The Parenthood Gap: Firms and Earnings Inequality After Kids

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Abstract

We document the dynamics of career paths around parenthood, capturing worker advancement within firms and across firms of differing pay. Using a new linkage between administrative data on U.S. workers' fertility and labor-market histories, we show that the parental earnings gap is partly explained by mothers transitioning to lower-paying firms. Firm downgrading is driven by parents who take an extended absence from the labor force. Mothers who move to lower-paying firms see improved job amenities, but less generous fringe benefits. The firm's contribution to the parental earnings gap rises over time and reaches one-third by the child's 11th birthday. Our results show that women lose valuable matches with firms after parenthood, consistent with their inability to adjust compensation packages. Many women appear to be "opting down" rather than opting out of the labor force.

1   Introduction

Parenthood is a critical factor underlying the persistence of gender inequality in the 21st-century labor market. While the emergence of a sharp difference in wages and employment among new parents is well-documented, less is known about the role employers play in mothers' and fathers' divergent career paths.

There is ample reason to believe firms influence parents' earnings and career paths: firms vary substantially in hiring practices, set standards for promotion, and play a critical role in determining the overall earnings distribution (Card et al., 2016, 2018; Goldin et al., 2020; Kline et al., 2022). Firms also differ in their provision of family-friendly workplace amenities (Goldin, 2014; Blau and Kahn, 2017). It is not clear *a priori* whether the availability of wage and non-wage amenities constrains parents' progress up the career ladder to higher-paying firms and higher-paying roles within the firm. For example, if parents demand greater amenities but employers are unwilling to adjust them, then valuable worker-firm matches may be destroyed, with implications for both equity and efficiency (Hsieh et al., 2019). Furthermore, policy responses to the parental earnings gap require an understanding of parents' demand for the non-pecuniary amenities that may contribute to family life. Yet the difficulty of linking workers to detailed longitudinal data on their employers, earnings, and fertility has limited the availability of evidence on the sources of earnings inequality and the tradeoffs parents face in the labor market.

In this paper, we leverage newly linked sources of U.S. administrative data to generate evidence on the firm's role in the dynamics of the parental gender earnings gap. Our analysis combines longitudinal, employer-employee linked data with information on job amenities and high-quality measures of workers' fertility histories that cover the near-universe of U.S. parents. We use these data to characterize worker advancement within and across firms in the years surrounding parenthood, and we examine the extent to which these employer transitions account for the widening gap between the earnings of mothers and fathers over the course of their careers.

Our analysis reveals four new facts about the emergence of the earnings gap among American mothers and fathers.

First, a substantial share of the decline in mothers' relative earnings can be accounted for by transitions to lower-paying firms that begin in the first years of parenthood and continue through their child's early adolescent years.[1] Although the gender gap precedes parenthood—before childbirth, women work at firms that pay a 7-log-point lower premium than men and

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[1]Our measure of firm pay policy uses job-transition-based estimates of the earnings premium paid to a fixed worker (Abowd et al., 1999; Card et al., 2018), described in section 2.1.

occupy positions about 11 log points lower on the job ladder within the firm—the differences are remarkably stable, with women and men moving in parallel to higher-paying employers and higher-paying roles within the firm until childbirth. After parenthood, fathers continue transitioning upward, but mothers steadily move to lower-paying firms, resulting in a gender gap of 12 log points in firm-specific pay and an earnings gap of 26 log points within-firm by the child's 11th birthday. This pattern of firm downgrading can be attributed to transitions to lower-paying firms rather than selection out of the labor force.

Second, we show that firm downgrading is driven by mothers who worked at the highest-paying firms prior to childbirth, and especially among women with interruptions in their labor force participation. Mothers at every point in the pre-childbirth distribution of firm pay have lower—and typically negative—growth in firm earnings premia after childbirth, compared to men. The gap widens most substantially at the top, as mothers in the highest ventiles of the distribution before parenthood move to firms that pay 9 log points less after birth. The uniformly larger decline in firm pay holds even for the most highly attached subgroup of mothers who have no interruption in their earnings history after childbirth, but it is especially stark for those who take time away from employment after childbirth. Mothers who take a year or more out of the labor force experience a decline in firm pay of 10 log points at the median and 41 log points at the highest ventile of pre-birth firms. We also show that mothers' job changes are disproportionately associated with changes in industry, suggesting women not only surrender firm-specific human capital but are also more likely to take on potentially costly career changes to accommodate the demands of family.

Third, we show that mothers who move to lower-paying firms gain amenities consistent with flexible work schedules, but actually surrender benefits along other dimensions. Because our administrative earnings data provides little information on firm amenities, we link our sample to large-scale survey data from the American Community Survey (ACS) and explore whether transitions across the distribution of firm earnings premia are correlated with access to more flexibility at work. Compared to fathers, mothers who move to lower-paying firms disproportionately move to jobs that offer part-time hours, shorter commutes, lower occupational returns to hours worked, and more opportunities for remote work, but are also more likely to lose health insurance coverage—especially from employer-sponsored plans. This finding suggests that lower-paying firms are offering non-pecuniary amenities that are worse along some dimensions.

Finally, we quantify the contribution of gender differences in sorting across firms to the overall parental earnings gap. After adjusting for differences in age at birth, the gender gap between working mothers and fathers is approximately 13 log points in the year prior to birth, jumps to 32 log points in the year of birth, and grows slightly over time to about 36

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log points 11 years later. The share of this gap that can be explained by differences in firm wage policy grow from 23 percent in the year of birth to 34 percent after a decade. Measures of the firm-specific earnings premium, industry, and firm size alone have more explanatory power than demographic characteristics, providing new evidence that firms are a key element in the persistence of the gender earnings gap in the United States.

Our findings contribute to the literature documenting a striking increase in gender earnings inequality after parenthood (Waldfogel, 1998; Bertrand et al., 2010; Chung et al., 2017; Juhn and McCue, 2017; Kleven et al., 2019b; Kleven, 2022).[2] Our analysis complements recent work showing that women are overall more likely to work at lower-paying employers (Card et al., 2016; Goldin et al., 2017; Bruns, 2019; Barth et al., 2021; Bronson and Thoursie, 2021; Casarico and Lattanzio, 2022; Di Addario et al., 2023).[3] Our contribution is to provide new evidence that there is firm downgrading after parenthood for women but not men, and to provide evidence for two sources of firm downgrading: time away from work and compensating differentials. Our results show that women lose valuable worker-firm matches after parenthood, even when they are highly attached to the labor market, and especially for women who have already advanced to high-paying firms.

This paper also contributes to research on gender differences in the demand for family-friendly workplace policies such as flexible hours (Glass and Camarigg, 1992; Goldin, 2014; Cortes and Pan, 2019; Wasserman, 2023). Job amenities may be particularly important in the United States, where public provision of benefits like paid leave and child care support are far less generous and often left to the discretion of employers (Blau and Kahn, 2013; Olivetti and Petrongolo, 2017; Goldin et al., 2020; Flood et al., 2022). Using data from countries in Europe and South America, prior research has studied broad job categories—such as public- and private-sector work—or has estimated revealed-preference valuations to show that gender gaps in job amenities play a role in the pay gap between mothers and fathers (Hotz et al., 2018; Morchio and Moser, 2021; Masso et al., 2022; Casarico and Lattanzio, 2023). But data limitations have made it challenging to measure the precise job amenities that are valued by parents.[4] This paper is the first to use a nationally representative sample of parents linked to granular survey-based measures of workplace amenities, which allow us to directly measure multiple job characteristics that are closely linked to theory and highly

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[2] Several recent papers explore potential sources of this parenthood gap, including maternal health (Kleven et al., 2021; Andresen and Nix, 2022), productivity (Gallen, 2024), and social norms (Kleven et al., 2024).

[3] Our findings also echo the importance of employer wage setting for overall earnings (Abowd et al., 1999; Card et al., 2018; Song et al., 2019), worker earnings losses from job displacement (Schmieder et al., 2023; Bertheau et al., 2023), and worker skill acquisition (Arellano-Bover and Saltiel, 2022; Arellano-Bover, 2024).

[4] For example, Hotz et al. (2018) use employer transitions to estimate an index of family-friendliness and show that women are more likely to move to firms with high values of this index after parenthood. Their employer-employee linked data, however, provides little direct information on working conditions.

relevant to policymakers. We show that while mothers who move to lower-paying employers gain flexibility—including reduced hours, shorter commutes, and opportunities for remote work—they also lose access to employer-sponsored health insurance. Building on recent research showing workers are unable to adjust hours (Lachowska et al., 2023; Jarosch et al., 2025), our paper provides evidence consistent with workers' inability to adjust compensation packages at firms after parenthood, and that many women are "opting down" rather than opting out of the labor force.

2   Data and Measurement

We describe our main analysis samples here and provide additional detail in Appendix A.

Our analysis of labor market outcomes around parenthood requires precise measurement of the timing of fertility. Our main source of data is the Census Household Composition Key (CHCK), which is constructed from Social Security Administration and federal address records and connects the near-universe of children born from 1997-2022 to their parents. The CHCK provides a high-quality measure of child-bearing that closely tracks Vital Statistics data and links over 90 percent of children to at least one parent (Genadek et al., 2022). One limitation of the CHCK is that we cannot observe children born prior to 1997. To ensure we are capturing first births, we link our sample of parents to the 2000 full-count Decennial Census and drop parents who have a child in the household born prior to 1997.

We link this sample of parents at the individual level to their labor-market outcomes using the 1997-2019 Longitudinal Employer-Household Dynamics (LEHD) files, which are based on administrative unemployment insurance records and provide longitudinal information on employment and earnings. Critically, the LEHD includes a firm identifier, allowing us to follow workers across firms and observe their employers' industry. The LEHD provides very broad coverage of the U.S. labor force, covering 95 percent of employment (Graham et al., 2022). We collapse the LEHD data to the worker-year level and define the primary employer of worker i in year t as the firm in which they have the highest earnings in that year. The limitations of the LEHD are that our sample covers 25 states, and it provides no information on occupation, hours worked, or benefits such as health insurance. To study workplace amenities, we link parents in our sample to the ACS, described in detail below.

We make five sample restrictions motivated by our interest in studying how career trajectories change after the birth of children. First, we restrict our sample to parents aged 23-45 at first birth. This restriction drops parents who have children as teenagers and those with minimal work histories, and reflects our focus on parents with some labor market attachment

prior to having children.[5] Second, to ensure we can follow parents' employment for at least a decade, we restrict the sample to parents whose first child is born between 2001 and 2010. Third, we use a linkage to the Social Security Numident file to require that the first child is born in one of our LEHD states. This restriction drops parents who may be misclassified as non-employed because they work at a firm located outside our 25-state sample. Fourth, we restrict our sample to workers with a degree of labor market attachment prior to parenthood, which we define as earning at least $3,500 (in 2012 dollars) in each of the four years prior to childbirth.[6] We make this restriction because our focus is on characterizing career paths conditional on working, and we wish to drop those who are still in school or are otherwise only loosely attached to the labor market. Finally, because we are interested in studying how careers change after childbirth, we limit our main analysis sample to individuals who have at least 1 year with $3,500 of earnings in the 11 years after parenthood. This final restriction ensures we track career outcomes of a relatively consistent sample over time, although we show below that it has negligible impacts on the composition of our sample.

