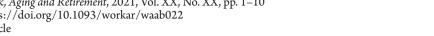
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California's Paid Family Leave Law and the Employment of 45- to 64-Year-Old Adults

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ABSTRACT

Paid family leave allows workers to take time off from work to care for a family member with a serious health condition, with reduced financial risk and increased job continuity. In 2004, California was the first state in the nation to implement a paid family leave program allowing workers to take up to 8 weeks off work with partial pay to care for their own or a family member's serious health condition. Although the effects of California's law on the labor supply of parents of newborns have been extensively studied, the role of paid family leave in the labor supply of workers who may need to provide care for a spouse has not been studied widely. We examine the effects of California's law on the employment of workers who are aged 45-64 and have a disabled spouse, using the 2001-2008 American Community Survey. Our preferred estimates suggest the paid leave program increased the employment of 45- to 64-year-old women with a disabled spouse in California by around 0.9 percentage points (or 1.4% on a prelaw base rate of 65.9%) in the postlaw period compared with their counterparts in other states, with a 2.9 percentage point rise in private-sector employment. The employment of men with a disabled spouse in California also increased, but by a smaller amount: 0.7 percentage points (or 0.8% on a prelaw base 86.8%; with a nonsignificant 0.4 percentage point decrease in private-sector employment).

KEYWORDS: paid family leave, older workers, employment

A nationally representative survey conducted by Pew Research in 2017 found that almost half of working adults (aged 18-70) in the United States expressed the need for leave to care for a seriously ill family member: 23% had taken leave of this kind during their employment tenure and 25% had not yet taken leave of this kind but believed they would need to do so in the future (Pew Research Center, 2017). The Pew survey also found that many members of the US workforce who need to take leave of this kind have been unable to do so.

Although there are no national provisions for paid family leave in the United States (the federal Family and Medical Leave Act [FMLA] implemented in 1993 provides job-protected but unpaid leave to eligible employees), in 2004 California became the first state in the nation to enact a paid family leave program that covers leave to care for a family member with a serious health condition as well as leave to care for a new child and one's own serious illness. California's law covers private and some public-sector workers meeting a minimum earning threshold (and contributing to the State Disability Insurance

program). Unlike the FMLA, there are no job tenure or work hour requirements, but the law does not provide job protection during the period away from work (California Employment Development Department, 2020).

Since California's law came into effect, eight other states (NJ, RI, NY, WA, MA, CT, OR, CO) and the District of Columbia have followed suit. These laws allow paid time off from work for most wage/ salary workers who meet the eligibility criteria (e.g., wage threshold, employment duration, or TDI contribution) and need to care for a new child, their own illness, or a seriously ill family member. Leave duration, benefit rates, and eligible family categories vary from state to state. (See Supplementary Appendix A for more details.)

A growing body of research has examined the impact of these laws on labor market and other outcomes for new parents who need leave to care for a newborn or newly adopted/foster child, focusing in particular on California's first in the nation law. But there has been less investigation of the impact of these laws on labor market outcomes for older workers who are disproportionately likely to need leave to care for a seriously ill family member, such as a spouse or a parent.

Understanding how paid family leave affects the employment of older workers with care responsibilities for a spouse or parent, independently from younger parents with childcare responsibilities, is important given the different nature and trajectories of care. Caring for an older adult is potentially more challenging than caring for a newborn or infant because the onset and duration of eldercare are highly unpredictable, the demand for care usually increases over time, and the caregiving often brings complex negative emotions (confusion, anger, helplessness, or guilt; Calvano, 2013; Williams et al., 2012). Consequently, workers with eldercare responsibilities are more likely to experience negative impacts of caregiving on their employment compared to workers with childcare responsibilities (Clancy et al., 2020; Henle et al., 2020). Furthermore, spousal caregivers may feel those impacts more profoundly than adult children caregivers because they provide more support for the care recipient which leads to greater physical, psychological, and financial burdens (Pinquart & Sörensen, 2011). At the same time, securing job continuity in the later working years is important for the economic well-being of the person approaching retirement age and his/her family and also has implications for the capacity of social and health insurance systems for older adults.

Using data from the 2001–2008 waves of the American Community Survey (ACS), we study the employment of 45- to 64-year-old adults with a disabled spouse in California in comparison to similar adults in states that had not enacted such laws. We focus on California because it is the only state that had a paid family leave law during this period. Focusing on California's law is also practically advantageous as its large state population ensures the statistical power of our analysis. Our study provides new empirical evidence on the effect of California's paid family leave law on employment for older workers with care responsibilities. Our findings underscore the importance of policy supporting a balance between work and eldercare for older adults and have implications for research and policy about paid family leave.

CONCEPTUAL FRAMEWORK

Economic models of labor supply assume a downward-sloping supply curve and upward-sloping demand curve for labor in a perfectly competitive market (Borjas, 2016). That is, they predict that all else equal, workers will prefer to work less, but employers will prefer to hire more, as the price of labor decreases. Having a family member who needs care increases the cost of working (because care must be purchased or foregone while the employee is at work) and thus reduces the returns to work, meaning that workers would be expected to reduce their hours of work or quit working altogether if the need for caregiving intensifies (Bolin et al., 2008). However, there is also a cost of not working—foregone earnings—and that cost would be higher for older workers with eldercare responsibilities than younger workers with childcare responsibilities, considering their later stage in career development.

