Paid Family Leave and Work Flexibility: The Differential Effects of California Paid Family Leave on Women's Work across Occupations

Introduction

Gender gaps in earnings, wages and labor market participation continue to exist despite the progress made over the last few decades. Prior research shows that mothers tend to experience greater disadvantage in the labor market as compared to non-mothers and fathers since they experience a substantial penalty for taking time off work (Blau & Kahn, 2017; Sigle-Rushton & Waldfogel, 2007). The transition into motherhood is a particularly crucial juncture in the life of female workers and amounts to a significant discontinuity in their labor market trajectories. A prominent policy tool used by governments to support female workers during this vulnerable period is the paid family leave. Paid family leave policies support women by providing statutory access to leave in the months after childbirth along with compensation for the wages lost during the leave period. Women's labor market decisions around family leave and return to work are crucially influenced by the extent of occupational flexibility they have access to. Flexibility at the workplace is a key factor because it not only affects how women balance their caregiving responsibilities with paid employment but also determines how much penalty women experience for taking time off work. Existing research indicates that the penalty of taking time off work is higher in occupations that offer low flexibility (Goldin, 2014).

This paper analyzes the differential effects of the California Paid Family Leave program (CA PFL) on women's leave-taking and employment outcomes across varying levels of occupational flexibility. The CA PFL was a landmark legislation as it was the first state-level paid family leave policy in the United States that enabled new parents to take time off work without suffering a complete loss in income for that period. It has been shown to increase women's use of family leave after having a child (Baum & Ruhm, 2016; Rossin-Slater et. al., 2013; Rossin-Slater, 2017) though its effects on employment and wages are unclear (Byker & Patel, 2021). The first purpose of this paper is to analyze how differently the CA PFL affected leave-taking, employment, and weekly hours of work for women employed in high-flexibility occupations vs for women employed in low-flexibility occupations. To this end, I use data from the National Longitudinal Survey of Youth 1997 (NLSY97) and employ a difference-in-differences empirical strategy. Secondly, I examine the three main dimensions of occupational flexibility, namely time flexibility, location flexibility and task flexibility. Specifically, I ask how the effects of the CA PFL are moderated by the presence of these three kinds of flexibility.

Background and Policy Context

Motherhood and Gender Gaps: Past scholarly literature shows the persistence of gender gaps in earnings and labor market participation. Having a child is one of the most crucial junctures in the employment history of a woman. When men and women initially enter the labor market, the gender gap in wages is small. However, female earnings relative to male earnings decrease for nearly two decades after college. A significant drop in their earnings is observed at the advent of motherhood when women take some time off work due to pregnancy and childcare. When women return to work, their earnings start to recover but

over the life cycle women who have children consistently have lower earnings than women who do not have children. In essence, this is the labor market penalty of having a child for women. As a result, the gender gap expands over time and only starts to shrink once these individuals reach their 40s. This discontinuity in employment around childbirth has tremendous influence on women's employment trajectory, wage history, and consequently, their long-term economic outcomes (Blau & Kahn, 2017; Bertrand, Goldin & Katz, 2010; Budig & England, 2012; Glauber, 2018; Goldin, 2014; Sigle-Rushton & Waldfogel, 2007). Recent studies further confirm the presence of a child penalty for women in many countries. Having a child adversely affects the employment and earnings of women but not of men (Kleven et. al., 2019a; Kleven et. al., 2019b).

Gender Gaps and Occupational Flexibility: The penalty for taking time off work experienced by women in the labor market varies by the occupation they work in. In certain occupations, the earnings cost of taking time off is lower than in others. Goldin (2014) shows that gender pay gap is lower in occupations where there is a linear relationship between earnings and hours worked; conversely, the gender pay gap is higher in occupations that exhibit a non-linear and convex relationship between earnings and hours worked. This is because working longer hours (particularly over 40 hours) and working non-standard hours (e.g., working on holidays, on late evenings, on demand by the client) is rewarded generously in certain occupations. In these occupations, workers have less flexibility but they earn a premium. It is also harder to substitute one worker for another in these occupations due to the friction and transaction costs involved. When substitution is costly, taking time off comes with a larger penalty which makes it more costly for mothers to take time off due to childbirth or childcare reasons. Such occupations have been shown

to have larger gender wage gaps in comparison to occupations which allow for more flexibility and lower costs associated with taking time off. (Goldin, 2014).

The compensating wage differentials framework (CWD) helps explain how gender differences in earnings emerge in regards to occupational flexibility. First introduced by Adam Smith in *The Wealth of Nations* (1776), the theory of CWD was later developed and applied by Rosen (1986) to modern day labor market contexts. The CWD model hypothesizes that occupations are bundles of attributes that are characterized by combinations of pecuniary and non-pecuniary features. There is heterogeneity among firms as well as among workers in how much they value these different features of occupations. Workers can earn more if they take up jobs with certain undesirable non-pecuniary characteristics. Correspondingly, workers can trade off wages for some other desirable non-wage features of a job. Flexibility is one such non-pecuniary occupational characteristic that is often valued by new parents, especially mothers. Mothers who may need flexibility to manage childcare with their work responsibilities may place high value on flexibility and may choose to give up some portion of their earnings to work in more flexible occupations.

In occupations that do not allow for much flexibility, mothers face a penalty if they have a preference to work fewer hours or if they are unable to work during non-standard work hours. If they are not able to work the specific hours that the employer places value on, they may miss out on key workplace interactions that are essential to fulfill the responsibilities of their role and to progress in this career. These interactions can include dealing with clients, important information exchange, networking, developing relationships with stakeholders within and outside the firm and managing interpersonal

dynamics. The potential for substituting one worker with another is low in these occupations due to the associated costs and individual preferences in working hours, working times, location, and mode of operation are difficult to accommodate. Thus, the labor market cost of disruptions in employment due to childbirth and childcare responsibilities vary by occupational flexibility. When a worker takes time off due to pregnancy or childcare, it is difficult for them to come back. If they have a preference for flexibility, they accrue costs for that preference over time. Workers' demand for flexibility changes through the life cycle but it can be higher for mothers during the first few years after the child's birth. Mothers who value more flexibility at the workplace may eventually even shift out of this professional role into a different one, or they may shift to a different occupation that allows for more flexibility (Bertrand, Goldin, & Katz, 2010; Cortes & Pan, 2016; Felfe, 2012; Goldin & Katz, 2011).

Paid leave and Post-Childbirth Labor Market Decisions: The transition to parenthood affects an individual's labor market trajectory, especially for women. To support this transition, governments all over the world enact various kinds of policies to provide new mothers time off from work. Paid family leave is one such policy tool that aids women in taking take time off work by giving them financial compensation for the earnings lost during the period of leave.

These policies, however, do not account for the extent to which the cost of taking time off work varies by occupational flexibility. Given CWD, mothers pay a higher penalty for taking time off work in low flexibility occupations than in high flexibility occupations. To this end, the relative preference for occupational flexibility likely influences the labor market decisions of women, particularly at and around childbirth. Since the penalty of

taking time off varies by the level of occupational flexibility, the effectiveness of family leave policies on women's labor force outcomes may also vary by occupation. Consistent with this, past literature shows that the extent of flexibility available is one of the key factors affecting mothers' employment decisions regarding how much leave to take, when to come back to work, how many hours to work and which job profiles and occupations to work in (Felfe, 2012; Fuller & Hirth, 2019; Ischizuka & Musick, 2021).

Amid this background, this paper studies the interface between the effectiveness of family leave programs and the influence of occupational flexibility on women's labor market behavior post-childbirth. The analysis focuses on the differential effects of the California's Paid Family Leave Program (CA PFL) on the outcomes of women working in high-flexibility vs low-flexibility occupations. The CA PFL was the first paid family leave program in the United States. Previous studies on the effect of paid family leave programs in the United States find that the CA PFL increased women's ability to take leave around the childbirth period. The CA PFL also improved leave-taking among new fathers, although these effects are more moderate than among new mothers (Rossin-Slater et. al. 2013; Bartel et. al. 2018; Baum & Ruhm, 2016). However, the effects of the CA PFL on labor market outcomes of women are not as clear. While some literature suggests that the introduction of the CA PF improved the employment and earnings of women (Baum & Ruhm, 2016; Rossin-Slater, 2017; Rossin-Slater et. al., 2013), many other studies do not show any effect on women's labor market participation or in earnings (Bailey et. al. 2019; Byker & Patel, 2021; Das & Polacheck, 2015).

This paper expands the existing literature by studying whether and how the effect of the introduction of CA PFL affects women who work in occupations that allow for different

levels of flexibility. The proportion of the gender wage gap attributable to occupation and industry has increased from 27 percent in 1980 to 49 percent in 2010 (Blau & Kahn, 2017) reflecting the increasing importance of studying occupational differences with regard to gender gaps in employment as well in caregiving. This paper contributes by bringing occupational flexibility into the conversation about the role of family leave policies in supporting women's work. It will help us understand the effects of paid family leave on a more granular level and throws light on the role of work flexibility in creating more gender-equitable workplaces.

History and Structure of the California Paid Family Leave: The US stands out among all OECD nations for not having a national paid family leave policy. The Family and Medical Leave Act (1993) provides unpaid, job-protected leave to new mothers for a period of 12 weeks nationally, though only individuals who have worked for an employer for at least 12 months (or 1250 hours) are eligible. Moreover, this law is only applicable to employers who have a minimum of 50 employees. Since 1978, pregnancy is covered under the Short-Term Disability Insurance (STDI) as a result of which women in all US states are able to claim disability insurance during pregnancy and get compensation for a short period. Of course, only women who go through the process of pregnancy can claim this. The take-up of STDI during pregnancy varies greatly by state and by employer/industry but five states have mandated universal coverage (California, New York, New Jersey, Rhode Island and Hawaii). The take-up of STDI due to pregnancy was much higher in these five states (Timpe, 2022).

More recently, some US states enacted independent family leave programs that enable women to take paid time off work due to pregnancy or childbirth. The CA-PFL was the

first such initiative and is the focus of this paper. Implemented on July 1, 2004, the CA PFL enabled new parents of both genders to take paid time off for up to 8 weeks. During this period, new parents can claim reimbursement of 60-70 % of their monthly income. It is financed through the California State Disability Insurance (CA SDI), a payroll tax in the state of California. To be eligible, one must have earned at least $300 in roughly the last 12 months prior to leave and made SDI contributions during this period. The CA PFL can begin as soon as the STDI period ends (around the 6 to 8 week mark after childbirth).

A number of other states followed suit in the following decade and implemented state-level family leave provisions - New Jersey (2009), Rhode Island (2014), New York (2018), District of Columbia (2020), Washington (2020), Massachusetts (2021), Connecticut (2022) and Oregon (2023). Three states have enacted similar legislation that will go into force soon – Colorado (2023/24), Maryland (2023/25) and Delaware (2022/23). All these programs enable parents of both genders to take 5 to 12 weeks of paid leave for caregiving reasons during which their income is partially reimbursed (Bipartisan Policy Center, 2022). While there is no paid family leave at the federal level, the demands for such a provision have been gaining momentum. The 2022 National Defense Authorization Act (NDAA) now provides 12 weeks of paid parental leave for members of the armed forces and for civilian federal employees. Apart from governmental policy, many employers also allow new parents to take family leave though not much data exists on firm-level family leave provisions (Bartel et. al. 2021; Stearns, 2015; Rossin-Slater, 2017).

