New Parent Labor Supply in Adaptive Markets*

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Abstract

We estimate the effect of exposure to adaptive work-from-home technologies on parental labor supply after childbirth. We find that mothers increased their participation in the labor force by more than half a percentage point, while fathers reduced the time they spent working by 1.1 weekly hours, driven by their use of leave. Both mothers and fathers increased their take-up of leave by 3.8 and 2.5 percentage points, respectively. Suggestive evidence shows that mothers in telework-compatible jobs took less time off. Adaptive technologies may help tackle the most stubborn gender-related work inequalities today, the gender wage gap and motherhood penalty.

JEL Codes: J13, J16, J22

Keywords: gender, labor supply, parental leave, adaptive labor markets, ATT

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1. Introduction

In 2020, a rapid move towards adaptive technologies changed expectations of how, when and where we work (Barrero et al., 2023). Although the service sector experienced massive temporary layoffs and slower adaptability to stay-at-home measures, other sectors, primarily those in white-collar office work, quickly innovated remote work adaptability and schedules, allowing more flexibility in achieving productivity outcome measures. These changes influenced worker expectations and created more fluid boundaries around work schedules. They adjusted worker productivity and allowed workers to more easily combine work- and non-work-related tasks.

Many firms transitioned to a work-from-home (WFH) and alternative work structure during stay-at-home policies. This allowed workers more flexibility on the engagement and timing of their work hours. This flexible acceleration to WFH had advantages for family caregivers, who often have significant unpaid care responsibilities. They could more effectively balance work with domestic tasks, increasing the probability of staying in the labor force (Heggeness, 2021; Heggeness and Suri, 2021). For example, workers could more easily participate in a staff meeting while simultaneously washing a load of clothes or running their dishwasher after lunch. This flexibility became important for employees who were also unpaid family caregivers.

Since the 1980s, most working- and middle-class households have relied on at least two incomes for survival (Boushey and Vaghul, 2016). During the pandemic, flexibility provided parents with a lifeline to participate in paid work while also tackling increased family care responsibilities, as daycare centers and schools were physically closed. Inoue et al. (2024) found that an extra day of WFH per week led male workers to spend on average 5.6% more time with family and 6.2% more time doing housework. WFH has been more common in industries where workers are better educated and better paid (Bartik et al., 2020), so there may be heterogeneous effects in how a changing work culture affects the labor outcomes of

people who added an infant to their home shortly after the pandemic started.

As time progressed, many companies established hybrid WFH as a temporary new normal. Daycare centers and schools were the last to physically reopen. When surveyed, employers reported that after the COVID-19 pandemic (which was described in the survey as starting in 2022 and later) they expected workers to work in WFH for approximately 20% of their full working days, an increase from 5% reported before the pandemic (Barrero et al., 2021). The necessity of WFH forcing the adoption of WFH technologies led to about two-thirds of workers reporting an improved perception of WFH due to their pandemic experiences (Barrero et al., 2021). This reduced the actual and social cost of working from home for employees who elected to continue working remotely after the pandemic. Workers reported being willing to accept a pay cut of around 7%, on average, to maintain the ability to WFH for two or three days after the pandemic (Barrero et al., 2021).

To identify whether a pandemic-induced change in work culture had an impact on labor force outcomes of parents of infants, we used the 2-year pseudo-panel of the Current Population Survey (CPS). The CPS 4-8-4 monthly interview pattern allows us to build a panel of people who introduced an infant into their household between the first and second year in which they were surveyed. Our treatment group includes parents who became pregnant well before March 2020, but who gave birth right at the onset of the pandemic or shortly after. When they became pregnant, they had no idea that their work lives would change drastically around the time their child was born.

We run several fixed-effects difference-in-difference models on this panel to estimate a robust set of estimates of the impact of having an infant during the first four months after February 2020. We then focus on the changes of parents' labor force participation and examine whether the changes were driven by different types of labor market transitions around the time an infant entered the home. Finally, we provide suggestive evidence of the effect of an environment with more access to flexible work policies using the CPS COVID-19 telework questions to estimate similar difference-in-differences models around having an

infant and teleworking due to COVID-19.

We find that leave take-up increases for both new mothers and fathers of infants but is more prominent among new fathers. We see no change in the hours worked for mothers, while fathers decrease their overall hours worked. Before the pandemic, fathers maximized work hours and minimized leave, so we interpret this change as driven by changes in social norms around work and childcare during the pandemic. Due to this, we are not surprised to see a decrease in fathers' work hours at the same time as there is an increase in leave take-up. Mothers' increases in leave take-up, on the other hand, appear to have been absorbed by more mothers staying in the labor force. Our results provide suggestive evidence that the increase in labor force participation of new mothers is driven by telework flexibilities, and we believe that this, in combination with the fact that women are generally more likely to work fewer hours on average, explains why we do not see any change in the hours worked by new mothers. Our results suggest that work-from-home policies may have begun a change in work culture that encourages more new mothers to stay attached to the labor force and more new fathers to take leave.

This paper contributes to an already existing robust literature on fertility and labor supply by taking advantage of external shocks in workplace norms and culture that drove many employers to adopt flexible work-from-home policies. We expand this literature using an exogenous shock to understand how parents of infants interacted with the labor force during the first stage of the pandemic compared to previous year data before the pandemic, and we attempt to shed light on additional questions such as: Does increased flexibility and the combination of home and work environments change the interactions of new parents in the labor force when caring for an infant, and, if so, how? Are the changes primarily along the extensive or intensive margins and are there differences between mothers and fathers?

This paper proceeds as follows. The next section provides the necessary background and literature, followed by a detailed description of the data and methods used for our analysis. The next sections are the analysis and discussion, followed by the conclusion.

2. Background

2.A. Fertility Decisions, Education, and Work

During the past century in the US, the patterns of fertility and participation in the labor force have evolved, often influenced by changing social norms and life-changing technological innovations in reproductive health and educational attainment (Goldin and Katz, 2002; Bailey, 2006, 2013; Heggeness, 2025). Advances in birth control and reproductive health span the past 70 years, accelerated by the development of the pill as a major form of contraception first for married women and eventually expanding to all (Goldin and Katz, 2002; Bailey, 2006, 2013; Goldin, 2021; Myers et al., 2021). At the same time, infant and child care costs have increased. In the past decade, increases in the cost of childcare have outpaced inflation (Peck, 2024; Schulze, 2024).

Individuals often consider the economic consequences of pregnancy and childbirth in the context of family and financial planning. The decision to expand a household by adding an infant includes discussions around the expectations of how much that child will cost in the first year and beyond. These calculations are often compared with the household's ability to economically support the addition of the said child. A recent estimate puts the lifetime cost of raising a child up to age 18 at $310,605 or around $17,000 annually (Bhattarai et al., 2022). To complicate matters, the same calculations find that a family earning between $25,000-50,000 is expected to spend around $10,000 on childcare when their child is between the ages of zero and two – a time when those considering adding to the family might be in the early stages of a career and feel the least economically stable to provide such an immediate and large financial investment. Today, some couples are opting out of having children, and, as a group, they have become common enough to have their own title "dual income, no kid" or DINK for short (Lee, 2023).