By allowing workers to take short periods of time off with pay when needed, the availability of paid leave could prevent workers from reducing their employment by reducing the cost of working for workers with care responsibilities and could also pull back into the labor force caregivers who had already left a job (Saad-Lessler, 2020). This is in contrast to unpaid leave such as that provided by the federal FMLA, which would be unlikely to affect the labor supply of workers with the

need for caregiving unless they can afford unpaid time off from work (this would be true of higher income workers with savings or with high earning spouses). We therefore expect that paid family leave will be associated with increased employment of older workers with spousal care responsibilities.

Hypothesis 1: Access to paid family leave will increase the employment of older wage/salary workers with spousal care responsibilities.

Saad-Lessler (2020) makes the important point that the relationship between paid family leave and older workers' labor supply is likely to differ by their level of attachment to the labor market. When the need for caregiving arises within a family, women are more likely than men to take on the caregiver role throughout the lifecourse, resulting in lower labor market attachment. This is true when it comes to caring for children and is also true of care for elderly parents, where women are more likely than men to be the primary caregiver and have a higher caregiving burden, performing more intense caregiving in terms of care hours, number of tasks, and personal care (Pinquart & Sörensen, 2006). Previous studies have consistently found that informal care reduces women's hours of work and wages and accelerates retirement, whereas it decreases men's employment more modestly (Dentinger & Clarkberg, 2002; Jacobs et al. 2017; Johnson & Lo Sasso, 2006; Meng, 2012; Skira, 2015; Van Houtven et al., 2013). We therefore hypothesize that access to paid family leave may have a larger influence on women's labor supply than on

Hypothesis 2: The effect of paid family leave on employment will be larger for women than men.

PRIOR LITERATURE

A growing literature has examined the effects of California's paid family leave (CA-PFL) law on labor market outcomes for new parents (see overview by Bartel et al., 2014 and Rossin-Slater & Uniat, 2019). One common finding is that the expanded access to paid leave has raised overall rates of maternal and paternal leave-taking, with some evidence that it has particularly helped disadvantaged women (e.g., nonwhites, the less educated and single parents), who had been least likely to benefit from the unpaid leave provided under the FMLA (Bartel et al., 2018; Baum & Ruhm, 2016; Rossin-Slater et al., 2013). Several studies have also examined the effects of California's law on employment. Rossin-Slater et al. (2013) find in their difference-in-differences (DD) analysis that the law increased hours worked of employed new mothers by 10%-17% 1-3 years after the birth. Using a longitudinal survey, Baum and Ruhm (2016) provide similar but more specific results. Their DD estimates show that California's law increased work probabilities by 18.3 percentage points 1-year postbirth and weeks and hours worked by 18% and 11%, respectively, 2 years postbirth among employed mothers.

Nevertheless, there are other studies that find negative employment effects. Analyzing administrative (tax) data, Bailey et al. (2019) find that CA-PFL decreases new mothers' employment by 2.1 percentage points in the short run and 4.1 percentage points in the long run. Looking at young women overall, Das and Polachek (2015) find

that CA-PFL is associated with a 5% increase in unemployment and a 0.8-week increase in unemployment duration.

Finally, a few studies examine policy design features, finding that short duration of paid leave increases mothers' labor force participation (Byker, 2016), whereas larger leave benefits are not associated with employment after birth (Bana et al., 2018).

In contrast to the literature on paid leave and labor market outcomes for new parents, few studies have examined paid leave and labor market outcomes for older workers with care responsibilities. Previous studies of older workers in and outside the United States have paid very little attention to paid family leave, instead focusing on the relationship between informal care provision and labor market outcomes for older adults (e.g., Bauer & Sousa-Poza, 2015; Clancy et al., 2020; Lilly et al., 2007).

How the availability of paid leave affects the labor supply of working caregivers, particularly those caring for a spouse with serious health issues, is not known. Descriptive studies suggest positive effects of paid leave policies on labor force participation and employment of older women caring for an ill or disabled family member (Pavalko & Henderson, 2006; Skira, 2015). Two recent empirical investigations using more rigorous methods indicate positive effects of the availability of paid family leave on older women's employment. Saad-Lessler and Bahn (2017) use a difference-in-difference-in-difference (DDD) approach to examine the effects of CA-PFL law on labor market outcomes for workers with care responsibilities and find that the law increased labor force participation for caregivers, with much stronger effects for part-time rather than full-time employment. A limitation of this paper is that it focuses on those who have already selected into caregiving; furthermore, the paper does not analyze the pretrends in employment prior to the law going into effect. Kang et al. (2019) use a DD methodology to study the employment of older women with a disabled family member. Although they find that older women's probability of working last week increased by an average of 4 percentage points in California after the PFL law went into effect, they too do not verify that the pretrends in employment were parallel nor do they study men.

In this study, we analyze variations in employment associated with California's paid family leave law, focusing on married or cohabiting 45- to 64-year-old adults with a disabled spouse. We use data from the American Community Survey (ACS) from 2001-2003 (prelaw) and 2006–2008 (postlaw), dropping the 2 years of data in the middle that refer to an indefinite period in 2004 (which might be pre- or postlaw). Our DDD model compares the changes in employment before and after the implementation of the law, for 45- to 64-year-old workers with a disabled spouse and those without, in California versus the rest of the nation. Implicitly, we assume that having a spouse with a disability is a proxy for the need to provide care for a spouse with a serious illness. Unlike prior studies, we analyze whether the trends in employment prior to the law going into effect were parallel in California and the rest of the nation, which is important in determining whether the rest of the nation is an appropriate comparison group. Our main estimates use symmetric numbers of years pre- and postlaw in order to obtain more accurate DDD estimates (see Goodman-Bacon, 2018) and we also examine whether these results are robust to adding more postlaw years. In addition, we consider whether the impact of the law differs by gender.