Literature Review

I. Family Leave Policies in the United States: Features and Effects

The effects of the CA PFL have been well-studied in the past. Overall, the CA PFL is shown to have increased leave-taking among new mothers as well as among new fathers (Rossin-Slater et. al. 2013; Bartel et. al. 2018; Baum & Ruhm, 2016). These papers analyze the causal effects of the CA PFL by comparing the outcomes of individuals in California with individuals in other states using a difference-in-differences approach. Rossin-Slater et. al. (2013) used Current Population Survey (CPS) data from 1999 to 2010 and found that mothers in CA were able to take nearly 3 weeks more of leave during the first year after the birth of their child. The treatment effect on treated was estimated at 6.3 percentage points and the intention to treat effect of around 3.6 percentage points. What was striking that they found that the CA PFL was particularly effective in increasing leave taking for women who identified as Black or Hispanic, who did not have a college degree and who were not married. Bartel et. al. (2018) found that the CA PFL increased leave-taking among mothers by 13% from the baseline level and by 46% from the baseline for fathers in CA. Fathers were found to increase their leave after introduction of CA PFL both in households where the mother was employed and in households where she was not. Baum & Ruhm (2016) used the National Longitudinal Survey of Youth 1997 (NLSY97) and found that the introduction of CA PFL increased leave-taking among mothers as well as fathers in California. For mothers, the increase in leave-taking starts at around 6 to 8 weeks prior to childbirth, peaked at around 8 weeks after birth, and consequently decreases gradually until week 20. They also found that the CA PFL improved employment among women in the quarter before birth and two quarters after birth. This paper is the closest to my paper given the use of the same data source and similarities in empirical approach.

In addition, the CA PFL was also found to increase the time spent by mothers on childcare. Trajkovski (2019) used data from the American Heritage Time Use Study and found that the CAPFL increased the time spent by mothers on childcare by almost 6 hours per week. This increase persisted even after mothers return to work and until the child reached the age of 3. Such increases were not found to be prominent for fathers.

However, the effects of the CA-PFL on women's labor market participation and wages are largely inconclusive. Bailey et. al. (2019) used rich administrative data from Internal Revenue Service (IRS) to study the impacts of the CA PFL and did not find any positive effects on employment, earnings, or attachment to pre-birth employer for mothers in general. For new mothers/first time mothers, they found that employment decreased by 7% and annual wages decreased by 8% approximately 6 to 10 years after childbirth. This decrease in earnings appears to be driven by reduction in working hours of mothers and potential shifts to lower wage jobs. Analyzing CPS data, Das & Polacheck (2015) also found negative impacts of the CA PFL on labor market outcomes of young women in comparison to a variety of comparison groups. They found that the labor force participation for young women in California increased by 1.37 p.p. but this was accompanied by a simultaneous increase of 1.48 p.p. in the unemployment rate and an increase of 1.57 weeks in the unemployment duration.

Further, Bana et. al. (2020) employed a regression kink design to study the outcomes of high-income women in California. using administrative data from the California Employment Development Department (EDD). They found that a higher benefit amount from the CA PFL does not improve the leave-taking or employment of high-earning mothers but it made it more likely for mothers to return to their pre-childbirth employer.

Similarly, Byker (2016) studied the introduction of paid leave in CA and NJ and found that introduction of these programs reduced the short-tern labor force exits of mothers in the period 3 months before and after childbirth but this finding only held true for women who did not have a college degree.

II. Penalty for taking time off and occupational characteristics

A substantial body of research shows that the relationship between work flexibility and women's labor force outcomes is relevant for women's employment trajectories in the long run. The amount of flexibility one has access to matters particularly for women who have children. Felfe (2012) shows that the women experience wage loss of nearly 10.7* in Germany amounts to nearly 10.7 right after coming back from maternity leave. Returning to the same employer after having a child is associated with a smaller earnings penalty and with a reduction in working hours. When women change employers, they experience a larger earnings penalty and are more likely to prefer family friendly working conditions that allow for reducing work hours, reducing working at night, reducing stress levels and increasing flexible work hours. This paper shows that the motherhood wage gap is explained in part by changes in job conditions. Goldin (2014) establishes a negative relationship between the gender earnings gap and elasticity of annual earnings with regard to weekly work hours. The elasticity of earnings with respect to weekly working hours is different for different occupations and occupations that exhibit a higher elasticity have higher gender wage gaps. This is because the penalty of taking time off work is higher in these occupations. Flexibility of work thus, is more costly in these occupations.

Fuller & Hirth (2019) analyze Canadian linked employer-employee data to study the actual use of flexible work arrangements focusing particularly on temporal and spatial flexibility.

They find that flexible hours help reduce motherhood wage gap by around 0.7 percentage points within establishments. Flexible work hours also reduce the motherhood wage gap that is attributable to occupational sorting of women by a around 4.1 percentage points. Thus, they find that the main mechanism by which flexible work arrangements help reduce motherhood penalties is by reducing barriers for the recruitment of women at well-paying firms. Temporal flexibility was found to be particularly advantageous for the most educated women who hold professional or managerial positions but it was not as effective in reducing motherhood earnings gaps for the less educated women. For the most educated women then, temporal flexibility allowed them to manage demanding workloads with their motherhood responsibilities and prevents them from switching to less well-paid positions in search of greater work flexibility. This paper also finds that while spatial flexibility is associated with lower motherhood wage gaps, working from home during regularly scheduled hours hampers the outcomes of the most educated postgraduate group of women, likely due to the stigma around it. This pattern is not replicated with spatial flexibility though (i.e., taking extra work home). This indicates that face to face time in the office is an important indicator of productivity for the most educated group of women who work in managerial/professional occupational contexts.

A study of high-skilled female MBA graduates from prestigious academic institutions by Bertrand, Goldin & Katz (2010) illustrates the effect of having a child on the careers of male and female MBA graduates. Both male and female graduates started their post-MBA careers with the same career and wage potential but women's career trajectories took a different turn after they had a child. Mothers in the sample had a higher number of career disruptions, had lower weekly hours of work and they spent more time out of paid

employment. The career cost of having children varied by profession. MBA graduates had the lowest employment rates a decade and a half after graduation. They were followed closely by JD graduates and PhD graduates and MD graduates had the highest employment rates for the study period. This was potentially due to different structural attributes of these jobs, varying levels of job flexibility, and/or the manner in which human resources are organized within each of these professions.

Ishizuka& Musick (2021) used data from the Survey of Income and Program Participation (SIPP) and occupational characteristics from American Community Survey (ACS) to show that occupations that required employees to work long weekly hours of work (40 hours or more) and rewarded such longer working hours with higher premiums are associated with lower post-childbirth employment among women not for similar men and childless women. Bachman et al (2020) provided some evidence that initiation of family friendly attributes ins workplaces had a positive effect on women's return to work in Germany. Women working in firms that have family friendly policies returned to work quicker after giving birth. These policies can include childcare support, opportunities for employees on parental leave and targeted programs for females (such as mentorship) to support career growth. When targeted promotion-relevant opportunities are offered by employers (i.e., special measures like mentorship programs) that focus on helping women improve their career prospects, women are more likely to return to work and they take shorter leave. However, providing these measures only is found to be effective in bringing women back to work after at least a year of childbirth when the generous German maternity leave period ends.

Studies also shows that people are working longer (more than 40 hours per week) than they used to. Working non-standard hours involving more unpredictable schedules has also

become more common (Gerstel & Clawson, 2018; Weeden et. al. 2016). Weeden et al. (2016) find that overall men work longer hours (defined here as 50 or more hours per week) than women but mothers, in particular, opt in to work these hours far less than fathers do. Childless women also work fewer long hours than childless men do. However, the proportion of mothers putting in the 50+ hour workweek is far lower than that of any other groups and this pattern remains consistent over time. While the premium for working such long hours has gone up in the last few decades (Goldin 2014), mothers have not made use of such increases in remuneration for long work hours as compared to fathers.

III. Occupational flexibility and the O*NET

Prior literature has studied occupational flexibility in multiple forms. While no standard definition exists, flexibility has been measured in various ways in the past. Table AX lists the studies that discuss occupational flexibility and the ways it has been operationalized. For instance, Felfe (2012) captures 10 flexible job characteristics, most of which involve working long hours per week, working in evening/night, working away from home, job hazards etc. In a seminal paper, Goldin (2014) uses 5 O*Net characteristics, such as time pressure, contact with others, establishing and maintaining interpersonal relationships etc. Four of these are included in my paper as well. Kim (2000) defines workplace flexibility as access to flexible schedules, working from home and working part-time. From this literature, I distilled three distinct dimensions of occupational flexibility – (1) temporal flexibility (flexibility in time, scheduling, pace), (2) flexibility in location (flexibility in space, location and geographical context in which work is done), and (3) flexibility around tasks (flexibility in relation to work tasks, structure of responsibilities). In this paper, I identify O*NET characteristics pertaining to each of these three categories to

develop indexes representing these three dimensions which are described in more detail in the next section.

Data and Sample

Data: The data comes from two main sources: the National Longitudinal Survey of Youth 1997 (NLSY97) and the Occupational Informational Network (O*NET).

The NLSY97 is a public-use, national longitudinal survey that captures multidimensional data about the lives of American youth born between 1980 and 1984. This survey has 19 rounds starting in 1997. Data was collected annually until 2011 after which it was collected once every two years. This dataset is particularly appropriate to answer my research questions because one can observe evolving patterns of employment and fertility over time. Using weekly employment history available in NLSY97, I match periods of leave and employment gaps with the childbirth data. This allows me to observe the labor market behavior of the respondents in the time around childbirth. I also used the restricted-use NLSY97 Geocode Supplement to identify the respondents who resided in California right before and after the implementation of the CA PFL[1].

The second data source is the Occupational Informational Network (O*NET) operated by the US Department of Labor/Employment and Training Administration. The O*NET records hundreds of occupational indexes that describe various aspects of occupations in the US. From the O*NET, I extracted several indexes that captured different facets of

[1] I was granted access to the NLS Geocode Supplement by the Bureau of Labor Statistics under the terms of an agreement that protects the confidentiality of the NLS respondents.

occupational flexibility. Many of these have been previously used in the literature to operationalize occupational flexibility (Goldin, 2014; Yu & Kuo, 2017).

In the analysis, I use an index of average occupational flexibility, i.e., the mean of each of these indexes per occupation. I combine NLSY97 data with the O*NET flexibility indices in order to identify the extent of occupational flexibility available to women in the sample following the method described in Yu & Kuo (2017).

Variables: The NLSY97 reports the month and year of childbirth for each respondent [2]. NLSY97 records paid leave periods of a week or longer taken by female respondents due to pregnancy or the birth of a child. I observe the beginning and end months of these paid maternity leave periods in the data but it is not possible to observe whether the leave was taken due to the TDI or due to PFL. The NLSY97 follows a continuous month scheme in structuring its variables wherein all time periods are tagged to continuous month numbers starting with January 1980[3]. I convert weekly employment variables to the continuous month format provided by the NLSY97.

I estimate the effect of the CA PFL for high flexibility occupations at each month prior to and after childbirth using triple differences models by comparing (i) mothers who gave birth before and after implementation of the CA PFL; (ii) in California vs mothers in others states; (iii) mothers who worked in high-flexibility jobs vs low-flexibility jobs.

In line with prior research, I study three main outcomes – take-up of paid maternity leave, employment status and hours worked per week. Take-up of paid leave is determined at the

[2] The exact date of childbirth is not accessible to researchers due to the data protection policies of the NLSY97.

[3] For example, January, 1980 will be month 1 in this scheme, February, 1980 will be month 2 and correspondingly May, 2005 will be month 305

monthly level using a binary variable. Women are described as employed, a binary variable, if they have worked at least one week during a given month and are also associated with an employer. Mothers who do not work at least one week, are unemployed, or out of the labor force are all coded as 0. The weekly number of hours women worked are reported in NLSY employment history and I take the average of weekly hours worked by each individual over a month [4].

O*NET uses the Standard Occupational Classification (SOC) to identify occupations it studies. The flexibility indexes rate each occupation on a measure of flexibility ranging from 1 to 100. The SOC is a federal government system that attaches a 6-digit SOC code to each unique occupation and enables comparison and analysis of occupational data across the country. In order to merge the O*NET indexes with NLSY97 data, I convert 2002 Census Occupation codes used by the NLYS97 into their corresponding SOC codes. After that, I use these SOC codes to attach the correct value of occupational flexibility to each occupation represented in the NLSY97 sample, following the strategy developed by Yu & Kuo (2017).

