011	40	33	32	32
2012	40	33	33	32
2013	41	33	33	32
2014	41	33	33	32
2015	41	33	33	32
2016	41	34	33	33
2017	41	34	33	32
2018	41	37	35	34

Notes: Table reports PFL average duration calculated from CA EDD PFL claims from 2004-2018. The program took effective on July 1, 2004 so 2004 figures only include July-December of that year.

PFL Participant Demographics

Table 4 reports details of Bonding and Care claims by gender. The growth in female Bonding claims has grown steadily over time, at an annual average of 2.8% from 2005-2018 and slightly higher at 3.2% since 2013. In contrast, the growth in male Bonding claims has been much higher, 11.2% from 2005-2018 and 11.7% over the 2013-2018 period. As a result, the female share of all Bonding claims fell from 84.3% in 2004 to 61.7% in 2018. If current growth rates continue, the number of male Bonding claims is on track to equal or exceed female Bonding claims in the year 2025.

Both female and male Care claims have grown at a faster rate than Bonding claims. Female Care claims grew at 4.5% annually, from 7,100 to 21,700 between 2005-2018. Male Care claims have grown even more quickly—7.6% annually since 2005—and 10.6% from 2013-2018. The trend in the share of Care claims for women is similar to Bonding, but less dramatic. In 2004, women accounted for 76.0% of all Care claims; that fell to 68.0% in 2018.

As male Bonding participation rates increased, average male leave duration also rose from 31 (2004) to 37 days (2018). In contrast, female Bonding leave duration has been stable at 40 or 41 days, close to the maximum leave duration, in every year since 2004. Similarly, the average female Care leave duration has been relatively stable, from 32 (multiple years) to 35 (2018), but average male Care leave duration has increased slightly over time, from 30 (2006) to 34 (2018).

Of note, the average WBA for both Bonding and Care for women is considerably lower than it is for men. In 2018, the Bonding WBA for women was $612, compared with $790 for men. Women Care WBA was $715, compared with $803 for men. Over time, this difference has narrowed somewhat. Female Bonding WBA has increased 3.3% since 2004, while male Bonding WBA has increased 2.6%. A similar pattern exists for Care WBA's. Female Care WBA increased 3.5% since 2004, compared with 2.8% for men.

Table 4—PFL Claims, By Claim Type and Gender

	Bonding						Care					
	Women			Men			Women			Men		
Year	# Claims	Avg. WBA ($)	Avg. Duration (Days)	# Claims	Avg. WBA ($)	Avg. Duration (Days)	# Claims	Avg. WBA ($)	Avg. Duration (Days)	# Claims	Avg. WBA ($)	Avg. Duration (Days)
2004	53,618	392	40	9,949	532	31	7,052	428	34	2,223	518	30
2005	96,516	402	40	21,628	567	31	12,312	456	34	3,967	558	31
2006	108062	413	40	25,070	577	31	9,959	475	32	4,533	572	30
2007	115,010	425	40	29,534	594	32	10,895	498	32	4,985	587	31
2008	121,737	438	40	34,262	607	32	11,153	519	32	5,169	602	31
2009	115,036	455	40	33,654	622	33	9,847	534	32	4,589	626	31
2010	115,270	460	40	38,809	614	33	11,564	548	32	5,183	622	31
2011	118,473	463	40	43,505	612	33	12,618	548	32	5,904	633	32
2012	118,605	475	40	48,466	627	33	15,309	560	33	5,370	634	32
2013	118,231	496	41	49,327	646	33	13,220	585	33	6,173	656	32
2014	128,840	503	41	57,369	654	33	14,561	590	33	6,908	668	32
2015	137,541	516	41	63,585	669	33	17,323	607	33	7,936	685	32
2016	142,686	533	41	70,377	694	34	18,817	621	33	9,042	703	33
2017	141,714	557	41	75,570	725	34	19,291	644	33	8,872	730	32
2018	138,153	612	41	85,796	790	37	21,738	715	35	10,229	803	34

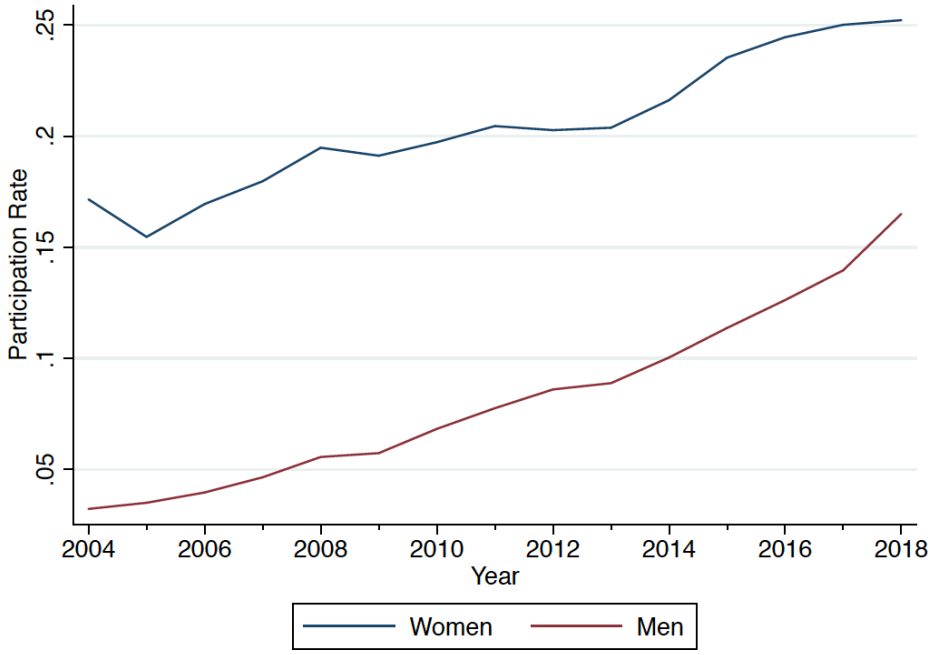
Notes: Table reports PFL program utilization and benefit amounts calculated from CA EDD PFL claims from 2004-2018. The program took effective 2004 so 2004 figures only include July-December of that year. All dollar amounts are reported in nominal dollars.