DATA AND METHODS

We use the American Community Survey (ACS) to estimate the effects of CA-PFL, using data from before and after the law's implementation in 2004. The ACS is a large annual population survey with comprehensive information about social, economic, housing, and demographic characteristics. We use the data between 2001 and 2003 to represent the prelaw period and between 2006 and 2008 to represent the postlaw period. We exclude 2004 and 2005 because it is unclear whether the "prior year" reference period occurred before or after the implementation of CA-PFL. We restrict the sample to married/cohabiting 45–64 year olds. Younger persons are dropped to minimize the influence of childcare leaves and those age 65 or older excluded because our focus is on the nonretired.

We use the information on a disability of a spouse or partner to identify the respondent's potential need for providing care for a family member with a serious illness. On average, 11%-13% of the women and 7%–9% of the men in this age group have a spouse or partner with a disability during the years observed. The share of men who are spousal caregivers in our data was similar to the numbers from other studies on caregiving in older ages. For example, Butrica & Karamcheva (2014) indicate that, among adults aged 51 or older, 7% of men and 5.3% of women are married to a spouse with poor health. Choi et al. (2015) estimate that 7.2% of men spouses and 14.6% of women spouses are available if a 55-or-older person has one or more difficulties in the activities of daily living. We do not focus on the disability of an older parent residing in the household because the decision to coreside may be endogenous and because we cannot observe elderly parents not living in the home in this data set. However, disability information for other household member (including older parents) is included as a control variable in the regression. We exclude those who have their own disabilities.

The outcomes examined include dichotomous variables indicating any employment (regardless of sector), employment in the private sector, employment in the public sector, and self-employment during the prior 12 months. We use the self-assessed categories of the current or the most recent job asking if the person is employed for a private establishment for (or not for) profit, a local/state/federal government, self-employed (incorporated or not), or family business without pay. We distinguish private sector, public sector, and self-employment because only employees in the private sector are fully covered by CA's law.

Spouse disability is a dummy variable coded as 1 if the spouse is reported to have any cognitive, ambulatory, independent living, self-care, or vision or hearing difficulties. The questionnaire measures cognitive difficulty with a question asking "Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?", ambulatory difficulty with "Does this person have serious difficulty walking or climbing stairs?", independent living difficulty with "Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?", self-care difficulty with "Does this person have difficulty dressing or bathing?", and vision/hearing difficulty with "Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?" and "Is this person deaf or does he/she have serious difficulty hearing?".

The years 2001–2003 are defined as the prelaw period and 2006–2008 is the postlaw period. As mentioned, we deliberately chose the

sample years to cover the same amount of time before and after the law took effect for our main estimates.

Individual-level demographic covariates include education, race and ethnicity, citizenship, veteran status, age, and age squared. Household controls comprise language spoken at home, homeownership, other household members' disabilities, age of the youngest child, childbirth in the previous year, and grandchildren in the household.

Descriptive statistics

Table 1 shows the summary statistics of our analysis sample by gender and a spouse's disability status, distinguishing between California and other states. Women living in California show higher levels of education (53%-66% some college or more); a larger share of nonwhites (44%–46%) and foreign-born individuals (35%–36%) than women in other states (47%-61% some college or more; 18%-19% nonwhite; 9%-12% foreign-born), regardless of the spouse's disability. So do men: a larger share of male California residents had some college or more education, are nonwhite, and are foreign-born than other state residents. Among women with a disabled spouse, the share with any employment during the prior 12 months is 67% for California residents and 71% for other state residents. The share with any employment for women without a disabled spouse is 69% and 74% for those living in California and other states, respectively, whereas the share with any employment is around 87%-88% and 90%-91% for men with and without a disabled spouse, respectively. As would be expected, employment rates for the disabled spouses themselves are considerably lower, ranging from 38% to 40% for disabled husbands and 34% to 36% for disabled wives.

Analytic method

We estimate the causal effect of CA-PFL on the employment of older adults with a disabled spouse using a difference-in-difference-in-difference (DDD) approach. We provide a detailed overview of this method in Supplementary Appendix B, but briefly, it provides a causal estimate by comparing the change in employment pre- and postlaw for older adults with a disabled spouse in California (this is the first difference) to the change for similar adults in the rest of the country over the same time period (the second difference), and by comparing those changes to those for older adults without a disabled spouse (the third difference).

$$Y_{ist} = \beta_0 + \beta_1 D_{ist} + \beta_2 D_{ist} \cdot CA_{ist} + \beta_3 D_{ist} \cdot Post_t + \beta_4 CA_{ist} \cdot Post_t + \beta_5 D_{ist} \cdot CA_{ist} \cdot Post_t + \gamma' X_{ist} + \delta_s + \theta_t + \varepsilon_{ist}$$

where the labor market outcome, Y, of individual i in year t and state s is dependent on disability of the spouse, D; California residence, CA; implementation of the paid family leave law, Post; and interactions, controlling for own and spouse demographic characteristics, X; as well as state and year effects, δ and θ .

Table 1. Summary statistics of 45- to 64-year-old adults: by gender, spouse's disability, and states.