Sample: The sample consists of women gave birth between 1997 and 2011. Since the NLSY collects data on women born between 1980 and 1984, this analytical sample comprises relatively young women as compared to the typical mother in California. The average age of women in this sample at childbirth is 23.4 years. In order to be eligible for

[4] A few outliers were found in this variable, which were weekly work hours of 200 or more in months close to childbirth. Since these are higher than the total number of hours available in a week, I winsorized this variable by 0.1% to correct for these outliers.

the CA PFL, women must have earned at least $300 in taxable wages during the 5-to-18-month period before childbirth. This forms the base period and the CA PFL benefit that new parents receive is calculated as 70% of the wages earned during the base period. To account for this, I study those women in the sample who worked a minimum of one week during the 5 to 18 months prior to childbirth. Women in active military service are excluded from the sample for two reasons: (i) O*NET provides flexibility indexes only for civilian occupations, (ii) women employed in the military have access to a different set of family leave and maternity-related provisions through the military. Thus, they do not make use of the CA PFL.

Using detailed employment history available in the NLSY97, I identify a mother's most recent during in the 12 months prior to childbirth. Based on this job, I categorize mothers as employed in high or low flexibility occupations job-specific information. Specifically, mothers with above median pre-birth flexibility are categorized as having worked in high-flexibility occupations and those below the median are categorized as working in low-flexibility occupations[5].

Dimensions of occupational flexibility and relevant O*NET Indexes: Three distinct dimensions of occupational flexibility were distilled from prior literature each of which is captured by a combination of O*NET characteristics. Table B1 in Appendix B lists the papers which studied occupational flexibility and highlights how each paper operationalized it. The three dimensions are:

[5] In addition to this, 241 women did not have an employer listed in the employment history data in the 12 months before childbirth. These were also dropped from the sample since the level of occupational flexibility associated with their pre-childbirth job could not be identified.

(a) *Flexibility in time and in work schedules*: This refers to the flexibility pertaining to the amount of time worked and the kind of hours worked. There is variation in the work schedules and the time demands of different professions owing to the nature of responsibilities. For instance, an on-call surgeon who performs emergency surgery has a different working schedule than a policy analyst in government who likely works standard 9 to 5 hours. A department store clerk might have night shifts, early morning shifts or late evening shifts while a professor at a university might teach evening classes to professional or distance education students after regular work hours.

The number of hours worked per week is an important component of temporal flexibility as illustrated in Goldin (2014). When the relationship between number of hours worked and earnings is non-linear, i.e., working longer hours is rewarded with additional pay, gender gaps in earnings are larger. In essence, working more and longer times above the standard 40-hour work week comes with a premium. Even more crucial is that working non-standard hours comes with a substantial premium, i.e., hours that are not within regular schedules, such as holidays, late evenings, weekends etc.

Flexibility in choosing work hours can be highly useful for a mother who can negotiate her work schedule around her children's school or daycare hours and who might have to deal with child-related emergencies without notice. This is especially relevant given that caregiving responsibilities in heterosexual couples continue to follow the traditionally gendered division of labor whereby mothers carry out the lion's share of childcare (Brenan, 2020; Pew Research Center, 2013).

Three O*NET characteristics are included in this category: *duration of typical work week, work schedules* and *time pressure*. The first captures the variation in the number of hours

typically worked in a week. Occupations where a typical work week is over 40 hours are considered less flexible than others (Cortes & Pan, 2019; Goldin, 2014). The *work schedules* index deals with regularity in work schedules, specifically asks whether work is regular, seasonal or if it is irregular depending on demand, weather or contract duration. The *time pressure* characteristic asks – "how often does this job require the worker to meet strict deadlines?". This can range from every day to weekly/monthly/annually or never.

(b) Flexibility in location and mode of operation: The physical location of work varies greatly by occupation – those in medical and paramedical fields must necessarily work from hospitals/clinics while others like financials advisor or accountants can work from anywhere. In some professions, workers require specialized equipment, devices or environments to carry out their duties (e.g., hospitals, manufacturing, and retail store employees). Some occupations also require one to work in proximity with other people while workers in other occupations can be more independent. This dimension of flexibility is becoming increasingly relevant in the post Covid-19 world. The pandemic changed the mode of operation for a large proportion of the US labor force economy-wide. Enabled by technology, working from home became common and even spurred a cultural shift in people's preferences regarding spatial flexibility. More and more establishments are renegotiating the frequency of working from the office with their employees (Albanesi & Kim, 2021; Dalton & Groen, 2022).

Two relevant O*NET characteristics fall under this category: *physical proximity* and *face-to-face discussions*. Physical proximity captures the extent to which a particular

occupation requires people to work in physical proximity. The second one indicates the frequency for face-to-face discussion in an occupation.

(c) *Nature of occupational tasks and responsibilities.* The third dimension has to do with the nature of tasks allocated to workers in different occupations. Apart from temporal and spatial considerations, flexibility in an occupation is also determined by how crucial social interactions are to the core nature of the job and how necessary it is to coordinate with other people. A job that entails managing employees closely or one that hinges upon developing personal connections with people will likely inhibit the amount of flexibility the workers have because they must coordinate other people's schedules. It also entails higher unpredictability and the need to be working when sudden urgency arises.

Four O*NET occupational indexes are included in this category: *structured vs unstructured work, establishing and maintaining personal relationships, coordinating the work and activities of others* and *contact with others.* The first measures how much autonomy workers have to determine their own tasks and priorities as opposed to adhering to an externally imposed structure for day-to-day operations. The second index deals with how important it is for workers to develop functional and lasting working relationships with other people as part of their job tasks. Thirdly, I include an index capturing the role of coordinating the work of others to meet goals. Lastly, the index *contact with others* captures the amount of contact an occupation requires one to have with others. This includes keeping in contact with others by various means (telephone, face to face, others).

Methods

Firstly, I estimate separate event-study models for high-flexibility and low-flexibility subsamples in order to decompose the effects of the CA PFL within these two groups. In these models, I compare the pre- and post-childbirth outcomes of women who gave birth before and after July 1, 2004 in CA vs in other states:

$$Y_{ijt} = \alpha + \sum_{k=-12}^{k=12} \boldsymbol{\beta_k} * T_k * (policy)_{ik} + \gamma_1 \boldsymbol{X_{ij}} + \boldsymbol{State_j} + \boldsymbol{Year_t} + \in_{ijt}$$

(1)

Y_{ijt} refers to the outcome of the respondent in month *t* who had a child *i* in state *j*, where *Y* captures one of the three main outcomes: whether a mother was on paid maternity leave, whether she was employed and the average weekly hours of work. T_k is a vector of dummy variables that captures the months-to-childbirth and ranges from -12 to +12. It tags each observation's time relative to childbirth. po*licy*$_{ik}$ is a binary variable that takes the value of 1 for women in California who had a child after July 1, 2004. The interaction of T_k and *policy*$_{ik}$ gives us the estimated effect of being treated by the CA PFL at each of these time points. $\boldsymbol{\beta_k}$ represents the coefficients for this interaction term. The month before childbirth (month -1) is the reference category and each of these coefficients is interpreted in relation to the reference category. $\boldsymbol{State_j}$ and $\boldsymbol{Year_t}$ are vectors of state and year fixed effects and $\mathbf{X_{ijt}}$ is a vector of covariates such as race, marital status, education (Bachelor's degree or not), household size, years of work experience, respondent's income and spousal income in the last year. Standard errors are clustered at the state level.

These models give me an insight into how the introduction of the CA PFL affects women's outcomes within the high-flexibility and low-flexibility subsamples respectively. Using the event-study specification, I am able to compare the how childbirth interrupts women's outcomes (leave-taking, employment and hours of work) in the months surrounding childbirth because the resulting coefficients for each month are interpreted relative to the reference period (month -1).

Secondly, in order to analyze how the effect of CA PFL on women's labor market outcomes differs by occupational flexibility, I estimate equation (2). A triple differences approach is used that compares: (i) women in California to women in other states, (ii) in high-flexibility and low-flexibility occupations, (iii) who gave birth before and after the implementation of the CA PFL. The model is:

$$Y_{ijt} = \alpha + \beta 1\, CA_{ijt} + \beta 2\, Post_{ijt} + \beta 3\, Flex_{ijt} + \beta 4\, (CA\ X\ Post)_{ijt} + \beta 5\, (Flex\ X\ Post)_{ijt} + \beta 6\, (CA\ X\ Flex)_{ijt} + \beta 7\, (CA\ X\ Flex\ X\ Post)_{ijt} + \delta 1\, \boldsymbol{X_{ij}} + \boldsymbol{State_j} + \boldsymbol{Year_t} + \in_{ijt}$$

(2)

Here, Y_{ijt} refers to the outcome of respondent in the month *t* who had a child *i* in state *j*. There are three outcomes as described above. Each row in the dataset represents a unique childbirth. The unit of analysis is childbirth, i.e., a child born to the NLSY97 respondents between 1997 and 2011. A mother can have more than one child in the sample and each childbirth is treated as a unique observation. CA_{ijt} is a treatment indicator that takes the value of 1 for mothers who resided in California and 0 otherwise. $Post_{ijt}$ is a binary indicator that identifies women who gave birth after July 1, 2004 which was the date of treatment

implementation. $Flex_{ijt}$ is a binary indicator that holds the value of 1 when the mother worked in a high flexibility occupation in the pre-childbirth job and 0 when she worked in a low flexibility occupation. $\beta 7$ is the coefficient of interest and represents the effect of CA PFL for women who worked in high-flexibility pre-birth occupations CA as compared to women who worked in low-flexibility pre-birth occupations. $\boldsymbol{State_j}$ and $\boldsymbol{Year_t}$ are state and year fixed effects. $\mathbf{X_{ijt}}$ is a vector of covariates (race, marital status, education, household size, years of work experience, respondent's income and their spouse's income in the last year).

Equation (2) is estimated at each month from 12 months before childbirth and up to 12 months after childbirth. This results in 25 regressions – one for each month wherein the dependent variable Y_{ijt} is captured at each of these months (there is no reference period as each of these 25 regressions is estimated independently of the others). The triple differences model is a known modification of the canonical difference-in-differences model that is often used to analyze the causal effect of policy treatments among other things. The assumptions behind canonicals difference-in-differences also apply to the DDD in the same way (Angrist & Pischke 2008, Olden & Moen, 2022).

Prior research shows that the effect of pregnancy on women's employment is particularly strong after the first birth (Desai & Waite, 1991) and so, I include an indicator for firstborn children. In addition, I include a dummy variable that identifies women who have more work experience (more than 20 hours a week in the base period). Those with more work experience are likely to earn more and receive a larger wage replacement from CA PFL until the cap of the weekly benefit. As mentioned above, five US states have universal short-term disability insurance (STDI) programs that women can use to take paid leave

because pregnancy qualifies as temporary disability. In order to account for this similarity between CA and the other 4 universal-STDI states (New York, New Jersey, Rhode Island and Hawaii), I dropped these five states from the control group.

Matching ONET characteristics: O*NET flexibility indexes are matched with the NLSY97 data to map the amount of flexibility women had in their pre-childbirth jobs. In the NLSY97, respondents are asked to describe the work they did for each employer reported in their work histories which is then used to assign the appropriate Census Occupation Code to each of the respondent's jobs.

Since the O*NET and the NLSY97 used different naming schemes to identify occupations, I first had to convert the 2002 Census Occupations Codes used in the NLSY97 to their corresponding SOC codes using the crosswalk provided by the NLSY (NLSY 2002 Census Industrial and Occupational Classification Codes). Thereafter, I used the SOC to merge the O*NET indexes to the NLSY data. Two complications emerged during this process. Firstly, some of the occupations represented in the NLSY were not found in the O*NET database because O*NET follows the multi-tiered SOC classification wherein occupations are organized in tiers on the basis of the definition of occupations (Major groups => Minor Groups => Broad occupations => Detailed occupations => Detailed O*NET-SOC occupations). O*NET sometimes provides indexes for occupations at one tier but not at the other. When O*NET indexes were not available for an occupation represented in the NLSY, I used the average of similar occupations within the same tier.

Secondly, the SOC identifiers for some occupations have changed over time. To improve accuracy for 63 such occupations in the NLSY, I traced the changes in the SOCs using

the crosswalks provided on the O*NET website. Some SOCs changed by a couple digits while the titles of some others changed a bit. I manually found the new SOC codes for these occupations and replaced them to aid the matching process. More detail on this process is provided in Appendix B.

