The Parenthood Gap: Firms, Flexibility, and Earnings Inequality After Kids

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Abstract

This paper uses job ads data and a linkage between U.S. administrative and large-scale survey data to provide evidence that flexible work amenities are rigid at the firm level and concentrated at employers with low earnings premia. A key source of the gender earnings gap is the transition to lower-paying firms after parenthood: mothers are "opting down" rather than opting out of the labor force. Mothers gain amenities consistent with increased flexibility—remote work, part-time employment, and reduced commuting time—but they are also more likely to lose health insurance, reflecting a trade-off between flexibility and other workplace benefits.

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1 Introduction

Despite historic convergence in the second half of the 20th century, gender inequality remains a persistent feature of labor markets. Recent research has documented a systematic pattern across countries and institutional settings in which the earnings of men and women diverge sharply at parenthood. But the economic forces underlying gender inequality over the lifecycle are less well understood.

One compelling theory, advanced by Goldin (2014, 2021), is that gender inequality persists because of the prevalence of "greedy jobs" that offer high wages but require long hours. Jobs with long, inflexible hours present a potential barrier to women's career advancement after the arrival of children because women spend more time than men on child care and other tasks at home (Ramey and Ramey, 2010; Cortes and Pan, 2023). Despite the centrality of parenthood in this theory, relatively little is known about how parents' career dynamics are related to the hours and scheduling requirements of the workplace. If firms are unwilling or unable to provide flexibility or other "family-friendly" amenities, then valuable worker-firm matches may be destroyed after women become parents, with implications for both equity and efficiency (Hsieh et al., 2019). Furthermore, to the extent that high-paying firms are those that require long hours, there are potential consequences for parents' career trajectories both within and across firms. Yet the challenge of measuring hours and other amenities at the firm level—and connecting it to workers' fertility histories—has limited research on the extent to which firms contribute to the parental earnings gap.

This paper provides new evidence that flexible work amenities—in particular, hours, part-time work, and remote work—are rigid at the firm level, and that these rigidities interact with gender norms to amplify gender earnings inequality over the lifecycle. We show that firms systematically differ in the earnings levels of workers, and that firms with high-earning workers pay high wages and require long hours. These structural features of the labor market interact with the time demands of parenthood to create a pattern of firm downgrading among mothers, which has long-run impacts on mothers' career trajectories in the United States.

To motivate our empirical analysis, we develop a two-period lifecycle model where workers increase earnings both through acquiring firm-specific human capital and by transitioning to higher-wage employers. All workers become parents in the second period, when they face gendered hour requirements of childcare. Firms are heterogeneous both in their wage premium and in whether they are "flexible," and allow workers to adjust hours freely, or are "inflexible," and require a fixed amount of high hours. To adjust hours, workers at inflexible firms must switch firms and lose accumulated firm-specific human capital.[1] We assume that

[1]The underlying economic source of firm-level rigidities may include fairness concerns, coordination costs

firms offering higher wages are more likely to require high hours, and we later provide direct evidence for this assumption.[2] The model shows that women sort into lower-wage and flexible firms even pre-parenthood, in anticipation of frictions to job switching and losses of human capital. The addition of firm-specific human capital and hours rigidities extends the compensating differentials framework in which all wage differentials reflect workers' preferences for amenities (Goldin, 2014; Sorkin, 2018), and generates nuanced predictions, including greater sorting of women into lower-wage firms pre-parenthood and firm downgrading after parenthood.

We provide evidence that flexible work amenities are rigid within the firm using the near-universe of U.S. job ads from Revelio. The Revelio data allows us to extract granular measures of flexible work amenities using the raw text of job ads, including paid parental leave, flexible hours, and remote work. Similarly, we measure characteristics that proxy for inflexible work, such as having to work night shifts, having irregular hours, or being on call. In a first step, we construct samples of job ads that mention these amenities and match them to positions advertised either in the same firm but a different occupation, or in a different firm but the same occupation. We find that jobs within a firm or establishment—even in different occupations—exhibit far more similarity across a wide variety of amenities than jobs in the same occupation but different firms. In a complementary exercise, we use a regression framework to study the share of variation in advertised job amenities that can be explained by firms and occupations in the U.S. labor market. We find that firms account for a substantial share of this variation—far more than occupation—suggesting that workers cannot freely adjust flexible work amenities within firms and must switch firms to do so. These exercises parallel the empirical evidence of DellaVigna and Gentzkow (2019) and Hazell et al. (2025) that show, respectively, that retail prices and wages are rigid within firms across geography. While the Revelio-based exercises focus on advertised rather than realized job amenities, we find qualitatively similar results in a sample constructed using employer-employee administrative earnings data from the Longitudinal Employer-Household Dynamics program (LEHD), which we link at the individual level to information on health insurance,

within firms, or technologies that require high hours among teams (Akerlof and Yellen, 1988; Breza et al., 2018). This assumption is also motivated by evidence that workers cannot choose hours optimally (Jarosch et al., 2025; Lachowska et al., 2026) and supported by new empirical evidence presented in this paper.

[2]Using administrative data on hours and wages from Washington state, Lachowska et al. (2026) show that firm-level components of wages and hours are positively correlated, motivating our modeling assumption that high wage firms are also long hours firms. Using Danish data, Labanca and Pozzoli (2022) show that firms with a higher wage premium have less variance in hours, which is similarly consistent with our assumption that hours are rigid at higher-premia firms. We provide new empirical evidence, using U.S. administrative employer-employee records linked to individual surveys, to show that log wages and log hours are positively correlated, and that the variance of hours at high earnings premia firms is lower.

remote work, and work hours from the American Community Survey (ACS).