Figure 1 plots Bonding participation rates by gender and shows steady increases for men and women since 2005.[24] The rate for women, about 16% in 2005, increased slowly through 2013 and accelerated since to its 2018 rate of 25%. Bonding participation rates for men began at less than 5% in the program's first two years but has increased steadily to 16% in 2018. Note that these participation rates are lower than those found by the Governor's Task Force, mentioned in the Introduction. This is because we do not have information on which mothers or father are eligible for PFL. These participation rates include all mothers (or fathers) in the denominator.

Figure 2 plots Bonding participation rates for mothers, by age group. Bonding participation increased over time for all age groups. In addition, Bonding participation is higher for older mothers, with each subsequent age group utilizing Bonding at higher rates. This may reflect higher labor force attachment among older women.

Figure 3 plots Bonding participation rates for fathers, by age group. Similar to mothers, Bonding participation increased over time for fathers of all age groups. However, in recent years, participation is highest for fathers ages 35-39 (compared to 40-44 for mothers), although the difference is small. The participation rate for men ages 35-39 rose from 6% in 2005 to just over 20% in 2018. The lowest participation rate occurs for men ages 20-24 with a 7% rate in 2018.

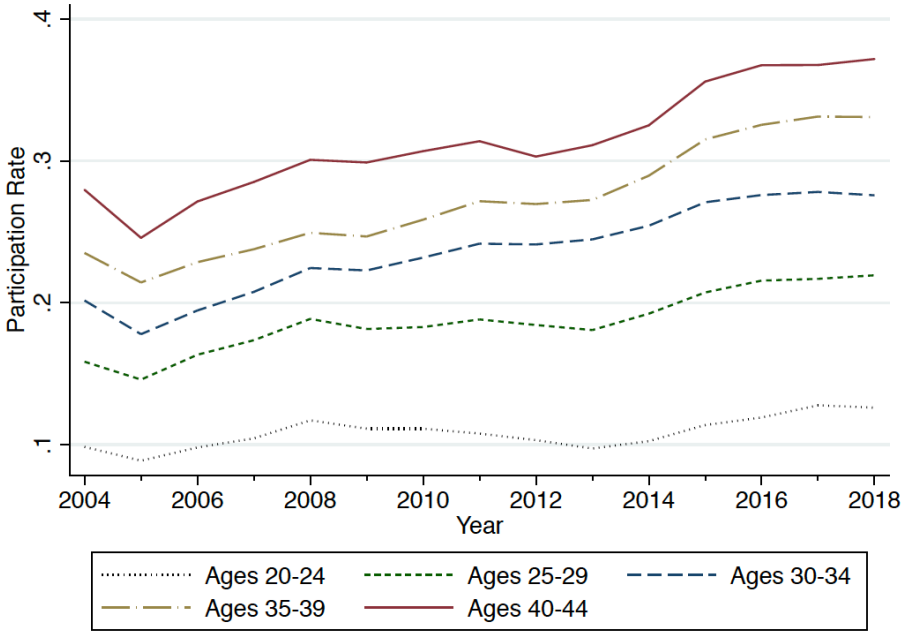
Figure 1: PFL Bonding Participation Rates Over Time, By Gender



Notes: Figure plots PFL Bonding participation rates over time, by gender. The Bonding participation rate in each year is defined to be the number of bonding claims (calculated from CA EDD PFL claims data) divided by the number of new parents (calculated from CDC Vital Statistics data for mothers and CA CDPH data for fathers) in each year. We calculate participation rates separately for women and men.

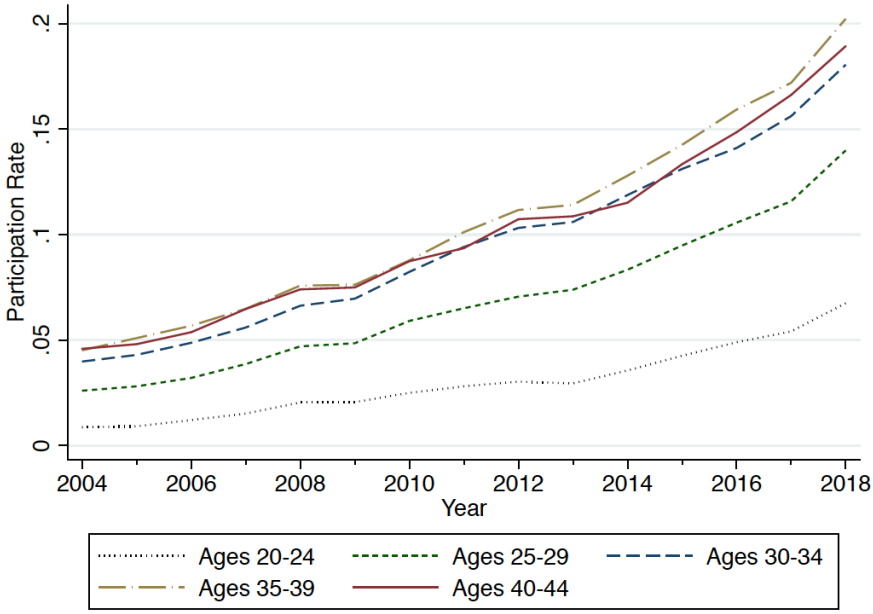
[24] Bonding participation rates were lower in 2004, the program's first partial year of operations.

Figure 2: PFL Bonding Participation Rates for Mothers, by Age Group



Notes: Figure plots female PFL Bonding participation rates over time, by age group. The Bonding participation rate in each year is defined to be the number of female bonding claims (calculated from CA EDD PFL claims data) divided by the number of new mothers (calculated from CDC Vital Statistics data) in each year. We calculate participation rates separately for each age group.

Figure 3: PFL Bonding Participation Rates for Fathers, by Age Group



Notes: Figure plots male PFL Bonding participation rates over time, by age group. The Bonding participation rate in each year is defined to be the number of female bonding claims (calculated from CA EDD PFL claims data) divided by the number of new fathers (calculated from CA CDPH data) in each year. We calculate participation rates separately for each age group.