Each of these O*NET indexes captures a different aspect of occupational flexibility. By grouping them into the three dimensions studied in this paper, I attempt to tease out the more salient aspects of flexibility for mothers and examine which ones allow mothers to balance childcare with labor market participation most effectively. The nine O*NET indexes included in this paper are independent of each other and I did not find high correlations between these.

Descriptive Statistics

Table 1 describes the sample and presents the mean of few attributes for the eight groups arising from a factorial combination of three factors: whether the women resided in California, whether they gave birth after implementation of the CA PFL and whether they worked in a high flexibility pre-birth occupation. Women in the post-treatment period in either flexibility condition across the US are more likely to be married, have more work experience, and have more children as compared to women across the US who had a child in the pre-treatment period. This is expected because as the sample respondents grow older, they have children, and gain more work experience with time. The individual and spousal incomes of the respondent are also higher in the post-treatment period. California appears to have a higher proportion of respondents who identify as Black or Hispanic. Curiously, educational attainment increases between the pre and post period for

women in both high and low flexibility groups, but it appears to increase more substantially for women working in low flexibility pre-birth occupations.

Group	Number of children	Education (Bachelor's or higher)	Household Size	Race	Years of work until childbirth	Marital status	Individual Income	Spousal income	Sample
Low Flex-Other States-Pre-treatment	1.48	0.10	4.51	1.78	2.36	0.29	7451.2	15045.1	481
Low Flex-Other States-Post-treatment	1.99	0.32	4.14	1.71	7.09	0.62	21488.2	34887.2	990
Low Flex-California-Pre-treatment	1.30	0.00	5.37	2.56	2.07	0.24	6743.8	20763.8	43
Low Flex-California-Post-treatment	1.88	0.25	4.68	2.35	6.73	0.64	27601.2	47143.2	145
High Flex-Other States-Pre-treatment	1.48	0.14	4.28	1.82	2.35	0.32	7097.6	18015.7	514
High Flex-Other States-Post-treatment	2.07	0.19	4.23	1.69	6.07	0.60	15011.5	32981.5	852
High Flex-California-Pre-treatment	1.38	0.11	5.08	2.62	2.24	0.47	9509.8	19390.6	66
High Flex-California-Post-treatment	2.13	0.12	5.16	2.63	5.70	0.58	15431.3	35063.2	126

Table 1: Descriptive Statistics: Mean of covariates

Figures 1, 2 and 3 display the trends in employment status, paid leave take up and average weekly hours of work respectively. The proportion of women employed starts to drop nearly 6 months before childbirth and is at its lowest in the month of childbirth and the following month (months 0 and 1)[6]. The proportion of employed women starts to rise

[6] Since the NLSY97 data only allows me to identify the month of childbirth but not the exact date, mothers can have a child born in the 1st week of the reported month of childbirth or in the last week. Even if mothers were working up until the day of childbirth, they were likely to be not employed in the month after childbirth (month 1). This includes women who may have given birth towards the end of the month as a result of which they were recorded as not employed in the next month.

again soon after birth for women in all eight groups but consistently remains below the pre-childbirth levels even at the end of the 1 year into the child's life. In general, the groups of women that gave birth in the before the implementation of CA PFL (dotted lines) have lower employment than the groups than gave birth after the CA PFL was implemented (solid lines).

Figure 1: Proportion of women employed 12 months before and after childbirth

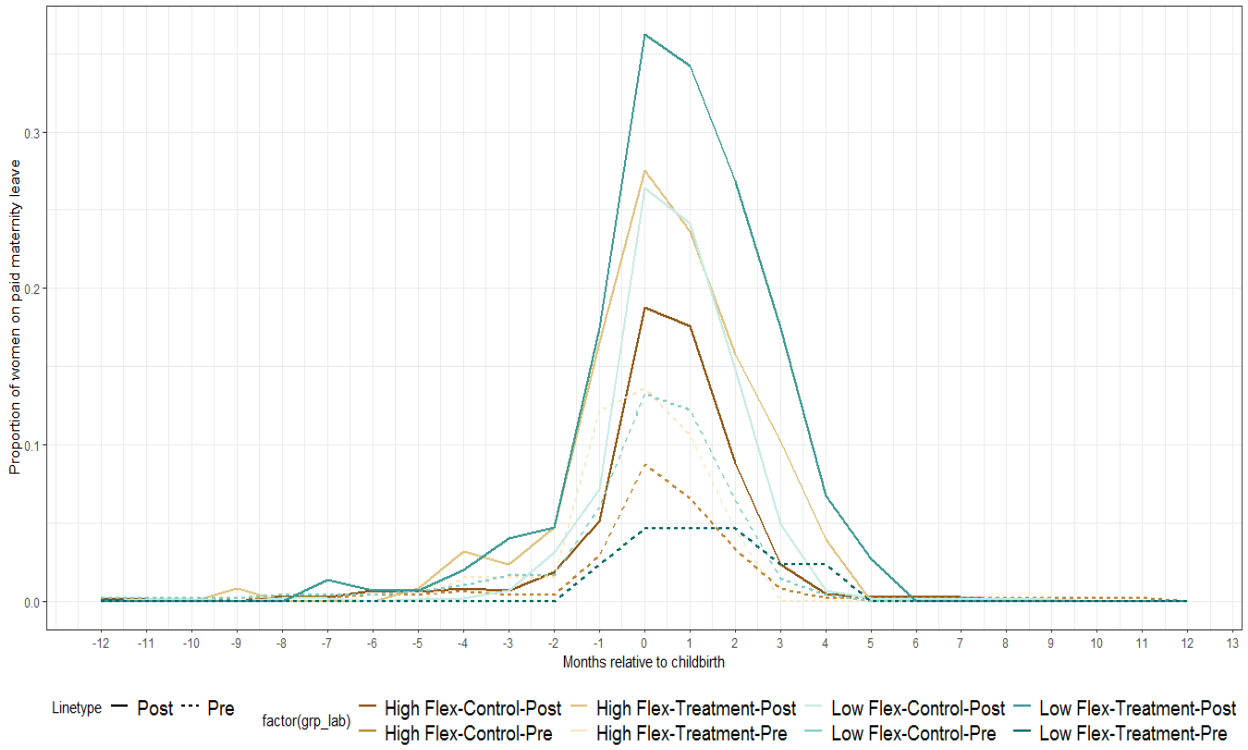


Figure 2: Proportion of women on paid leave in 12 months before and after childbirth

In Figure 2, I find that women across all eight groups start taking paid maternity leave almost 2 months before childbirth. The proportion of women on leave increases and peaks at 0 to 1 months of childbirth and then gradually drops until 5 months post birth. This is in line with the pattern documented in prior research that women who have access to state-level TDI can start taking leave from 1 month (4 weeks) before pregnancy and this leave lasts for up to 1.5 months after birth (6 weeks in case of regular delivery and 8 weeks in case of complications or cesarean section). CA PFL benefits can start right after the end of TDI and last for up to 8 weeks after that.

In general, Figure 2 shows that women who gave birth post implementation of the CA PFL (solid lines) are more likely to be on paid leave as compared to women who gave

birth in the pre-treatment period (dotted lines). Among women who gave birth post-CA PFL implementation, CA women in the low-flexibility occupations appear to have the highest take-up of paid leave among all groups shown (solid blue line). This is much higher than the take-up among CA women in high-flexibility occupations (yellow solid line).

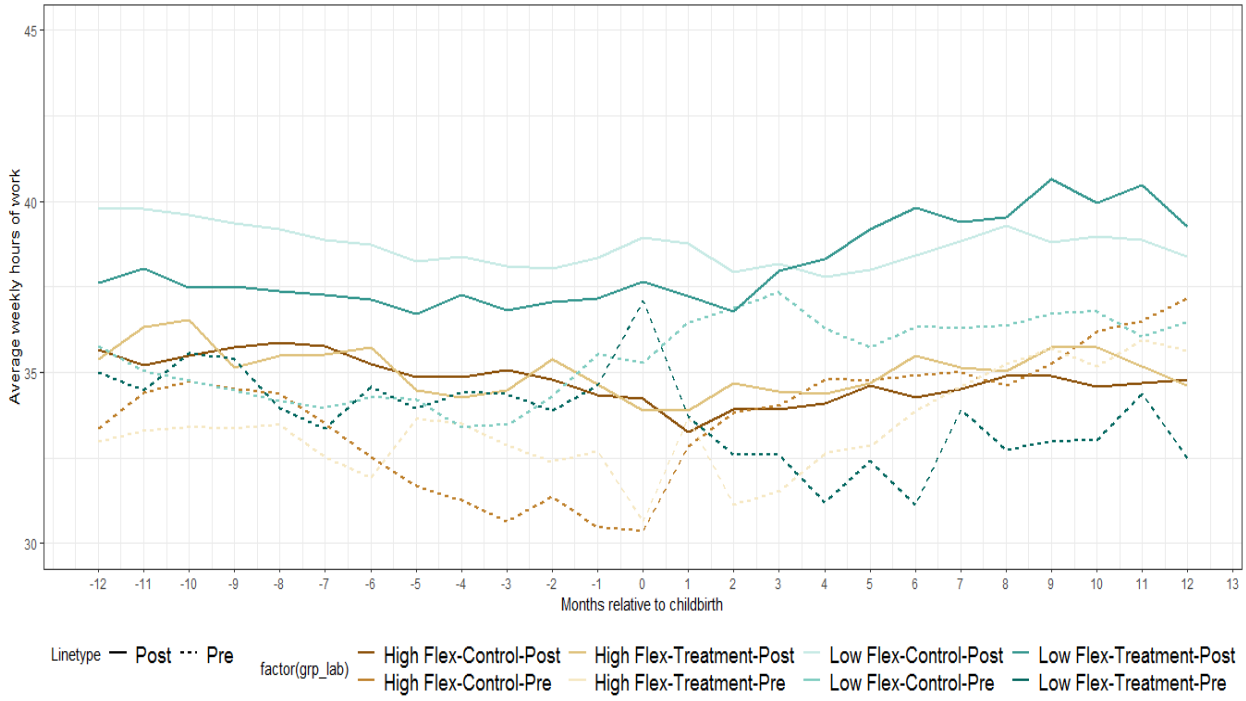


Figure 3: Average weekly hours of work in the 12 months before and after childbirth

Figure 3 shows the average weekly hours of work for each group 12 months before and after childbirth. We see that the average weekly hours of work decrease around childbirth for some of the groups though not for all. This dip in hours of work is most pronounced for high-flexibility women across the country who gave birth before CA PFL

implementation (dotted yellow and dotted brown lines). For the corresponding low-flexibility groups, no such dip is seen. Among women who gave birth after CA PFL implementation, high-flexibility groups in both CA and elsewhere do not show such a drastic drop in work hours (solid brown and yellow lines) but low-flexibility groups in both CA and elsewhere have higher hours of work (solid blue and green lines). Having flexibility thus, might allow women to adjust their work hours to keep up with the demands of motherhood in the post-childbirth period.

Some of the common pre-birth occupations represented in this sample are: Cashiers; Nursing, psychiatric and home health aides; Waitresses; Child care workers; Retail salespersons; Receptionists and information clerks; Secretaries and Food preparation workers. Overall, I found that this sample of young mothers in California has relatively lower levels of locational flexibility in comparison to time or task flexibility. Occupations that allow for high average flexibility include: Textile knitting and weaving machine setters; Crossing guards; File clerks; Janitors and building cleaners; Insurance claims and policy processing clerks etc. Individuals who work as textile knitters and weaving machine setters, janitors and dishwashers do not have to coordinate the activities of others, have regular work schedules and do not hinge upon the need to establish interpersonal connections in order to fulfill their work tasks. This results in fairly high time-flexibility for these occupations even though they rank lower on location flexibility. Insurance claims and processing clerks also have high time-flexibility because they tend to have very regular and predictable work schedules and do not need to coordinate the work of others for the fulfillment of their own duties.