Our theoretical model also motivates an analysis of how workplace flexibility is associated with firm-specific components of pay. To characterize these components, we turn to our administrative earnings data from the LEHD and adopt the workhorse statistical model of firm earnings premia, following Abowd et al. (1999). A limitation of the LEHD is that we observe worker earnings, but not wages and hours separately. Using our additional linkage between the LEHD and the ACS, we provide novel evidence on the contribution of hours and hourly wages to estimates of firm earnings premia. When workers transition from low- to high-earnings firms, both hours and wages increase, with two-thirds of earnings increases driven by changes in wages. Moreover, the LEHD-ACS sample shows that high-earnings firms pay higher wages to all of their employees but have less *dispersion* in hours worked, a result that is consistent with these firms offering less flexibility. Part-time work is concentrated at firms with below-median earnings premia and is nearly non-existent at the top of the distribution, with more than 98 percent of employees working at least 40 hours per week. These findings are consistent with the assumption in our model that high-wage firms also require high hours that cannot be adjusted.

Having established that rigidity in job amenities is an important feature of the U.S. labor market, and that flexibility is less prevalent among high-paying firms, we examine the career progressions of men and women in the United States around parenthood. To do so, we link the LEHD to fertility records from the Census Household Composition Key (CHCK) to restrict our analysis to parents and to measure the timing of first birth in our sample. We also link these parents to their responses in the ACS, which allows us to study trends in workplace flexibility and other amenities around parenthood. We emphasize that this analysis sample conditions on being employed in the post-parenthood period. While selection into and out of the labor force is theoretically important, we show that in practice the vast majority of women who are working pre-parenthood remain in the workforce or reenter the workforce shortly after parenthood, and our core empirical finding of firm downgrading after parenthood is not driven by selection out of the workforce.

Our empirical analysis establishes three new facts about the gender earnings gap that increases sharply with parenthood. First, a substantial share of the decline in mothers' relative earnings can be accounted for by transitions to firms with lower earnings premia, a pattern that begins in the first years of parenthood and continues through their children's early adolescent years. Consistent with our model's predictions, the gender gap precedes parenthood—before childbirth, women work at firms that have a 7-log-point lower premium than men and earn about 11 log points less than coworkers within the firm. These differences are remarkably stable during pre-parenthood years, 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 to higher-paying firms, but mothers steadily move to lower-paying firms. These transitions result in a gender gap of 12 log points in firm-specific pay 11 years after the birth of a first child. In contrast, mothers' position *within* the firm falls sharply at childbirth, but then grows at a rate similar to that of fathers, suggesting that career growth continues but may be limited by the movement to firms with fewer opportunities to attain high levels of earnings. This firm downgrading is driven by transitions to lower-earnings firms rather than selection out of the labor force. Furthermore, while selection into parenthood is an endogenous choice often informed by career objectives, this firm downgrading pattern occurs regardless of the age at first birth: even women who delay parenthood and work up the career ladder transition to lower-paying firms after parenthood on average.

Second, we show that firm downgrading is larger for mothers who worked at the highest-paying and most hours-intensive firms prior to childbirth. This result aligns with our model's prediction that the inability to adjust hours at inflexible firms, along with a gender norm in childcare, generates job transitions to lower-paying and more flexible firms for women after parenthood.[3] 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 firm pay before parenthood move to firms that pay 9 log points less after birth. This decline is larger than the pre-childbirth gender gap in firm-specific earnings premia. 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 the pattern of firm downgrading 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.

Finally, we show empirically that mothers who move to lower-paying firms gain amenities consistent with flexible work, but also lose benefits—namely, health insurance. Because our administrative earnings data provides little information on firm amenities, we rely on our linked LEHD-ACS sample and explore whether transitions to lower-paying firms are

[3]This empirical exercise provides further evidence that amenities are rigid at the firm-level. If high-wage firms offered hours flexibility, then high-wage, reduced-hours jobs would strictly dominate lower-wage, reduced-hours jobs and we would not find this pattern of downgrading after childbirth.

correlated with gains in 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 health insurance effect is *net* of switching to insurance plans of spouses, meaning that women who downgrade firms are, on average, less likely to have health insurance at all. This result emphasizes a tradeoff between gaining flexible work amenities, such as adjusting hours to part-time status, and maintaining health insurance coverage.

This paper contributes to the literature on the sources of the gender earnings gap, which increases dramatically with parenthood (Waldfogel, 1998; Bertrand et al., 2010; Angelov et al., 2016; Kleven et al., 2019b; Kleven, 2022). Influential work by Goldin (2014, 2021) developed the theory of "greedy jobs," in which high-wage jobs also require long and inflexible hours, disproportionately affecting women because of gender norms in childcare and other differences in demand for flexible work (Mas and Pallais, 2017; Cortes and Pan, 2023; Buzard et al., 2025; Anstreicher and Jack, 2026). But because of data limitations, evidence on the demand for flexibility as a driver of the earnings gap around parenthood has thus far focused on occupations (Goldin and Katz, 2016; Adda et al., 2017; Wasserman, 2023). We use new data sources to establish that workplace flexibility is a characteristic of firms, and to show that workers' inability to adjust hours within firms interacts with gender norms to generate costly firm downgrading for women after parenthood.

A broader literature has found that firms affect earnings inequality through their influence on wages, hours, and hiring practices (Card et al., 2018; Song et al., 2019; Kline et al., 2022; Lachowska et al., 2026), and that women sort into lower-paying firms, which contributes to overall gender inequality (Card et al., 2016; Goldin et al., 2017; Bruns, 2019; Barth et al., 2021; Bronson and Thoursie, 2021; Di Addario et al., 2023; Morchio and Moser, 2024). The literature has diverged on whether amenities amplify or attenuate wage inequality (Sorkin, 2018; Maestas et al., 2023; Humlum et al., 2025), but recent work has provided evidence that job satisfaction is higher and benefits are more generous at high-paying firms (Lamadon et al., 2022; Sockin, 2022). Several papers study parents in the European context and find that women are more likely to transition to more family-friendly firms after parenthood (Hotz et al., 2018; Coudin et al., 2018; Masso et al., 2022; Casarico and Lattanzio, 2023). For example, in a related study of Danish parents, Datta Gupta et al. (2026) provide evidence that mothers move to lower-paying but higher-amenity jobs after first birth. They show that incorporating the value of amenities—derived from a hypothetical choice experiment—reduces the measured gender gap in post-childbirth labor compensation relative to the gap based on earnings alone. Relative to this literature, our paper provides the first nationally

representative analysis of career progressions around parenthood in the United States, a setting where firm provision of job benefits is likely to be salient because workers have fewer rights to dictate working conditions and a less robust social safety net (Blau and Kahn, 2013). We also contribute by using direct measures of a wide range of amenities, drawn from both job ads and large-scale worker surveys linked to administrative earnings data, to document changes in working conditions after childbirth. Our results provide novel evidence that mothers' transitions to lower-paying firms are accompanied by increased access to shorter hours and workplace flexibility, but on average women lose other valuable benefits such as health insurance.