We report summary statistics for our final sample, which includes 2.2 million mothers and 2.5 million fathers, in Appendix Table A1. Relative to all first-time parents, the restrictions on age at birth and pre-childbirth employment results in a sample that is slightly older, has more education, and is less likely to be Black or Hispanic. Restricting to parents who work at least once after childbirth drops those who permanently exit the labor market. Table A1 shows that this restriction has a nearly indistinguishable impact on our sample. We discuss and empirically study the potential role of selection below, and we show that selection is not driving our main empirical findings.

2.1   Measuring firm quality

Our effort to characterize parents' career paths requires measuring firm quality. Our main strategy adopts an estimate of the firm-specific earnings premium, following the literature examining firm effects and their implications for earnings inequality. We use the full LEHD sample from 1997 to 2019. Following Card et al. (2013) and Sorkin (2018), we restrict this sample to all individuals age 18-61 in years with a non-negligible amount of annual earnings

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[5]During our sample period, 71 percent of American mothers have their first child between ages 23-45 (Ruggles et al., 2024).

[6]The threshold of $3,500 is chosen to eliminate workers with negligible links to their primary employer, following Card et al. (2013) and Sorkin (2018). This figure is approximately equivalent to the earnings from working 10 hours per week and 48 weeks per year at the federal minimum wage in effect during the midpoint of our sample period.

($3,500 in 2012 dollars).[7] To reduce the computational burden, we follow Bonhomme et al. (2023) and collapse our data to the job-spell level after residualizing the data by regressing log earnings on year dummies and a cubic in age, separately by state.

We estimate ψ_j using the following regression framework:

$$y_{ijt} = \alpha_i + \psi_{j(i,t)} + \epsilon_{ijt} \tag{1}$$

where y_{ijt} is the residual of log earnings for individual i at firm j in period t and α_i are individual fixed effects. The $\psi_{j(i,t)}$ represent the firm's contribution to differences in earnings.[8]

One noteworthy concern about these estimates of wage premia is that they may be measured with substantial error for firms that experience relatively few transitions, overestimating firms' contribution to earnings differences (Andrews et al., 2008; Kline et al., 2020). However, the bias due to limited mobility falls substantially as the length of the panel grows (Bonhomme et al., 2023), and we estimate firm effects using a 23-year panel, far longer than typical in this literature. Furthermore, while limited mobility leads to biased estimates of the share of the *variance* in earnings that can be explained by firms, our focus on the evolution of *mean* firm effects suggests it will primarily add noise, not bias, to our estimates.

2.2 Job amenities

Because the LEHD provides limited information on workplace amenities, we require an alternative data source to characterize the nature of the work performed by parents and the way it evolves after the arrival of children. We use nationally representative survey data from the American Community Survey (ACS) from 2003-2019, which we link at the individual level to our LEHD-CHCK sample. We limit our sample to parents with a first child born 2008-2014 while they were age 23-45.[9] We observe repeated cross-sections of cohorts defined by the date of first childbirth, both before and after they become parents. This linkage

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[7]We further restrict the sample to firms with at least 15 non-singleton person-years per LEHD year, where singleton person-years are defined as observations in which the individual is not observed in any subsequent year. We construct annualized earnings using the pattern of quarterly employment in the LEHD to inflate quarterly earnings to the amount an individual would have earned in a full year at the firm (Sorkin, 2017, 2018).

[8]Following the literature, we normalize our estimates of $\psi_{j(i,t)}$ so they are 0 on average for firms in the hotel and restaurant industry (e.g., Card et al., 2016). This choice is innocuous given our focus on the gender gap in firm effects. Our estimates of $\psi_{j(i,t)}$ are not sensitive to restricting the sample to only men, only women, or only non-parents, nor are they sensitive to estimating equation 1 at the person-year level, or state by state.

[9]This restriction is necessitated by the years available in the ACS, which does not yield large samples prior to 2005. The use of parents of children born 2008-2014 provides a balanced panel from 3 years prior to first birth until the child's 5th birthday.

allows us to build upon prior research that has used the ACS alone to study labor-market outcomes only after parenthood.

Since our focus is on the gender earnings gap conditional on employment, and to facilitate comparisons with our LEHD analysis, we restrict the ACS sample to working parents and to individuals we can link to an LEHD firm. Using the ACS, we study part-time work, fully remote work, and commuting time as measures of hours flexibility, and health insurance coverage as an important non-pecuniary benefit for new parents.[10] In addition, to capture an additional measure of workplace flexibility, we follow Goldin (2014) and Cortes and Pan (2019) by constructing an occupation-specific proxy for the wage returns to working long hours. Using a sample of full-time workers in the ACS, we regress log earnings on an interaction between usual hours worked and occupation categories. We interpret higher values of the occupation-specific coefficient on hours worked as evidence of convexity in the wage-hours profile, i.e., that workers in the occupation are rewarded for long hours. We link this measure to our ACS sample at the occupation level.

Lastly, we use the ACS-LEHD linkage to characterize workers by whether they move to higher- or lower-paying firms after parenthood.[11] This allows us to provide new descriptive evidence on the extent to which parents trade off lower-paying firms for greater non-pecuniary amenities.

3   Career progressions around parenthood

We begin our analysis by using our linked employer-employee data to study the career progressions of women and men in the years surrounding parenthood. We focus on two outcomes. First, to document movement *within* firms, we construct a measure of each parent's position in their employer's earnings distribution by calculating the difference between their log earnings and that of their average co-worker. Second, to study movement *across* firms, we use the firm earnings premium of their primary employer. We then document parents' career trajectories by estimating the following event-study specification:

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[10]Our sample is restricted to years prior to the Covid-19 pandemic, and our remote measure captures only fully remote work, rather than hybrid working arrangements. Hence, we likely undercount remote work. Our measure of health insurance coverage includes any coverage and employer-sponsored coverage. In cases where individuals have employer-sponsored coverage, we do not observe which parent's employer provided the insurance. We therefore interpret our results as net of any changes to coverage from a spouse, parent, or other family member.

[11]Specifically, we calculate the average wage premium among the firms at which individual i worked in years $r \in [1,5]$ relative to the birth of their first child. We compare this to the wage premium of their highest-paying firm in year $r = -2$. We then assign parents to one of two groups depending on whether they moved to lower-paying firms or higher-paying (or equal) firms as parents.

$$y_{ijt} = \sum_{r=-5}^{11} \eta_r Mom_i \cdot D_r + \sum_{r=-5}^{11} \beta_r D_r + X_{it}\delta + \epsilon_{ijt} \qquad (2)$$

In specification 2, y_{ijt} is one of our measures of the worker i's position in year t in the distribution within or across firms j. The indicators D_r track the year relative to first birth r. The vector of controls, X_{it}, includes only a quadratic in age at first birth, since women tend to have their first child approximately 1.4 years earlier than men (as seen in Table A1) and we wish to hold fixed the point in mothers' and fathers' careers in which the first child arrives.[12] Departing from the specification of Kleven et al. (2019a), we intentionally do not adjust for contemporaneous age because our aim is to document parents' career trajectories over the lifecycle rather than netting out age profiles.[13] Our estimates of η_r and β_r can be interpreted straightforwardly as regression-adjusted means by year relative to first birth.

Our estimates for both outcomes are plotted together in Figure 1 to depict the evolution of parents' careers both within and across firms. Each point in the figure represents a parent-year average, where years are defined relative to the birth of a first child, and we indicate the year next to each point. Each point's position on the vertical axis corresponds to mothers' or fathers' earnings relative to the average among their co-workers, capturing workers' position on the job ladder within the firm. The position on the horizontal axis represents the average earnings premium among parents' employers, to capture sorting across firms.

The results show that the parental earnings gap predates parenthood itself: Five years prior to parenthood, men work at firms paying 7.7 log points more and are 11.1 log points higher on the job ladder, compared to women. But in the years leading up to parenthood, men and women advance in their careers in parallel, both transitioning to higher-paying firms and moving up the ladder within the firm. By the year prior to first birth, the gender gap has narrowed only slightly, with a 7.5-log-point gap across firms and a 9.9-log-point gap within the firm.

The arrival of the first child marks a sharp divergence in parents' career paths. Fathers continue to make career gains, moving up both within and across firms without apparent interruption. Mothers, on the other hand, experience an immediate and large drop in year 0 in their earnings position within the firm, and it takes seven years for them to return to their peak pre-parenthood position. Meanwhile, in those seven years, men increase their ranking

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[12]We subtract the sample mean age at first birth before estimating $\hat{\eta}_r$ and $\hat{\beta}_r$ so they can be interpreted as regression-adjusted means by event year r.

[13]We report estimates from the specification used in Kleven et al. (2019a), which estimates parental outcomes net of lifecycle effects, in Figure A4.

within the firm by over 10 log points.

Our key finding is that mothers transition to lower-paying firms after parenthood, a trend that begins immediately after childbirth and continues through the end of our sample period, 11 years later. By year 11, women have moved to firms paying approximately 4 log points less than their firms in the year of parenthood, representing about 50 percent of the baseline (year 0) gender difference—a large effect. Over the same period, men move to higher-paying firms, increasing their average firm premia by another 2 log points. By year 11, there is a 12.1-log-point gender gap in the firm earnings premium and a 26.4-log-point gender gap within firms. These findings show that parenthood is a sharp inflection point in women's career progressions within and across firms.

We emphasize that the yearly averages shown in Figure 1 are conditional on employment, meaning that the trends reflect both transitions to new jobs and selection into and out of the labor force. In Figure A1, we perform a simple decomposition of these two effects.[14] The transition effect shows the change in firm earnings premium from two years prior to childbirth ($r = -2$) and the current year, among those who remain in the labor force. The selection effect captures the share of the change due to differential exit from the labor force. While selection temporarily raises the overall average firm earnings premium for mothers, its influence disappears by year 2 as mothers re-enter the labor force at lower-paying firms. Mothers' overall trend toward lower-paying firms is driven by transitions to lower-paying firms rather than by differential exit from the labor force.

3.1 Firm downgrading across the distribution of pre-parenthood employers

Transitions to lower-paying firms are a key component in mothers' career trajectories after parenthood. It is not clear, however, whether this downgrading varies across the distribution of firms. Women at high-paying firms may have increased access to networks or skills that help them maintain roles at higher-paying firms (Caldwell and Harmon, 2019; Jarosch et al., 2021), or may have even postponed childbirth until establishing security in their careers (Wasserman, 2023). On the other hand, women who are previously employed at high-paying firms may be more likely to downgrade, moving away from inflexible or demanding jobs at

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[14]Specifically, let $\Delta y_r = \bar{y}_r - \bar{y}_{-2}$ denote the average change in firm wage premium between each relative year r and 2 years prior to first birth, $r = -2$. This change in firm wage premium can be decomposed as $\Delta y_r = \frac{1}{N_r}\sum_i E_{ir}(y_{ir} - y_{i,-2}) + \sum_i y_{i,-2}(\frac{E_{ir}}{N_r} - \frac{E_{i,-2}}{N_{-2}})$, where E_{ir} is an indicator for working in year r and N_r is the sum of E_{ir} across individuals i in relative year r. Our sample construction ensures everyone is working in year $r = -2$. The first term captures the "transition effect," the average change in firm wage premium among parents who are employed in year r and year -2. The second term captures a residual that is increasing in the extent of positive selection into the labor force in relative year r.

these high-paying firms towards more family-friendly positions (Goldin, 2014).

Figure 2a shows the largest downgrading occurs for mothers who were previously employed at the highest-paying firms. We average each individual's firm effects separately over the pre-parenthood years (years relative to first birth $r \in [-5, -1]$) and post-parenthood years ($r \in [1, 11]$) and plot the average change in earnings premium, after relative to before childbirth, by ventile of firm premium prior to childbirth.