Families deciding to expand by adding a child make short-term choices between working for pay and staying home to take care of the infant in its first months and years of life when

the cost and accessibility of outside care can be financially unattainable. Driving factors in fertility decisions include both whether (paid) maternity leave and childcare is available and, if childcare is available, whether it is affordable. The past few decades have seen improvements in parental leave policies within the United States. In 1993, the US Congress passed the Family and Medical Leave Act (FLMA), guaranteeing up to 12 weeks (around 3 months) of unpaid work-protected leave to a large segment of the US workforce (Shabo, 2023). Two decades later, the number of state laws that require paid leave started to increase from three to 14 (including Washington, DC) between 2014 and 2023 (National Partnership for Women and Families, 2023).

Regardless of having access to paid parental leave, households often consider how paid work patterns will change or shift and for whom within the home in response to the birth of a new child. This is particularly relevant for women, who disproportionately perform unpaid domestic work at home and become the primary caregiver for new babies (Hess et al., 2020). As women's educational attainment continues to increase, the average opportunity cost of having a child increases. Technological advances in the workplace today could help bridge that gap by allowing mothers more flexibility in work schedules and location of work performance.

2.B. Public Health Concerns and Fertility

When the pandemic and subsequent recession began in March 2020, the prevailing thought among economists was that fertility and birth rates would decline. Studies had found that during previous recessions there was a decrease in births; people delayed having a child until their income and job prospects improved (Currie and Schwandt, 2014; Black et al., 2013). A counterargument was that birth rates would increase due to increased access to WFH, where adults spent hours physically together at their homes during the day, and reduced access to contraception and reproductive health services (Bailey et al., 2022). In general, birth rates did decrease in the United States, but there was a "baby bump" during the pandemic

specific to highly educated mothers born in the United States (Bailey et al., 2023). And, while overall births in 2020 and early 2021 decreased, the decrease was primarily driven by reduced conceptions prior to the pandemic (Kearney and Levine, 2023; Bailey et al., 2023). Trends in the total fertility rate for US women suggest that conceptions began to increase sharply in March 2020 and remained at that elevated level until at least March 2021 (Bailey et al., 2023). The increase in fertility appears to be driven by women under 25 years of age and first-time mothers, which together may indicate that some younger women decided to start their families earlier than originally planned, perhaps because they could better combine paid work with infant care at home (Bailey et al., 2023). Among other women, the most pronounced increase in fertility was among women aged 30-34 years and women with a college education; women with less than a college education did not experience a similar increase (Bailey et al., 2023).

There are several theories as to why the COVID-19 baby bump occurred. First, the increase in fertility since March 2020 could be due to social distancing measures that were highly encouraged during this time. People, especially those who live with a significant other, may have taken advantage of the pandemic lockdown to have more sex or increase childbearing during a time when the first months of the baby's life could be combined with work from home. This is especially true for individuals without paid leave whose work income is a critical contribution to the household budget. There is some evidence that locations that undergo similar forced isolation events such as hurricanes (Evans et al., 2010) or bomb threats (Rodgers et al., 2005) experience an increase in fertility.

A second theory is that the stimulus checks that were distributed during the pandemic may have loosened budget constraints for some families (Bailey et al., 2023). This change in budget constraint may have encouraged some families on the margin to have a child. Finally, the reduction in in-person employment that accompanied the pandemic may have reduced the opportunity cost of having a child. As mentioned above, often one parent takes some form of leave or exits the labor force entirely after the birth of a baby, making the

opportunity cost of having a child high. If the pandemic shifted the culture around work (e.g., allowing for more flexible hours, enabling work-from-home or telework positions), there is a possibility that a parent no longer needs to exit the labor force on the extensive margin, and, instead, we may see changes along the intensive margin like in the hours worked or leave take up. This can reduce the opportunity cost of having a baby.

2.C. Public Health Concerns and Parental Labor Supply

In general, mothers spend more time caring for their children than fathers. One study found that mothers spent, on average, 49.8 hours a week in childcare compared to fathers who spent 31.4 hours per week (Raley et al., 2012). During the pandemic, fathers increased the time they spent in childcare and domestic work, but moms increased more (Sevilla and Smith, 2020). If restricted to typical working hours (weekdays between 8:00am and 6:00pm), women provided about 70% of childcare regardless of employment status (Alon et al., 2020). Raley et al. (2012) found a positive relationship between the employment status of the wife, the hours worked, and the husband's time spent in childcare and household management. However, they also found a negative relationship between father's employment and time spent caring for the child. The act of care is labor intensive, no matter who is giving it.

The pandemic and subsequent school closures increased, by approximately 40 hours a week, the amount of childcare for which parents of young children were responsible, the equivalent of a full-time job (Sevilla and Smith, 2020). How parents divided the additional childcare depended largely on who continued to work. If mothers stopped working, they did twice as much childcare as their partner; if the father stopped working, the parents shared childcare responsibilities equally (Sevilla and Smith, 2020).

Among families where both parents continued to work, mothers spent approximately an additional hour with their children each workday (Adams-Prassl et al., 2020). Sevilla and Smith (2020) found that there was a slight narrowing of the childcare gap between mothers and fathers, but regardless of employment status, mothers on average did 63.6% of

the childcare during the pandemic. Thus, if both parents continue to work due to increased flexibility, there is likely a higher chance of burnout among mothers, especially mothers of young children.

2.D. Maternity Leave Policies, Childcare Availability, and Mothers' Labor Supply

In the literature, there is a pending question about the effect of maternity leave on women's willingness and ability to stay attached to the workforce. In the short term, paid parental leave appears to be beneficial for mothers. When parental leave laws are implemented, paid or unpaid, there is an increase in the extensive (Han et al., 2009; Baum and Ruhm, 2016; Bailey et al., 2019; Rossin-Slater, 2017) and intensive (Rossin-Slater et al., 2013; Baum and Ruhm, 2016) margins of work for mothers. Studies have shown that paid parental leave increases the probability that mothers return to work a year after birth (Baum and Ruhm, 2016) and increases the hours worked for employed mothers (Rossin-Slater et al., 2013). Around the time of birth, there is an increase in the weeks spent with a job and a decrease in the weeks spent looking for work (Byker, 2016), indicating that new mothers are substituting a labor-market separation with a time spent on job-protected leave. In general, paid parental leave increases the rate of participation in the short-term labor force of women, specifically young women (Byker, 2016; Das and Polachek, 2015).

Paid parental leave seems to adversely affect mothers in the long run and young women in general. Mothers who take advantage of paid parental leave see declines in employment and wages in the decade after their leave period (Bailey et al., 2019). Longer periods of maternity leave can negatively affect earnings, employment, and career advancement (Rossin-Slater, 2017; Olivetti and Petrongolo, 2017; Ruhm, 1998). Whether or not they take leave, all young women in the economy are affected by paid family leave policies. After the implementation of paid family leave in California, there was a relative increase in young women's unemployment (Das and Polachek, 2015) as employers could engage in statistical discrimination. After the implementation of paid parental leave, young women were also less likely to receive employer-

arranged training and be promoted (Puhani and Sonderhof, 2011; Thomas, 2020). These adverse effects led Blau and Kahn (2013) to argue that due to the lack of universal paid parental leave, US women tend to work in higher-level positions and are less likely to work part-time than women in other counties.