Lastly, an extensive literature in economics has documented the rigidity of wages—e.g., evidence that wages are compressed within the firm (Breza et al., 2018; Cullen and Pakzad-Hurson, 2023; Hazell et al., 2025) and over the business cycle (Bewley, 1999; Grigsby et al., 2021)—but there is less evidence on the rigidity of non-pecuniary amenities. Several papers document hours constraints (Altonji and Paxson, 1992; Labanca and Pozzoli, 2022; Jarosch et al., 2025) and on the firm-side that there is imperfect substitutability between hours and workers (Carry, 2026). Using employer-employee-linked data from Washington state, Lachowska et al. (2026) find that a substantial share of workers would prefer to adjust their hours—usually upward—suggesting substantial mismatch between worker preferences and the schedules offered by their employers. We provide new, granular measures of workplace flexibility and evidence for the rigidity of these amenities within firms. While existing research on wage rigidities has noted its role in spatial inequality (Hazell et al., 2025), ours is the first to connect firm-level rigidities to lifecycle inequality.

The remainder of the paper proceeds as follows. Section 2 presents the economic framework and develops empirical predictions that guide the analysis. Section 3 describes the data. Section 4 provides evidence that flexible work amenities are rigid within firms, discusses measurement of the firm earnings premia, and shows this measure is correlated with both high hours and high wages. Section 5 provides evidence consistent with the model's predictions, presenting new facts about worker transitions within and across firms of different pay and amenities around parenthood. Section 6 concludes.

2 Model

To motivate and guide interpretation of our empirical analysis, we develop a two-period model of labor supply, before and after parenthood. The model highlights how amenity rigidities—the inability to adjust hours within a firm—along with costly firm switching, distorts working decisions and amplifies the gender earnings gap.

Firms. Firms are characterized by a pair (ψ, a), where $\psi \in [\underline{\psi}, \bar{\psi}]$ is a firm-specific wage premium and $a \in \{0, 1\}$ indicates whether the firm offers a workplace flexibility amenity. Workers at firms with $a = 1$ can choose hours flexibly, $h \in [0, 1]$, while workers at firms with $a = 0$ must work a fixed amount of high hours, $h = \bar{h}$, assumed higher than the unconstrained optimum that workers would choose pre-parenthood.

The amenity is assumed to be *rigid within firms*: workers at an inflexible firm cannot adjust hours without switching employers. In particular, workers cannot bargain and accept a wage reduction in exchange for being able to adjust hours. We assume the distribution of firm wage premia among inflexible firms first-order stochastically dominates the distribution among flexible firms:

$$F(\psi|a = 0) \leq F(\psi|a = 1) \quad \text{for all } \psi \in [\underline{\psi}, \bar{\psi}] \tag{1}$$

This implies that inflexible firms offer higher wage premia on average, $E[\psi|a = 0] > E[\psi|a = 1]$, and is motivated by the idea that productivity increases with team production or information sharing, which is facilitated by employees working long hours.

Workers. There is a continuum of workers indexed by gender $i \in \{m, f\}$. The model has two periods. In period 1, workers enter the labor market without children. Between period 1 and 2, all workers become parents.

Workers have preferences over consumption and leisure. Utility for individual i in each period t is given by:

$$U_{it} = \log(y_{it}) + \alpha \log(\ell_{it}) \tag{2}$$

where y_{it} is earnings, which equals consumption (i.e., there is no savings), ℓ_{it} is leisure, and $\alpha > 0$ measures the preference weight of leisure relative to consumption.

Before having children, workers allocate time between work and leisure, and the budget constraint for time is: $h_{i1} + \ell_{i1} = 1$. After parenthood, workers must also allocate time ξ_i to childcare, $h_{i2} + \ell_{i2} + \xi_i = 1$, which cannot be purchased in the market. We assume a gender norm in childcare, where women provide more childcare than men (Bianchi et al., 2012; Jack et al., 2026): $\xi_f = \bar{\xi} > \xi_m = \underline{\xi}$.[4] We assume $\bar{h} + \xi_f < 1$, ensuring that working at an inflexible firm remains feasible for women after parenthood.

A key feature of the model is that workers accumulate *firm-specific human capital*, which captures the productivity gained from relationships with colleagues and clients, knowledge

[4]While our paper is agnostic on the underlying sources of this gender norm, potential explanations include differential bargaining power within the household (Jayachandran and Voena, 2026); societal views about gender identity (Bertrand et al., 2015); cultural norms tied to geography or religion (Kleven et al., 2025); or parental role model effects (Kleven et al., 2024).

of internal systems, and reputation within the organization—all of which are lost upon switching employers. In period 1, all workers have zero firm-specific human capital. In period 2, if a worker remains at the same firm, their productivity increases by a constant factor $exp(\gamma_e) > 1$. For simplicity, $exp(\gamma_e)$ does not depend on prior hours worked or firm type. Firm switching is thus costly for workers, who will take this into account before parenthood.

Wages. In period 1, worker i's wages at firm j are $w_{ij} = \psi_j$, and in period 2, their wages are $w_{ij} = \psi_j \cdot \exp(\gamma_e \mathbb{1}\{\text{stay at period-1 firm}\})$. Hence, wages only depend on the firm-specific premium and whether the worker has prior experience at the firm.