Table 5 reports characteristics of Bonding and Care claimants, compared to all workers. On average, total quarterly earnings of PFL participants are lower than those of other workers. Average total quarterly earnings was for $10,021 for Bonding claimants and $13,428 for Care claimants, compared to $15,699 for all workers. This reflects the fact that women tend to earn less than men, and that younger workers tend to earn less than older workers. We also see that both Bonding and Care participants are more likely to work at larger firms. This is something we discuss in greater detail when we report our findings for Research Objective #3, which was to identify firms affected by PFL.

Research Objective 2: Estimate the impact of PFL on employment

To estimate the impact of PFL on employment, we compared employment rates between new mothers and their female counterparts, as well as between new fathers and their male counterparts, before and after the implementation of PFL. We used data from 2000 to 2018 from the American Community Survey (ACS) for this analysis. Our analysis sample includes all survey respondents ages 20-44 who are U.S. citizens. All female respondents were asked if they gave birth in the last 12 months. New mothers are defined to be women who gave birth in the last 12 months. New fathers are defined to be men who are married to/partnered with and living in the same household as a woman who gave birth in the last 12 months. We believe new mothers should be accurately captured in the data, but the survey design does not capture fathers who do not live in the same household as the mother of their newborn child. We discuss the implications of this on our findings below. We report descriptive statistics for our analysis sample in Appendix B.

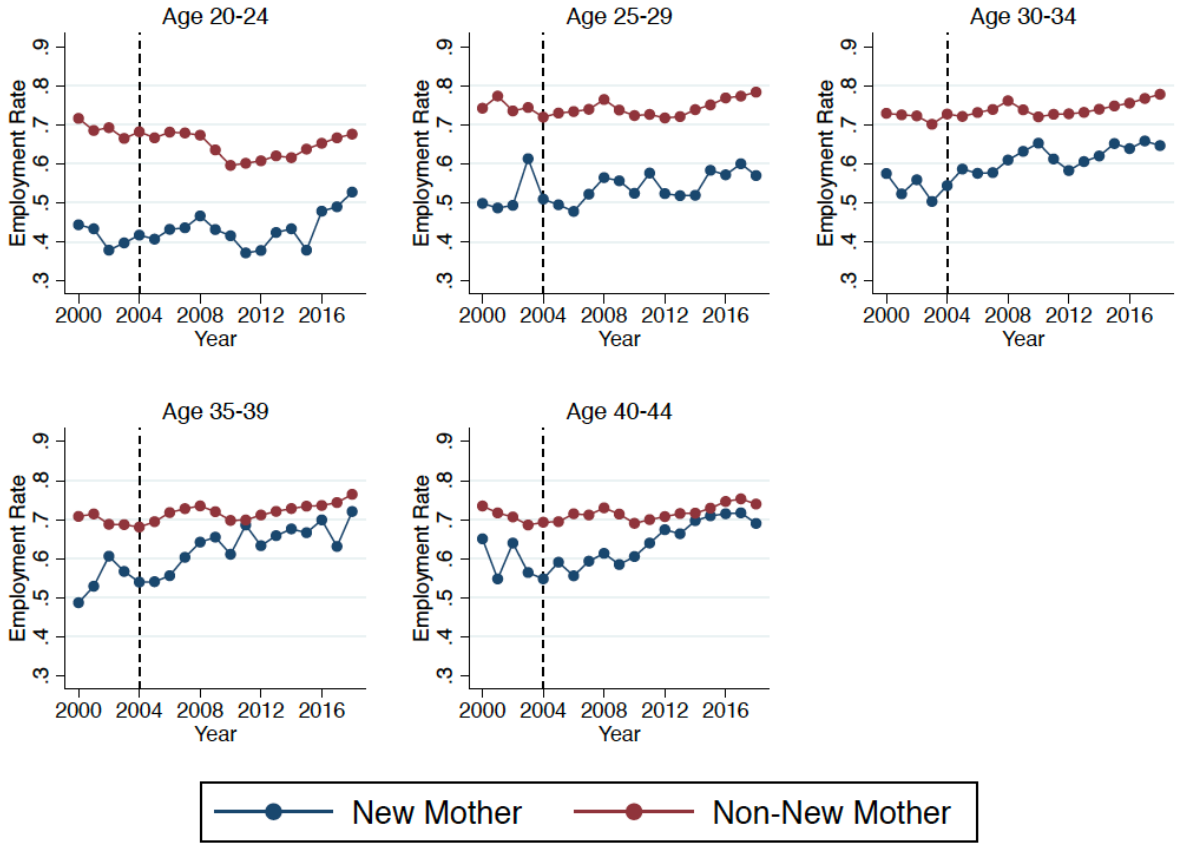
Figure 4 plots female employment rates from 2000-2018 for new mothers and their female counterparts (non-new mothers), by age group. Across all age groups, new mothers have lower employment rates than non-new mothers. Before PFL was implemented in 2004, the overall employment rate was roughly 50% for all new mothers and 70% for non-new mothers. In general, female employment has increased since 2004. However, the growth in employment is greatest for new mothers, particularly new mothers ages 30 and over. This suggests that PFL has increased employment among new mothers. To estimate the effect of PFL on employment of new mothers, we employed a differences-in-differences regression model to estimate the change in employment for new mothers, relative to non-new mothers, controlling for factors such as race, age, education, industry, number of other children, and age of other children. We also estimated the model separately for different age groups. More details on the regression model are contained in Appendix C.

Table 5—Worker Characteristics, All Workers Compared to Workers Using PFL (2004-2018)