However, studies have shown that more affordable childcare services promote mothers' labor supply, especially for mothers with preschool children. A reduced cost of daycare in Canada increased the rate of participation in the labor force of mothers with children under five years of age, as well as their number of work weeks and work hours (Lefebvre and Merrigan, 2008). An increase in the minimum wage led to increased employment for single mothers with children under 5 years of age, as higher take-home wages offset the fixed cost of childcare (Godøy et al., 2024). In Norway, Andresen and Havnes (2019) find that full-year childcare substantially increased full-time employment for mothers with children under the age of two. Andresen and Havnes (2019) also argued that the need for childcare for very young children (aged 0-2) was distinctively different from the need for childcare for slightly older children (aged 3-4) and that formal childcare was a more important alternative for young children. In particular, parents were more willing to arrange informal childcare for older children as an alternative to at home childcare, but parents were more reluctant to use informal care to replace at home care for very young children.

2.E. Paternity Leave Policies and Fathers' Labor Supply

The impact of access to paid parental leave for fathers has been less studied, which likely reflects the prevailing societal norms that fathers are not primary providers and historically have not taken leave after adding an infant to the household. After California instituted a paid family leave policy in 2004, more fathers took leave, but at a much lower rate than mothers (Bartel et al., 2018). For fathers who took leave, the paid family leave policy increased the duration of the leave anywhere between 2-3 days (Baum and Ruhm, 2016) and 1.5 weeks (Bartel et al., 2018). However, Baum and Ruhm (2016) found that the effect of the

paid family leave policy dissipated quickly, with no significant effect occurring beyond the seventh week after birth. To encourage more fathers to take leave, several countries around the world have instituted paid family leave policies that restrict a portion of the leave for just fathers, and families who choose not to take the leave lose that time. The so-called "daddy month(s)" have been found to increase the share of fathers who take leave and to increase the amount of leave that fathers take (Ekberg et al., 2013; Tamm, 2019; Périvier and Verdugo, 2024).

Several studies show the lasting impact that can occur when fathers take leave after the birth of an infant. After a policy of "daddy month" in Sweden went into effect, mothers and fathers were more likely to equally share the care of sick children (Duvander and Johansson, 2019), and fathers who took more days off were more likely to report sometimes having sole care of their children, spending more time with their children, and were more involved in physical and emotional childcare tasks (Haas and Oi, 2018). Fathers who took advantage of Germany's "daddy month" policy were found to spend 1.2 additional hours a week with their families and an additional 0.5 hours per weekend on housework (Tamm, 2019). In the United States, Nepomnyaschy and Waldfogel (2007) found that fathers who took more than two weeks of paternity leave were more likely to participate in direct childcare tasks 9 months later. These studies suggest that when fathers take parental leave, there are lasting impacts on the division of childcare and housework in the household. However, it is also possible that fathers who are more likely to take leave after the birth of an infant are, in general, more likely to spend time in household production.

In this paper, we extend the previous literature by examining what happens to the labor supply of both mothers and fathers around the time of a fertility event when major shifts in employer expectations for work location and childcare access occur simultaneously. We add to previous research that examines fertility and birth rates during the pandemic to further study the impact that births had on parental labor supply. Our results are unique in that we focus on both mothers and fathers and examine differences and similarities in their behavior

in response to macro labor market shocks in how we work.

3. Data and Methods

3.A. Data

We use the monthly Current Population Survey available from the Integrated Public Use Microdata Series (IPUMS) (Flood et al., 2023). The monthly CPS is a 4-8-4 sampling methodology,[1] allowing us to study the same individuals in two consecutive years. We used this unique data structure to identify a precise sample of individuals who have an infant added to the household from year one to year two. Following the same individuals over time reduces changes or effects due to an underlying shift in sample dynamics and allows us to have more certainty that what we are observing is due to the adaptive environment driven by the pandemic. We use unique person identifiers from the CPS to link individuals across months, creating a panel data set with demographic and socioeconomic information from the same individual for the same four-month rotations within two consecutive years.

We construct a new variable to indicate whether a person had a new birth between the end of their first-year interviews and the end of their second-year interviews. Because we cannot know the exact timing of a new birth, we use information from both the first and second year to determine whether an infant was added to the household in the second year. In doing so, we observe the changes in the employment of parents as closely as possible to the birth of a new child. We use multiple CPS variables: the age of an individual's youngest child in the home, the number of children under 5 years of age in the home, and the total number of all of his own children in the home. We restricted the sample to respondents who appear both in the year one and in the year two interviews of the household. Table 1 illustrates the construction of the indicator for whether an infant has entered the home.

[1]Households in the CPS are interviewed for four consecutive months in the first year, not interviewed for eight consecutive months, and interviewed again for four more consecutive months in the second year. For example, a household is interviewed March through June in 2019, then not interviewed July 2019 through February 2020, and again interviewed monthly from March to June 2020 before exiting the sample.

[Table 1 here]

Using the CPS two-year panel, we created a multiwave sample of respondents between the ages of 25 and 45 for the years 2017 through 2021. The data in the panel represent two cohorts. First, the 2017-2018 cohort which had their first-year interviews between January 2017 and February 2019 and second-year interviews between January 2018 and February 2020. This cohort is our control group and serves as a pre-pandemic baseline for the work experiences of parents with a new childbirth. The 2017-2018 cohort is the reference group for all cohort comparisons. The treatment group is a 2019-2020 cohort (pandemic cohort) that had their first year interviews between March 2019 and May 2021 and their second year interviews between March 2020 and May 2022. The treatment cohort experienced their postpartum period after March 2020. Comparisons between these two cohorts show differences in employment trajectories during the postpartum period before and after the pandemic.

In addition, we constructed a pseudo-control cohort 2015-2016 that had their first-year interviews between January 2015 and February 2017, and their second-year interviews between January 2016 and February 2018. We use this cohort in robustness checks, with the 2017-2018 cohort acting "as if" the 2017-2018 cohort were exposed to workplace changes even though it was not. Under the assumption that the pandemic increased workplace flexibilities and the ability to balance work and paternity, we expect to see differences of labor market activities from the treatment cohort in comparison to the 2017-2018 cohort but not for the 2015-2016 cohort in comparison to the 2017-2018 cohort. To the extent that we see this phenomenon, we call it *pandemic parental leave*. In addition, given assumptions that women's employment situations are affected by maternity more than men, we expect to see more notable changes for women than for men.