Earnings are $y_{ijt} = w_{ijt} \cdot h_{it}$. Taking logs,

$$\log y_{ijt} = \log \psi_j + \gamma_e e_{ijt} + \log h_{ijt} \tag{3}$$

Job matching and worker decisions. In period 1, workers draw two job offers at random: one from an inflexible firm ($a = 0$) with pay premium from $F(\psi|a = 0)$, and one from a flexible firm ($a = 1$) with pay premium from $F(\psi|a = 1)$. The worker's only decision is which firm to work for and, if the worker chooses a flexible firm, how many hours to work.

In period 2, workers receive two new offers from the same distributions, and do not have recall of prior offers. The new offers are assumed independent of the earlier offers. In period 2, workers again decide which firm to work for and, if they choose a flexible firm, how many hours to work. The worker's decision whether to remain at their current firm or transition to one of the new offers contains a trade off between switching to a potentially higher-paying firm or one with the flexible hours amenity, against the cost of switching firms. The tradeoff is more acute because in period 2 workers have to spend time on child rearing, and the hours requirement at inflexible firms is farther from their optimum.

2.1 Empirical content of the model

The model generates several empirical predictions that we study using our newly linked datasets.

Proposition 1: Even before parenthood, women are less likely to work for inflexible firms compared to men.

Proof: See Appendix C. The intuition is that women anticipate the future time requirements of child-rearing, and because firm-switching is costly, they prefer flexible firms before parenthood. This result implies a gender gap in wages even before parenthood, when there

are no current gender differences in preferences, human capital, childcare, or the distribution of employment offers in period 1: the gender gap arises solely from anticipation of future childcare costs and costly firm switching.

Proposition 2: The gender gap in firm premium increases after parenthood.

Proof: See Appendix C. This result is driven by the fact that the gender norm of childcare puts women further from their optimal hours at inflexible firms, making flexible firms relatively more attractive after parenthood.

Proposition 3: Conditional on initial firm quality ψ, women experience larger losses (or smaller gains) in ψ compared to men, with parenthood.

Proof: See Appendix C. The intuition is that women are more likely to switch to flexible firms, which destroys firm-specific human capital and reduces their firm premium.

Taken together, these propositions provide insight into gender differences in lifecycle earnings. Prior to parenthood, women sort into flexible firms to a greater extent than men; at these firms, hours are optimally chosen and lower than the mandated requirement at inflexible firms. After parenthood, the gender earnings gap increases because of greater switching of women to flexible firms, which destroys firm-specific human capital, and because women reduce hours more than men at flexible firms due to the gender norm in childcare. Under the assumption of equation 1, which formalizes the empirical regularity that inflexible firms pay higher wage premia on average, these sorting patterns translate into an earnings gap: women's greater propensity to work at and transition to flexible firms implies lower average firm wage premia, which emerges before parenthood and increases after parenthood. The model also predicts that women who switch to lower-paying firms gain flexibility, which we provide empirical evidence for (see Section 5.2).

2.2 Implications of hours rigidities

Hours rigidities distort worker allocations across firms through three channels. First, women employed at inflexible firms pre-parenthood lose firm-specific human capital, because they must switch firms to gain flexibility. Second, amenities rigidities distort pre-parenthood employment decisions, leading to greater sorting of women into flexible firms. Third, the rigidities prevent women from bargaining over hours when receiving *new* offers from inflexible firms in period 2. Some women would accept a wage penalty to obtain flexibility at inflexible firms, but amenities rigidity prevents this arrangement.[5] This economic mechanism contrasts

[5]If all firms offered flexibility (so that firm-type sorting disappears), the gender earnings gap would compress but not vanish: differential hours worked due to the childcare norm would remain. Similarly, if

with a standard compensating differentials framework, in which workers reallocate across firms in a frictionless environment (Rosen, 1974; Goldin, 2014; Sorkin, 2018).

An important question is why don't firms offer flexibility in exchange for a wage penalty? Firms may avoid offering flexibility due to concerns about fairness and morale: if one worker receives flexibility, other workers (e.g., non-parents) may demand similar arrangements, generating productivity losses that exceed any individual worker's compensating differential. Firms may also be constrained by technology or coordination requirements that makes flexible arrangements costly even when they would benefit individual worker-firm pairs.

3 Data and Measurement

We assemble data from several sources with the following goals: estimating firm earnings premia and characterizing its wage and hours components, providing evidence for wage and hours rigidities in firms, and studying parents' transitions across firms over the lifecycle. We provide an overview of our data sources here, but provide additional details on the empirical analysis in the sections below and in the appendix. See Table A1 for a list of each figure and table with the underlying data sources and sample restrictions.

Our first data source is Revelio, which collects job vacancy postings across major online platforms and company websites and de-duplicates them. These data provide rich information about a wide variety of job amenities and how they vary across firms and industries, and they allow us to explore the extent to which amenities are rigid across firms. We begin with a random sample of 10 million job postings, which we restrict to those in the United States in 2021-2025 with non-missing company, occupation, and metro area information (about 2.7 million). The Revelio data includes each posting's job title, firm name, and location, in addition to the raw text of the descriptions. To extract job-level amenities, we search for relevant keywords from the job ads (see Table A2 for the mapping of keywords to amenities). We focus on flexible hours and remote work, but we also measure job amenities such as health insurance and paid parental leave. We also measure job inflexibility as a *disamenity*, including having to work irregular hours, night shifts, or be on call. These data allow us to measure a wide dimension of amenities that are missing from large-scale surveys such as the ACS. Job ads have the advantage of the rich text descriptions that are provided by firms seeking to fill their positions. But using job ads for measuring amenities also requires an

firm switching were costless ($\gamma_e = 0$), there would be no pre-parenthood sorting gap and no destruction of firm-specific human capital at parenthood. It is the interaction of gender norms in childcare, hours rigidities at the firm level, and costly firm switching that amplifies the gender earnings gap beyond what differential hours choices alone would generate.

assumption that firms accurately describe the positions they wish to fill and their associated job benefits.[6] We therefore complement this analysis with an LEHD-ACS sample measuring amenities in the ACS, and we describe this sample below.