Some examples of high flexibility occupations are: Chefs and head cooks; First-line supervisors/managers of food preparation and service workers; Construction laborers; Meeting and convention planners; Supervisors of Transportation and Material Moving Workers and Door-to-door sales workers. Chefs and Head Cooks are inflexible in all dimensions of occupational flexibility (time, task, and location) due to the need for high contact with others, for coordination of others' tasks and for prolonged face-to-face interactions. Being a chef also requires maintaining interpersonal relationships and working very long hours per week. Door-to-door sales workers also depend upon face-to-face interactions and sales often depend on personal connections that these workers can establish. They also have low location flexibility. Similarly, meeting and convention planners tend to be locationally inflexible and task inflexible. Their work involves high contact with others and high physical proximity and lots of face to face interactions. They also often work under high time pressure.

Results

Separate event-study models for low and high flexibility subsamples: First, I discuss the results from separate event-study models for the subsamples of women in high- and low-flexibility occupations. Figure 4 displays the coefficients and confidence intervals representing the effect of the CA PFL on the leave-taking, employment and hours of work separately for high and low flexibility subsamples.

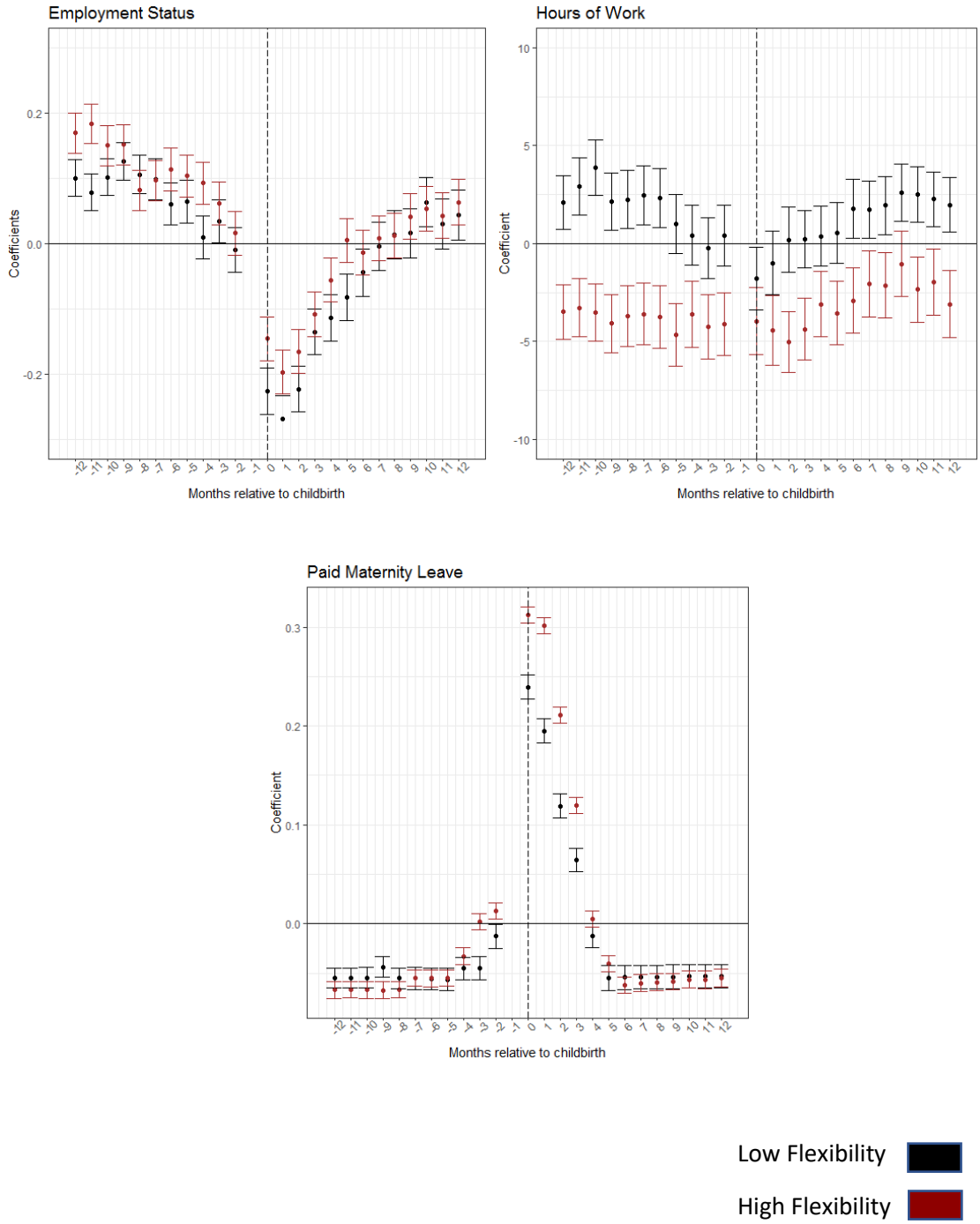
The top left panel shows that employment of women drops in the first 5 months after birth for women in both high and low flexibility occupations. These coefficients are relative to the employment status in month before childbirth (month -1). The coefficients are negative and statistically significant at the 0.001 level for the high-flexibility

subsample in months 0 to 5 and for the low-flexibility sample in months 0 to 4. There is substantial overlap between the confidence intervals of these coefficients for high and low flexibility groups but the coefficients are larger in magnitude for the high-flexibility sample (-0.226 for high-flexibility vs - 0.146 for low flexibility at month 0). Although employment of women in both subsamples starts to pick up after around 6 months of childbirth, it never reaches pre-childbirth levels. The coefficients in months 6 and beyond are positive but not statistically significant.

I find that the effect of the CA PFL on leave-taking is positive and statistically significant for both subsamples. Relative to the month before childbirth, women are more likely to take paid leave in the month of childbirth and the first quarter after that. As seen in Figure 4, these coefficients are larger for women in low-flexibility occupations (0.31 for low-flexibility subsample vs 0.24 for the high-flexibility in month 0). From month 4 onward, these coefficients become negative and statistically significant indicating that women are not on paid leave after the first quarter of childbirth.

Figure 4: Separate event-study models for women in high-flexibility and low-flexibility occupations: Coefficients and Standard Errors at each month before and after childbirth

[The month before childbirth (-1) is the reference category]



The introduction of the CA PFL consistently reduced the weekly work hours for women in low-flexibility occupations both before and after childbirth. The coefficients are negative and statistically significant at the 0.001 level. This amounts to a reduction in weekly hours of work by 3 to 4 hours in the year before childbirth holding the month before childbirth as reference. On the other hand, for high-flexibility subsample, the introduction of the CA PFL did not have significant effects in the period around childbirth. Only at month 0, I find a reduction of hours worked by 1.8 statistically significant at the 0.05 level. Otherwise, I do not find evidence for any substantial effect of CA PFL on the hours of work for the high-flexibility subsample. In the bottom panel of Figure 4, the point estimates and confidence intervals of high- and low- flexibility subsamples do not overlap at all.

Triple Difference Models Comparing Women in High and Low Flexibility Occupations: Table 2 displays the triple-differences coefficients ($\beta 7$) from equation (2) estimated at each month before and after childbirth. These regressions compare the outcomes of women who (i) reside in CA vs in other states, (ii) who were employed in high-flexibility occupations vs in low-flexibility occupations, (iii) who gave birth prior to CA FL implementation vs after. Figure 5 displays these coefficients visually along with their confidence intervals.

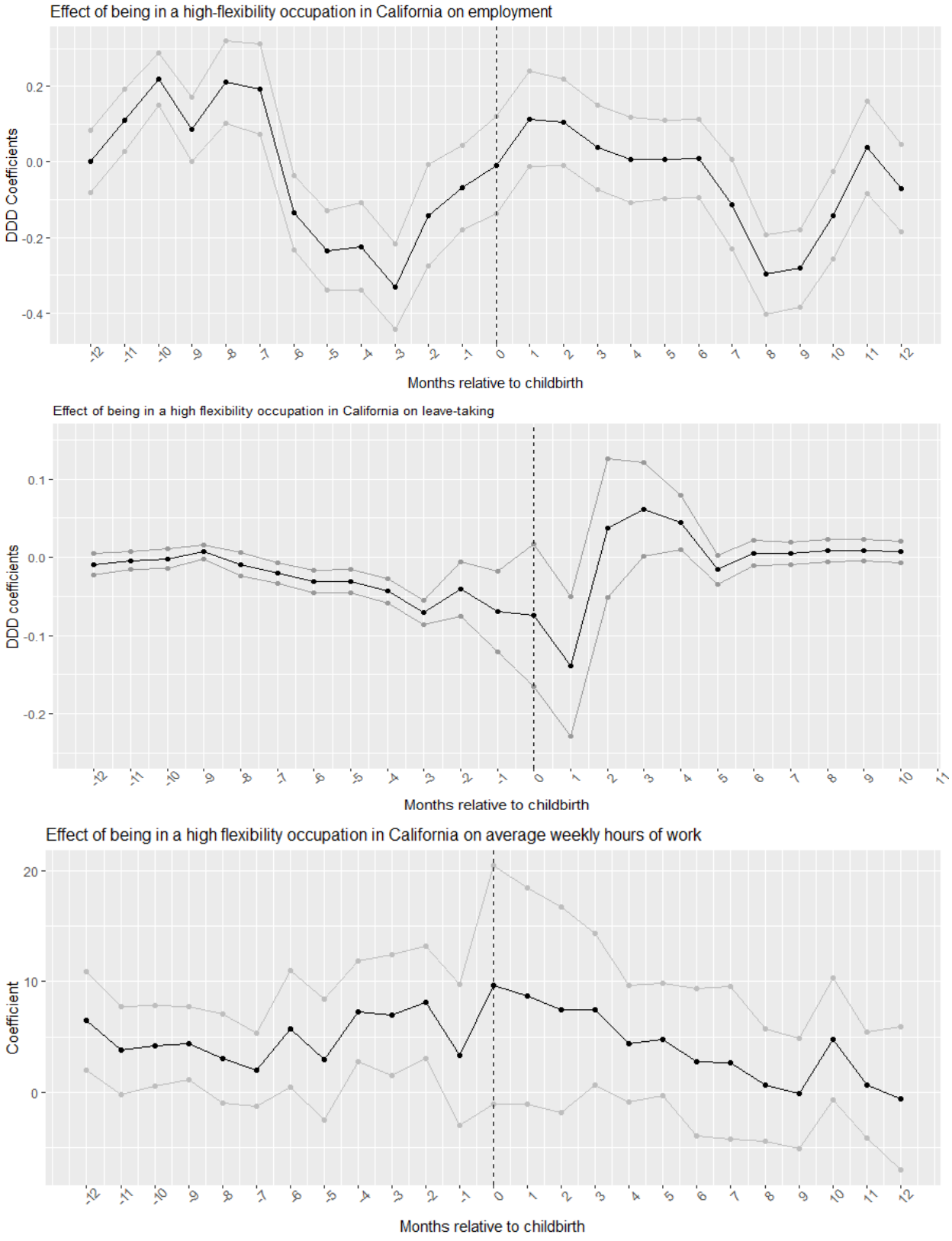
I find that women who worked in a high-flexibility occupation and had access to the CA PFL were less likely to be employed during the 6 months right before childbirth. The topmost panel presents these results for employment status. This shows that CA women in high-flexibility occupations reduced their employment in the 6 months before

childbirth and were 11 p.p. to 33 p.p. less likely to be employed in comparison to women with low-flexibility. The coefficients for this period are negative and statistically significant at the 0.001 level.

In the post-childbirth period, the coefficients pertaining to employment status are close to 0 and not statistically significant. However, I see indications of reduced employment in months 8, 9 and 10 post childbirth with a drop of 14 to 30 p.p.