3.B. Estimation Model

We used difference-in-differences estimation models with individual and month-year fixed effects to estimate the impact of more flexible work-from-home environments on labor market activities of new parents. Individual fixed effect models allow us to partial out the unobserved differences between individuals that might affect the outcomes of interests. Our main outcome variables are employment outcomes that highlight changes in the extensive and intensive margins of labor supply. We examine labor force participation, leave take-up, and hours worked. The participation of the labor force and the take-up of leave are both dichotomous variables. We use linear probability models. Our controls include citizenship status, education, marital status, and whether the individual is in school. Subsequent models add employment controls with 27 occupations and 10 industries, including a missing category for those without a self-reported occupation or industry. All models cluster the standard error at the state level. Our panel difference-in-differences equation is:

$$\begin{aligned} y_{imt} = \beta_0 + \beta_1 NewBirth_{imt} + \beta_2 PandemicCohort_{mt} \\ + \beta_3 (NewBirth_{imt} \times PandemicCohort_{mt}) + \delta X_{imt} + \lambda E_{imt} + \alpha_i + \alpha_{mt} + u_{imt} \end{aligned} \tag{1}$$

where y_{imt} is our outcome of interest (for example, participation in the labor force, taking leave from work, and hours worked). $NewBirth_{imt}$ indicates that the individual added an infant to their household between year 1 and year 2. $PandemicCohort_{mt}$ indicates that the second four interviews of the individual were between March 2020 and May 2022. X_{imt} is a vector of demographic controls that includes the age group, marital status, citizenship status, educational level, and an indicator of current school attendance. E_{imt} is a vector of employment variables that controls for 27 occupation groups and 10 industry groups including a category for those without a self-reported occupation or industry. α_i and α_{mt} are fixed effects of individual and year-month, respectively. Our coefficient of interest is β_3, which measures the average treatment effect on the treated (ATT) of having an infant during

the pandemic on each labor outcome.

4. Analysis

Table 2 shows the descriptive statistics for parents with a new birth before March 2020 (control group) and on or after March 2020 (treatment group). For parents with a new birth, descriptively, participation in the labor force was 1.8 ppt higher for treatment mothers compared to control mothers and 0.8 ppt lower for comparative fathers. The treated parents had a higher take-up of leave of 3.9 ppt for mothers and 2.2 ppt for fathers. Treatment parents reduced work hours. The mothers in the treatment group were slightly older women, more educated, and more likely to be married. The fathers in the treatment group were less likely to be under age 30, slightly more likely to be white and less likely to be Asian, and fewer of them had an Associate's degree.

[Table 2 here]

Table 3 shows the results of our DID estimates on participation in the labor force of new mothers and fathers. With demographics as base controls and fixed effects for individual and year-month, column (1) indicates that being a mother with a new infant is associated with a 9.3 ppt decline in labor force participation for both cohorts, but mothers in adaptive work environments were nearly 3.0 ppt less likely to exit the labor force compared to the control cohort (parents who experienced their baby's first year under "normal" workplace in-office configurations). Column (2) of Table 3 adds employment controls. Most of the magnitude of the effect of adaptive work environments disappears. However, the coefficients are still marginally significant in column (2) indicating a general negative impact of new birth overall and a positive impact of an adaptive environment on mother's participation in the labor force with an increase of 0.6 ppts. For fathers, we do not observe changes in labor force participation caused by new births or more flexible work arrangements across model specifications. These results indicate that, in terms of participation in the labor force,

adaptive work is primarily important for new mothers by increasing attachment to the labor force during their postpartum period.

Alternatively, the new flexibility may have allowed some mothers to hide their pregnancies and continue working without the employer knowing about the birth of their child (Wexler, 2021). We believe that this is more likely an issue for those who became pregnant after March 2020 and therefore has little potential effect on our results.

[Table 3 here]

In Table 4, we keep only observations of those in the labor force and actively working. We create a dichotomous variable for leave take-up where "on leave" is equal to one and "at work" is the reference category (=0). The size and significance levels of the coefficients for leave take-up are consistent across the models, suggesting that the impact of a new birth and its effect of interaction with the treatment cohort are not explained away by including employment attributes. In Table 4 column (2), a new birth was associated with a 19 ppt higher probability of mothers taking a leave period in general. The treated cohort of mothers was 3.8 ppts ($p < 0.05$) more likely to take a leave relative to the control group (2017-2018 cohort). In Table 4 Column (4), all fathers living with an infant were, on average, 2.0 ppts more likely to take leave with a new child. Fathers who lived with an infant in the treated cohort were an additional 2.5 ppts ($p < 0.001$) more likely relative to fathers in the control group. Together, both women and men increased their use of leave after the birth of a new child. Mothers and fathers in the treated cohort were more likely to take leave with the addition of an infant to the household. Relatively speaking, fathers leave take up almost doubles (that is, 2.5 ppts more likely from a mean of 2.6%), while mothers leave increased by approximately 84% (that is, 3.8 ppts more likely from a mean of 4.5%). The impact was relatively larger among the fathers.

[Table 4 here]

Table 5 shows the DID estimates for the hours worked in the previous week for the entire sample. For individuals who did not work last week because they took a vacation, were unemployed, or were out of the labor force, their work hours are coded to zero. The coefficients do not vary greatly by model specifications for women and men. Table 5 Column (2) shows that mothers on average reduced their weekly work hours by 8.5 hours after a new birth, but there is no cohort-specific treatment effect. Table 5 Column (4) shows that fathers on average reduce their weekly work hours by 1.1 hours after a new birth, and fathers in the treatment cohort have an additional one hour reduction in weekly work hours compared to fathers in the control cohort.

[Table 5 here]

Combined with the results in Table 4, the additional reduction in work hours for fathers in the treated cohort reflects an increase in the use of leave. Since mothers in the treated cohort do not increase the take-up of leave (Table 5), the potential changes in weekly hours worked are not as clear for mothers. In Appendix Table A.1, we restrict the sample to observations "at work" with positive work hours and exclude those on leave, unemployed or out of the labor force. We find a general reduction of 2.9 hours associated with a new birth but no cohort differences for mothers; for fathers, there is a 0.4 hour reduction in weekly work hours after employment characteristics and no cohort differences. The results, found in the Appendix Table A.1 provide additional evidence that the cohort difference in work hours for fathers reflects an increased use of leave take-up.

In traditional in-office work settings, an infant in the home does not disrupt a parent's workflow because they are in the office. It is possible that when fathers worked from home, where the infant also was, they were unable to multitask paid work with childcare and were, therefore, more willing to take parental leave to focus on sharing the responsibility of caring for their child. They may also have gained an additional awareness of the mental load involved in caring for an infant. Another plausible scenario is that, with the lack of available infant care options during the shutdown, fathers helped cover the care gap. Just as

other research has shown some longer-term benefits in terms of attachment to children due to caregiving during childhood, it is possible that similar shifts in behavior could be seen in this cohort in the longer term. Future research should investigate this further.

4.A. Labor Market Transitions for Mothers with New Births

Next, we examine whether the additional increase in new mothers in the labor force during treatment was driven by women who were in the labor force before treatment and continued to stay in the labor market after birth or by women who were not previously in the labor force but joined after a birth because work-from-home makes it more plausible to multitask work with childcare. Using information from the last interview of the respondents during their first four interviews and the last interview of the second four interviews, we create four types of labor market transitions over a maximum of 16 months: (1) those not in the labor force who stayed out always; (2) those not in the labor force who joined the labor force after birth; (3) those in the labor force who left the labor force after birth; and (4) those in the labor force who stayed in the labor force.