Our empirical analysis also leverages linkages between several sources of large-scale administrative and survey data.[7] To observe high-quality measure of workers' labor-market histories, we rely on 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). The limitations of the LEHD are that our sample covers only 25 states, and it provides no information on occupation, hours worked, or benefits such as health insurance.

To provide additional information on job characteristics, we link the LEHD to the 2001-2019 American Community Survey (ACS). Because the restricted-use ACS provides the exact date of the interview, we can link it to the LEHD at the individual-by-calendar-quarter level. This allows us to connect information about workers' employer in the LEHD to their survey responses about usual hours worked, health insurance, commuting time, remote work, and other amenities over parents' careers. To capture an additional measure of workplace flexibility, we also follow Goldin (2014) and Cortes and Pan (2019) by constructing an occupation-specific proxy for the wage returns to working long hours.[8]

Finally, 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). We focus on first births that occur between 2001-2010, ensuring that we can follow the parents for at least a decade before the onset of the Covid-19 pandemic.[9]

[6]Several papers have used job vacancy data to extract benefits, such as 401(k) plans (Cole and Taska, 2023) and remote work (Hansen et al., 2023). Many discrete choice experiments (Mas and Pallais, 2017) provide menus of wages and job benefits using a similar framing as a job posting description.

[7]Additional detail on our data and sample restrictions is provided in Appendix A.

[8]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.

[9]One limitation of the CHCK is that we cannot observe children born prior to 1997. To ensure we are

4 Flexible Work Amenities and Rigidities in Firms

In this section, motivated by the theoretical model in section 2, we provide empirical evidence that flexible work arrangements and other amenities are rigid at the firm level, and that workplaces with higher firm-specific components of pay offer less flexibility in hours.

4.1 Are amenities rigid at the firm level?

Benefits overlap within and between firms

Our first exercise draws on our job-ad data from Revelio to study how access to amenities such as flexibility varies within and across firms. Using a sample of Revelio job ads with non-missing occupation and employer information, we form randomly selected job pairs in each of three groups: (i) within the same firm and establishment but across occupation; (ii) within the same firm, but across establishments and occupations; (iii) within occupation but across firms. This exercise follows the approach of DellaVigna and Gentzkow (2019), who study retail price rigidity in stores within and across chains. The randomly selected pairs are made without replacement, so no job is included in multiple pairs. While we would expect to observe meaningful overlap among workers in the same occupation given their similar skills and roles, there is less reason to suspect that co-workers with different occupations would receive similar benefits unless amenity rigidity is an important factor in the U.S. labor market.

For this exercise, we make a few sample restrictions. First, in constructing (ii), we restrict to firms with at least two establishments. Second, for firms with more than 200 establishments, we randomly sample 200 establishments and retain all jobs within those establishments for all amenities we study. This cap at 200 is intended to limit the influence of large firms. Third, if any group has an odd number of jobs, the unpaired job is excluded. Fourth, for the cross-firm comparisons (iii), we restrict to pairs that have different parent companies (dropping pairs if they have the same ultimate parent company).

Since many of the benefits are mentioned rarely in job ads, in constructing averages we exclude matched pairs if neither of the two jobs mentions the amenity; we do this to not inflate our estimates of amenities overlap when neither job ad mentions the amenity. To construct averages for each amenity, we first average within each group (firm-establishment, firm, or occupation-metro cell), and then average across groups, to avoid over-weighting large groups with many pairs.

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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 plot the within- and between- shares separately by amenity in Figure 1a. Jobs have far more overlap in amenities within firms—whether within or across establishments—than across firms in the same occupation and metro area. For example, within firms, if one job mentions health insurance, there is a 30 percent likelihood that the matched job in the firm also mentions the health insurance amenity, while there is only a 7 percent likelihood the matched job between firms also mentions the health insurance amenity.[10] The within shares are similarly high for paid parental leave. Other measures that proxy for flexible work amenities (or disamenities) also have far more overlap within firms than between firms. We interpret these results as providing strong evidence that firms strongly influence their workers' access to benefits, and that adjusting amenities or disamenities may often require changing employers.

Variance Decomposition

As an alternative approach to studying amenity rigidity, we also explore the extent to which firms account for variation in flexible work amenities. We adopt the strategy of Nakamura and Steinsson (2008), DellaVigna and Gentzkow (2019), and Hazell et al. (2025), who show that a substantial share of the variation in prices and wages reflect firm-specific components rather than differences in local economic conditions. To our knowledge, no paper has examined whether this rigidity extends to job characteristics like work hours and benefits, even though the firm's incentive to standardize amenities may be stronger than wages since a firm's establishments may share production processes, management techniques, and contracts for benefits such as health insurance.

For this exercise, we restrict the Revelio sample to job ads with a non-missing 4-digit Standard Occupational Classification (SOC) code, company name, and metro area. We estimate the following regression separately for each amenity:

$$y_{jof} = \gamma_r + \gamma_o + \epsilon_{jof} \tag{4}$$

where y_{jof} is an indicator that job j in occupation o and firm f offers the amenity. We

[10] One might consider 30 percent to be a lower share than expected, but this figure is broadly consistent with other research that has tracked the share of job ads mentioning health insurance (Shrivastava, 2024). There are three reasons why job advertisement data may underestimate benefits. First, some jobs are part-time and may not be covered by employer-sponsored health insurance. Second, there is measurement error and our keyword approach may not perfectly capture benefits if firms use different wording or short-hand descriptors. Third, some jobs may offer the benefit but the firm may not include this information in the job description, perhaps because the benefit is implied or tacitly understood to be part of the compensation package.

estimate this regression with both sets of fixed effects, and then re-estimate the regression dropping either the firm fixed effects or the occupation fixed effects. The reduction in the adjusted-R^2 from dropping firm fixed effects measures the marginal contribution of firm-level factors in accounting for amenities variation. We calculate the difference in adjusted-R^2 when dropping firm fixed effects, and again when dropping occupation fixed effects.