	Women					Men				
	Total	With a c	lisabled	Without spouse	a disabled	Total	With a c	lisabled	Without spouse	a disabled
		CA	Other	CA	Other		CA	Other	CA	Other
Less than high school	0.096	0.217	0.145	0.152	0.081	0.102	0.214	0.162	0.153	0.089
High school or GED	0.308	0.249	0.385	0.192	0.312	0.260	0.211	0.334	0.159	0.266
Some college	0.295	0.323	0.288	0.314	0.294	0.275	0.320	0.284	0.288	0.273
College degree+	0.300	0.210	0.183	0.341	0.313	0.363	0.256	0.219	0.400	0.373
White, non-Hispanic	0.796	0.542	0.808	0.565	0.825	0.780	0.538	0.781	0.555	0.810
Black, non-Hispanic	0.063	0.043	0.082	0.034	0.064	0.072	0.057	0.103	0.040	0.073
Hispanic	0.078	0.247	0.066	0.215	0.061	0.087	0.271	0.077	0.231	0.069
Other, non-Hispanic	0.063	0.168	0.044	0.186	0.049	0.060	0.134	0.039	0.174	0.048
Native-born, citizen	0.862	0.653	0.909	0.640	0.885	0.854	0.666	0.904	0.633	0.879
Foreign-born, citizen	0.085	0.213	0.057	0.223	0.071	0.089	0.194	0.056	0.224	0.074
Foreign-born, noncitizen	0.053	0.134	0.034	0.137	0.044	0.057	0.140	0.040	0.143	0.047
Veteran	0.011	0.010	0.013	0.008	0.011	0.264	0.268	0.334	0.206	0.265
Age	53.12	54.59	54.77	52.64	52.93	53.23	54.31	54.41	52.88	53.16
Any employment	0.728	0.671	0.710	0.685	0.736	0.906	0.870	0.880	0.902	0.909
Private-sector employment	0.515	0.463	0.520	0.474	0.520	0.664	0.664	0.677	0.662	0.663
Public-sector employment	0.181	0.185	0.168	0.178	0.183	0.155	0.158	0.150	0.158	0.155
Self-employed	0.031	0.023	0.022	0.033	0.033	0.087	0.048	0.054	0.082	0.091
Spouse employment	0.757	0.384	0.402	0.797	0.807	0.672	0.338	0.361	0.656	0.706
Observations	955,989	9,971	106,379	82,809	756,830	915,602	6,980	69,439	84,243	754,940

Note. The table reports summary statistics of married or cohabiting women and men aged 45–64. The entries are proportions except for age, which is in years. American Community Survey person weights are applied throughout.

Source. 2001–2003, 2006–2008 American Community Survey.

The DDD estimate, β_s , represents the effect of the paid family leave law in California on the employment outcomes for 45- to 64-year-old individuals with a spouse with disabilities. To ease interpretation, linear probability models are estimated.

All models are estimated separately for men and women because we hypothesize that women's employment would be more responsive than that of men.

RESULTS

Pretrends

We begin by illustrating the trends in employment outcomes across the observed period for 45–64 year olds with a disabled spouse in CA and other states to see whether the parallel trend assumption holds. The graphs show the results for men and women for each outcome.

Figure 1 shows that trends in the employment rate for 45- to 64-year-old women in CA and other states look fairly similar before 2004. Likewise, the pretreatment period trends for employment in the private sector, public sector, and self-employment do not differ much between CA and other states. Figure 2 shows corresponding employment pretrends for 45- to 64-year-old men. Generally, the trends in CA and other states are similar, although less so than for women and with a suggestion of differences for private-sector employment. These patterns indicate that our results for men need to be interpreted with greater caution than those for women.

Econometric estimates

Table 2 reports the DDD estimates of the effect of CA-PFL on the employment of 45- to 64-year-old women with a disabled spouse. Cluster-robust standard errors are shown in parentheses. Overall, the probability of employment for women with a disabled spouse rose 0.9 percentage points or 1.4% on a prelaw base of 65.9%. Given that

CA-PFL covered virtually all private-sector employees, but not those working for the government or self-employed, it is no surprise that the program increased the probability of private-sector employment of 45- to 64-year-old females by a larger amount, 2.9 percentage points on a base of 44.7%, while reducing public-sector employment and self-employment.

Table 3 reports corresponding results for 45- to 64-year-old men. Overall employment for men with a disabled spouse increases 0.7 percentage points or 0.8% on a preprogram base of 86.8% but, when disaggregated by sector, the results are insignificant. The weaker results may be because men have fewer caregiving responsibilities or because of the possibly nonparallel pretrends previously discussed.

Robustness checks

The results presented in Tables 2 and 3 are based on a symmetric number of years pre- and postlaw. To examine the robustness of these results, we also estimated the employment regressions adding more postlaw years (Table 4). Specifically, we extended the postlaw period by 2-year intervals from 2010 to 2018. In all cases, our results remained substantially similar to our main estimates.

Other estimates

In previous work, we found racial differences in access to and use of paid family leave, specifically that Hispanics are significantly less likely than White non-Hispanics to have such access and use, and with Blacks also being marginally less likely to have access to and use leave compared with White non-Hispanics (Bartel et al., 2019). Given these results, we repeated the employment regressions, disaggregating by race/ethnicity, and found much larger estimated effects for Black non-Hispanics than whites for both women and men. However, a review of the trends in employment prior to the law uncovered sharp differences between California and the control states in employment for Black

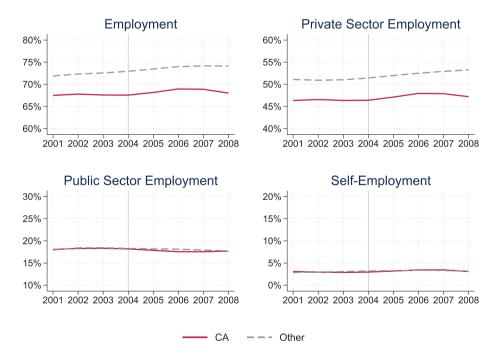


Figure 1. Employment in California compared with other states for 45- to 64-year-old women.