[Table 6 here]

In a simple difference-in-differences design, we apply multinomial logistic regression to estimate the effect of "new birth" on these four labor market transition patterns, and we compare whether such effect differed for new mothers in the treated cohort relative to those in the control cohort. Table 6, panel A shows that the treated cohort was 1.3 percentage points less likely to transition from being in the labor force to being out of the labor force when having a new birth, compared to those in the control cohort. These results add more evidence to the *pandemic parental leave* phenomenon as it shows that the direction of movement during the pandemic allowed women who had a birth to stay better attached to the labor market during their postpartum period. Panels B and C show that this change was primarily driven by women with a bachelor's degree.

4.B. Robustness Checks

We perform robustness checks for our analyzes by drawing comparisons between the 2015-2016 cohort relative to the 2017-2018 cohort, where the former is a pseudo control group and the latter is a pseudo treatment group (Figure A.1). Since there were no large-scale changes in the work arrangements for either cohort, we expect to see no differences in the effect of a new birth on the labor market activities of parents by cohort. Each panel in Figure A.1 shows the additional effect of a new birth on the pseudo-treated group (2017-2018 cohort) in relation to participation in the labor force, the use of leave, and the work hours. As expected, the effect is not statistically significant in any outcome, demonstrating that there was no difference between the cohorts. These robustness checks provide additional support to our argument that the phenomenon we call *pandemic parental leave* existed. Mothers leaned more toward paid work and fathers leaned more toward caregiving in an adaptive work environment where childcare was not generally available for infants.

[Figure A.1 here]

In terms of labor market transition patterns, we also compared the two pre-pandemic cohorts with the expectation that there would be no statistically significant differences between the two pre-pandemic cohorts. In panel D of Table 6, there is no significant difference between the two robustness check cohorts, that is, the 2015-2016 cohort compared to the 2017-2018 cohort for transitions into and out of the labor force.

The participation of women in the labor force during the latter part of 2019 was unusually high (Goldin, 2022). To verify that our results are not influenced by this unique phenomenon, we compared a 2015-2016 cohort with our 2019-2020 and 2020-2021 cohorts. This allows us to verify that our results are not driven by unique circumstances with our preferred control group. We found (not shown) that our results are largely consistent with our primary results, with one exception, mothers' labor force participation becomes insignificantly different from the control group even without occupation and industry. These results support our general

findings and perhaps provide some evidence that the labor force participation of mothers of infants was not affected due to the adaptive labor market.

4.C. Was There A Lasting Effect After the Pandemic?

To examine whether the effect was short-lived, we make another comparison between a cohort of 2021-2022 and the cohort of 2017-2018. We define the 2021-2022 cohort as a post-pandemic cohort whose first-year interviewers fell between March 2021 and July 2023 and second-year interviews fell between March 2022 and July 2024. These individuals would have been making conscious and unconscious fertility decisions during the first year of the pandemic and brought an infant into their home in the second wave of our panel. We expect some adjustment both in terms of fertility decisions and in terms of the impact return-to-office may have had on the outcomes of interest. As stay-at-home restrictions gradually lifted, employees began returning to the office during the time of treatment. We expect the impact on the labor market caused by adaptive work-from-home policies during the first year of the pandemic to dissipate but not completely disappear.

Appendix Tables A.2 - Appendix Table A.4 show these results. Compared to Table 3 - Table 5, the effect of a new birth on labor market outcomes weakens. There is no significant effect on the participation of mothers in the labor force. The effect on mother's leave take-up also diminishes. Fathers' leave take-up remains significant but the coefficient is smaller, and we find no effect on hours worked. Women in this treatment cohort are nearly 2.0 ppt more likely to stay in the labor force compared to the 2017-2018 cohort, but such differences are explained by shifts in occupation and industry distributions. Men in the post-pandemic cohort are still more likely to take leave with a new birth compared to the control cohort. Taken together, *pandemic parental leave* is partially sustained during the post-pandemic years, but the effect is weaker, as expected. We find evidence that fathers' behavioral changes may have had a lingering effect.

4.D. Supplemental Analysis of Telework on Leave Take Up and Hours Worked

Tables 7 and 8 provide additional evidence of *pandemic parental leave* by describing the ways in which new mothers and fathers of infants interacted with the labor market and employers during the pandemic. Between May 2020 and September 2022, the CPS asked respondents if they teleworked for pay *due to the COVID-19 pandemic*.[2] Because this question was only asked for those who were employed, we focus only on examining two results related to telework: leave and hours worked.

[Table 7 here]

[Table 8 here]

We again use a difference-in-differences estimation design with the cross-sectional format of the CPS to identify the effect having a child under the age of two has on leave take up and hours worked for those who did telework due to the pandemic.[3] With an assumption that telework provided parents with more flexibility to balance work with childcare, we might expect to see parents of children under two, especially mothers, take less leave and work a higher number of hours if they teleworked because they could more efficiently interchange work time with childcare time. They might also take more leave if they found it impossible to simultaneously take care of an infant while working and did not have other care options available to them.

Table 7 shows that, conditional on being employed, there was a consistent negative interaction effect (6 ppt) for mothers. Mothers of infants took less leave if they teleworked

[2]"Due to the COVID-19 pandemic" could mean very different things for people. It could mean that the person was teleworking because they had COVID-19 or another member of their family had COVID-19. It could mean that they had been exposed to COVID-19 and were quarantining. It could mean that their entire office had transitioned to remote work due to the pandemic, regardless of whether they themselves had COVID-19 or had been exposed. It could mean that they were teleworking because they did not have childcare or elder care for family members due to the pandemic.

[3]We use under age two as a cutoff instead of under the age of one because data on the age of very young children is often imprecise with respondents making more errors in age reporting than older children (Oppenheimer, 1988; Yadav et al., 2020)

compared to mothers who did not telework. Conditional on working (that is, having positive work hours the previous week), there is a consistent positive effect on the hours worked by mothers (Table 8), suggesting that mothers who teleworked were able to work more hours than their non-telework counterparts. There is no statistically significant effect for fathers in terms of leave take-up and hours worked.

Although we include controls for broad occupational and industrial groups, the effect could still be a reflection that telework jobs provide better leave options or are better protected from public health shocks so that workers in telework jobs did not suffer a reduction or cut in hours worked. Regardless of the selection into telework, the pandemic made telework a widely adopted work strategy that appears to have benefited parents' ability to continue working during their child's infancy. We could have seen a decrease in work due to the lack of availability of childcare during the pandemic, but flexible work appeared to reduce leave take-up and increase hours worked, particularly among mothers.

To address questions of whether parents shifted into telework jobs during the pandemic, we use Dingel and Neiman (2020)'s measure of the telework compatibility of a job. Figure A.1 shows that while there was an initial increase in mothers and fathers working in telework compatible jobs during the pandemic, the proportion of mothers and fathers working in telework compatible jobs has been relatively stable. In particular, mothers consistently have higher rates of working in telework-compatible jobs than fathers.