Figure 1b shows that firms are by far the dominant predictor of variation in job flexibility across the U.S. labor market compared to occupations. Firm fixed effects account for a large share of the variation—between approximately 25 and 45 percent—while occupation fixed effects account for less than 2 percent. Paid parental leave has the highest share accounted for by firms. Health insurance also has a high share of variation explained by firms. Other flexible work amenities—such as remote work or flexible hours—or flexible work disamenities, such as weekend or night shifts, being on call, or working irregular hours, have a surprisingly high share of variance accounted for by the firm: 25 to 40 percent. As a comparison, we study salary (in the subsample of job ads with non-missing and non-imputed salaries), and show that occupation accounts for much more variation in salaries across jobs compared to flexible work amenities. This comparison lends support to the idea that job flexibility is primarily a feature of firms rather than occupations.

One drawback of our Revelio data is that it captures the amenities that employers advertise, which need not be the same as the amenities that workers receive. While advertised amenities are arguably a policy-relevant measure to the extent that they influence the jobs workers pursue, we assess robustness by repeating our variance decomposition exercise using the LEHD-ACS data. A strength of this dataset is that it measures realized benefits among the stock of jobs rather than the flow of job vacancies. A drawback is that we have fewer available measures of amenities. We focus on the log of hourly wages and four ACS-based measures of amenities: usual hours worked and indicators for part-time work, remote work, and employer-sponsored health coverage. The results in Figure A1 are qualitatively similar to those obtained using Revelio job-ad data. Using log wages as a benchmark, firms and occupation account for a similar amount of variation in wages, 0.12 and 0.15, respectively. Turning to usual hours, firms and occupations again provide similar explanatory power. For employer-sponsored health insurance, firms unsurprisingly account for more variation across workers than occupations. The analysis of remote work—perhaps the ACS's most direct measure of workplace flexibility—shows firms accounting for far more than occupations in the total variation across workers. These results reinforce the takeaway that to a great extent benefits are set at the firm-level.

4.2 Measuring and interpreting earnings premia of firms

Our theoretical model in section 2 also motivates the question of how pay varies across firms in the U.S. labor market. To capture a measure of firm pay, we adopt the workhorse statistical model of firm earnings premia, following Abowd et al. (1999) and the literature on labor-market inequality (e.g., Card et al., 2018; Song et al., 2019; Di Addario et al., 2023). These premia are identified by changes in earnings among workers who switch firms. Since data on hours worked and hourly wages are not directly observable in the LEHD, we use the LEHD linked to the ACS to study the hours and wage components of earnings premia.

We estimate firm earnings premia using our full LEHD sample from 1997-2019. 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 ($3,500 in 2012 dollars). We define the primary employer of worker i in year t as the firm in which they have the highest earnings in that year.[11] In a first step, we follow Bonhomme et al. (2023) and residualize our data by regressing log earnings on year dummies and a cubic in age, separately by state, and then collapse our data to the job-spell level. In a second step, we estimate firm earnings premia $\psi_{j(i,s)}$ using the following regression framework:

$$y_{ijs} = \alpha_i + \psi_{j(i,s)} + \epsilon_{ijs} \tag{5}$$

where y_{ijs} is the residual of log earnings for individual i at firm j in job-spell s and α_i are individual fixed effects. The $\psi_{j(i,s)}$ represent the firm's contribution to differences in earnings.[12]

Our estimated firm effects are broadly consistent with the estimates reported in the literature. At the person-year level, the variance of log earnings in our sample is roughly 0.76, similar to the 0.7 found by Sorkin (2018) using an earlier time period. Firm effects explain about 16 percent of this variance, a figure that is in line with the academic literature on firms' contribution to earnings variation (Card et al., 2018; Kline et al., 2020).[13] Our

[11] 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).

[12] Following the literature, we normalize our estimates of $\psi_{j(i,s)}$ 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 $\psi_{j(i,s)}$ are not sensitive to restricting the sample to only men, only women, or only non-parents, nor are they sensitive to estimating equation 5 at the person-year level, or state by state.

[13] In a survey of the literature, Card et al. (2018) that typical estimates of the firm share of earnings variation are 15-25 percent. Note that these figures are relevant for estimates that have not been corrected

estimates are also remarkably robust. While our preferred estimates use women and men age 18-61, they are highly persistent across different samples: the correlation between our preferred estimates and those from a sample of men only is 0.978, while the correlation between our preferred estimates and a sample of predicted-full-time workers is 0.976.[14]

The interpretation of $\hat{\psi}_{j(i,s)}$ as a firm-level earnings premium rests on the assumption that workers' job switches are not correlated with shocks to other determinants of their productivity. We offer evidence consistent with a large literature that suggests changes in pay among job-switchers are driven by firm-specific factors, such as rents, rather than alternative factors such as worker-firm match effects (Abowd et al., 1999; Card et al., 2013, 2016, 2018; Song et al., 2019). Following Card et al. (2013), we restrict our LEHD sample to a set of workers who work 8 continuous quarters at an origin firm before switching, without interruption, to a spell of at least 8 continuous quarters at a destination firm. We then plot event-study estimates of changes in log earnings, separately by quartile of sending and receiving firm. For ease of interpretation, we plot these estimates only for workers who start at either a first-quartile or fourth-quartile firm. Figure 2a shows that workers who move to a higher-paying firm see a commensurate bump in log earnings, with effects that grow with the premium of the receiving firm. Those who move to lower-paying firms see the reverse, with decreases in log earnings that match the decline in firm earnings premium. The symmetric responses to firm transitions and the lack of substantial pre-trends in log earnings are consistent with viewing estimated earnings premia as a firm-specific component of earnings.