CA women in high-flexibility occupations were also 6.1 p.p. more likely to take paid maternity leave in the third month after childbirth and 4.4 p.p. more likely to be on leave in the fourth month. However, in the first month right after childbirth, women were nearly 14 p.p. less likely to be on paid maternity leave. The pattern in the estimated effect of take-up, which begins 3-4 months after birth, is consistent with the design of the California policy. In particular, women in California are eligible for benefits under two different policies – STDI and CA PFL. STDI provides benefits to mothers due to the medical effects and complications of childbirth beginning 4 weeks prior to childbirth and ending at 6 or 8 weeks after. Paid leave under the CA PFL most often begins once STDI benefits are fully exhausted --- 6 to 8 weeks after childbirth. This corresponds with exactly the time points when the estimated effects in Table 2 are positive and statistically significant at the 0.05 level. Consistent with the past literature, these results show an increase in paid leave take-up in months 3 and 4 after childbirth for women in high-flexibility pre-birth occupations.

Figure 5: Effect of CA PFL for women in high-flexibility occupations as compared to women in low flexibility occupations: Coefficients from triple difference analysis



I also find that the CA PFL increases the pre-childbirth weekly hours of work for women in highly flexible occupations in the treatment group. The last two columns of Table 2 display the coefficients and standard errors that show steady increases in average weekly hours of work ranging from 7 to 8 hours in the quarter before childbirth. Women in high-flexibility occupations may have the opportunity to proactively increase their work hours before they have a child anticipating their need for time off in the future. The coefficients estimated for this outcome in the after-childbirth period are not statistically significant.

Table 2: Effects of CA PFL for women working in high-flexibility occupations on leave-taking, employment status and hours of work: Triple Differences coefficients and Standard Errors

Months relative to birth	Employment		Paid Leave Take-Up		Weekly Hours of Work	
	Coef	SE	Coef	SE	Coef	SE
-12	0.002	(0.042)	-0.009	(0.007)	6.449 **	(2.253)
-11	0.11 **	(0.042)	-0.004	(0.006)	3.773	(2.006)
-10	0.22 ***	(0.035)	-0.002	(0.006)	4.195 *	(1.854)
-9	0.086 *	(0.043)	0.007	(0.005)	4.405 **	(1.689)
-8	0.211 ***	(0.055)	-0.009	(0.008)	3.046	(2.068)
-7	0.193 **	(0.06)	-0.02 **	(0.007)	2.033	(1.692)
-6	-0.134 **	(0.05)	-0.031 ***	(0.007)	5.738 *	(2.669)
-5	-0.234 ***	(0.053)	-0.03 ***	(0.007)	2.959	(2.785)
-4	-0.224 ***	(0.059)	-0.043 ***	(0.008)	7.285 **	(2.323)
-3	-0.33 ***	(0.058)	-0.07 ***	(0.008)	6.961 *	(2.781)
-2	-0.142 *	(0.068)	-0.041 *	(0.018)	8.13 **	(2.592)
-1	-0.068	(0.057)	-0.069 **	(0.026)	3.375	(3.229)
0	-0.009	(0.065)	-0.074	(0.047)	9.652	(5.471)
1	0.114	(0.065)	-0.139 **	(0.046)	8.685	(4.946)
2	0.105	(0.058)	0.038	(0.045)	7.43	(4.735)
3	0.039	(0.057)	0.061 *	(0.03)	7.489 *	(3.489)
4	0.006	(0.058)	0.044 *	(0.018)	4.388	(2.683)
5	0.006	(0.053)	-0.016	(0.009)	4.773	(2.578)
6	0.009	(0.052)	0.006	(0.008)	2.717	(3.386)
7	-0.112	(0.06)	0.005	(0.008)	2.652	(3.498)
8	-0.298 ***	(0.054)	0.008	(0.007)	0.667	(2.576)
9	-0.282 ***	(0.052)	0.009	(0.007)	-0.096	(2.531)
10	-0.142 *	(0.059)	0.007	(0.007)	4.81	(2.804)
11	0.037	(0.062)	-	-	0.66	(2.451)
12	-0.069	(0.059)	-	-	-0.544	(3.304)

Note 1: 0 '***' 0.001 '**' 0.01 '*' 0.05

Note 2: This table presents coefficients from 25 regressions per outcome - one at each month relative to birth. Each regression implements a triple difference-in-differences model with state and year fixed effects and with standard errors clustered at the state level. Overall, there are 1578 to 1579 degrees of freedom for each regression for the paid maternity leave outcome. Degrees of freedom range between 1388 and 1566 for the employment outcome and they range from 540to1236 for weekly work hours outcome.

Dimensions of flexibility. In order to understand how different dimensions of flexibility affect the labor market behavior of mothers, I estimate the triple difference model in equation (2) separately for each of the three flexibility dimensions as well. Similar to Table 2, 25 regressions are estimated at each month from 12 months before to 12 months after childbirth. Tables A2, A3 and A4 in Appendix A present the coefficients for time flexibility, location flexibility and task flexibility respectively.

Time flexibility: I find that the CA PFL reduces employment for women who have high time flexibility in the quarter before childbirth. Women with high time-flexibility in their pre-birth jobs are 14 p.p. to 16 p.p. less likely to be employed in the quarter before childbirth but approximately 15 p.p. more likely to be employed in the month of childbirth. While the coefficients for the first few months after childbirth are close to 0 and not statistically significant, I see statistically significant reduction in employment from the fifth month onwards. The magnitude of these negative effects on employment increases from 11.8 p.p. in the fifth month post-childbirth to 34 p.p. in the ninth month and 20 p.p. in the twelfth month. This reduction in employment in the post-childbirth period signals the limited effectiveness of the CA PFL in advancing the employment for women. Moreover, I do not find any statistically significant effects of having high time-flexibility on post-childbirth hours of work.

The effect of the CA PFL for women having high time flexibility was positive and statistically significant only in the 4th month after childbirth. These women were 2.9 p.p. more likely to be on paid leave in the 4^{th} month after childbirth. The estimated coefficients for this outcome are not statistically significant at other time points in Table A1. Overall, this indicates that women who have high time-flexibility start reducing their

employment close to their pregnancy and are slightly more likely to take paid leave in the 4th month post-childbirth.

Locational Flexibility: Table A2 displays the coefficients for location flexibility. Women in CA who have access to high locational flexibility are less likely to be employed in the 5 months leading up to childbirth. These reductions range from around 16 p.p. to 27 p.p. This was preceded by an increase in the work hours of these women in the 6 to 12 months prior to childbirth. Women who had high location flexibility and access to the CA PFL worked 4 to 15 hours more hours between -6 and -12 months before childbirth. I do not find any substantial statistically significant estimates in the post-childbirth period.

Women with access to CA PFL who had high location flexibility were less likely to take paid maternity leave in the first two months after childbirth but they were more likely to take it in month 5 after childbirth. The coefficient for month 5 indicates an increase of 2.9 p.p. but the other coefficients in this period are not statistically significant.

The estimates for location flexibility are similar to that of average flexibility with regard to employment and hours of work. For paid leave-taking, the effects of having average flexibility are much larger and more prolonged than the effects of having location flexibility. However, these results should be interpreted with regard to the fact that sample of young women with low-education and relatively low-income tend to have lower levels of location flexibility as compared to any other kinds of flexibility.

Task flexibility: Having high task flexibility was associated with a higher likelihood of taking paid leave in months 3 and 5 of childbirth after the introduction of the CA PFL. This group is 7.8 p.p. more likely to take paid maternity leave in the third month after

childbirth and 3 p.p. more likely in the fifth month. These increases are similar to the ones found for average flexibility. Table A3 shows the coefficients for task flexibility.

The effects on labor market outcomes for task flexibility are somewhat different than for average flexibility. Women who had high task-flexibility and access to the CA PFL were more likely to be employed in the months leading up to childbirth. These women were 15.6 p.p. more likely to be employed 2 months prior to childbirth and 24 p.p. more likely 1 month before childbirth. This is complemented by the positive and statistically significant effect of the CA PFL on weekly hours of work in the year before childbirth. Having high task-flexibility and access to the CA PFL was associated with increases in hours of work in the range of 3.6 to 7.8 hours in the year before childbirth. These two findings together indicate that CA PFL aided the women with high task flexibility in maintaining stronger labor market attachment in the year before they had a child.

The coefficients for the post-childbirth period are not statistically significant until month 9. From months 9 to 12 after childbirth, I find increases in employment (of around 17 to 33 p.p.) along with corresponding decreases in the weekly hours of work (of 6 to 9 hours per week). This potentially indicates that new mothers with task flexibility continue to benefit from higher employment levels but reduce their work hours after the end of their leave period.

Discussion

Overall, I find that the effects of the CA PFL vary by the level of pre-birth occupational flexibility mothers have access to. Women in highly flexible occupations who had access to the CA PFL were 4.4 to 6 p.p. more likely to take paid leave in months 3 and 4 post

childbirth. This is consistent with the design of the CA PFL which kicks into effect once STDI leave is over around two months post childbirth.

The estimated effects on labor force outcomes are also interesting. Women who had access to both high-flexibility and CA PFL were 13 to 33 p.p. less likely to be employed during the 6 months before childbirth. The corresponding increases in weekly hours worked for this time period range from 7 to 8 hours. It is plausible that women start decrease their employment in the 6 months before childbirth in anticipation of the arrival of the child but the ones who were employed worked longer hours.

The effect of CA PFL on leave-taking are similar across the three dimensions of flexibility. Women who have access to any one of the three dimensions of flexibility are more likely to be on leave at some point between 3 and 5 months after childbirth. The coefficients associated with increased leave-taking each of the three flexibility dimensions are smaller in magnitude when compared to the ones for average flexibility. Women who have high time flexibility are 3 p.p. more likely to be on paid leave in the 4^{th} month after childbirth. Those with high location flexibility are 3 p.p. likely to be on paid leave in the 5^{th} month after birth. Those with task flexibility are 7.8 p.p. more likely to be on paid leave in 3^{rd} month after childbirth and are 3 p.p. more likely to be on paid leave in 5^{th} month after childbirth.

The effects of the CA PFL on employment and hours of work vary by the dimension of flexibility. Having time flexibility is associated with a decrease in employment as well as weekly work hours before the childbirth period. This amounts to a 13 to 16 p.p. decline in employment in the 6 months before childbirth and a reduction of 4 to 8 hours of work between 7 and 12 months prior to childbirth. This decline in employment status continues

even after the end of the leave period. A similar decline in employment is observed with regard to location flexibility though this is combined with an increase in work hours in the pre-childbirth period.

Introduction of the CA PFL is associated with an increase in the employment and in hours worked for women who have access to high task flexibility. Having high task flexibility and access to the CA PFL is associated with higher employment in the post-childbirth period though these increases are most pronounced 10 to 12 months post-childbirth. Coupled with this are reductions in hours of work in the same time period (9 to 12 months post-childbirth) that range from 6.5 to 10 hours. In addition to these, increases in employment of around 15 to 24 p.p. are also seen in the couple of months prior to childbirth and along with increases of 3.6 to 7.8 hours in the 6 months prior to childbirth. This indicates that having task flexibility allows new mothers an opportunity to reconcile employment with caregiving for toddlers in the first year of the child's life. Women who have task flexibility and access to the CA PFL might be able to adjust their work hours to meet the demands of childcare more effectively because they have more control over the structure of their tasks, they work relatively independently and do not have to coordinate the activities of others. Not having to maintain interpersonal relationships as part of their job may make it easier for mothers to set their mode of operation in accordance with personal needs.

The findings in this paper are consistent with prior studies. Being in a highly flexible job enables women to take more paid leave. Women in high flexibility occupations experience substantial decline in employment in the year before childbirth and approximately 6 months after childbirth. There is also evidence to support an increase in

work hours for women in high-flexibility occupations in the year prior to childbirth. These findings are particularly relevant in the post-Covid world where work flexibility is more prominent in many sectors of the economy. The possibility of remote work has increased location flexibility for workers in many industries though definitely not in all. The findings from this paper may be relevant for future research focused on work flexibility and speak to this increased demand for flexibility among employees who are parents.