5. Discussion

The strong recovery of women's employment after COVID-19 is part of longer term trends in women's rising employment, partially due to women's increasing education, reductions in fertility, longer-term increases in life expectancy, among other factors (Goldin, 2021; Arnon et al., 2023). Our research shows a *pandemic parental leave* effect, which occurred when a more flexible work environment and WFH emerged out of pandemic closures and stay-at-home orders. The shifts in the labor market and the dynamics of the workplace enabled

parents of infants, especially mothers, to continue to work despite the lack of viable infant care options. In addition, the employment protections put in place during the pandemic made it easier for parents to take leave during this time (U.S. Department of Labor, 2022).

The fact that teleworking mothers took less leave and worked more hours than non-teleworking mothers indicates that they managed to work and provide childcare simultaneously in a teleworking environment. With the option to telework, it is likely that mothers with the birth of a new child thought they could return to work and simultaneously balance childcare for their infant with work-from-home. Without options for infant care, telework gave mothers a vehicle to continue working. The challenging labor market during the pandemic also suggested that the decision to stay in the labor force and working was at least partially driven by economic factors within the household. Finding another job was likely more difficult during the pandemic and these decisions were probably driven jointly in tandem with changes in the employment of a partner. Similarly to (Byker, 2016), we find that when women have the option to stay attached to their job while balancing family care responsibilities, women who just gave birth are more likely to stay attached to their pre-childbirth employment. The results in Appendix Table A.2 show suggestive evidence that the trend of women staying attached to the labor force after childbirth continues past the beginning of the pandemic.

Regarding fathers, our findings show that they were twice as likely to take leave after having an infant enter. Previous work has found that the only other policies that encourage fathers to take leave anywhere near this rate are paid family leave policies, especially those that specifically allocate a portion of the leave for fathers (Périvier and Verdugo, 2024; Bartel et al., 2018; Ekberg et al., 2013). Our results are similar to some of the "daddy month" findings in that when forced or in a pinch, fathers increase caregiving responsibilities. The higher rate of fathers taking leave may be a reflection of fathers becoming increasingly involved in childcare as workplace norms changed. However, with the closure of childcare centers and schools moving online, fathers were more likely to take more leave out of necessity

to cover childcare responsibilities. Taken together, while mother leave is more likely to be economically driven, fathers' increased leave signals a cultural change in fatherhood, expectations on men regarding family care when other care options are limited, and employer expectations of fathers in the workplace. This theory is reflected in the continued increase in leave intake for fathers after the pandemic (as shown in Table A.3).

6. Conclusion

This paper provides an innovative use of the unique structure of the CPS panel to study the impact of bringing an infant home on parental labor supply as technological advancements drove increases in WFH and infant care slots in daycare settings were temporarily unavailable. To our knowledge, no previous research has used a CPS panel to study changes in parental employment after the birth of a child. Our study shows the potential to use the unique methodological design of the 4-8-4 rotation of the CPS survey to uncover changing patterns in men and women's employment shortly after birth or adoption.

We find that both mothers and fathers of infants increase leave take up during pandemic months. For fathers, who already have high labor force participation rates, increases in leave take-up result in an overall reduction of work hours. The same was not true for mothers. We further investigated the dynamics of the mother's labor supply by examining whether increased participation in the labor force coincides with the potential for telework and adaptive technologies that accompanied the transition to WFH. We find suggestive evidence that while more mothers took leave from work after the birth of an infant, the overall hours worked did not change due to increased participation in the labor force of mothers in combination with mothers who teleworked taking less leave.

Our results shed light on the complexities of work and family caregiving for mothers and fathers today and raise concerns about the benefits and potential risks of mothers' ability to work remotely after birth. On the one hand, accelerating mothers' labor supply after birth provides more economic agency and bargaining power to mothers within the household.

On the other hand, mothers who try to balance too much risk burnout. Multitasking care of an infant with remote work could have damaging effects on mother mental health and well-being both in the short and long term. More research is needed to better understand these dynamics in the long run. Using time use data to understand how parents, specifically mothers, balance their time spent at work and in their caregiving role, to understand how adaptations to the labor market change parents' relationship with the labor market, and whether the increased flexibility provided by employers help or hinder women's labor supply and economic agency are areas for next steps in this line of research.

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7. Tables and Figures

Table 1. Creating "New Birth" Indicator from CPS 4-8-4 Panel

Individual	Month 1	Month 2	Month 3	Month 4	8 Months no int.	Month 5	Month 6	Month 7	Month 8
1	NB(0)	NB(0)	NB(0)	NB(0)		**NB(1)**	**NB(1)**	**NB(1)**	**NB(1)**
2	NB(0)	NB(0)	NB(0)	NB(0)		NB(0)	**NB(1)**	**NB(1)**	**NB(1)**
3	NB(0)	NB(0)	NB(0)	NB(0)		NB(0)	NB(0)	**NB(1)**	**NB(1)**
4	NB(0)	NB(0)	NB(0)	NB(0)		NB(0)	NB(0)	NB(0)	**NB(1)**
5	NB(0)	NB(0)	NB(0)	NB(0)		NB(0)	NB(0)	NB(0)	NB(0)

Table 2. Descriptive Statistics for Parents of Infants (Year 2)

	Women			Men		
	Control Cohort (2017-2018)	Treatment Cohort (2019-2020)	Diff.	Control Cohort (2017-2018)	Treatment Cohort (2019-2020)	Diff.
Ages 25-30	34.0%	32.0%	2.0**	26.3%	24.5%	1.8**
Ages 31-35	42.1%	41.7%	0.4	40.5%	40.9%	-0.4
Ages 36-40	18.9%	21.1%	-2.2***	26.1%	26.6%	-0.5
Ages 41-45	5.0%	5.2%	-0.2	7.1%	8.0%	-0.9
White	69.4%	67.9%	1.5*	72.5%	74.2%	-1.7**
Black	6.8%	7.8%	-1.0**	5.7%	6.2%	-0.5
American Indian	1.1%	0.9%	0.2	1.0%	0.8%	0.2
Asian	7.9%	6.9%	1.0*	7.1%	6.1%	1.0**
Hispanic	12.8%	13.7%	-0.9	11.4%	10.8%	0.6
Other	2.1%	2.7%	-0.6**	2.3%	1.9%	0.4
High school or less	20.5%	22.0%	-1.5*	26.4%	26.4%	0.0
Some college	12.6%	12.0%	0.6	15.2%	16.1%	-0.9
Associates degree	12.2%	9.3%	2.9***	11.0%	9.7%	1.3**
Bachelor's degree	33.0%	32.8%	0.2	29.0%	29.4%	-0.4
Advanced degree	21.7%	23.8%	-2.1***	18.5%	18.5%	0.0
US Citizen	89.2%	90.7%	-1.5***	89.9%	90.7%	-0.8
Never married	13.3%	11.7%	1.6***	10.2%	8.1%	2.1***
Married	81.1%	84.3%	-0.1	87.3%	89.5%	-2.2***
Previously married	5.6%	4.0%	1.6***	2.5%	2.4%	0.1
Currently in school	3.5%	2.5%	1.0***	6.9%	5.6%	1.3***
In labor force	64.3%	66.1%	-1.8**	96.8%	96.0%	0.8**
Among employed % on leave	20.7%	24.6%	-3.9***	3.9%	6.1%	-2.2***
Total hours worked last week	17.49	16.49	1.0***	38.44	36.03	2.41***
Number of Individuals	1,729	1,655		1,578	1,521	
Number of Observations	5,679	5,263		5,219	4,868	