Wage and hours components of firm earnings premia

A critical question is to what extent our estimated firm earnings premia represent firm-specific wage effects or hours effects. Our Section 2 model develops a labor market where firms are characterized by both: heterogeneity in their wage-specific premium and in whether they require high hours, and the model assumes these are positively correlated (equation 1).

for "limited mobility bias," which has been shown to inflate the variance of firm effects (e.g., Andrews et al., 2008; Kline et al., 2020; Bonhomme et al., 2023). This issue is not a major concern in our setting for two reasons. First, the unusually long nature of our panel reduces concerns about bias from a small number of movers, which falls quickly as panels grow in length (Bonhomme et al., 2023). More importantly, limited mobility leads to biased estimates of the share of the *variance* in earnings that can be explained by firms, but our analysis focuses on the evolution of *mean* firm effects. This suggests that limited mobility would add noise, not bias, to our estimates (Lachowska et al., 2023).

[14]To construct estimates of firm premia among predicted-full-time workers, we use our ACS sample to regress an indicator for working at least 35 hours on the interaction between age, sex, race, and education, characteristics we can observe in the LEHD. We then restrict our LEHD sample to workers whose predicted probability of working full-time is above the median, and re-estimated $\psi_{j(i,t)}$.

Our data allow us to investigate the wage and hours components of earnings premia by linking our sample of job switchers to their ACS responses.

We use the ACS to measure both usual hours and hourly wages, constructed from annual earnings, usual hours, and weeks worked. Our ACS measures are based on repeated cross-sections, but under the assumption that the timing of the ACS survey is not systematically correlated with the job transitions we observe in the LEHD, we can use the LEHD-ACS sample to construct event-study estimates of changes in log hours and log hourly wages, separately by quartile of sending and receiving firm.

Figure 2b shows that hourly wages account for most of the change in earnings associated with a job transition. But log hours also change, consistent with our theoretical model and the "greedy jobs" hypothesis that lucrative work tends to require long and inflexible hours. Each dot in the scatterplot corresponds to a combination of origin and destination earnings-premium quartile, and shows the change in log hours worked or log hourly wages (vertical axis) against the change in firm earnings premium (horizontal axis).[15] We plot changes between the year prior to a job transition and the second year after a job transition, to account for the design of ACS survey questions.[16] As in Figure 2a, we see a striking symmetry, as workers who move to higher-paying firms earn higher wages and work longer hours, while those moving to lower-paying firms earn lower wages and work fewer hours. This analysis suggests that firm earnings premia largely reflect firm-specific wages, which account for 66% of the total change in earnings.

We are also interested in characterizing how the distribution of wages and hours worked—for *all* workers, not just job switchers—varies across firms of different earnings premia. We construct a sample of all firms in the LEHD-ACS that can be linked to at least 10 ACS respondents. Figure 3a shows that all workers enjoy higher hourly wages at firms with higher earnings premia. The horizontal axis plots firms by ventile of firm earnings premia, while the vertical axis show the average 90th, 50th, and 10th-percentile wage at firms in each bin. At every percentile, wages rise monotonically with the firm earnings premium, with a gradient that becomes steeper at the highest-paying ventiles. This result complements our within-person evidence in Figure 2a but shows that wages increase at every point in the distribution.

[15] Event-study versions of these changes are presented in Appendix Figure A2, which shows no evidence of pre-trends, suggesting that job transitions across firms are associated with discrete changes in both wages and hours.

[16] The ACS survey asks about earnings and hours in the previous calendar year. As a result, responses for the first year after a transition correspond to a mix of earnings at the origin and destination firm. By focusing on the second year after the transition, we ensure that we are picking up characteristics from the destination firm only.

Figure 3b shows how hours worked change along the firm-specific earnings distribution. Since earnings are a function of hours worked, it is not surprising that hours are higher at higher-earnings-premia firms. But the figure provides the additional insight that higher wages are associated with lower *dispersion* in work schedules. In the highest-paying firms, part-time work is virtually nonexistent, as 95% of employees work at least 40 hours and more than 98% work at least 30 hours per week. Part-time work is much more common in the middle and bottom of the distribution of firm pay. At the lowest-$\psi(j,s)$ firms, nearly two-thirds work part-time, and the 90th-percentile wage earner makes just a few dollars more than the 10th-percentile worker at the highest-$\psi(j,s)$ firms.[17] Overall, the evidence is consistent with our theoretical framework, where hours requirements are higher at high-wage firms.

The results above show that both wages and hours jump discretely when workers transition to firms with high earnings premia and is consistent with the hypothesis that firms that pay high wages also require long hours. Our findings are also consistent with Lachowska et al. (2026), who show directly that firm-level components of wages and hours are positively correlated using employer-employee data from Washington state, where hours can be observed. An alternative approach would use our LEHD-ACS sample to estimate wage and hours premia and show directly that they are correlated, but we do not rely on these estimates because it would restrict our sample to a smaller set of firms, limiting our analysis of parents' career trajectories. In the analysis that follows, we instead rely on firm earnings premia—interpreting them as a proxy for firms that pay higher wages and require longer hours—to paint the broadest picture possible of how parents navigate the labor market after the birth of a child.

5 Career progressions around parenthood

The results in the previous section suggest that amenity rigidity is an important feature of the U.S. labor market, and they are consistent with the assumptions of our model in section 2 that jobs at high-wage firms require long and inflexible hours. This raises the question of how women and men navigate the labor market in the years around the beginning of parenthood. We next turn to our linked LEHD-CHCK data to study career progressions around parenthood, within and across firms of differing earnings premia.

[17] Table A4 shows that these cross-sectional results are not simply the result of differences across occupations or industries. While these cross-sectional regressions are descriptive, they demonstrate that firm earnings premia are strongly predictive of wages even when we compare workers in narrowly defined occupation and industry categories.

We collapse the 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. We then 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.[18] 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. 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.