We highlight two main takeaways from this figure. First, across the entire pre-parenthood distribution, mothers experience a larger decrease (or a smaller increase) in their firm earnings premium compared to fathers. While the downward slope for both mothers and fathers suggests some regression to the mean, the lack of a crossing point suggests that mothers are falling behind fathers—even holding pre-childbirth firm quality fixed—at every point in the distribution. Second, the gender gap in career progression across firms is largest for those previously working at the highest-paying firms. For parents working at the bottom of the firm distribution before children, fathers make modest gains relative to mothers—about 3 log points at the 25th percentile. However, fathers employed at top-quartile firms pre-parenthood experience limited downgrading, of about 2 log points, while mothers employed at similar firms downgrade by 7 or more log points.

We also show that attachment to the labor force is an important moderator of firm downgrading for mothers. Because the United States has no universal paid leave policy, there is a lot of variation in the amount of time women take off from work after childbirth, and some women may temporarily exit the labor force after the birth of their child. In our sample of working mothers, 1.8 million (83 percent) have no interruption in their earnings history, 221,000 mothers (10 percent) have between 1 and 3 quarters without earnings after the birth of their first child, and 156,000 (7 percent) have at least one year of non-employment.[15]

Figure 2b plots firm downgrading across the distribution for fathers and for the three groups of mothers defined above.[16] Mothers who take zero quarters of leave transition to lower-paying firms, on average falling an extra 2-5 log points compared to fathers. But strikingly, longer periods of leave are associated with larger decreases in firm-specific pay: women taking 1-3 quarters of leave experience a drop of about 4 log points at the median in firm quality, while women taking 4+ quarters of leave experience a drop of about 10 log points at the median. In addition to these level differences, the *gradient* in firm downgrading

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[15]We note that these groups are likely capturing different lengths of separation from the labor force rather than job-protected maternity leave. Our data do not allow us to observe the length or incidence of job-protected or paid parental leave, since we do not observe hours and cannot disentangle earnings from paid leave benefits in the LEHD.

[16]Since taking extended parental leave remains relatively uncommon for men in the U.S., we do not construct the analogous figure for men.

varies substantially with the length of absence from the labor force. Among women in the highest ventile of firms before parenthood, the decline in employer wage premium is 15 log points for those with 1-3 quarters of leave but more than 40 log points for those with four or more quarters of leave. These results suggest that career interruptions play an important role in the parenthood gap, especially for workers at the highest-paying firms.

Figure 3 provides additional context by reporting the post-parenthood changes in 2-digit industry by gender.[17] Health care and education are the two most common industries prior to childbirth and a frequent destination for mothers after childbirth. In contrast, mothers move in large numbers out of finance and insurance; retail trade; professional, scientific, and technical; accommodation and food service; and information. On the other hand, fathers' movements are much more limited, with substantial declines in retail trade, substantial increases in education and public administration, and relatively small shifts elsewhere.

These industry changes are noteworthy for two reasons. First, while working fathers are more likely than working mothers to change employers (see Figure A2), Figure 3 suggests their job changes are less likely to cross industries. To the extent that industry-specific human capital is an important driver of current and future earnings, this result suggests that firm transitions for fathers are more likely to represent advancement up the job ladder rather than costly career shifts (Neal, 1995). Second, an inspection of the pattern across industries reveals that mothers are much more likely to move in the direction of *lower-paying* industries such as education and health care, reinforcing the finding from Figure 1 that women move toward less lucrative employers after childbirth.[18] Finally, Figure A3 shows that these cross-industry changes are driven by women who take an extended absence from employment.

Overall, these results show that longer leave durations are strongly associated with transitions to lower-paying firms, and this pattern is more pronounced for women previously employed at high-paying firms. These results are consistent with women losing ties to high-paying firms leading to the loss of firm-specific and industry-specific human capital, and may also reflect working conditions at high-paying firms being incompatible with the demands of family.

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[17]For parsimony, the figure presents industry changes for the 9 two-digit industries that are most common among women in our sample prior to childbirth.

[18]Card et al. (2024) estimate industry-level wage premia using firm-level premia as a building block. They find substantial variation in the premium across industries. The highest-premium industries include finance and insurance, information, and professional, scientific, and technical. The lowest-paying industries include accommodation and food services, retail trade, education, and health care.

3.2 Are women transitioning to firms with greater amenities?

Our results provide new evidence that mothers move to lower-paying firms after the birth of a child. An open question is whether the loss in pecuniary returns are offset by greater family-friendly job amenities. Because our linked LEHD-CHCK data provide little information on working conditions, we turn next to our linkage to the ACS, which has individual-level survey responses related to job attributes.

We divide our sample into two groups: those who remain at the same firm or upgrade to a higher-paying firm in the post-parenthood period (averaged over the 5 years immediately following childbirth) relative to the pre-parenthood period (measured 2 years prior to birth), and those who downgrade firms. The goal of splitting the sample in this way is to characterize the extent to which firm downgrading for parents is associated with increased access to family friendly amenities.

We estimate the following regression, which captures differences between mothers and fathers in the years before and after parenthood, allowing for separate trends for mothers who transition to higher-paying firms and mothers who transition to lower-paying firms:

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y_{it} = \gamma_t + \sum_{r \neq -2} \eta_r^U Mom_i \cdot Up_i \cdot D_r + \sum_{r \neq -2} \eta_r^D Mom_i \cdot Down_i \cdot D_r + \sum_r \beta_r D_r + X_{it}\delta + \epsilon_{it},
$$
(3)

where Up_i is an indicator for person i working at higher-paying (or the same) firms after the birth of their first child; similarly, $Down_i = 1 - Up_i$ is an indicator for person i moving to lower-paying firms. Year relative to first birth is indexed by r.

We interpret the coefficients η_r^U and η_r^D as descriptive evidence of the evolution of job amenity y_{it} for mothers who move up or down the firm distribution, respectively, after childbirth. To improve precision in our smaller samples, and because we observe similar trends in pre-childbirth outcomes in our earlier LEHD analysis, we estimate these trends relative to overall trends for fathers around their first children's birth. In other words, they represent changes in the *gap* between mothers and fathers. To the extent that firm downgrading among mothers is driven by demand for work that is more flexible or otherwise amenable to family considerations, we would expect to find differences between η_r^U and η_r^D.

Our results are shown in Figure 4. Panel (a) shows that while both groups of mothers fall behind fathers in the share working full-time, the drop is 10-12 percentage points for mothers who move to higher-paying firms compared with 18-20 percentage points—nearly twice as large—for mothers who move to lower-paying firms. Panel (b) shows that all mothers shift toward jobs with shorter commutes compared to fathers, suggesting an increased demand

13

for working close to home. Women who join a lower-paying firm, though, have a larger decline in commute time, decreasing by 6 minutes over the time period, relative to a baseline ($r = -2$) average commute for working women of about 25 minutes. Panel (c) is also consistent with demand for flexibility, with mothers who downgrade firms more likely to move to remote work, although the gap in this outcome attenuates around the time of the child's kindergarten entry. It is worth noting that our data captures only *fully* remote work, rather than hybrid arrangements, and in a time period when remote work was quite rare. The magnitude of these effects is therefore quite large given the baseline share of about 1.2 percent working remotely.

Panel (d) considers our measure of occupational flexibility, the returns to working long and inflexible hours, constructed following Goldin (2014) and Cortes and Pan (2019). The results in panel (d) show that women who transition to lower-paying firms are also moving to occupations with lower returns to hours worked. This finding suggests that women are shifting to roles within the firm that are more substitutable, echoing the finding from Figure 1 of a flattened earnings profile within firms after parenthood.

In addition to workplace flexibility, parents' choice of job may be linked to demand for health insurance, which is especially important in the early years of a child's life (Wherry et al., 2018). We have two ACS-based measures of health insurance: an indicator for health insurance from any source, and an indicator of employer-sponsored coverage, which includes coverage through an individual's own employer or through the employer of a spouse or other family member.

Panels (e) and (f) of Figure 4 estimate changes in the mother-father gap in health insurance coverage. Before childbirth, working women are slightly more likely to have health coverage than working men: 2 years prior to the first birth, 93 percent of mothers and 92 percent of fathers have health insurance. The gap in employer-sponsored coverage is even smaller, with 87.8 percent of men and 88.4 percent of women utilizing an employer plan. Women gain coverage relative to men in the year prior to birth—a pattern likely driven by Medicaid coverage (Currie, 2004)—but this effect persists only for those who move to higher-paying firms. Among those who downgrade firms, coverage actually *falls* relative to men, with a gap in favor of fathers of 1-2 percentage points.

Panel (f) shows an even starker difference: both groups of women fall behind men in the share with an employer-sponsored plan. But this negative trend is far larger for women who move to lower-paying firms. We emphasize that the decrease in private insurance coverage we observe for mothers is *net* of any shifts onto the insurance plans of spouses. These estimates are therefore consistent with an overall downgrading of health coverage for all women, and an increase in non-coverage for mothers who move to lower-paying firms.

14

Taken together, these results suggest that women move to jobs that offer greater flexibility after parenthood, a pattern that is even more pronounced among women who transition to lower paying firms. This pattern of results is consistent with mothers seeking more family-friendly working conditions and transitioning to lower-paying firms that offer them. Nevertheless, the decline in health insurance among mothers—and the even larger decline in employer-sponsored coverage—provides suggestive evidence that there is a disparity between the amenities demanded by parents and those offered by employers.

3.3 The gender earnings gap and the role of firms

We conduct a final exercise to understand how much of the total gender earnings gap can be accounted for by firm downgrading. We document the gender earnings gap around parenthood using our LEHD-CHCK sample and an event study regression, where the dependent variable is log earnings and we control only for age at birth. We plot these event study estimates as the gray shaded region of Figure 5. To understand what proportion of this earnings gap can be accounted for by differences in firm pay premia, we overlay the gender gap in the average firm premia by gender, taken from Figure 1, as the darker shaded region of Figure 5.

Figure 5 shows that gender differences in firm premia are pronounced throughout the lifecycle, although its role in the overall gender gap varies substantially over time. The gray shaded region shows that prior to childbirth, the gender earnings gap among working women and men averages about 15 log points. The darker shaded region shows that 5 years prior to birth, women work at firms that pay about 8 log points less than men, a gap that comprises about 45 percent of the total gap in log earnings.

While firms' role in the gender earnings gap temporarily declines when a child is born, employers become increasingly consequential over the remainder of the mother's career. In the year of childbirth, the gender earnings gap expands to 32 log points and then remains steady over time. Firms explain only 23 percent of the total gap in the year of first birth—an unsurprisingly lower share compared to previous years, since much of the initial gender earnings gap is accounted for hours differences between men and women, rather than firm effects. But between-firm differences account for a steadily larger share over time, increasing from 23 percent to 34 percent, as women transition to lower-paying firms for over the decade following the birth of their first child.[19]

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[19]We present an alternative exercise in Figure A4, where we estimate an event study regression with demographic controls only (indicators for education and race categories), and then re-estimate the regression with firm controls only (the estimates of $\psi_{j(i,t)}$, 2-digit industry code, and log firm size). The main finding is that firms account for a greater share of the parental earnings gap than demographic characteristics.