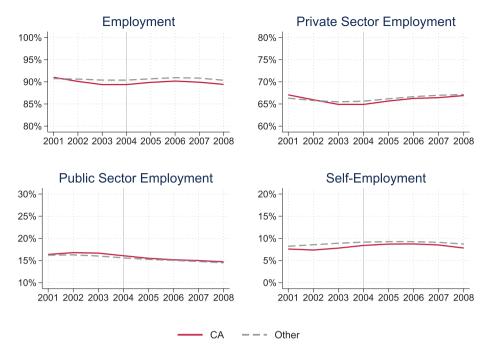


Figure 2. Employment in California compared with other states for 45- to 64-year-old men.

Table 2. Effects of paid family leave on employment of women aged 45-64.

	Any employment	Private-sector employment	Public-sector employment	Self-employed
Spouse's disability	0.030***	0.030***	0.005	-0.005***
•	(0.003)	(0.003)	(0.002)	(0.001)
Disability \times CA	0.011**	-0.026***	0.034***	0.003*
•	(0.004)	(0.003)	(0.003)	(0.001)
Disability × Post	-0.000	-0.010*	0.012***	-0.002
	(0.004)	(0.005)	(0.003)	(0.001)
$CA \times Post$	-0.003	-0.010***	0.005***	0.002***
	(0.002)	(0.002)	(0.001)	(0.001)
CA × Post × Disability	0.009*	0.029***	-0.017***	-0.003*
	(0.005)	(0.005)	(0.003)	(0.001)
Prelaw mean	0.659	0.447	0.188	0.023

Note. This table provides ordinary least squares estimates for married or cohabiting women age 45-64 without their own disability. Spouse/partner's disability is considered as 1 if a spouse has any cognitive, ambulatory, independent living, self-care, or vision or hearing difficulties, and 0 otherwise. CA takes the value of 1 if the respondent lives in California, and 0 otherwise. Post is coded as 1 if survey year is between 2006 and 2008, and 0 if between 2001 and 2003. All models also control for year and state fixed-effects, as well as the individual and household demographic characteristics described in the text. Prelaw means for CA women with a disabled spouse/partner are shown in the last row. Sample size is 955,989. Cluster-robust standard errors are shown in parentheses. American Community Survey person weights are applied. The interaction term in bold is the DDD estimate showing the effect of the leave law on women's employment. *p < .05, **p < .01, ****p < .001. Source. 2001–2003, 2006–2008 American Community Survey

women and men. Hence, we are unable to conclude how much of the observed racial differences in employment postlaw can be attributed to the paid family leave program. We also estimated the employment regressions by education group and type of disability of the spouse. We were unable to detect statistically significant differences between these groups, although this might reflect imprecision in the estimates.

DISCUSSION

We find that California's paid family leave law raised the employment rate of 45–64 year olds with a disabled spouse. For women,

these effects were concentrated among private-sector employees, which makes sense since CA-PFL fully covered private but not public workers. We found weaker effects for men. Our findings are generally consistent with previous studies that found a positive effect of CA-PFL on older workers' labor supply, particularly for women (Kang et al., 2019; Saad-Lessler & Bahn, 2017). However, we find a 1.4% increase in older women's employment, which is smaller than 3.97% from Kang et al. (2019). A reason for our smaller effect size could be that we focus on a subset of married or cohabiting adults aged 45–64 to study spousal caregivers, whereas Kang et al. (2019) include all women

Table 3. Effects of paid family leave on employment of men aged 45-64.

	Any employment	Private-sector employment	Public-sector employment	Self-employed
Spouse's disability	0.007*	0.019***	0.008*	-0.020***
•	(0.003)	(0.004)	(0.003)	(0.002)
Disability \times CA	-0.007*	-0.008	0.000	0.001
•	(0.003)	(0.005)	(0.004)	(0.002)
Disability × Post	-0.006*	-0.005	0.004	-0.004
•	(0.003)	(0.005)	(0.004)	(0.002)
CA × Post	-0.005***	-0.013***	0.001	0.007***
	(0.001)	(0.002)	(0.001)	(0.001)
CA × Post × Disability	0.007*	-0.004	0.006	0.005
·	(0.003)	(0.005)	(0.004)	(0.002)
Prelaw mean	0.868	0.661	0.162	0.045

Note. This table provides ordinary least squares estimates for married or cohabiting men age 45–64 without their own disability. Spouse/partner's disability is considered as 1 if a spouse has any cognitive, ambulatory, independent living, self-care, or vision or hearing difficulties, and 0 otherwise. CA takes the value of 1 if the respondent lives in California, and 0 otherwise. Post is coded as 1 if survey year is between 2006 and 2008, and 0 if between 2001 and 2003. All models also control for year and state fixed-effects, as well as the individual and household demographic characteristics described in the text. Prelaw means for CA men with a disabled spouse/partner are shown in the last row. Sample size is 915,602. Cluster-robust standard errors are shown in parentheses. American Community Survey person weights are applied. The interaction term in bold is the DDD estimate showing the effect of the leave law on men's employment. *p < .05, **p < .01, ***p < .001.

**Source. 2001–2003, 2006–2008 American Community Survey.

within the same age range who have any family member with physical limitation or disability. Another reason could be that they used a much longer postlaw period (to 2014), compared with 2008 in this study, although when we extended our analysis period the estimates did not change. Our results cannot be compared directly to Saad-Lessler and Bahn (2017) because they do not include employment in their measures for labor market outcomes (focusing on labor force participation, full-time, and hours of work).