	All	Bonding	Care
N	908,793,408	2,462,737	297,988
Total Quarterly Earnings ($)	15,699	10,021	13,428
% 1 employer	0.87	0.69	0.81
Firm Size (%)			
1-5	0.07	0.03	0.02
6-10	0.05	0.03	0.02
11-25	0.08	0.06	0.03
26-99	0.15	0.13	0.09
100-249	0.10	0.11	0.10
250-499	0.08	0.09	0.09
500-999	0.08	0.09	0.10
1000+	0.39	0.47	0.56
Industry (%)			
Agriculture, Forestry, Fishing, Hunting	0.03	0.02	0.02
Mining	0.00	0.00	0.00
Utilities	0.01	0.01	0.01
Construction	0.05	0.03	0.02
Manufacturing	0.09	0.08	0.11
Wholesale Trade	0.05	0.04	0.04
Retail Trade	0.11	0.12	0.12
Transportation, Warehousing	0.03	0.03	0.04
Information	0.03	0.03	0.02
Finance and Insurance	0.04	0.06	0.05
Real Estate Rental and Leasing	0.02	0.02	0.01
Professional, Scientific, Technical Services	0.07	0.09	0.05
Management of Companies and Enterprises	0.00	0.00	0.00
Admin., Support, Waste Mgmt., Remediation Svcs.	0.07	0.05	0.04
Education Services	0.09	0.02	0.02
Health Care, Social Assistance	0.11	0.19	0.29
Arts, Entertainment, Recreation	0.02	0.01	0.01
Accommodation, Food Services	0.08	0.06	0.04
Other Services (except Public Administration)	0.03	0.02	0.02
Public Administration	0.05	0.03	0.06
Unknown	0.01	0.09	0.03

Source: Table reports descriptive statistics for all workers, and those using Bonding or Care PFL, from CA EDD PFL claims data from 2004-2018 and CA EDD quarterly earnings data from 2003-2018 (we included one year before the introduction of PFL to capture full quarterly earnings prior to using PFL. Workers who use PFL will only have partial earnings the quarter they begin leave. In order to obtain a more accurate estimate of what their full earnings would be, we calculated the maximum quarterly earnings for the previous four quarters before starting PFL for each worker using PFL. We excluded observations for workers who were employed at greater than 2 firms in a given quarter because those quarters likely involved workers switching firms. In those cases, we could not correctly identify the firm for which PFL use was associated. These observations accounted for less than 5% of the sample. Of the remaining workers, 87% were employed by more than one firm. Total quarterly earnings for each worker is the sum of quarterly earnings from all firms, and firm characteristics for the job with higher earnings was used. All dollar amounts are reported in real 2018 dollars.

Figure 4: Female Employment Rates Over Time, by Age Group



Notes: Figure plots female employment rates for new mothers and non-new mothers calculated from the American Community Survey.

Table 6 reports regression estimates of the impact of PFL on employment. The first column reports results for new mothers. Overall, PFL is associated with a 2.86 percentage point change increase the employment rate for new mothers. Baseline employment for new mothers from 2000-2003 was approximately 50% so the corresponds to a 5.7% increase in employment for all new mothers. This effect is statistically significant at the 5% significance level. We also estimated impacts for different age groups and find that the effect is driven by new mothers age 30 and over. In particular, for new mothers age 30-34, employment increased 4.5 percentage points, or roughly 8.5%.

If other factors that would disproportionately affect the employment of new mothers (e.g., more family-friendly workplace norms or policies adopted at firms) also changed after the introduction of PFL, our estimates will overestimate the effect of PFL on the employment of new mothers. We expect that some of these factors would also affect mothers with slightly older children, so the use of non-new mothers of similar characteristics as controls will at least partially account for these factors. The data does not allow us to disentangle the effects of these factors and the extent to which different factors are contributing to the increase in employment of new mothers. That said, unless there are significant changes occurring that would differentially affect the employment of new mothers after the introduction of PFL, our estimates will capture the effect of PFL on employment.

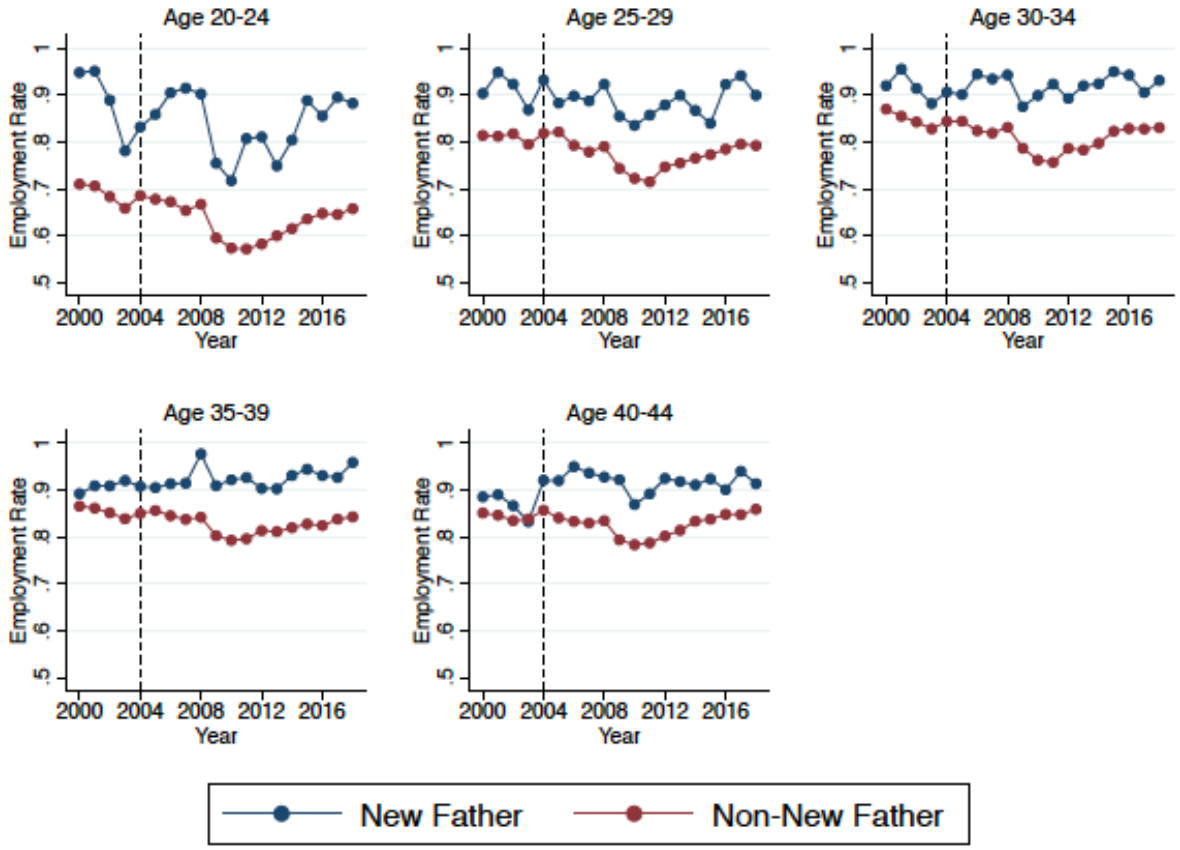
Table 6: Regression Estimates of Impact of PFL on Employment