4 Conclusion

This paper leverages newly linked administrative and survey datasets to study the dynamics of career paths around parenthood. We provide four new facts on the gender earnings gap: first, women begin transitioning to lower-paying firms after parenthood; second, the largest drops in firm premia are experienced by women working at the highest-paying firms, and particularly by women taking extended time away from work; third, many non-pecuniary benefits, consistent with flexible work, increase for women transitioning to lower-paying firms, with the key exception of employer-based health insurance; and fourth, transitions to lower-paying firms account for up to one-third of the overall gender gap after parenthood.

Taken together, our findings provide new evidence that firms play an important role in the persistence of the parental earnings gap. Consistent with the theory that today's generation is intent on pursuing both career and family (Goldin, 2021), a relatively small share of women in our sample leave the workforce after the birth of a first child. Mothers who drop out of the labor force see the largest relative declines in earnings and firm quality upon their return. However, parenthood marks the start of a career setback even for mothers with no labor-market interruptions, and especially for those at the highest-paying firms. Our results suggest a mismatch between the pay and non-pay amenities demanded by parents and those offered by U.S. employers, especially at the highest-paying firms (Lachowska et al., 2023). Such a mismatch may help explain the failure of policies such as paid leave, which offer flexible conditions only in the short term, to close the gender gap among parents in the United States (Bailey et al., 2025). Furthermore, the transitions to firms that offer lower pay and less health insurance coverage may have additional consequences for family health (Wherry et al., 2018; Miller et al., 2021). The potential for a disparity between the pay and amenity packages offered by firms and those demanded by working parents is an important avenue for future work, with implications for the gender earnings gap and overall family well-being.

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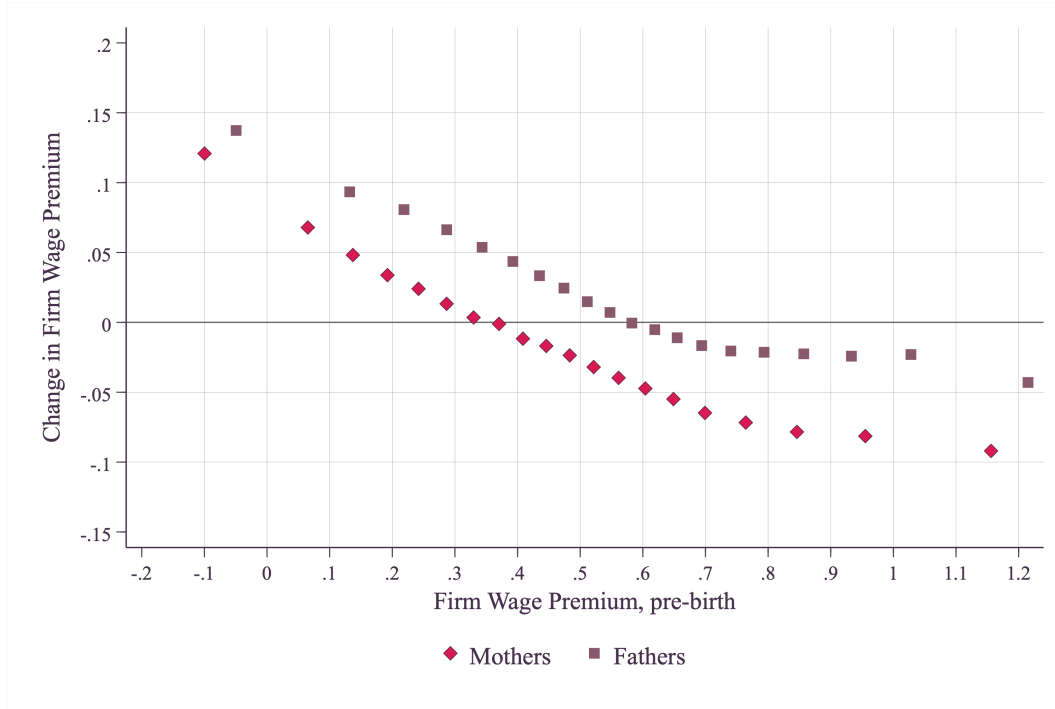
5   Figures

Figure 1: Changes in parents' employment within and between firms
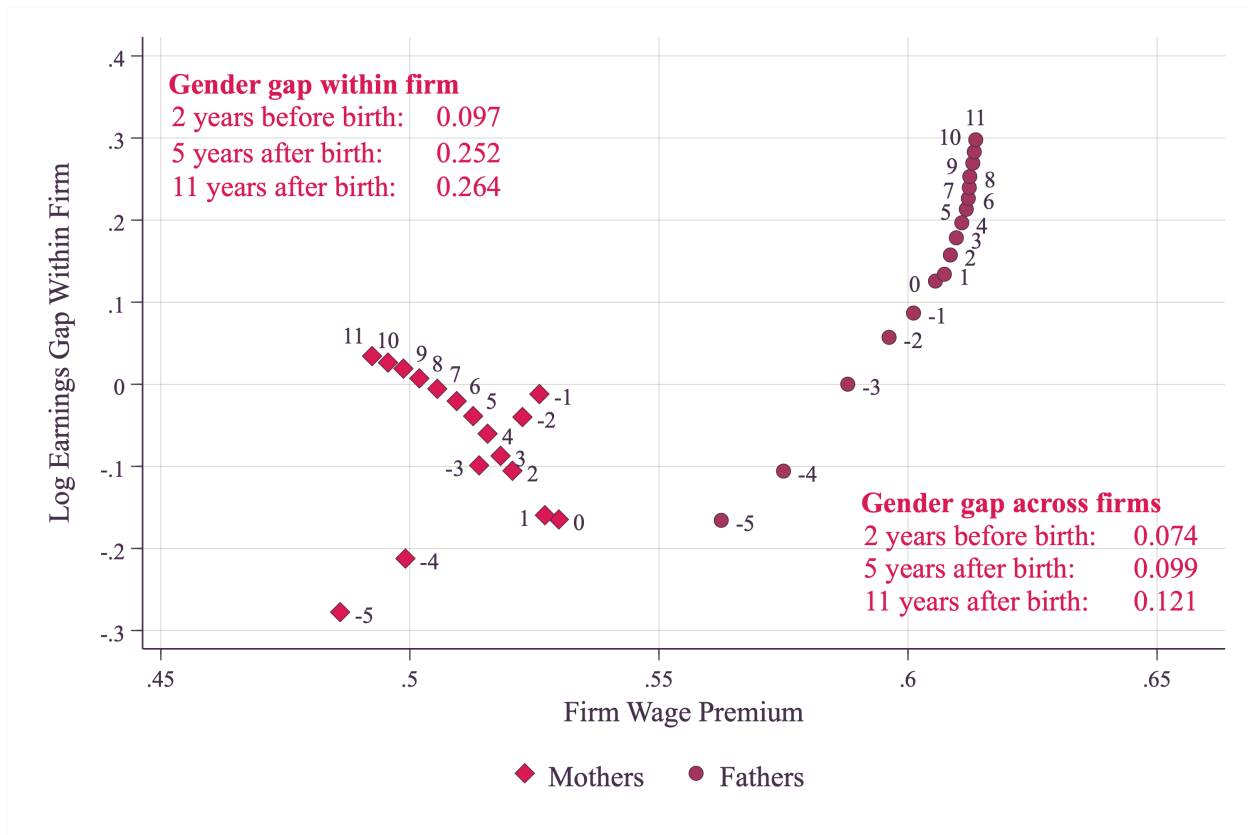
Notes: The figure above plots, on the x-axis, the average firm quality $(\psi_{(j(i,t))})$ for mothers and fathers in each year relative to having their first child, with years indicated next to the markers. The figure also plots, on the y-axis, the log difference between parents' earnings and the average earnings among their coworkers, in each year relative to having their first child. Means are regression-adjusted for differences in age at first birth. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure 2: Changes in firm quality across the distribution

(a) Changes in firm quality for mothers and fathers, before and after birth of first child