Contributions and implications

Our work contributes to the existing literature by providing additional evidence to the few existing studies about the effects of paid family leave on older workers' employment, lending a new perspective to paid family leave studies. The FMLA and state laws were enacted to cover all kinds of family caregiving—care for a spouse, parent, grandparent, children, or grandchildren—but the effects of these policies on leave for reasons other than parental leave have not been widely studied. Given the growing older population, understanding the effects of paid family leave for older workers with care responsibilities for an adult family member is gaining importance. In particular, spouse caregivers are less likely than child caregivers to use formal care services or supports or share the care responsibilities with other family members or relatives (Jacobs et al., 2018). Therefore, we expect there could be a substantial negative impact of caregiving on employment for older adults with a disabled spouse. In this study, we examine the effect of paid family leave on employment of older workers with the need to provide caregiving to a spouse and find modest but robust positive effects.

Our study is unique in analyzing older male and female caregivers separately. We find larger positive effects for women than men. These results support our hypothesis that women face higher costs of employment due to caregiving compared with men and that paid family leave policy reduces those costs. In addition, women's rate of employment in California during the prelaw period was lower than men's and therefore had more room to increase after the implementation of the

law. The larger positive effects for women suggest that paid family leave could protect economic well-being of women and their families by helping them maintain their jobs and cover the costs incurred by caregiving, rather than leaving their jobs altogether. Our results imply that paid family leave could reduce gender inequality in the labor market for older workers caused by informal care responsibilities.

Our analysis has two important policy implications. First, the availability of paid family leave could extend work lives for older workers. Population aging calls for policy innovations that could counteract the projected decline in economic productivity (Maestas et al., 2016), and promoting the labor supply of older workers is considered an important option (Goldin, 2016). One of the major factors that interrupts employment continuity of older adults is difficulty in finding a job compatible with caregiving responsibilities, in spite of many older workers' willingness to work (Fahle & McGarry, 2018; Moen, 2020). Paid family leave can offer older workers flexibility around the time of a care emergency—without the loss of earnings or the loss of their job—to allow them to provide immediate assistance for the family member who needs care. During or after the emergency, the caregivers can make use of the time off from work to find the appropriate care arrangement that enables care provision congruent with their work schedule in the long term.

Second, our results suggest that paid family leave could help contribute to the future solvency of Social Security as a result of the increased job continuity among older caregivers, especially women. Providing care reduces older women's hours of work and accelerates retirement timing compared with men (Jacobs et al., 2015; Meng, 2012; Skira, 2015; Van Houtven et al., 2013) and their reduced labor supply due to caregiving often does not recover even after the care spell ends (Skira, 2015). This is particularly true for the caregivers of a spouse or partner (Gonzales et al., 2017). It is estimated that, among unpaid eldercare providers, 9% quit their job, and 10% retire early due to caregiving, according to a nationally representative survey (AP-NORC, 2017). We can extrapolate from these numbers that up to 10% of workers with eldercare responsibilities, projected to amount to nearly

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Table 4. Robustness checks.

	Women				Men			
	Any employment	Private-sector employment	Public-sector employment	Self-employed	Any employment	Private-sector employment	Public-sector employment	Self-employed
Post: 2006-2010								
DDD	900.0	0.024***	-0.015***	-0.002*	*2000	0.001	0.006	0.001
	(0.005)	(0.005)	(0.003)	(0.001)	(0.003)	(0.005)	(0.004)	(0.002)
Observations	1,309,953	1,309,953	1,309,953	1,309,953	1,246,301	1,246,301	1,246,301	1,246,301
Mean	0.726	0.515	0.179	0.032	0.900	0.662	0.152	980.0
Post: 2006-2014								
DDD	0.007	0.024***	-0.013***	-0.004**	0.011***	0.007	0.005	-0.000
	(0.004)	(0.004)	(0.003)	(0.001)	(0.003)	(0.004)	(0.003)	(0.002)
Observations	2,189,663	2,189,663	2,189,663	2,189,663	2,069,286	2,069,286	2,069,286	2,069,286
Mean	0.722	0.517	0.174	0.032	0.894	0.663	0.147	0.083
Post: 2006-2018								
DDD	0.007	0.022***	-0.012***	-0.003*	**600.0	-0.000	*800.0	0.001
	(0.004)	(0.004)	(0.003)	(0.001)	(0.003)	(0.004)	(0.003)	(0.002)
Observations	3,066,568	3,066,568	3,066,568	3,066,568	2,895,882	2,895,882	2,895,882	2,895,882
Mean	0.722	0.520	0.169	0.033	0.894	899.0	0.143	0.083

Note. DDD = difference-in-difference-in-difference The table reports the DDD estimates with longer postlaw periods for married or cohabiting adults age 45–64 without their own disability. All models control for year and state fixed-effects, as well as the individual and household demographic characteristics described in the text. Prelaw means for CA residents with a disabled spouse/partner are shown in the last row. Cluster-robust standard errors are shown in parentheses. American Community Survey person weights are applied. * $^*p < .05, ^{**}p < .01, ^{***}p < .01, ^{***}p < .001$.

30 million people in 2019 (Feinberg & Skufca, 2020), could stay in their job and continue to contribute to social insurance if paid family leave became available to all workers.

Limitations

Our results should be interpreted in light of several limitations. First, with only a single "treated" state (California) our clustered robust standard errors may reject the null hypothesis of no effect too frequently. Ferman and Pinto (2019) have developed a bootstrap method to address the issue of a single treatment state but there is no consensus yet in the literature as to whether it yields estimated p-values that are too conservative. Second, we have not investigated the effects of specific parameters of paid family leave policy, such as generosity of pay or duration or job protection. California's law in the period we examine was considerably less generous than laws that other states have enacted more recently, and it did not provide job protection. Therefore, the potential effects of paid family leave on employment might be understated in our analysis, and future research should examine other state policies as data becomes available. Even so, the results are consistent with a beneficial effect of paid leave on the overall and private-sector employment rates of 45-64-year-old women with a disabled spouse, and with a positive albeit more muted effect on the overall employment rates of corresponding men. If confirmed by future investigations, these findings could indicate an important benefit of the program. Third, due to data limitations, we were not able to examine the effects of paid family leave on older workers caring for parents. This remains an important topic for future research.