Note: Reported percentage is the global mean across observations for each group. Diff. reports difference between control and treatment cohorts and the significance level of two-sample t-test of that identifies if the two sample means are statistically different from each other. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 3. Impact of a New Birth During the Pandemic on Labor Force Participation

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	-0.093***	-0.011***	0.003	0.000
	(0.007)	(0.002)	(0.004)	(0.001)
New Birth × Pandemic Cohort	0.030***	0.006**	-0.005	-0.002
	(0.011)	(0.003)	(0.006)	(0.002)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.801	0.969	0.752	0.958
Number of Individuals	67,924		63,095	
Number of Observations	483,432		449,472	
Dependent Variable Mean	0.768		0.908	

Note: Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. The cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table 4. Impact of a New Birth During the Pandemic on Leave Take-Up

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	0.190***	0.190***	0.020***	0.020***
	(0.013)	(0.013)	(0.003)	(0.003)
New Birth × Pandemic Cohort	0.038**	0.038**	0.025***	0.025***
	(0.017)	(0.017)	(0.007)	(0.007)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.312	0.312	0.244	0.244
Number of Individuals	54,344		56,930	
Number of Observations	353,944		384,009	
Dependent Variable Mean	0.045		0.026	

Note: Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. The cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table 5. Impact of a New Birth During the Pandemic on Hours Worked Last Week

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	-8.466***	-6.544***	-1.377***	-1.447***
	(0.469)	(0.397)	(0.288)	(0.293)
New Birth × Pandemic Cohort	0.047	-0.517	-1.194***	-1.057**
	(0.559)	(0.475)	(0.442)	(0.430)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.738	0.780	0.675	0.708
Number of Individuals	67,924		63,095	
Number of Observations	483,432		449,472	
Dependent Variable Mean	26.40		35.44	

Note: Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. Cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table 6. Marginal Effects of a New Birth During the Pandemic on Labor Force Transitions

VARIABLES	Out → Out	Out → In	In → Out	In → In
Panel A: Full Sample				
New Birth × Pandemic Cohort	-0.010	0.002	-0.013**	0.021
	(0.014)	(0.009)	(0.006)	(0.018)
Panel B: Bachelor's or Higher Degree				
New Birth × Pandemic Cohort	-0.015	-0.011	-0.013*	0.039*
	(0.014)	(0.013)	(0.007)	(0.021)
Panel C: High School to Associate's Degree				
New Birth × Pandemic Cohort	0.005	0.014	-0.010	-0.008
	(0.020)	(0.014)	(0.009)	(0.023)
Panel D: Robustness Check of Two Pre-pandemic Cohorts				
New Birth × 2015-2016 Cohort	0.011	-0.004	0.008	-0.015
	(0.011)	(0.008)	(0.006)	(0.013)

Note: Estimates and standard errors are marginal effects from a multi-logit regression. Multi-logit regression includes race, age, age squared, education, citizenship, marital status, number of children, year, month, and state controls. Robust standard errors are in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table 7. Impact of Telework on Leave Taking

	Women			Men		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Telework	-0.0300***	-0.036***	-0.032***	-0.014***	-0.014***	-0.013***
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Infant	0.095***	0.087***	0.087***	0.011***	0.011***	0.011***
	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)
Telework × Infant	-0.061***	-0.059***	-0.058***	-0.002	-0.002	-0.001
	(0.006)	(0.006)	(0.006)	(0.003)	(0.003)	(0.003)
Year/Month/State	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	No	Yes	Yes	No	Yes	Yes
Employment Controls	No	No	Yes	No	No	Yes
R-squared	0.031	0.033	0.042	0.005	0.005	0.009
Number of Observations		169,084			157,394	
Dependent Variable Mean		0.063			0.031	

Note: The samples are ages 25-45 parents who are employed. The time period is between May 2020 and September 2022, when the CPS question about whether the respondents teleworked because of COVID-19 was asked. The infant is defined as having children aged 0 or 1. Demographic controls include education, races, age, citizenship status, marital status, # of children, # of children under age 5. Employment controls include 25 occupation groups and 8 industry groups. Robust standard errors are in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table 8. Impact of Telework on Hours Worked Last Week

	Women			Men		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Telework	2.243***	1.600***	0.764***	-0.148	-0.582***	-0.418***
	(0.129)	(0.129)	(0.131)	(0.138)	(0.143)	(0.143)
Infant	-2.118***	-1.166***	-1.180***	-0.273**	-0.295*	-0.297*
	(0.169)	(0.195)	(0.189)	(0.133)	(0.160)	(0.157)
Telework × Infant	1.175***	1.132***	1.124***	-0.286	-0.216	-0.133
	(0.280)	(0.279)	(0.274)	(0.262)	(0.260)	(0.257)
Year/Month/State	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	No	Yes	Yes	No	Yes	Yes
Employment Controls	No	No	Yes	No	No	Yes
R-squared	0.017	0.031	0.064	0.007	0.020	0.045
Number of Observations		158,697			152,445	
Dependent Variable Mean		36.822			42.485	

Note: The samples are ages 25-45 parents and are actively working, that is, having positive work hours last week (sample excludes those who are out of the labor force, unemployed and not at work). The time period is between May 2020 and September 2022, when the CPS question about whether the respondents telework because of COVID-19 was asked. The infant is defined as having children aged 0 or 1. Demographic controls include education, races, age, citizenship status, marital status, # of children, # of children under age 5. Employment controls include 25 occupation groups and 8 industry groups. Robust standard errors are in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

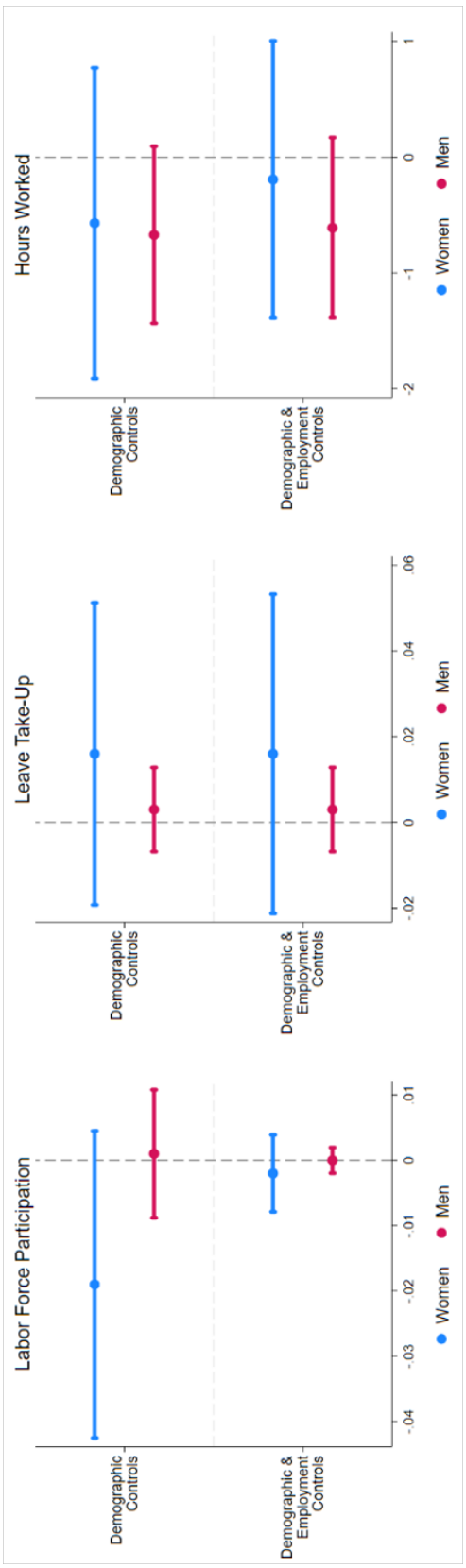


Figure 1. Impact of New Birth with 2015-2016 Cohort.