(b) Changes in firm quality for mothers, by duration out of labor force
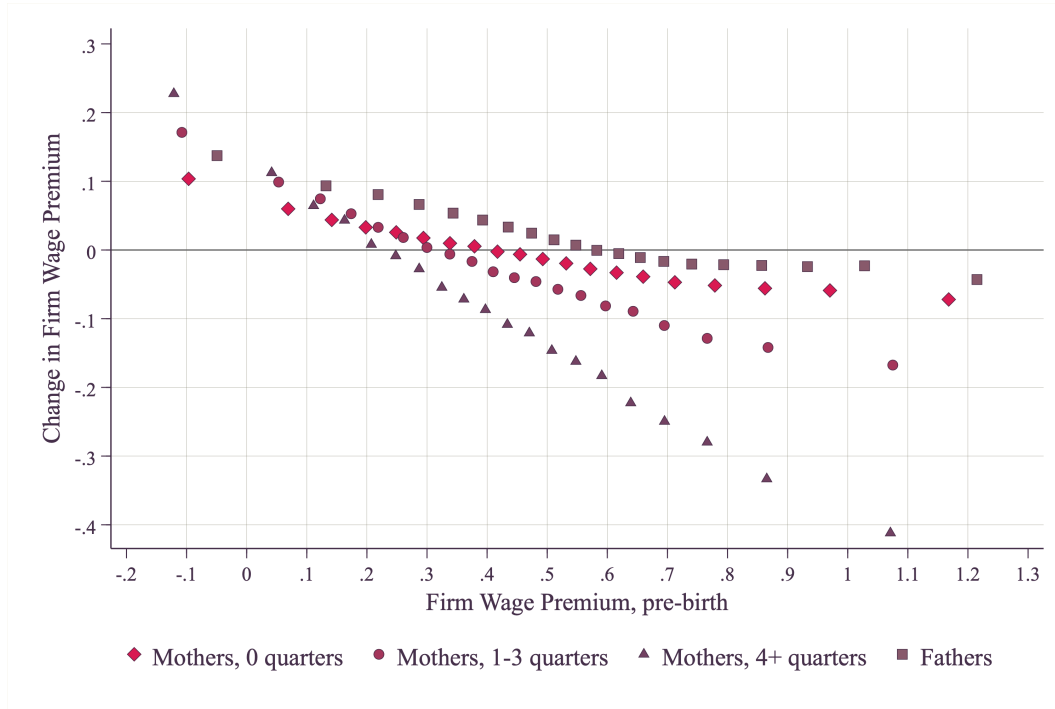
Notes: The figure plots the average change in firm quality $(\bar{\psi}_{j(i),t\geq b} - \bar{\psi}_{j(i),t<b})$ by firm quality prior to childbirth for our sample of mothers and fathers in the 2010 Census linked to the LEHD. Average pre-childbirth firm quality $\bar{\psi}_{j(i),t<b}$ is averaged over the 5 years prior to birth, and average post-childbirth firm quality $\bar{\psi}_{j(i),t\geq b}$ is averaged over the 11 years after birth. For Figure 2b, Each set of markers plots the figure for populations of mothers defined by the number of calendar quarters of leave taken from the workforce after childbirth. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure 3: Change in industry composition among working parents, before and after childbirth
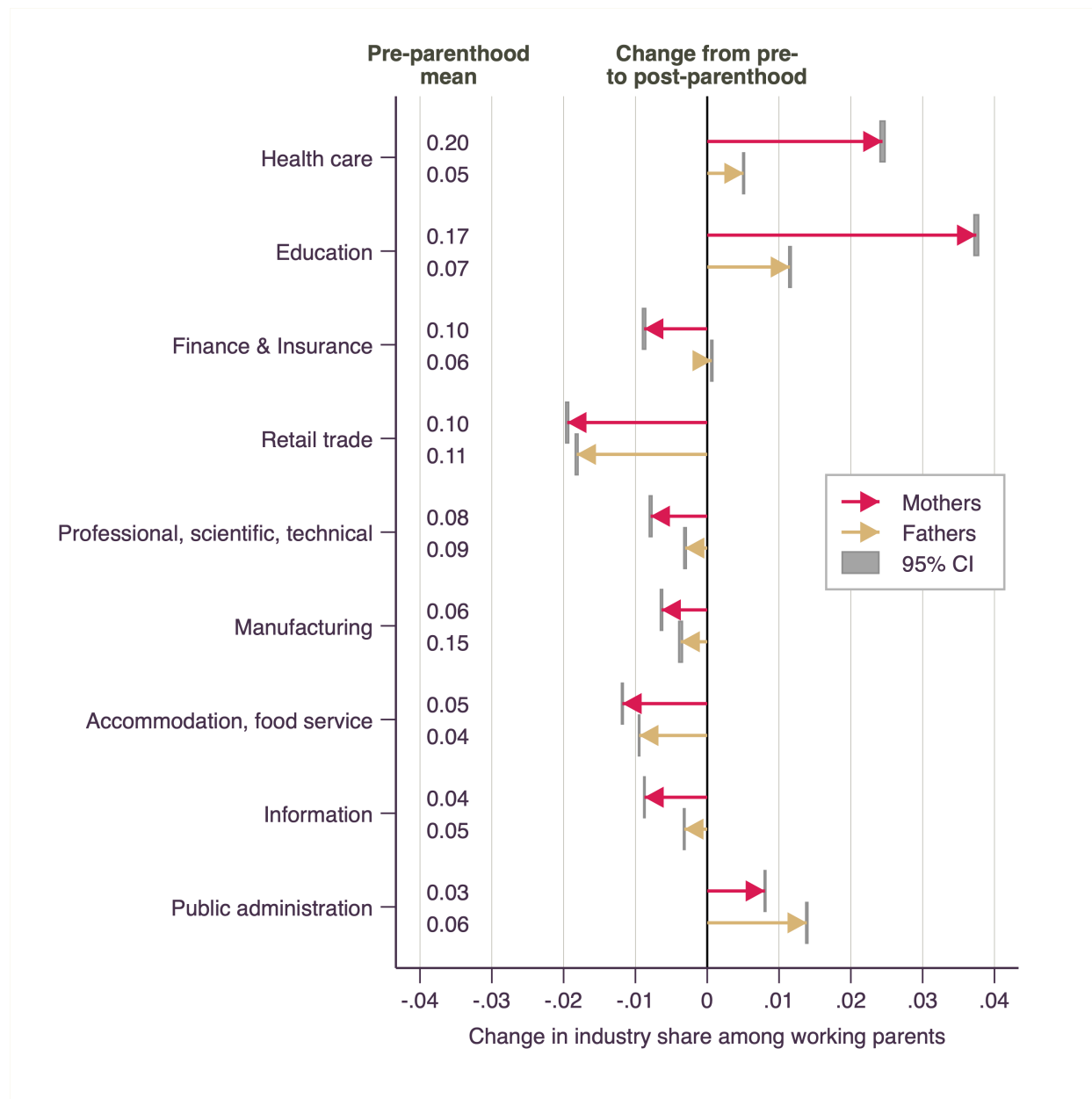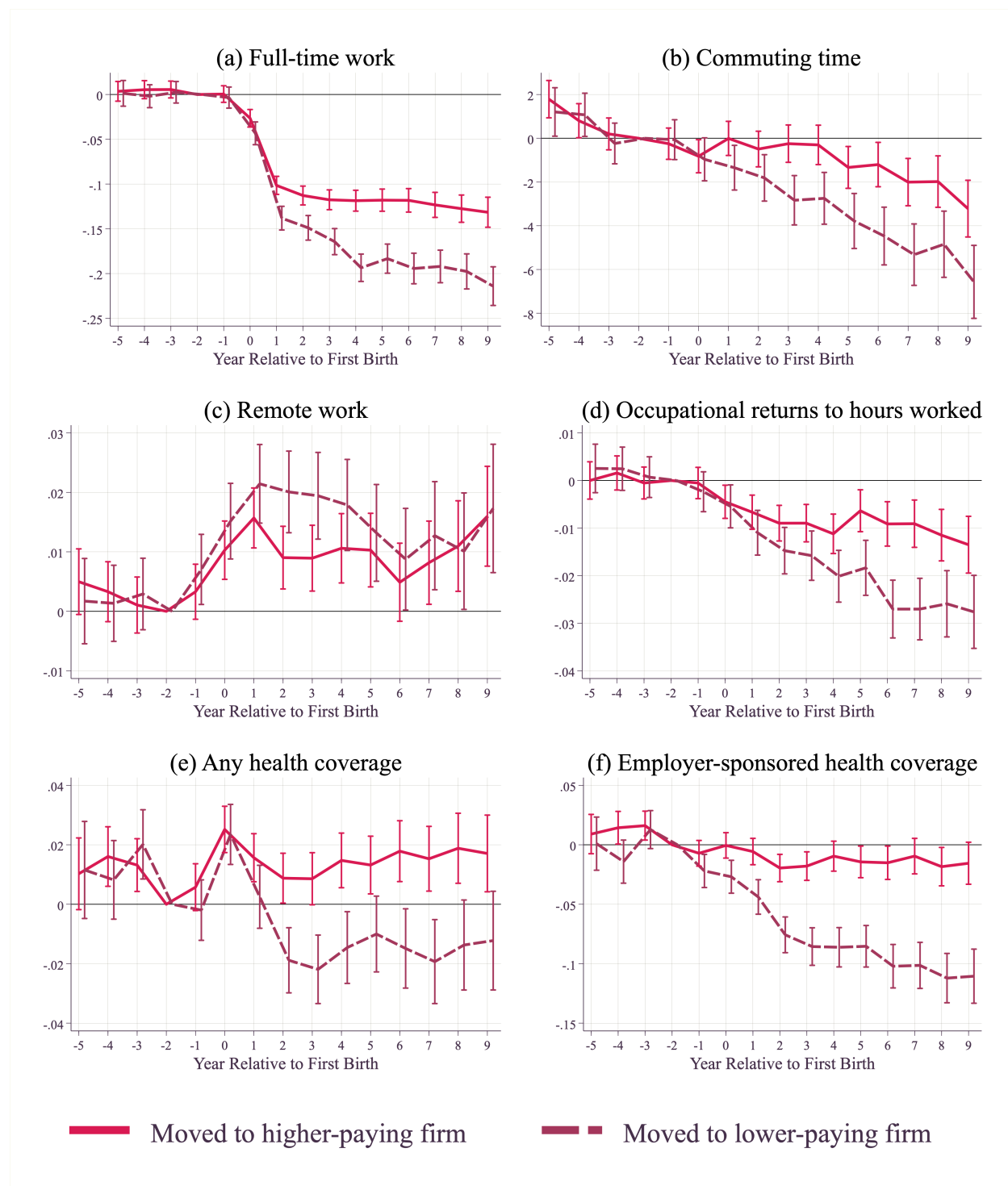
Figure plots the change in share of working parents in each two-digit NAICS industry prior to childbirth (length and direction of arrow). Pre-parenthood shares for both mothers and fathers are listed on the left of the plot, corresponding with each arrow. Industry categories are arranged in order of pre-childbirth share of working mothers; industries with lowest pre-childbirth shares are omitted. Gray bars show width of 95% confidence interval. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure 4: Mother-father gap in job characteristics, by type of job transition after childbirth

(a) Full-time work

(b) Commuting time

(c) Remote work

(d) Occupational returns to hours worked

(e) Any health coverage

(f) Employer-sponsored health coverage

Moved to higher-paying firm   Moved to lower-paying firm

Notes: The figure above plots event-study estimates of the gap in each outcome for mothers relative to fathers, separately by mothers who moved to higher-paying and lower-paying firms after childbirth. Sample includes parents in the 2003-2019 American Community Survey linked to fertility from the Census Household Composition Key files, and who we can link to a firm in the LEHD that is large enough to estimate a wage premium. Sample is limited to parents who were age 23-45 at first birth, and whose first child was born 2008-2014. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure 5: Evolution of the gender earnings gap after parenthood
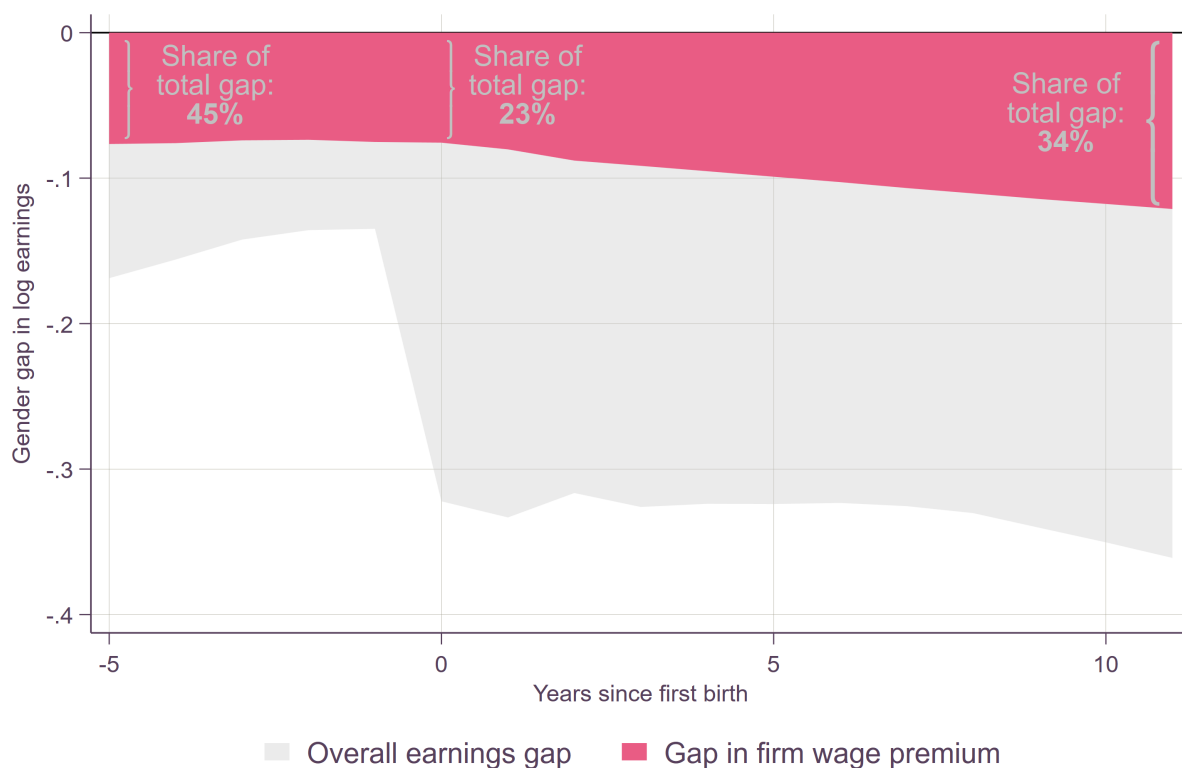
Notes: The figure above plots the regression-adjusted gender earnings gap in log earnings and firm earnings premium by year relative to birth of first child. Log earnings and estimated firm earnings premia are regression-adjusted for gender differences in age at first birth. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Online Appendix

A Data and Measurement

This section provides additional detail on our data sources and sample criteria. Our analysis requires three key elements: (1) the timing of an individual's first birth, (2) an individual's earnings and firm history over time, and (3) measures of job amenities. To measure each of these pieces, we build linkages across several datasets, including the 2000 decennial Census, the Census Household Composition Key files, the Longitudinal Employer Household Dynamics file, and the American Community Survey. We describe each data source, our linkages, and related measurement below.