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REFERENCES

- AP-NORC. (2017). Long-term caregiving: the types of care older Americans provide and the impact on work and family. https://www.longtermcarepoll.org/wp-content/uploads/2017/11/AP-NORC-Long-term-Care-2017 Caregivers Issue-Brief.pdf
- Bailey, M., Byker, T., Patel, E., & Ramnath, S. (2019). The long-term effects of California's 2004 Paid Family Leave Act on women's careers: evidence from U.S. tax data (NBER Working Paper Series No. 26416). National Bureau of Economic Research. doi:10.3386/ w26416
- Bana, S., Bedard, K., & Rossin-Slater, M. (2018). The impacts of paid family leave benefits: regression kink evidence from California administrative data (NBER Working Paper Series, No. 24438). National Bureau of Economic Research. doi:10.3386/w24438
- Bartel, A. P., Baum, C., Rossin-Slater, M., Ruhm, C., & Waldfogel, J. (2014). California's paid family leave law: lessons from the first decade. https://www.dol.gov/sites/dolgov/files/OASP/legacy/files/PaidLeaveDeliverable.pdf
- Bartel, A. P., Kim, S., Nam, J., Rossin-Slater, M., Ruhm, C., & Waldfogel, J. (2019). Racial and ethnic disparities in access to and use of Paid Family and Medical Leave: evidence from

- four nationally representative datasets. Monthly Labor Review. doi:10.21916/mlr.2019.2
- Bartel, A. P., Rossin-Slater, M., Ruhm, C. J., Stearns, J., & Waldfogel, J. (2018). Paid family leave, fathers' leave-taking, and leave-sharing in dual-earner households. *Journal of Policy Analysis and Management*, 37(1), 10–37. doi:10.1002/pam.22030
- Bauer, J. M., & Sousa-Poza, A. (2015). Impacts of informal caregiving on caregiver employment, health, and family. *Journal of Population Ageing*, 8(3), 113–145. doi:10.1007/s12062-015-9116-0
- Baum, C. L., & Ruhm, C. J. (2016). The effects of Paid Family Leave in California on labor market outcomes. *Journal of Policy Analysis and Management*, 35(2), 333–356. doi:10.1002/pam.21894
- Bolin, K., Lindgren, B., & Lundborg, P. (2008). Your next of kin or your own career? Caring and working among the 50+ of Europe. *Journal of Health Economics*, 27(3), 718–738. doi:10.1016/j. jhealeco.2007.10.004
- Borjas, G. J. (2016). Labor economics (7th ed.). McGraw-Hill Education.
- Butrica, B., & Karamcheva, N. (2014). The impact of informal caregiving on older adults' labor supply and economic resources. https://www.dol.gov/sites/dolgov/files/ebsa/researchers/analysis/retirement/the-impact-of-informal-caregiving-on-olderadults-labor-supply-and-economic-resources.pdf
- Byker, T. S. (2016). Paid parental leave laws in the United States: does short-duration leave affect women's labor-force attachment? *American Economic Review*, 106(5), 242–246. doi:10.1257/aer. p20161118
- California Employment Development Department. (2020). Overview of California's Paid Family Leave program. https://edd.ca.gov/pdf_pub_ctr/de2530.pdf
- Calvano, L. (2013). Tug of war: caring for our elders while remaining productive at work. *Academy of Management Perspective*, 27(3), 204–218. doi:10.5465/amp.2012.0095
- Choi, H., Schoeni, R. F., Langa, K. M., & Heisler, M. M. (2015). Spouse and child availability for newly disabled older adults: socioeconomic differences and potential role of residential proximity. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. 70(3), 462–469. doi:10.1093/geronb/gbu015
- Clancy, R. L., Fisher, G. G., Daigle, K. L., Henle, C. A., McCarthy, J., & Fruhauf, C. A. (2020). Eldercare and work among informal caregivers: a multidisciplinary review and recommendations for future research. *Journal of Business and Psychology*, 35(1), 9–27. doi:10.1007/s10869-018-9612-3
- Das, T., & Polachek, S. W. (2015). Unanticipated effects of California's paid family leave program. *Contemporary Economic Policy*, 33(4), 619–635. doi:10.1111/coep.12102
- Dentinger, E., & Clarkberg, M. (2002). Informal caregiving and retirement timing among men and women: gender and caregiving relationships in late midlife. *Journal of Family Issues*, 23(7), 857–879. doi:10.1177/019251302236598
- Fahle, S., & McGarry, K. (2018). Women working longer: labor market implications of providing family care. In C. Goldin & L. F. Katz (Eds.), Women working longer: increased employment at older ages (pp. 157–181). University of Chicago Press. http://ebookcentral. proquest.com