	Female	Male
Overall	0.0286**	0.0117
	(0.0113)	(0.00818)
Age 20-24	0.0277	-0.00899
	(0.0261)	(0.0369)
Age 25-29	0.00936	-0.00553
	(0.0227)	(0.0207)
Age 30-34	0.0453**	0.0198
	(0.0219)	(0.0135)
Age 35-39	0.0357	0.0136
	(0.0229)	(0.0148)
Age 40-44	0.0321	0.0341*
	(0.0353)	(0.02)

Notes: Table reports estimates of β_3, the coefficient on the *newparent x postPFL* interaction term, from Equation 1 in Appendix X, using data from the ACS. The outcome variable is a binary variable for whether a person is employed at the time of the survey. Robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

We performed a similar analysis to evaluate the impact of PFL on employment of new fathers. Figure 5 plots male employment rates from 2000-2018 for new fathers and their male counterparts. In general, we see that new fathers have higher employment rates than non-new fathers, the opposite of what was true for women. Visually, there do not appear to be any differences in employment rates before and after 2004 for new fathers versus non-new fathers. We also estimate the same regression model described above for men and report estimated effects in the second column of Table 5. Overall and for each age group, there does not appear to be any changes in employment for new fathers after the introduction of PFL. It is worth noting, however, that the survey design of the ACS caused us to under-identify fathers, for the reasons described above. This will cause us to possibly underestimate any impacts PFL had on employment of new fathers. Although it is not possible for us to test whether that is the case, at the very least it does not appear that PFL decreased the employment of new fathers. It is more likely that PFL had no impact on employment for new fathers.

Figure 5: Male Employment Rates Over Time, by Age Group



Notes: Figure plots male employment rates for new mothers and non-new mothers calculated from American Community Survey.

Research Objective 3: Identify firms affected by PFL

To identify firms affected by PFL, we took two approaches. First, we focused on workers who used PFL in descriptive worker-level analyses. Second, we focused on firms that had workers use PFL in descriptive firm-level analyses. This allowed us to identify firms at which workers who used PFL were employed to see if PFL workers tended to work at different firms that those who did not use PFL. This also allowed us to compare firms that had PFL use to those that did not to see which firms were more likely to have PFL use.

We report results at the worker-level in Table 5 above. Here, we see that that workers who use PFL are more likely to be employed by larger firms. Most notably 47% of workers who use Bonding and 56% of workers who use Care, compared to 39% of all workers, work in firms employing 1000 or more workers. On the other hand, 12% of workers who use Bonding and 6% of workers who use Care, compared to 20% of all workers, work in firms employing 25 or fewer workers, with the differential increasing as firm size decreases. Workers who use PFL are also more likely to work in certain industries than other workers. The most notable differences are that workers who use PFL are less likely to work in education and more likely to work in health care or social assistance.

We report results at the firm-level in a series of tables. Table 7 reports similar statistics as Table 5 does, but at the firm-level. On average, firms with PFL use tend to be much larger firms. Firms with PFL use, on average, 528 workers, compared to 19 workers for all firms overall. We also see that only 6.9% of firms with PFL use employ 1-5 workers, even though they account for 71.7% of all firms. More broadly, 25.5% of firms with PFL use employ 25 or fewer workers. In contrast, these firms account for 92.1% of all firms. Finally, the largest firms, those employing 1000 or more workers account for 9.2% of firms with PFL use, but only 0.2% of all firms.

To further explore differences across firm size, we calculate the share of firms with any PFL use over our entire study period (2004-2018), and the share of quarters with any PFL use for those firms, by firm size. These results are reported in Table 8. In this table, we see that PFL use increases with firm size. The smallest firms, those employing 1-5 workers, are least likely to have any PFL use over the 15 years in our study period. Only 4% of these firms ever have a worker use PFL. In contrast, over 90% of firms that employ 250 or more workers ever have a worker use PFL. Among firms with PFL use, smaller firms have workers use PFL less frequency. Firms that employ 25 or fewer workers, on average, have workers use PFL 6% of quarters. This corresponds to roughly one quarter every four years. Larger firms have workers use PFL more often. Corresponding with firm size, larger firms have more workers use PFL each quarter there is PFL use. However, the difference is very non-linear. Firms employing fewer than 100 workers have, on average, just one worker use PFL at a time. That figure increases to roughly two workers for firms employing 250-499 workers, 3 workers for firms employing 500-999 workers, and then 12 workers for firms employing 1,000 or more workers.

Finally, Table 9 reports the share of firms with any PFL use over our entire study period (2004-2018), and the share of quarters with any PFL use for those firms, by industry. Here we see that firms with PFL use are more likely to be in certain industries. The industry with the greatest share of firms with PFL is public administration, at 61.6 of firms with PFL use. Utilities, education, manufacturing, mining, management of companies and enterprises all have roughly 20-25% of firms with PFL use. These are generally industries with higher wages. The industries with the lowest share of firms with PFL use are health care and social assistance; real estate rental and leasing; and arts, entertainment, and recreation.

Table 7—Firm Characteristics, All Firms Compared to Firms with PFL Users (2004-2018)

	All	Firms With PFL Use
N	59,617,576	974,055
# Workers	19	528
# Workers Taking PFL	--	2.4
Quarterly Earnings/Worker ($)	10,304	15,010
Quarterly Earnings/Worker Taking PFL ($)	--	8,303
Firm Size (%)		
1-5	0.717	0.069
6-10	0.110	0.064
11-25	0.094	0.122
26-99	0.058	0.258
100-249	0.013	0.199
250-499	0.004	0.117
500-999	0.002	0.079
1000+	0.002	0.092
Industry (%)		
Agriculture, Forestry, Fishing, Hunting	0.015	0.025
Mining	0.001	0.002
Utilities	0.001	0.003
Construction	0.055	0.057
Manufacturing	0.039	0.098
Wholesale Trade	0.051	0.062
Retail Trade	0.063	0.071
Transportation, Warehousing	0.016	0.025
Information	0.014	0.030
Finance and Insurance	0.027	0.047
Real Estate Rental and Leasing	0.032	0.024
Professional, Scientific, Technical Services	0.102	0.127
Management of Companies and Enterprises	0.001	0.004
Admin., Support, Waste Mgmt., Remediation Svcs.	0.036	0.054
Education Services	0.011	0.038
Health Care, Social Assistance	0.342	0.180
Arts, Entertainment, Recreation	0.013	0.015
Accommodation, Food Services	0.053	0.067
Other Services (except Public Administration)	0.085	0.039
Public Administration	0.002	0.022
Unknown	0.040	0.010

Notes: Table reports descriptive statistics for all firms, compared to firms with PFL use. Statistics are calculated using CA EDD PFL claims data and quarterly earnings data from 2004-2018. All dollar amounts are reported in real 2018 dollars.