This paper has a few limitations. Firstly, it uses survey data unlike some prior papers in this area which utilize more granular and comprehensive administrative data that allows the authors to observe the exact usage of paid leave instead of reported usage of paid leave. Secondly, a drawback of using O*NET characteristics that measure the flexibility of the pre-birth occupation of respondents is that women in the sample who work in a specific occupation have the same level of occupational flexibility. Women maybe be able to negotiate for flexibility at an individual level with their respective employers, and their personal access to flexibility may also vary by the tasks and responsibilities they are responsible for. This paper is not able to account for that variation in individual access to flexibility but focuses on flexibility at the occupational level. Thirdly, I study how the effect of the CA PFL differs for women in high and low-flexibility occupations in the 12 months before and 12 months after childbirth. It is possible that the declines in employment for high-flexibility women found in this paper are mitigated in the long run as women have more scope to maneuver their employment around their childcare needs. Further research is needed to understand the long-run impacts of the CA PFL with regard to work flexibility.

Finally, this paper finds that women working in high-flexibility occupations are more likely to take paid maternity leave three to four months after childbirth, are less likely to be employed half a year before childbirth and work longer weekly hours in the 12 months before having a child. Having task flexibility can be particularly helpful as it allows for more consistent labor market attachment before childbirth and increases the probability of being employed 10 to 12 months after childbirth though this is coupled with working fewer hours. This indicates that women might be able to make better use of the CA PFL by adjusting their work hours according to their needs.

Appendix A

Table A1: Coefficients of effect of CA PFL for women working in occupations with high time flexibility from triple differences analysis

Months relative to birth	Being employed		PML		Hours of work	
	coefficient	SE	coefficient	SE	coefficient	SE
-12	0.015	(0.044)	-0.008	(0.008)	-8.982 ***	(2.257)
-11	0.004	(0.048)	-0.007	(0.008)	-5.552 *	(2.286)
-10	-0.033	(0.034)	-0.006	(0.007)	-2.917	(2.422)
-9	-0.07	(0.036)	-0.016 *	(0.006)	-1.408	(2.127)
-8	0.069	(0.048)	-0.009	(0.009)	-4.91 *	(2.155)
-7	0.128 **	(0.049)	-0.014	(0.009)	-5.982 *	(2.467)
-6	-0.056	(0.056)	-0.016 *	(0.007)	-1.484	(2.189)
-5	-0.088	(0.067)	0.009	(0.007)	-1.541	(2.001)
-4	-0.062	(0.07)	0.031 ***	(0.007)	-2.585	(1.887)
-3	-0.139 *	(0.066)	-0.003	(0.01)	-2.74	(2.005)
-2	-0.155 *	(0.066)	0.038 *	(0.017)	1.178	(1.996)
-1	-0.161 **	(0.056)	0.006	(0.032)	-1.602	(2.81)
0	0.148 **	(0.052)	0.014	(0.045)	1.861	(4.384)
1	0.075	(0.052)	0.024	(0.056)	4.25	(4.438)
2	-0.042	(0.053)	0.046	(0.046)	-1.928	(5.075)
3	-0.015	(0.054)	-0.032	(0.019)	0.276	(3.194)
4	-0.047	(0.064)	0.029 **	(0.009)	1.701	(2.778)
5	-0.118 *	(0.05)	-0.01	(0.007)	2.157	(3.286)
6	-0.07	(0.053)	0.003	(0.006)	4.089	(2.675)
7	-0.157 *	(0.07)	0.004	(0.007)	-0.823	(2.592)
8	-0.251 ***	(0.065)	0.007	(0.006)	-0.71	(2.815)
9	-0.342 ***	(0.065)	0.009	(0.008)	0.834	(2.385)
10	-0.225 ***	(0.052)	0.008	(0.008)	-0.01	(2.26)
11	-0.196 ***	(0.056)	0.005	(0.006)	-5.014	(2.819)
12	-0.198 **	(0.062)	-	-	-4.341	(3.061)

Note 1: 0 '***' 0.001 '**' 0.01 '*' 0.05

Table A2: Coefficients of effect of CA PFL for women working in occupations with high location flexibility from triple differences analysis

Months relative to birth	Being employed		PML		Hours of work	
	coef	(SE)	coef	(SE)	coef	(SE)
-12	-0.057	(0.05)	-0.006	(0.005)	15.475 ***	(2.395)
-11	-0.087 *	(0.042)	-0.001	(0.005)	10.532 ***	(2.037)
-10	-0.026	(0.034)	-0.001	(0.006)	4.028	(2.328)
-9	0.022	(0.04)	0.005	(0.005)	4.046 *	(1.97)
-8	-0.018	(0.039)	-0.006	(0.005)	5.254 *	(2.505)
-7	-0.078	(0.052)	-0.003	(0.006)	2.623	(2.047)
-6	-0.037	(0.046)	0.003	(0.01)	4.862 **	(1.623)
-5	-0.162 **	(0.06)	-0.024 **	(0.008)	2.261	(2.358)
-4	-0.159 **	(0.053)	-0.038 ***	(0.009)	5.159 *	(2.296)
-3	-0.237 ***	(0.055)	0.034 **	(0.01)	2.988	(2.146)
-2	-0.187 **	(0.065)	0.018	(0.015)	2.02	(2.138)
-1	-0.275 ***	(0.06)	-0.067	(0.035)	-0.79	(2.291)
0	-0.206 ***	(0.056)	-0.256 ***	(0.068)	-1.89	(3.357)
1	-0.135	(0.07)	-0.245 ***	(0.061)	-0.098	(3.688)
2	0.035	(0.066)	-0.126 **	(0.041)	-0.108	(3.759)
3	-0.092	(0.056)	0.038	(0.028)	-1.399	(4.003)
4	-0.072	(0.059)	0.009	(0.013)	0.013	(3.127)
5	-0.107 *	(0.051)	0.029 **	(0.009)	-0.7	(3.015)
6	0.018	(0.055)	0.013	(0.009)	-3.996	(2.375)
7	-0.118 *	(0.05)	0.013	(0.009)	0.066	(2.504)
8	-0.057	(0.052)	0.011	(0.008)	-0.049	(3.424)
9	-0.03	(0.052)	0.009	(0.007)	3.047	(3.219)
10	-0.007	(0.052)	0.006	(0.006)	8.397 **	(2.771)
11	0.079	(0.051)	0.006	(0.007)	6.938 *	(2.845)
12	0.108	(0.057)			6.5 *	(2.592)

Note 1: 0 '***' 0.001 '**' 0.01 '*' 0.05

Table A3: Coefficients of effect of CA PFL for women working in occupations with high task flexibility from triple differences analysis

Months relative to birth	Being employed		PML		Hours of work	
	coef	(SE)	coef	(SE)	coef	(SE)
-12	0.058	(0.048)	0.003	(0.005)	6.826 **	(2.128)
-11	0.114	(0.06)	0.007	(0.007)	3.821	(2.649)
-10	0.328 ***	(0.056)	0.01	(0.007)	5.946 **	(2.039)
-9	0.179 ***	(0.048)	0.018 *	(0.007)	6.385 **	(2.392)
-8	0.301 ***	(0.046)	0.004	(0.01)	3.412	(1.963)
-7	0.396 ***	(0.054)	0.013	(0.009)	3.628 *	(1.587)
-6	0.083	(0.047)	0.018 *	(0.009)	7.249 **	(2.352)
-5	-0.021	(0.048)	-0.002	(0.01)	4.79	(2.622)
-4	-0.028	(0.052)	0.006	(0.01)	6.695 **	(2.201)
-3	-0.098	(0.063)	0.023 *	(0.01)	7.549 **	(2.539)
-2	0.156 *	(0.077)	0.004	(0.02)	7.879 ***	(2.123)
-1	0.24 **	(0.078)	-0.048	(0.029)	4.442	(3.051)
0	0.113	(0.062)	-0.118 *	(0.051)	6.684	(4.557)
1	0.102	(0.075)	-0.167 **	(0.059)	5.429	(4.135)
2	0.132 *	(0.061)	0.026	(0.045)	6.436	(4.255)
3	0.03	(0.051)	0.078 **	(0.027)	5.726	(3.605)
4	-0.017	(0.062)	0.017	(0.016)	1.433	(2.827)
5	-0.004	(0.059)	0.03 ***	(0.008)	2.999	(2.689)
6	0.131 *	(0.06)	0.004	(0.007)	-0.173	(3.088)
7	-0.053	(0.057)	0.003	(0.006)	-0.445	(3.155)
8	-0.105	(0.057)	0.005	(0.006)	-3.127	(2.387)
9	0.06	(0.055)	0.007	(0.006)	-6.993 **	(2.321)
10	0.171 **	(0.058)	0.006	(0.006)	-6.583 **	(2.451)
11	0.297 ***	(0.057)	0.003	(0.004)	-7.084 **	(2.363)
12	0.336 ***	(0.064)			-9.939 **	(3.198)

Note 1: 0 '***' 0.001 '**' 0.01 '*' 0.05

Table A4: Results from Dynamic Difference-in-Differences models using event-study methods: Separate model for high and low flexibility women

	Being Employed		**Hours of Work**		**Paid Maternity Leave**	
	High Flexibility	**Low Flexibility**	**High Flexibility**	**Low Flexibility**	**High Flexibility**	**Low Flexibility**
CA PFL X Time-to-treatment						
-12	0.1003*** (0.0142)	0.1695*** (0.0156)	2.103** (0.6969)	-3.496*** (0.7180)	-0.0549*** (0.0052)	-0.0671*** (0.0043)
-11	0.0783*** (0.0144)	0.1833*** (0.0156)	2.924*** (0.7402)	-3.270*** (0.7542)	-0.0549*** (0.0052)	-0.0667*** (0.0043)
-10	0.1016*** (0.0145)	0.1500*** (0.0158)	3.888*** (0.7227)	-3.520*** (0.7476)	-0.0547*** (0.0053)	-0.0671*** (0.0043)
-9	0.1259*** (0.0148)	0.1516*** (0.0158)	2.146** (0.7355)	-4.083*** (0.7650)	-0.0438*** (0.0053)	-0.0671*** (0.0042)
-8	0.1057*** (0.0151)	0.0817*** (0.0158)	2.257** (0.7612)	-3.711*** (0.7897)	-0.0551*** (0.0054)	-0.0665*** (0.0043)
-7	0.0985*** (0.0159)	0.0966*** (0.0160)	2.479** (0.7670)	-3.590*** (0.7969)	-0.0553*** (0.0055)	-0.0550*** (0.0043)
-6	0.0605*** (0.0164)	0.1136*** (0.0165)	2.341** (0.7707)	-3.740*** (0.8130)	-0.0559*** (0.0057)	-0.0553*** (0.0043)
-5	0.0645*** (0.0168)	0.1037*** (0.0165)	0.9979 (0.7728)	-4.661*** (0.8200)	-0.0563*** (0.0058)	-0.0552*** (0.0042)
-4	0.0097 (0.0168)	0.0927*** (0.0166)	0.4226 (0.7820)	-3.612*** (0.8539)	-0.0454*** (0.0059)	-0.0328*** (0.0042)
-3	0.0343* (0.0170)	0.0611*** (0.0168)	-0.2328 (0.7854)	-4.251*** (0.8495)	-0.0454*** (0.0060)	0.0021 (0.0042)
-2	-0.0092 (0.0174)	0.0160 (0.0170)	0.4115 (0.7982)	-4.115*** (0.8117)	-0.0126* (0.0062)	0.0130** (0.0041)
0	-0.2264*** (0.0179)	-0.1457*** (0.0173)	-1.790* (0.8189)	-3.956*** (0.8768)	0.2393*** (0.0064)	0.3123*** (0.0041)
1	-0.2688*** (0.0180)	-0.1968*** (0.0172)	-0.9948 (0.8276)	-4.434*** (0.8983)	0.1949*** (0.0063)	0.3015*** (0.0041)
2	-0.2233*** (0.0179)	-0.1654*** (0.0172)	0.1915 (0.8503)	-5.032*** (0.7870)	0.1190*** (0.0061)	0.2107*** (0.0042)
3	-0.1352*** (0.0181)	-0.1085*** (0.0172)	0.2190 (0.7489)	-4.368*** (0.8099)	0.0643*** (0.0061)	0.1194*** (0.0042)
4	-0.1145*** (0.0182)	-0.0558** (0.0172)	0.3849 (0.7853)	-3.092*** (0.8470)	-0.0121. (0.0062)	0.0044 (0.0042)
5	-0.0823*** (0.0185)	0.0051 (0.0172)	0.5421 (0.7962)	-3.554*** (0.8283)	-0.0551*** (0.0064)	-0.0405*** (0.0041)