A.1 Measuring first births

We measure the year of first birth for the near-universe of parents in the United States using the Census Household Composition Key (CHCK) files. These data are constructed using administrative data from the Social Security Administration and federal address records, and they link parents to children born 1997-2022.[20] We use the CHCK to measure the date of the first child's birth for mothers and fathers. Because the CHCK provides no information on children born prior to 1997, this procedure risks mischaracterizing birth parity for some children, and therefore the date of the first child's birth for some parents. To minimize misclassification error, we link parents in the CHCK to their fertility histories constructed from household rosters in the full-count 2000 Census. We drop parents who do not have a unique record in the 2000 Census, or who have a child in the Census born prior to 1997. Finally, we link the children and parents from our sample to the Social Security Numident file, which provides the most precise available measure of the timing and location of birth (Taylor et al., 2016).

We link fertility records from the CHCK to the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) files from 1997-2019. The linkage is performed at the individual level. These data, which are based on unemployment insurance records, provide quarterly information on UI-covered employment and earnings at each covered employer. We collapse the data to the annual level, assigning the highest-paying employer for each person-year as the primary firm. Our LEHD sample provides coverage for 25 states; for people employed in other states, we observe an indicator that they are employed outside our LEHD sample, but we cannot see their earnings nor the state in which they are employed. Other than this limitation, the LEHD provide very broad coverage of the U.S. labor force. The Census Bureau reports that the LEHD covers 95 percent of U.S. employment (Graham et al., 2022).[21]

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[20]The CHCK's error rate due to non-residence is arguably lower than Census household rosters because it requires only that children and their parents co-reside at some point in the child's lifetime, rather than at the time the Census is collected. However, the CHCK is more limited in some dimensions because it requires that children be assigned a Protected Identification Key (PIK) by the Census Bureau, and it limits covered children to those born in 1997 or later. Analysis of the CHCK by suggests that the dataset successfully links more than 90% of children with PIKs to their mothers, and for most cohorts, more than 75% are linked to both parents (Genadek et al., 2022).

[21]The 25 states in our sample are AZ, CA, CO, CT, DE, ID, MA, MD, ME, ND, NJ, NM, NV, NY, OH,

We make several restrictions motivated by our interest in studying the long-run career trajectories of parents. First, to focus on a population that has plausibly established a career prior to parenthood, we limit our sample to parents who were age 23-45 when their first child was born.[22] Second, to ensure we can follow parents for an extended period after childbirth, our main sample is limited to parents whose first child was born between 2001-2010. Third, we limit our sample to the parents of children born in one of our 25 LEHD states. Fourth, because we are interested in studying parents with established careers prior to childbirth, we restrict the sample to mothers and fathers who earned at least $3,500 (2012 dollars) in each of the four years prior to the year of childbirth. Finally, because we are interested in following the post-childbirth career trajectory, we drop parents who are never observed working after childbirth. The final restriction mechanically eliminates parents who drop out of the labor force permanently after childbirth, but it is necessary due to our interest in studying the career trajectories of working parents because it ensures that we follow a relatively consistent population of mothers and fathers both before and after childbirth. Furthermore, we show below that it has little effect on the composition of our sample and that our main results are not driven by selection.

Appendix Table A1 reports summary statistics for our main sample of working mothers and fathers and a comparison to the full population of U.S. mothers. For context, column 1 reports the race, ethnicity, educational attainment, and age at birth for all mothers in the public-use 2001-2011 American Community Survey, limited to mothers who report having a child in the previous year and have no children older than 1 in the household. These mothers are 26.2 years old on average. About 62 percent are white non-Hispanic, 12 percent Black non-Hispanic, and 17 percent Hispanic. Fewer than 9 out of 10 have finished high school and only about one-third have a four-year college degree. Columns 2 and 3 show the impact of our sample restrictions designed to focus on career-oriented mothers. First, in column 2, we limit the ACS sample to mothers who live in one of our 25 LEHD states and gave birth between age 23-45. With these restrictions alone, average age at birth rises mechanically to 29.5, while educational attainment rises substantially and the share Black falls. In column 3, we limit the sample further to mothers who worked in the previous year and have at least 4 years of potential labor market experience—the best approximation possible of our restriction in the LEHD to mothers with four years of continuous employment pre-childbirth. In this subsample, mothers are 30 on average at first birth, 68 percent are white non-Hispanic, and very high shares have high school or college degrees.

With the estimates in column 3 as a benchmark, we next report estimates for our LEHD-CHCK sample. Columns 4 and 5 report demographic characteristics of a sample of parents who meet our age and pre-childbirth labor-force attachment criteria. Given our focus on a career-oriented sample of parents, the average age at birth is naturally older than the broader population: 30.5 for mothers and 31.9 for fathers. However, their demographic

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OK, OR, PA, SD, TN, TX, UT, VA, WA, and WI. These states comprise 62% of the U.S. workforce (Ruggles et al., 2024).

[22]Because the CHCK provides no information on children born prior to 1997, we may mischaracterize birth parity for some children. To minimize misclassification error, we link parents in the CHCK to their fertility histories constructed from household rosters in the full-count 2000 Census. We drop parents who do not have a unique record in the 2000 Census, or who have a child in the Census born prior to 1997.

and educational characteristics are broadly similar to those from the public-use ACS. This provides assurance that our LEHD-CHCK sample is representative of the population of U.S. women who pursue a career prior to childbirth. Finally, columns 6 and 7 report summary statistics for our main analysis sample, which satisfies the additional criteria of working at least one year after childbirth. A comparison to columns 5 and 6 show that this restriction has very little impact, as the vast majority of parents with careers prior to childbirth also work at some point after childbirth.

Table A2 reports additional summary statistics for our LEHD-CHCK and ACS samples. Two years prior to their first child's birth, mothers in our sample have 2.8 years of tenure on the job and earn about \$40,000 (in 2019 dollars). Fathers have slightly longer tenures and earn about 20 percent more, or \$49,000.

Panel B of Appendix Table A2 reports summary statistics from our linkage to the ACS. Marital status is very similar for mothers and fathers in our sample. Relative to mothers, fathers have slightly higher job tenure and enjoy higher earnings, even before childbirth. Their commutes are 2 minutes longer and they are substantially more likely to work full-time than mothers. Finally, health insurance coverage is comparable by gender, with slightly higher shares of mothers having any coverage (92.7 versus 91.5 percent) but negligible differences in the share with employer-sponsored plans.

B Alternative method of quantifying the firm's contribution to the parenthood gap

This section presents an alternative method of quantifying the role of the firm in mothers' earnins losses after childbirth. We first present evidence on the gender earnings gap around parenthood, using our LELHD-CHCK sample and an event study design similar to Kleven et al. (2019a) and based on the regression

$$y_{ibt} = \gamma_t + \sum_{r \neq -2} \beta_r \mathbb{1}\{t - b = r\} + X_{ibt}\delta + \epsilon_{ibt}, \tag{4}$$

where β_r captures changes in outcome y_{ibt} in year t for a parent i whose first child was born in year b. Except where noted, X_{ibt} includes dummies for the age of the parent in years, so that the estimates from this specification are interpreted as changes in career outcomes net of the lifecycle pattern of earnings. We report estimates of β_r from 5 years prior to 11 years after the first child's birth, and we omit the event time dummy $r = -2$ so that our event time estimates are interpreted relative to the outcome two years prior to childbirth.[23]

Figure A4a presents estimates of equation 4 with earnings as the dependent variable. Using our linked employer-employee data, we confirm what Kleven (2022) finds using repeated cross-sections of the ACS: relative to 2 years prior to childbirth, mothers' earnings fall by

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[23]To facilitate comparisons with Kleven et al. (2019a) and Kleven (2022), we rescale our estimates by average predicted earnings net of the influence of β_r. Specifically, after estimating equation 4, we predict earnings $\hat{y}_{it}$ using the estimated coefficients except for β_r, which we restrict to be 0 for all r. We then report $\hat{\theta}_r = \hat{\beta}_r / \hat{E}[\hat{y}_{it}|r]$. The reported estimates can therefore be interpreted as percentage changes in earnings relative to 2 years prior to childbirth.

nearly 30 percent in the year of their first children's birth.[24] The effect grows over time, reaching 40 percent around the child's third birthday and persisting for at least 11 years.

Much of the decrease in mothers' earnings can be accounted for by non-participation, as can be seen in the dashed line in Figure A4a, which presents estimates of the same regression for the subsample of person-years with positive earnings. Among this sample, the earnings gap is cut by about half. Our focus in this paper is on this gender earnings gap conditional on employment (the "conditional earnings gap," henceforth), which is approximately 20-30 percent of pre-child earnings.

Of this conditional earnings gap, we aim to understand what proportion can be accounted for by characteristics of the firms at which mothers work. As a benchmark, we re-estimate equation 4 with additional controls commonly thought to play a significant role in accounting for differences in earnings (Mincer, 1974; Lemieux, 2006): indicators for education categories (high school dropout, high school graduate, some college education, college graduate), indicators for race categories (white, Black, American Indian or Alaskan Native, Asian, Native Hawaiian or Pacific Islander, and two or more race groups), and an indicator for Hispanic ethnicity.

Figure A4b shows that these demographic controls can explain a relatively sizable share of the conditional earnings gap. The solid line in Figure A4b quantifies the share of the overall earnings gap that is accounted for by these demographic controls in every year relative to the first childbirth. Specifically, we calculate the share of the conditional earnings gap (i.e., $\hat{\beta}_r$ from equation 4 with the sample of working mothers, as shown by the dashed line in Figure A4a) that is left after including the controls. We find that demographics can account for 10-15 percent of the decrease in earnings relative to 2 years prior to birth.

The solid line in Figure A4b quantifies the share of the overall earnings gap that is accounted for by these demographic controls in every year relative to the first childbirth. Specifically, we calculate the share of the conditional earnings gap (i.e., $\hat{\beta}_r$ from equation 4 with the sample of working mothers, as shown by the dashed line in Figure A4a) that is left after including the controls. We find that demographics can account for 10-15 percent of the decrease in earnings relative to 2 years prior to birth.

We next show that relative to demographics, characteristics of the firm play a larger role in explaining the decline in mothers' earnings after childbirth. First, we remove the demographic controls and instead include controls for characteristics of the firm that employed mothers two years *before* childbirth: the firm-specific earnings premium for the primary firm in year $r = -2$ (i.e., $\hat{\psi}_{j(i,b-2)}$ from equation 1), indicators for two-digit industry, and the log of the number of employees at the firm. We find that these controls account for 6 percentage points or about 20 percent of the conditional earnings gap — more than the demographics — and that this effect persists through 11 years post-childbirth (dashed line). If we instead control for the same characteristics, but measured for the person's *current* employer, the gap

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[24]Kleven (2022) focuses on the difference between the changes in mothers' labor-market outcome and fathers' labor-market outcomes, calculating a 33-36% post-childbirth gender gap in earnings using public-use data from the ACS, Current Population Survey, Panel Study of Income Dynamics, and National Longitudinal Study of Youth. His sample is slightly older and covers an earlier time frame, but his estimated effects on mothers' earnings are nevertheless strikingly similar to ours. He finds a decrease in mothers' earnings of about 25% in the year of birth and 40% a decade later—only slightly smaller than our estimates of 28% and 47%, respectively.

is reduced by 8 percentage points or 20-25 percent (dotted line). The key takeaway from this exercise is that firms account for a significant share of the parental earnings gap—more than demographic characteristics.