Table 8—Firm-Level PFL Use, By Firm Size (2004-2018)

Firm Size	# Firms	% Firms with PFL Use	% Qtrs. with PFL Use	# Workers Using PFL / Qtr. with PFL Use
1-5	2,556,727	0.040	0.065	1.0
6-10	201,220	0.198	0.056	1.0
11-25	154,033	0.328	0.066	1.0
26-99	85,183	0.584	0.121	1.1
100-249	17,171	0.837	0.281	1.4
250-499	5,350	0.898	0.447	1.9
500-999	2,671	0.942	0.587	2.9
1000+	2,549	0.975	0.715	12.0

Notes: Table reports PFL use and frequency of PFL use, by firm size. Statistics are calculated using CA EDD PFL claims data and quarterly earnings data from 2004-2018.

Table 9— Firm-Level PFL Use, By Industry (2004-2018)

Industry	# Firms	% Firms with PFL Use	% Qtrs. with PFL Use
Agriculture, Forestry, Fishing, Hunting	29,679	0.189	0.146
Mining	1,250	0.215	0.148
Utilities	1,860	0.253	0.132
Construction	126,825	0.138	0.077
Manufacturing	80,892	0.224	0.123
Wholesale Trade	117,942	0.139	0.089
Retail Trade	150,256	0.126	0.097
Transportation, Warehousing	41,218	0.138	0.108
Information	43,194	0.134	0.148
Finance and Insurance	67,617	0.155	0.130
Real Estate Rental and Leasing	80,351	0.091	0.085
Professional, Scientific, Technical Services	271,899	0.133	0.094
Management of Companies and Enterprises	2,503	0.212	0.167
Admin., Support, Waste Mgmt., Remediation Svcs.	90,757	0.151	0.116
Education Services	25,445	0.233	0.138
Health Care, Social Assistance	977,570	0.055	0.092
Arts, Entertainment, Recreation	41,816	0.095	0.097
Accommodation, Food Services	138,532	0.161	0.090
Other Services (except Public Administration)	324,774	0.046	0.077
Public Administration	2,254	0.616	0.287
Unknown	408,270	0.019	0.209

Notes: Table reports PFL use and frequency of PFL use, by industry. Statistics are calculated using CA EDD PFL claims data and quarterly earnings data from 2004-2018.

Research Objective 4: Estimate the impact of PFL on firm exit rates and labor costs

To evaluate the impact of PFL on firm labor costs and exit rates, we performed a series of descriptive and regression analyses using CA EDD PFL claims and quarterly earnings data. Table 10 reports one-year firm exit rates, defined to be the likelihood a firm ceases operations within the next four quarters, for all each firm-quarters (observations) compared to those with PFL use, by firm size. There are two notable trends. First, the second column shows that exit rates are lower for larger firms – the larger the firm, the lower its exit rate. Next, comparing the second and fourth columns, we see that with the exception of firms employing 1,000 or more workers exit rates are lower after quarters of PFL use than they are overall. We also calculated one-year exist rates by industry (reported in Table 11) and find that while exit rates vary across industry, they are lower after quarters of PFL use than they are overall. This is true for all industries.

We also employed regression models to estimate the impact of PFL use, measured by the share of a firm's workforce using PFL in each quarter, on the likelihood the firm "exits" in the next four quarters. Our regression analyses allow us to account for other differences across firm-quarters with and without PFL use (e.g., firm size and industry of firms with and without PFL use, economic factors at different points in time, etc.). Additional details on the regression model are included in Appendix C. Regression results are reported in the first column of Table 12. The first row reports results for the entire sample of firms. The estimate of 0.0751 should be scaled by the average share of a firm's workforce taking PFL leave when it is used. This share is, on average, 6%. This means that on average, exit rates increased by 0.45 (0.0751 * 0.06) percentage points. The exit rate across all firms was 20% so this corresponds to a 2% increase in the likelihood of exit. Although this estimate is statistically significant, the magnitude of the effect is essentially zero.

Table 10— One-Year Firm Exit Rates, by Firm Size

	All Observations		With PFL Use	
Firm Size	# Obs	Exit Rate	# Obs	Exit Rate
1-5	39,486,237	0.250	65,839	0.219
6-10	6,070,277	0.086	59,028	0.062
11-25	5,163,505	0.069	112,267	0.052
26-99	3,215,113	0.053	235,707	0.043
100-249	704,125	0.039	181,564	0.033
250-499	229,454	0.035	106,591	0.030
500-999	117,027	0.030	71,891	0.028
1000+	112,409	0.024	84,483	0.025
All	55,098,147	0.199	917,370	0.052

Notes: Table reports exit rates, defined to be the likelihood a firm ceases operations within the next four quarters of a given quarter, by firm size. Exit are calculated for the entire sample of firms and quarters, as well as only quarters with PFL use. Calculations are performed using CA EDD quarterly earnings data from 2003-2018.