- Feinberg, L. F., & Skufca, L. (2020). Managing a paid job and family caregiving is a growing reality. *Spotlight*, 50, 1–8. doi:10.26419/ppi.00103.024
- Ferman, B., & Pinto, C. (2019). Inference in differences-in-differences with few treated groups and heteroskedasticity. *The Review of Economics and Statistics*, 101(3), 452–467. doi:10.1162/rest_a_00759
- Goldin, C. (2016). How Japan and the US can reduce the stress of aging (NBER Working Paper Series, No. 22445). National Bureau of Economic Research. http://www.nber.org/papers/w22445
- Gonzales, E., Lee, Y., & Brown, C. (2017). Back to work? Not everyone. Examining the longitudinal relationships between informal caregiving and paid work after formal retirement. The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 72(3), 532–539. doi:10.1093/geronb/gbv095
- Goodman-Bacon, A. (2018). Difference-in-differences with variation in treatment timing (NBER Working Paper Series, No. 25018). National Bureau of Economic Research. doi:10.3386/w25018
- Henle, C. A., Fisher, G. G., McCarthy, J., Prince, M. A., Mattingly, V. P., & Clancy, R. L. (2020). Eldercare and childcare: how does caregiving responsibility affect job discrimination? *Journal of Business* and Psychology, 35(1), 59–83. doi:10.1007/s10869-019-09618-x
- Jacobs, J. C., Van Houtven, C. H., Laporte, A., & Coyte, P. C. (2015). Baby boomer caregivers in the workforce: do they fare better or worse than their predecessors? *Journal of the Economics of Ageing*, 6, 89–101. doi:10.1016/j.jeoa.2015.05.001
- Jacobs, J. C., Van Houtven, C. H., Laporte, A., & Coyte, P. C. (2017).
 The impact of informal caregiving intensity on women's retirement in the United States. *Journal of Population Ageing*, 10(2), 159–180. doi:10.1007/s12062-016-9154-2
- Jacobs, M. T., Broese van Groenou, M. I., Aartsen, M. J., & Deeg, D. J. H. (2018). Diversity in older adults' care networks: the added value of individual beliefs and social network proximity. The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 73(2), 326–336. doi:10.1093/geronb/gbw012
- Johnson, R. W., & Lo Sasso, A. T. (2006). The impact of elder care on women's labor supply. *INQUIRY*, 43(3), 195–210. doi:10.5034/inquiryjrnl 43.3.195
- Kang, J. Y., Park, S., Kim, B., Kwon, E., & Cho, J. (2019). The effect of California's paid family leave program on employment among middle-aged female caregivers. *The Gerontologist*, 59(6), 1092– 1102. doi:10.1093/geront/gny105
- Lilly, M. B., Laporte, A., & Coyte, P. C. (2007). Labor market work and home care's unpaid caregivers: a systematic review of labor force participation rates, predictors of labor market withdrawal, and hours of work. *Milbank Quarterly*, 85(4), 641–690. doi:10.1111/j.1468-0009.2007.00504.x
- Maestas, N., Mullen, K. J., & Powell, D. (2016). The effect of population aging on economic growth, the labor force and productivity (NBER

- Working Paper Series No. 22452). National Bureau of Economic Research. http://www.nber.org/papers/w22452
- Meng, A. (2012). Informal caregiving and the retirement decision. *German Economic Review*, 13(3), 307–330. doi:10.1111/j.1468-0475.2011.00559.x
- Moen, P. (2020). Working longer versus flexible pathways in uncertain times. *Public Policy & Aging Report*, 30(3), 124–129. doi:10.1093/ppar/praa018
- Pavalko, E. K., & Henderson, K. A. (2006). Combining care work and paid work: do workplace policies make a difference? *Research on Aging*, 28(3), 359–374.
- Pew Research Center. (2017). Americans widely support paid family and medical leave, but differ over specific policies. http://www.pewsocialtrends.org/2017/03/23/support-for-paid-leave-policies/
- Pinquart, M., & Sörensen, S. (2006). Gender differences in caregiver stressors, social resources, and health: an updated meta-analysis. The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 61(1), P33–P45. doi:10.1093/geronb/61.1.P33
- Pinquart, M., & Sörensen, S. (2011). Spouses, adult children, and children-in-law as caregivers of older adults: a meta-analytic comparison. *Psychology and Aging*, 26(1), 1–14. doi:10.1037/a0021863
- Rossin-Slater, M., Ruhm, C. J., & Waldfogel, J. (2013). The effects of California's paid family leave program on mothers' leave-taking and subsequent labor market outcomes. *Journal of Policy Analysis and Management*, 32(2), 224–245. doi:10.1002/pam.21676
- Rossin-Slater, M., & Uniat, L. (2019). Paid family leave policies and population health. *Health Affairs Health Policy Brief.* doi:10.1377/hpb20190301.484936
- Saad-Lessler, J. (2020). How does paid family leave affect unpaid care providers? *The Journal of the Economics of Ageing*, 17, 100265. doi:10.1016/j.jeoa.2020.100265
- Saad-Lessler, J., & Bahn, K. (2017). The importance of paid leave for caregivers: labor force participation effects of California's comprehensive paid family and medical leave. https://cdn. americanprogress.org/content/uploads/2017/09/26141822/BahnPaidLeaveLaborForce-report.pdf
- Skira, M. M. (2015). Dynamic wage and employment effects of elder parent care. *International Economic Review*, 56(1), 63–93. doi:10.1111/iere.12095
- Van Houtven, C. H., Coe, N. B., & Skira, M. M. (2013). The effect of informal care on work and wages. *Journal of Health Economics*, 32(1), 240–252. doi:10.1016/j.jhealeco.2012.10.006
- Williams, J. C., Devaux, R., Petrac, P., & Feinberg, L. (2012). Protecting family caregivers from employment discrimination. *Insight on the Issues*, 68, 1–26. https://www.aarp.org/content/dam/aarp/research/public_policy_institute/health/protecting-caregivers-employment-discrimination-insight-AARP-ppi-ltc.pdf