Appendix Figures and Tables

Table A1: Demographic characteristics

	Public-use ACS			LEHD-CHCK		Analysis sample	
	(1) All mothers	(2) Mothers, age 23-45	(3) Working mothers	(4) Mothers, age 23-45	(5) Fathers, age 23-45	(6) Working mothers	(7) Working fathers
Age at first birth	26.2	29.5	30.0	30.5	31.9	30.5	31.9
	(6.00)	(4.62)	(4.53)	(4.67)	(5.17)	(4.68)	(5.17)
Hispanic	0.171	0.168	0.144	0.132	0.149	0.136	0.150
	(0.38)	(0.37)	(0.35)	(0.34)	(0.36)	(0.34)	(0.36)
White non-Hispanic	0.624	0.639	0.681	0.724	0.701	0.714	0.700
	(0.48)	(0.48)	(0.47)	(0.45)	(0.46)	(0.45)	(0.46)
Black non-Hispanic	0.118	0.072	0.072	0.066	0.065	0.070	0.065
	(0.32)	(0.26)	(0.26)	(0.25)	(0.25)	(0.26)	(0.25)
High school graduate	0.857	0.932	0.955	0.934	0.905	0.934	0.905
	(0.35)	(0.25)	(0.21)	(0.25)	(0.29)	(0.25)	(0.29)
College graduate	0.329	0.484	0.495	0.435	0.363	0.435	0.363
	(0.47)	(0.50)	(0.50)	(0.50)	(0.48)	(0.50)	(0.48)
Observations	120,473	52,481	39,213	2,588,000	2,402,000	2,166,000	2,523,000

Notes: Columns 1-3 display means and standard deviations from a sample of women in the public-use 2001-2011 ACS who gave birth in the previous year and whose oldest child in the household is no more than 1. Column 2 additionally restricts to mothers age 23-45 in one of our 25 LEHD states, and column 3 restricts to mothers who worked in the previous year and have at least 4 years of potential experience. Columns 4-5 report means and standard deviations, measured 2 years prior to first birth, from an LEHD-CHCK sample of all mothers and fathers whose first child was born in one of our LEHD states between 2001-2010 at age 23-45, and who had 4 years of work history prior to parenthood. Columns 6-7 report means and standard deviations for our main analysis sample of working parents, who additionally meet the criteria of working in at least one year after childbirth. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831, CBDRB-FY25-P2593-R12027)

Table A2: Summary statistics

	LEHD-CHCK		Analysis sample	
	(1) Mothers, age 23-45	(2) Fathers, age 23-45	(3) Working mothers	(4) Working fathers
Panel A: LEHD outcomes				
Job tenure (years)	2.84	2.96	2.86	2.96
	(1.47)	(1.49)	(1.47)	(1.49)
Log of total earnings	10.6	10.8	10.6	10.8
	(0.673)	(0.712)	(0.668)	(0.708)
Observations	2,402,000	2,588,000	2,166,000	2,523,000
Panel B: ACS outcomes				
Married	0.550	0.555	0.544	0.554
	(0.498)	(0.497)	(0.498)	(0.497)
Commuting time	25.4	27.3	25.4	27.2
	(19.7)	(23.1)	(19.6)	(22.9)
Usual hours worked per week	40.5	43.9	40.6	43.8
	(8.7)	(9.4)	(8.7)	(9.4)
Full-time worker	0.876	0.942	0.880	0.943
	(0.330)	(0.233)	(0.325)	(0.232)
Remote worker	0.010	0.013	0.010	0.013
	(0.098)	(0.113)	(0.099)	(0.112)
Any health insurance	0.924	0.914	0.927	0.915
	(0.265)	(0.280)	(0.260)	(0.278)
Employer-sponsored health insurance	0.877	0.876	0.884	0.878
	(0.329)	(0.330)	(0.320)	(0.327)
Observations	250,000	278,000	220,000	254,000

Notes: Columns 1-2 of panel A display means and standard deviations, measured 2 years prior to first birth, from our LEHD-CHCK sample of all mothers and fathers whose first child was born in one of our LEHD states between 2001-2010 at age 23-45, and who had 4 years of work history prior to parenthood. Columns 3-4 report means and standard deviations for our main analysis sample of working parents, who additionally meet the criteria of working in at least one year after childbirth. Panel B reports outcomes from the subset of parent-years that appear in the 2003-2019 ACS. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831, CBDRB-FY25-P2593-R12027)

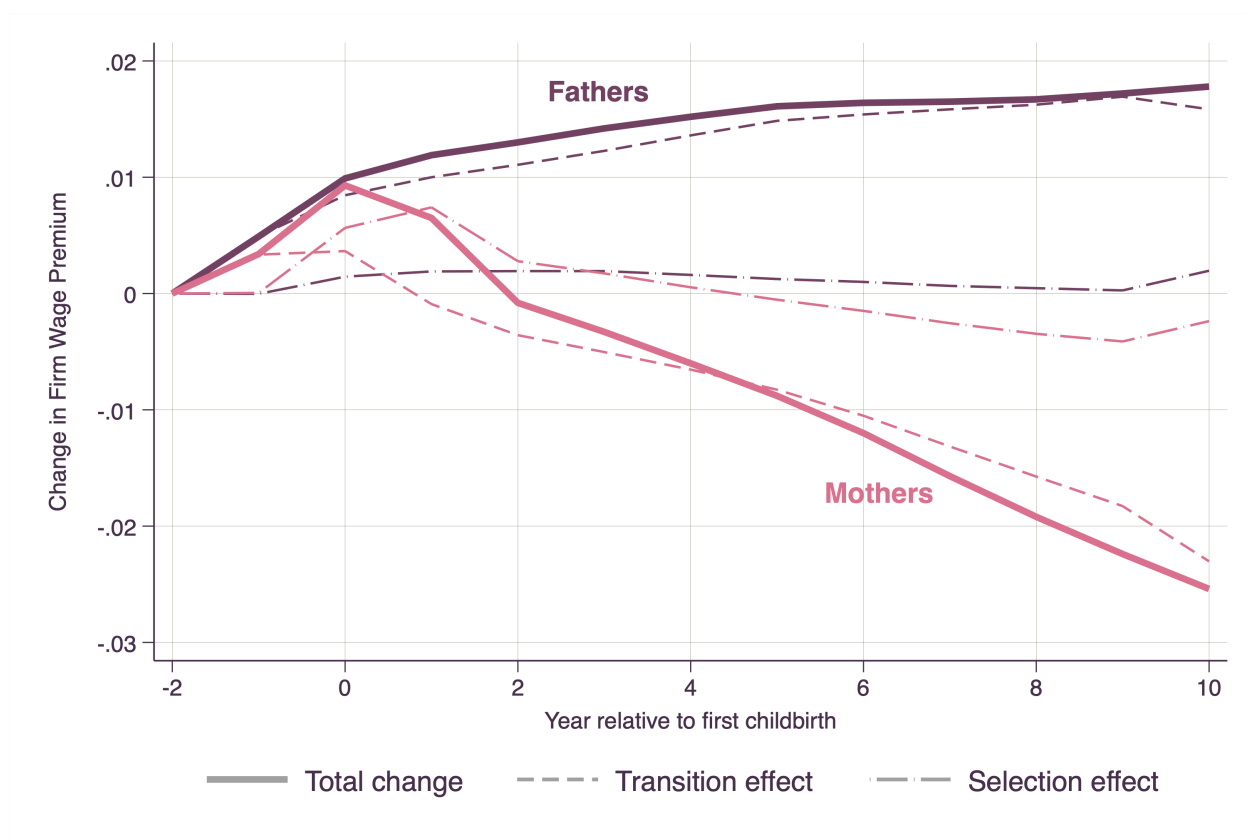Figure A1: Decomposition of changes in the firm wage premium after parenthood

Figure plots changes in estimated firm wage premium, $\hat{\psi}_{j(i,t)}$ from equation 1, by year relative to the birth of the first child for our sample of women and men in the 1999-2014 LEHD. Transition effect is defined as the average change in $\hat{\psi}_{j(i,t)}$ among parents who work in both time t and the year prior to first birth. Selection effect is the residual that can be attributed to the effect of parents dropping out of the labor force. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure A2: Employer transitions before and after parenthood