Table 11— One-Year Exit Rates, by Industry

	All Observations		With PFL Use	
	# Obs.	Exit Rate	# Obs.	Exit Rate
Agriculture, Forestry, Fishing, Hunting	857,258	0.171	25,424	0.073
Mining	32,226	0.129	1,532	0.037
Utilities	67,984	0.074	2,788	0.018
Construction	3,101,281	0.187	52,103	0.043
Manufacturing	2,182,539	0.114	88,692	0.035
Wholesale Trade	2,858,931	0.136	55,660	0.039
Retail Trade	3,494,121	0.143	64,733	0.045
Transportation, Warehousing	873,285	0.157	22,415	0.039
Information	752,876	0.217	27,270	0.061
Finance and Insurance	1,488,609	0.157	43,580	0.056
Real Estate Rental and Leasing	1,797,194	0.167	22,054	0.047
Professional, Scientific, Technical Services	5,653,911	0.183	114,961	0.053
Management of Companies and Enterprises	54,649	0.137	3,186	0.031
Admin., Support, Waste Mgmt., Remediation Svcs.	1,998,276	0.161	50,648	0.057
Education Services	628,565	0.124	35,058	0.019
Health Care, Social Assistance	18,964,080	0.233	166,807	0.063
Arts, Entertainment, Recreation	739,368	0.251	13,527	0.046
Accommodation, Food Services	2,906,045	0.141	63,151	0.053
Other Services (except Public Administration)	4,796,074	0.226	35,734	0.060
Public Administration	105,613	0.032	20,229	0.006
Unknown	1,745,262	0.394	7,818	0.311
All	55,098,147	0.199	917,370	0.052

Notes: Table reports exit rates, defined to be the likelihood a firm ceases operations within the next four quarters of a given quarter, by firm industry. Exit are calculated for the entire sample of firms and quarters, as well as only quarters with PFL use. Calculations are performed using CA EDD quarterly earnings data from 2003-2018.

To explore whether the effect differed across firm sizes and industries, we repeated the analysis for different subgroups of firms. Estimates for different firm sizes are reported in the second panel of Table 12, and estimates for different industries are reported in Appendix D. We note that these estimates should be treated as they were in the previous paragraph, scaled by the average share of workers using PFL when PFL is used for the particular industry or firm size and compared to the overall exit rate for the industry or firm size, in order to interpret the magnitude of the estimates.

With the exception of firms employing 1-5 workers, PFL use is not associated with any changes in exit rates. For firms employing 1-5 workers, PFL use is associated with an increase in the exit rate of 2.5 percentage points. When we investigate this further, we find that the effect is largely driven by firms employing 1-2 workers. For those firms, it appears that an increase in PFL use is associated with a small increase in exit rates. We believe a likely reason for this observed change is that as a firm becomes smaller, the likelihood of the worker taking leave being at least a part-owner of the firm increases. The challenges of owning and operating a small business are high, which is partially reflected in the high exit rates among small businesses. The competing demands of owning a business and being a new parent might be such that the owner decides to put a pause on the business. In that case, the observed increase in exit rates is due,

at least in part, to becoming a new parent, rather than having taken paid leave from work. For this reason, we conclude that PFL does not appear to increase firm exit rates.

Table 12: Regression Estimates of Impact of PFL on Firm Exit Rates and Labor Costs

	Exit Rate	Per Worker Labor Costs
All	0.0751***	-3,095***
	(0.00294)	(84.39)
By Firm Size		
1-5	0.0504***	-3,047***
	(0.00255)	(80.50)
6-10	0.0124**	-4,901***
	(0.00610)	(710.9)
11-25	0.0189**	-5,834***
	(0.00821)	(472.5)
26-99	0.0260*	-985.2
	(0.0148)	(1,172)
100-249	0.0883**	5,059
	(0.0429)	(3,789)
250-499	0.00856	26,505
	(0.103)	(18,598)
500-999	-0.0722	6,930
	(0.169)	(16,241)
1000+	0.0970	-27,355
	(0.274)	(42,380)

Notes: Table reports estimates of β_1, the coefficient on the *sharePFL* term, from Equation 2 in Appendix D and Equation 3 in Appendix F, using CA EDD quarterly earnings data. The outcome variables are a binary variable for whether firm exited within the next four quarters of a given quarter, and average quarterly per worker labor costs. Regressions are estimated for all firms, as well as by firm size. Stanford errors clustered at the firm level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Finally, we evaluated the impact of PFL on firm labor costs. To do this, we estimated the regression model described in Appendix C. Regression estimates are reported in the second column of Table 13. We find that small firms experience a reduction in labor costs when workers use PFL. Firms employing 25 or fewer workers experience, on average, a 14% decrease in per worker labor costs when workers use PFL, with the smallest firms experiencing the greatest reductions. This suggests that firms are not increasing labor costs (e.g., by hiring temporary workers or paying other workers overtime pay) by more than what they would have paid workers who use PFL. Larger firms do not seem to experience any changes in per worker labor costs when workers use PFL.

Appendix A: References

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Appendix B: ACS Descriptive Statistics

Table 13 reports descriptive statistics from the ACS for new parents and non-new parents age 20-44, by gender. 76% new mothers are between the ages of 20-34, with 55% between ages 25-29. New fathers tend to be older than new mothers, with 60% between the ages of 30-39. It is worth noting that marriage rates are relatively high in this sample, with 72% of new mothers and 96% of new fathers married. Using birth data from 2003-2016 from the CDC Vital Statistics, we calculate that 65% of all new mothers age 20-44 were married at the time of birth, so the marriage rate observed in the data is only slightly higher. We expect the marriage rate among new fathers in the ACS to be higher than that for all new fathers, given the fact that we were only able to identify new fathers who were living in the same household as the mother.

Table 13—ACS Descriptive Statistics (2000-2018)

	Women		Men	
	New Parent	Non-New Parent	New Parent	Non-New Parent
N	48,909	671,341	28,169	692,695
Age Group				
20-24	0.21	0.20	0.05	0.21
25-29	0.27	0.18	0.21	0.19
30-34	0.28	0.18	0.33	0.18
35-39	0.18	0.20	0.27	0.20
40-44	0.06	0.23	0.14	0.22
Race				
White	0.62	0.64	0.70	0.65
Black	0.07	0.08	0.05	0.07
Asian	0.11	0.12	0.10	0.11
Other	0.20	0.16	0.15	0.17
Hispanic	0.34	0.29	0.25	0.29
Married	0.72	0.46	0.96	0.41
Education				
Less than HS	0.07	0.06	0.04	0.07
HS/GED Degree	0.22	0.19	0.18	0.23
College Degree	0.56	0.62	0.60	0.56
College+	0.15	0.13	0.18	0.14
Employment Status				
Employed	0.53	0.71	0.91	0.79
Unemployed	0.06	0.06	0.04	0.07
Not in Labor Force	0.41	0.23	0.06	0.14
Average Income ($)	29,779	35,929	82,944	54,657

Notes: Table reports descriptive statistics for new parents and non-new parents, as defined in the text, from the American Community Survey 2000-2018.