A. Appendix

Table A.1. Impact of a New Birth During the Pandemic on Hours Worked Last Week, Conditional on Actively Working

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	-2.857***	-2.889***	-0.415*	-0.416*
	(0.346)	(0.341)	(0.244)	(0.242)
New Birth × Pandemic Cohort	-0.410	-0.394	-0.328	-0.325
	(0.486)	(0.487)	(0.323)	(0.323)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.635	0.636	0.578	0.579
Number of Individuals	53,769		56,666	
Number of Observations	337,592		373,895	
Dependent Variable Mean	37.61		42.49	

Note: The sample includes only actively working individuals. Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. Cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses

$^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table A.2. Impact of a New Birth After the Pandemic on Labor Force Participation

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	-0.093***	-0.010***	0.003	0.000
	(0.007)	(0.002)	(0.004)	(0.001)
New Birth × 2021-2022 Cohort	0.020*	0.003	-0.007	-0.000
	(0.012)	(0.003)	(0.005)	(0.001)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.801	0.971	0.757	0.962
Number of Individuals	67,973		63,512	
Number of Observations	485,091		453,812	
Dependent Variable Mean	0.775		0.911	

Note: Models compare the 2021-2022 cohort to the 2017-2018 cohort. Each model includes year-month fixed effects and individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries Robust standard errors in parentheses
$^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table A.3. Impact of a New Birth After the Pandemic on Leave Take-Up

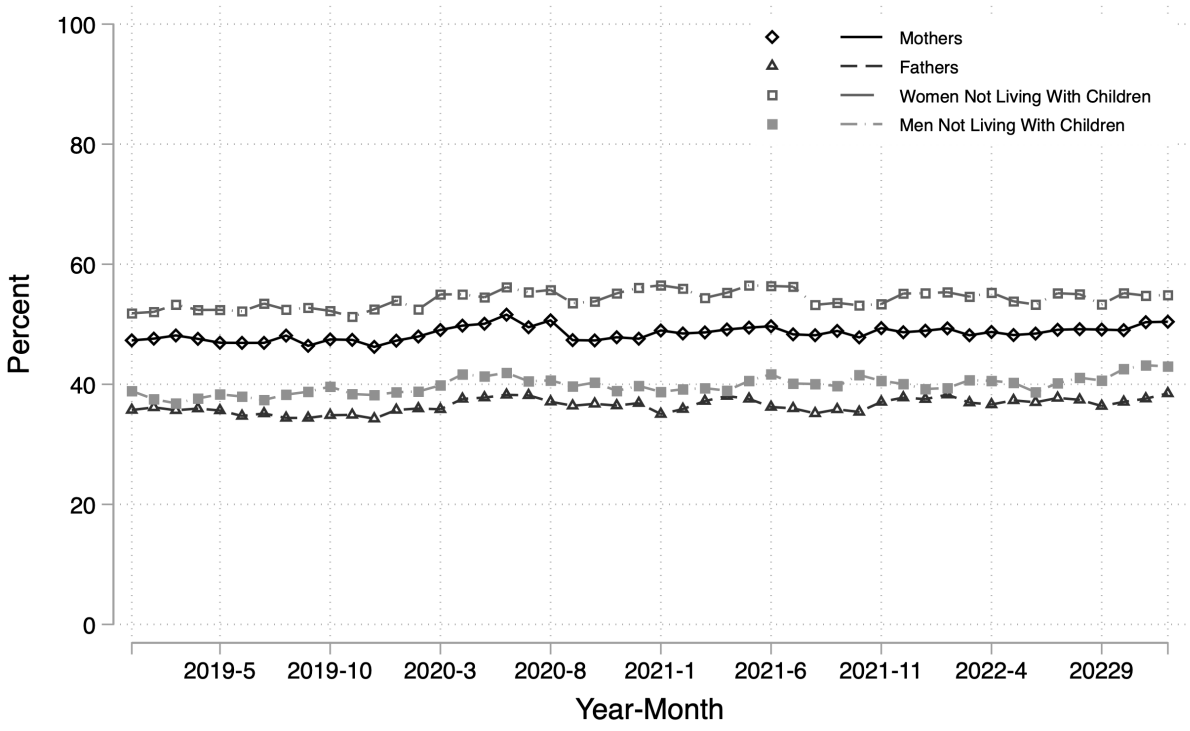
	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	0.190***	0.190***	0.020***	0.020***
	(0.013)	(0.013)	(0.003)	(0.003)
New Birth × 2021-2022 Cohort	0.019	0.019	0.017**	0.017**
	(0.014)	(0.014)	(0.007)	(0.007)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.298	0.299	0.237	0.237
Number of Individuals	57,065		58,744	
Number of Observations	361,883		393,148	
Dependent Variable Mean	0.045		0.025	

Note: The models compare the 2021-2022 cohort with the 2017-2018 cohort. Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. The cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)

Table A.4. Impact of a New Birth After the Pandemic on Hours Worked Last Week

	Women		Men	
VARIABLES	(1)	(2)	(3)	(4)
New Birth	-8.484***	-6.475***	-1.376***	-1.450***
	(0.468)	(0.397)	(0.287)	(0.294)
New Birth × 2021-2022 Cohort	0.047	-0.503	-0.673	-0.473
	(0.529)	(0.452)	(0.445)	(0.448)
Demographic Controls	Yes	Yes	Yes	Yes
Employment Controls	No	Yes	No	Yes
R-squared	0.735	0.780	0.671	0.708
Number of Individuals	67,973		63,512	
Number of Observations	485,091		453,812	
Dependent Variable Mean	26.980		35.867	

Note: The models compare the 2021-2022 cohort with the 2017-2018 cohort. Each model includes a year-month and an individual fixed effect. Demographic controls include education, citizenship, marital status, and school status. Employment controls include 27 occupations and 10 industries. The cohort coefficient is omitted due to year and month controls. Robust standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$ (two-tailed tests)



Note: Telework compatible occupation is a dummy indicator constructed by using Dingel and Neiman (2020).

Figure A.1. Distribution of Telework Compatible Occupations by Gender and Parenthood, Monthly 2019 to 2022