(a) Share of working mothers and fathers at a new job
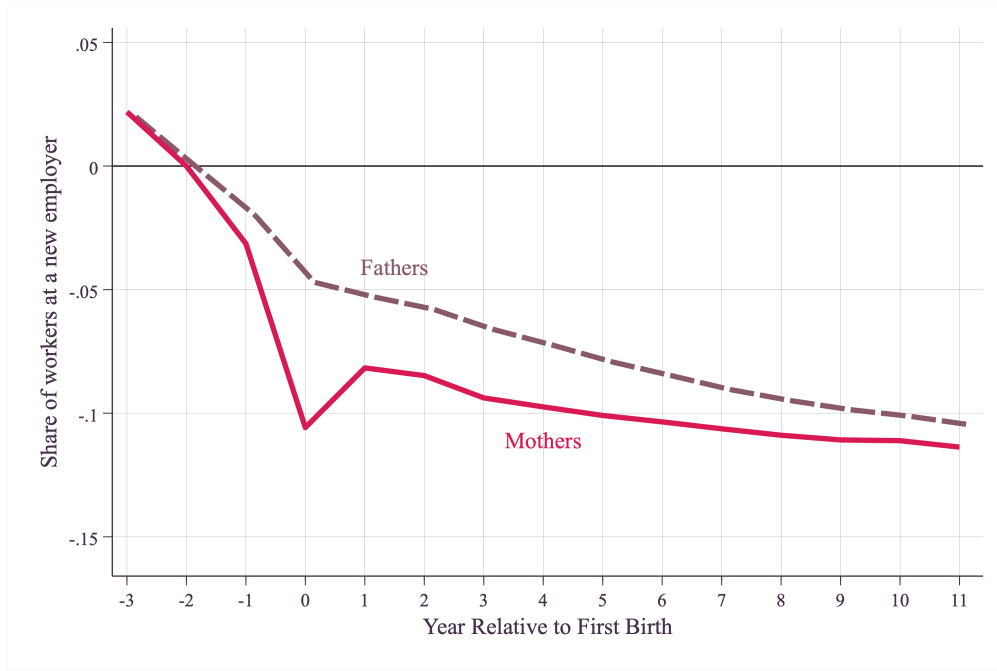
(b) Employer transitions by length of mothers' labor-force interruptions around childbirth
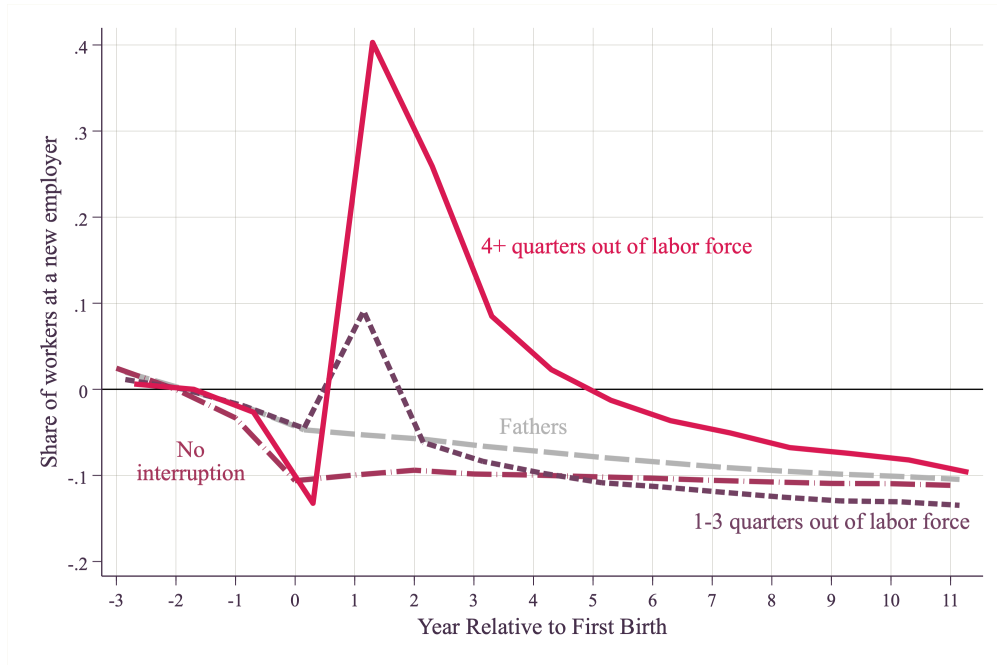
Notes: The figures above plot changes in transition rate among mothers and fathers, by year relative to first birth. Sample is limited to mothers and fathers with a first birth between ages 23-45 who are currently working. Individuals are classified as working at a new employer in calendar year t if their highest-paying firm in t was not their highest-paying firm in year $t-1$ and did not employ them at all in year $t-2$. In year relative to first birth $r = -2$, 26% of mothers and 25% of fathers transitioned to new jobs. In panel B, mothers are classified by the length of interruption in labor-force participation after the first child's birth, as measured using the number of quarters with 0 earnings. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure A3: Industry composition among working mothers, by length of labor-force interruption around childbirth
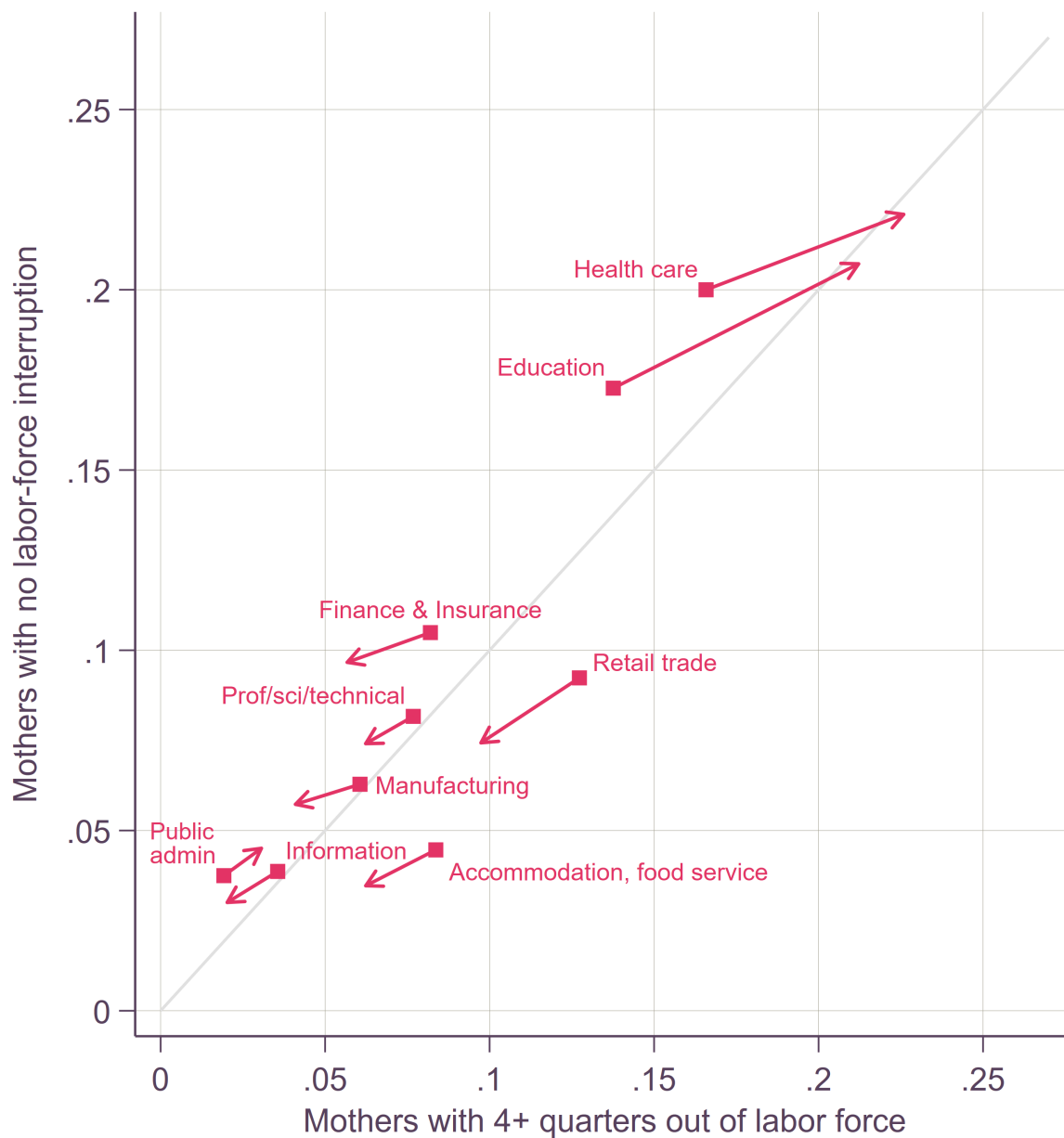

Figure plots share of working mothers in each two-digit NAICS industry prior to childbirth (markers), along with change in share of mothers in each industry after childbirth (length and direction of arrow). Estimates reported for mothers with 4 or more quarters of non-employment after first childbirth (horizontal axis) and no quarters of non-employment after first childbirth (vertical axis). Industries with lowest pre-childbirth shares are omitted. Confidence intervals are omitted due for clarity; t-statistics on post-childbirth change range from 13 to 145. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R11831)

Figure A4: Changes in mothers' earnings around birth of first child

(a) Percentage changes in mothers' earnings
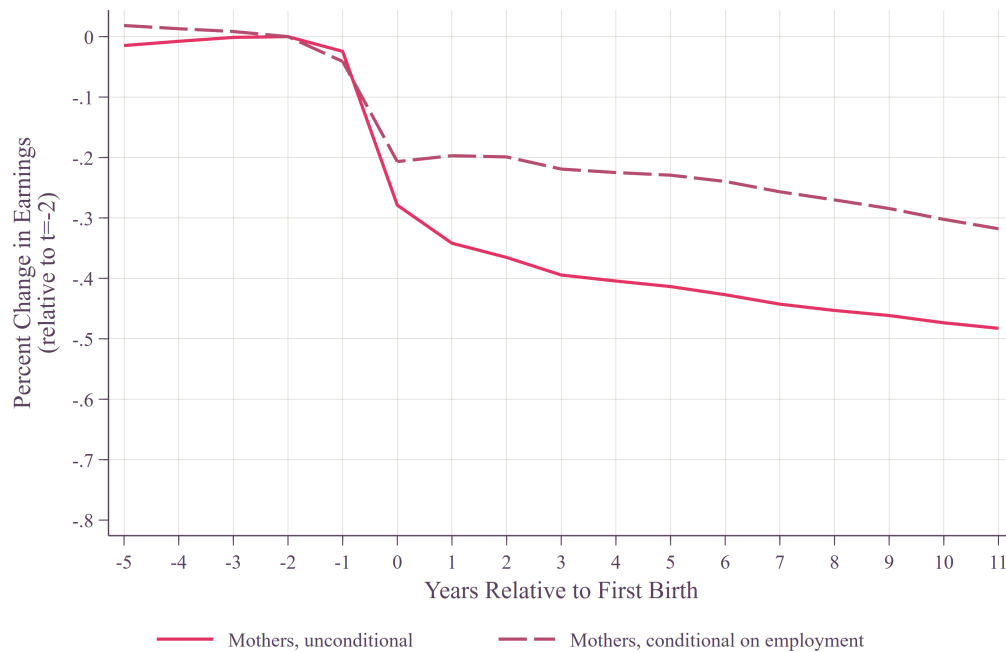
(b) Share of earnings gap explained by demographic, firm characteristics
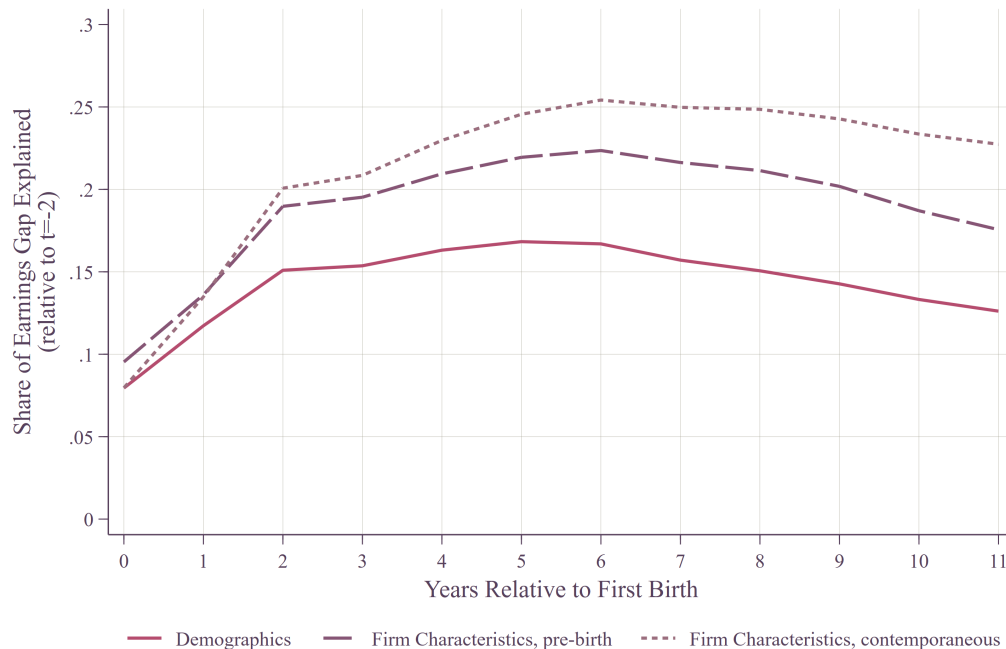
Notes: Figure A4a reports event-study estimates from a regression of real earnings on indicators for time relative to first birth, year indicators, and age indicators. Estimated coefficents are rescaled by predicted earnings net of the influence of event-time coefficients. Figure A4b reports event-study estimates as a share of the total estimated impact on mothers conditional on working. Data drawn from 1999-2014 LEHD linked to fertility histories from the 2010 Census and date and place of birth from the Social Security Numident. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY23-P2593-R10523)