Appendix C: Regression Analyses

Employment
To estimate the impact of PFL on employment of new parents, we estimate the following regression model:

$$employed_{it} = \beta_1 newparent_{it} + \beta_2 postPFL_t + \beta_3 newparent_{it} * postPFL_t + \alpha X_{it} + e_{it} \quad \text{(Eq. 1)}$$

where $employed_{it}$ is a binary variable that equals one if person *i* is employed in year *t*; $newparent_{it}$ is a binary variable that equals one if person *i* is a new parent in year *t*; $postPFL_t$ is a binary variable that equals one if year *t* is 2004 or after; X_{it} is a vector of controls that includes a set of dummy variables for year, age group, race, Hispanic ethnicity, education, industry, and, for women, whether the person has children under the age of 6 or between age 6-17; and e_{it} is a robust standard error that accounts for heteroskedasticity. The coefficient of interest is β_3, which corresponds to the change in the likelihood of being employed for new parents, relative to non-new parents, associated with the introduction of PFL in 2004. We estimate the model separately for women and men.

Firm Exit Rates
To estimate the impact of PFL use on firm exit rates, we estimate the following regression model:

$$exit_{fq} = \beta_1 sharePFL_{fq} + \gamma_q + \alpha X_{fq} + e_{fq} \quad \text{(Eq. 2)}$$

where $exit_{ft}$ is a binary variable that equals one if firm *f* ceases operations in the four quarters after quarter *q*; $sharePFL_{fq}$ is the share of firm *f*'s workplace using PFL in quarter *q*; γ_q is a set of quarter fixed effects that accounts for economic and social factors that change over time; X_{fq} is a vector of controls that includes firm size; and e_{fq} is a standard error clustered at the firm level. The coefficient of interest is β_1, which corresponds to the change in one-year exit rates associated with a 100 percentage point increase in the share of a firm's workforce using PFL. We scale estimates of this coefficient by the average share of firm's workforce using PFL with PFL is used and compare them to overall exit rates to interpret the estimates. We estimate this model for all firms, as well as by firm size and industry.

Firm Labor Costs
To estimate the impact of PFL use on firm labor costs, we estimate the following regression model:

$$laborcost_{fq} = \beta_1 sharePFL_{fq} + \delta_f + \gamma_q + \alpha X_{fq} + e_{fq} \quad \text{(Eq. 3)}$$

where $laborcost_{ft}$ is the average per worker labor cost for firm *f* in quarter *q*; $sharePFL_{fq}$ is the share of firm *f*'s workplace using PFL in quarter *q*; δ_f is a set of firm fixed effects, which allows us to compare labor costs within firms (across quarters); γ_q is a set of quarter fixed effects that accounts for economic and social factors that change over time; X_{fq} is a vector of controls that includes firm size; and e_{fq} is a standard error clustered at the firm level. The coefficient of interest is β_1, which corresponds to the change in average per worker labor costs associated with a 100 percentage point increase in the share of a firm's workforce using PFL. We scale estimates of this coefficient by the average share of firm's workforce using PFL with PFL is used

and compare them to average per worker labor costs to interpret the estimates. We drop the first and last quarters of operations for each firm since labor costs for those quarters may not account for the entire quarter. We estimate this model for all firms, as well as by firm size and industry.

Appendix D: Impact of PFL on Firm Exit Rates + Labor Costs, by Industry

	(1) Exit (1 Yr)	(2) Per Worker Labor Costs
Agriculture, Forestry, Fishing, Hunting	0.0316	-1,329
	(0.0370)	(972.5)
Mining	-0.187	-10,121**
	(0.130)	(4,338)
Utilities	0.178**	-7,379**
	(0.0788)	(2,960)
Construction	0.0399***	-2,322***
	(0.0134)	(460.0)
Manufacturing	0.0482***	-3,128***
	(0.0183)	(565.3)
Wholesale Trade	0.0729***	-6,718***
	(0.0126)	(541.0)
Retail Trade	0.0463***	-2,943***
	(0.0126)	(301.0)
Transportation, Warehousing	0.0778***	-3,323***
	(0.0278)	(428.4)
Information	0.0673***	-8,442***
	(0.0189)	(2,460)
Finance and Insurance	0.0441***	-6,285***
	(0.0114)	(510.6)
Real Estate Rental and Leasing	0.0488***	-4,649***
	(0.0134)	(460.7)
Professional, Scientific, Technical Services	0.0609***	-5,851***
	(0.00624)	(242.2)
Management of Companies and Enterprises	0.0140	-12,824*
	(0.0861)	(6,888)
Admin., Support, Waste Mgmt., Remediation Svcs.	0.0692***	-4,934***
	(0.0157)	(589.8)
Education Services	0.00778	-3,885***
	(0.0278)	(506.2)
Health Care, Social Assistance	0.0506***	-1,323***
	(0.00356)	(113.4)
Arts, Entertainment, Recreation	0.0336	-5,927*
	(0.0225)	(3,235)
Accommodation, Food Services	0.0764***	-1,526***
	(0.0208)	(258.4)
Other Services (except Public Administration)	0.0641***	-2,724***
	(0.00960)	(157.0)
Public Administration	-0.0519	-11,601
	(0.0826)	(10,343)
Unknown	0.0207**	-4,097***
	(0.00823)	(232.9)

Notes: Table reports estimates of β_1, the coefficient on the *sharePFL* term, from Equations 2 and 3 in Appendix X, using CA EDD quarterly earnings data. The outcome variables are a binary variable for whether firm exited within the next four quarters of a given quarter, and average quarterly per worker labor costs. Regressions are estimated for firms, by industry. To interpret the magnitude of these estimates, the estimates should be scaled by the average share of workers using PFL when PFL is used for the particular industry and compared to the overall exit rate for the industry. Stanford errors clustered at the firm level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.