6	-0.0445* (0.0186)	-0.0136 (0.0177)	1.777* (0.7757)	-2.909** (0.8494)	- 0.0544*** (0.0063)	- 0.0621*** (0.0043)
7	-0.0047 (0.0188)	0.0087 (0.0175)	1.725* (0.7531)	-2.061* (0.8680)	- 0.0540*** (0.0061)	- 0.0602*** (0.0044)
8	0.0135 (0.0190)	0.0125 (0.0176)	1.947* (0.7510)	-2.129* (0.8418)	- 0.0539*** (0.0062)	- 0.0591*** (0.0043)
9	0.0160 (0.0191)	0.0416* (0.0176)	2.616** (0.7428)	-1.039 (0.8540)	- 0.0536*** (0.0061)	- 0.0586*** (0.0043)
10	0.0635** (0.0191)	0.0534** (0.0177)	2.507** (0.7294)	-2.349** (0.8568)	- 0.0533*** (0.0060)	- 0.0563*** (0.0045)
11	0.0300 (0.0194)	0.0428* (0.0179)	2.271** (0.7116)	-1.973* (0.8579)	- 0.0530*** (0.0059)	- 0.0564*** (0.0046)
12	0.0435* (0.0197)	0.0636*** (0.0179)	1.978** (0.7126)	-3.094** (0.8786)	- 0.0529*** (0.0059)	- 0.0546*** (0.0047)
First Child	-0.0172 (0.0212)	0.0185 (0.0169)	0.9280 (0.9920)	-0.2695 (0.7906)	-0.0014 (0.0041)	0.0037 (0.0036)
Marital Status: Married	-0.0343 (0.0262)	-0.0063 (0.0213)	-0.8767 (0.8254)	-1.007 (0.8718)	0.0014 (0.0059)	-0.0049 (0.0057)
Marital Status: Divorced/Separated	-0.0187 (0.0547)	0.0038 (0.0632)	1.675 (2.374)	3.541. (1.757)	0.0095 (0.0159)	-0.0027 (0.0080)
HH size	0.0002 (0.0083)	-0.0036 (0.0061)	0.0452 (0.3334)	-0.0050 (0.3784)	-0.0009 (0.0015)	-0.0013 (0.0012)
Education (Bachelor's or higher)	-0.0051 (0.0232)	0.0495** (0.0141)	-4.996*** (0.9223)	-2.021* (0.9513)	-0.0067 (0.0052)	-0.0006 (0.0053)
Individual Income	6.72e-6*** (1.26e-6)	4.27e-6*** (6.33e-7)	0.0005*** (3.26e-5)	0.0003*** (2.52e-5)	1.5e-6*** (3.94e-7)	9.93e-7*** (1.4e-7)
Spousal Income	-9.44e-7** (2.86e-7)	-1.77e-6** (5.41e-7)	-6.16e-5*** (1.65e-5)	-3.8e-5 (2.39e-5)	-1.43e-7 (8.75e-8)	5.11e-8 (1.1e-7)
Race: Black	-0.0261 (0.0349)	0.0315 (0.0258)	2.273* (0.9380)	3.070. (1.680)	-0.0113* (0.0050)	0.0038 (0.0076)
Race: Hispanic	-0.0076 (0.0289)	0.0473** (0.0166)	2.669* (1.029)	-1.652. (0.8965)	-0.0030 (0.0093)	0.0044 (0.0047)
Race: Mixed Race	-0.1595* (0.0682)	0.0099 (0.0673)	-6.263** (1.944)	3.296 (2.656)	-0.0142. (0.0076)	0.0176 (0.0112)
Years of work experience	0.0462*** (0.0041)	0.0379*** (0.0044)	-0.1186 (0.2486)	-0.4524** (0.1429)	-3.59e-6 (0.0012)	0.0037** (0.0012)
Longer work history	0.2134*** (0.0240)	0.2452*** (0.0391)	-0.6430 (1.343)	-0.5045 (1.206)	0.0017 (0.0049)	0.0100* (0.0042)
Fixed-Effects:	----------	----------	----------	----------	----------	----------
State	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
S.E.: Clustered	by: state	by: state	by: state	by: state	by: state	by: state
Observations	18,672	21,261	11,897	14,571	19,100	22,300

R2	0.17322	0.16900	0.23071	0.18430	0.05292	0.05979
Within R2	0.13684	0.13152	0.16816	0.13636	0.04118	0.04225

Note 1: 0 '***' 0.001 '**' 0.01 '*' 0.05

Appendix B

Figure B1: Standard Occupation Codes (SOC) Classification as it applies to the O*NET indexes

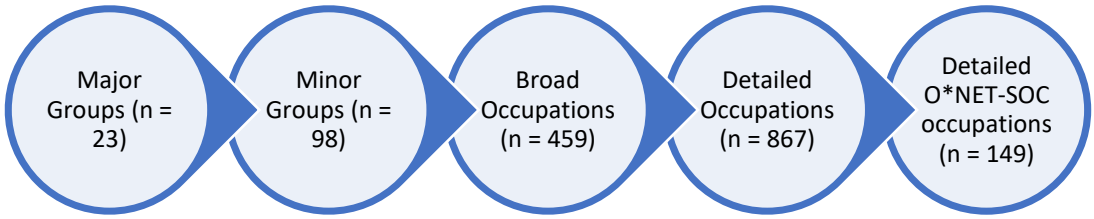


Table B1: Occupational Flexibility and it's Operationalization in Prior Research

Study	Concept	Relevant features capturing flexibility
Felfe (2012)	Job amenities/non-pecuniary job char	Three dimensions and 10 characteristics: aspects of working schedule (working time measured as agreed hours worker per week, working in evening, working at night, working in rotating shifts); flexibility of job (flexible working hours, possibility to work away from home, distance to workplace); demands of the job (required physical effort, stress, involved hazards)
Goldin (2014)	Occupational flexibility, primarily temporal flexibility	Time pressure, Contact with others, Establishing and maintaining interpersonal relationships, Structured vs unstructured work, freedom to make decisions (ONET)
Dameland & Ebenspergr (2020)	Working arrangements that are important for work-family balance	Work family balance arrangements (overwork, extensive part-time, marginal part time work, weekend work, homework) + high qualification requirements

Yu & Kuo (2017)	Occupational autonomy	Structured vs unstructured works, level of decision making freedom, frequency with which worker required to make decisions (ONET)
Fuller & Hirth (2019)	Flexible work arrangements	Temporal flexibility (can vary start and stop times but do work a certain number of hours equal to full week) Spatial flexibility – whether person works for home at all and what kind of hours are these (overtime your regular hours, regularly scheduled hours, unpaid work over regular hours)
Kim (2020)	Workplace flexibility	Access to flexible schedules, working from home, part-time work
Ischizuka & Musick (2021)	Occupational inflexibility	Two indicators – 1. Prevalence of 40+ hours workweek/proportion of workers in a given occupation who work at least 40 hours a week 2. wage returns to working longer hours by occupation
Bachman et al (2020)	Family friendliness of workplaces	Support with childcare, opportunities for employees on parental leave, targeted promotion of female employees

Matching NLSY to O*NET indexes

O*NET flexibility indexes are matched with the NLSY97 data to map the amount of flexibility women had in their pre-childbirth jobs. In the NLSY97, the occupation of each respondent is coded using the three-digit 2002 Census Occupational Codes. During the survey, respondents are asked to describe the work they did for each employer reported in their work histories which is used to assign the appropriate code to each of the respondent's jobs.

However, O*NET identifies occupations using a different naming scheme called the Standard Occupation Classification (SOCs) system. The SOC is a federal government classification system that attaches a 6-digit SOC code to each unique occupation and enables comparison of occupational data across the country. To merge O*NET indexes

with individual-level NLSY data, I converted the 2002 Census Occupation Codes used by NLSY into their corresponding SOC codes using the cross walk provided by the NLSY (NLSY 2002 Census Industrial & Occupational Classification Codes) and then, used the SOC codes to attach the O*NET indexes to NLSY data.

Two issues emerged during the matching process. Firstly, some of the occupations represented in the NLSY are not found in the O*NET database. This is because O*NET does not provide indexes for all the occupational categories at all levels. The SOC coding system is multi-tiered. There are a total of 867 occupations (called *detailed occupations*) that are grouped into *broad occupations* on the basis of similarity in skills, nature of the job and education. There are 459 *broad occupations*, that are grouped within 98 *minor groups* which are further coalesced into 23 *major groups*. Figure B1 in Appendix B depicts the SOC classification visually. For example, there is a *minor group* called physicians (SOC: 29-1210) underneath which there are 13 *broad occupations*, such as anesthesiologists (29-1211), cardiologists (29-1212), dermatologists (29-1213), neurologists (29-1217) and so on. ONET provides numerical indexes of occupational attributes for some of these occupational categories but not all occupations at all levels, i.e., there may be an O*NET index for a broad occupation but none for any of the detailed occupations that fall under it. Conversely, there may be O*NET indexes available for the detailed occupations, but none of the minor occupation category underneath which they fall. In addition, 149 occupations are not part of the national SOC but were created by the O*NET. These are called *detailed O*NET-SOC occupations* that break down some of the *detailed occupations* in the SOC into more granular categories. There are O*NET indexes available for each of them.

The second issue that arises is that the SOC identifiers for some occupations have changed over time. The identification scheme used by the O*NET is based on the 2018 SOC codes while the NLSY occupations are identified using 2002 SOC codes due to which an exact match is not found for some occupations. To improve the accuracy of this match for these 63 occupations, I trace any changes in SOC codes over time using the crosswalks provided by on the O*NET website. Some SOCs have changed by a single or a couple digits; for some, there were some changes in the occupation title; for a few, I found that the occupation has been recategorized into another occupation group. Identifying the changed SOC code was easy for the first two scenarios but for the third and I manually matched the code and title of the occupations. For these cases where a few occupations were moved to a different occupation group, I chose the SOC codes that were closet to the original in terms of occupation code, occupation title and occupation group. For example, the SOC for Public Relations Manager changed from 11-2031.00 to 11-2032.00.

Thereafter, I match the ONET indexes to the NLSY occupations using the SOC which can now be identified as the common variable in both databases. When an exact match is not found for an occupation, I take an average of the nearest occupations. For example, if a NLSY occupation is a *detailed occupation* in the SOC but the O*NET does not provide an index for it, I find the indexes of the *detailed O*NET-SOC occupations* that fall under that particular *detailed occupation*. I take the average of these corresponding *detailed O*NET-SOC occupations* as a measure of flexibility. Analogously, when there are no corresponding *detailed O*NET-SOC occupations* found underneath the *detailed occupation* with the missing index, I take the average of the flexibility index of related occupations from the same *broad occupation* or the same *minor group*. For example, for

"Managers, All Other" (SOC 11-9199.00) is a *detailed occupation* in the SOC but this is not found in ONET indexes. Instead, 6 *detailed O*NET-SOC occupations* are found: Regulatory Affairs Managers (11-9199.01), Compliance Managers (11-9199.02), Loss Prevention Managers (11-9199.08), Wind Energy Operations Managers (11-9199.09), Wind Energy Development Managers (11-9199.10), Brownfield Redevelopment Specialists and Site Managers (11-9199.11). Thus, I take the average of these 6 for the flexibility index to fill in as the flexibility index for 'Managers, All Other'[7].

Each of these O*NET indexes captures a different aspect of occupational flexibility. By grouping them into the three dimensions studied in this paper, I attempt to tease out the more salient aspects of flexibility for mothers and examine which ones allow mothers to balance childcare with labor market participation most effectively. The nine O*NET indexes included in this paper are independent of each other and I did not find high correlations between these.

[7] Taking a weighted average of these indexes with the weights representing the prevalence of each occupational category in the economy would have been ideal. However, to the best of my knowledge, I did not find any such measures of prevalence of each occupation in the O*NET database.