Table 1 shows that our sample is broadly representative of the U.S. population of mothers and demonstrates the strong labor-force attachment of parents in the United States. For context, columns 1-3 use the 2001-2011 public-use ACS to document the characteristics of U.S. mothers with a first-born infant in the household. The average mother of is 26.2 years old, but this figure rises to 29.5 if we impose our age restrictions and 30 if we restrict to mothers who have worked in the past year. These figures match our LEHD-CHCK sample quite well, as shown in column 4: mothers are 30.5 on average, with broadly similar racial and educational characteristics. Fathers are slightly older, 31.9 years on average. Columns 6 and 7 restrict the sample further to those who work at some point after childbirth. Relative to the full LEHD-CHCK sample of parents, demographic characteristics are nearly identical. The relatively small decline in sample size—from 2.59 million mothers in the full sample to 2.17 million in our analysis sample—highlights the fact that among U.S. women who pursue a career prior to parenthood, the vast majority continue to work after childbirth (Jack et al., 2026). We discuss and empirically study the role of selection further in the sections below.

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

We begin by studying 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, as estimated using the full LEHD sample from 1997-2019. We then document parents' career trajectories by estimating the following event-study specification:

$$y_{ijt} = \sum_{r=-5}^{11} \eta_r Mom_i \cdot D_r + \sum_{r=-5}^{11} \beta_r Dad_i \cdot D_r + X_{it}\delta + \epsilon_{ijt} \tag{6}$$

In specification 6, 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 1) and we wish to hold fixed the point in mothers' and fathers' careers in which the first child arrives.[19] 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.[20] 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 4 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

[19] 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.

[20] We report estimates from the specification used in Kleven et al. (2019a), which estimates parental outcomes net of lifecycle effects, in Figure A6.

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 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.

While the firm downgrading shown in Figure 4 is conditional on employment, a key question is the role of selection out of the labor force in driving firm downgrading among mothers. We show in Figure 5 that this pattern is driven almost entirely by firm switching, rather than selective exits from the labor force. For each year relative to first birth, we decompose the change in firm earnings premia since period $r = -2$ into two components: a.) a "transition effect" that captures changes in $\hat{\psi}_{j(i,t)}$ among mothers who are still employed; and b.) a "selection effect" that captures the contribution of exits from employment.[21] While selection temporarily raises the overall average firm earnings premium for mothers (long-dashed line), its influence disappears by year 2. The tight relationship between the transition effect (short-dashed line) and the overall change in firm earnings premia (thick solid line) shows that mothers' overall trend toward lower-paying firms is driven by transitions to lower-paying firms rather than by differential exit from the labor force. This aligns with the observation in Table 1 that the vast majority of American mothers remain attached to the labor force after childbirth. Similarly, the steady increase in fathers' firm earnings premia

[21]Specifically, let $\Delta y_r = \bar{y}_r - \bar{y}_{-2}$ denote the average change in firm earnings premium between each relative year r and 2 years prior to first birth, $r = -2$. This change in firm earnings 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. By construction, everyone in our sample is employed in year $r = -2$. The first term captures the average change in firm earnings 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.

are driven exclusively by employer transitions.

Since the timing of parenthood is, to some degree, a choice, we may also wonder whether selective timing into parenthood interacts with career progressions and the observed pattern of firm downgrading. Appendix Figure A3 reports estimates of parents' career trajectories by age at parenthood. We might expect that women who delay parenthood have characteristics such as higher educational attainment, greater career ambitions, or better networks, and would therefore be less susceptible to firm downgrading. Women who delay parenthood are indeed positively selected—in both their average firm premium and the average position within their firm's earnings distribution. Women who delay parenthood and work up the firm distribution prior to kids are not immune to downgrading, however. In fact, mothers who have children when they are older and more established in their careers experience the largest declines in firm earnings premia post-parenthood. Only the youngest mothers see approximately zero downgrading, largely because this group reaches a ceiling at such a low level of earnings premia that there is little room left to downgrade.

How much of the gender earnings gap can be accounted for by firm downgrading? Figure 6 examines this question by plotting the age-at-first-birth-adjusted gap in log earnings (gray shaded region) alongside the gap in firm earnings premia (pink region). The figure demonstrates that the gender gaps in overall earnings and firm pay predate parenthood. Prior to childbirth, women earn about 15 log points less than men, and they work at firms that pay about 8 log points less than the firms that employ men—suggesting that in an accounting sense, firms explain 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.[22]

[22]We present an alternative exercise in Figure A6, 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.

5.1 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. Our theoretical model in section 2—and the evidence report in section 4.2 that high-paying firms require long hours—suggest that women who are previously employed at high-paying firms may be more likely to downgrade, moving away from inflexible or demanding jobs at these high-paying firms towards more family-friendly positions. On the other hand, 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).

Figure 7a 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.[23]

Figure 7b plots firm downgrading across the distribution for fathers and for the three groups of mothers defined above.[24] 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 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 earnings 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.

One potential explanation of the correlation between downgrading and length of labor-market absence is that mothers may be more likely to pursue a career change. Through the lens of the theoretical model in section 2, to the extent that parenthood necessitates a job change and loss of firm-specific human capital, employer transitions may be more likely to represent a career interruption or reset than a movement up the job ladder. While we observe limited information about the nature of job transitions, Figure 8 reports results that are consistent with this hypothesis. For both mothers and fathers, we the post-parenthood changes in 2-digit industry by gender.[25] 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 A4), Figure 8 suggests their job changes are less likely to cross industries. To the extent that industry-specific

[23]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.

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

[25]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.

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 4 that women move toward less lucrative employers after childbirth.[26] While suggestive, these results are consistent with the implications of the theoretical model that amenity rigidity leads to human capital losses by inducing mothers to change careers to accommodate the demands of parenthood.

5.2 Are women transitioning to firms with greater amenities?

Our final analysis explores the extent to which the post-childbirth loss in pecuniary returns among working mothers is offset by the gain of "family-friendly" job amenities. To study this question, we connect our longitudinal LEHD-CHCK data to the restricted-use ACS. Because the ACS provides large samples only from 2005 onward, for this analysis we rely on parents with a first child born 2008-2014 to provide for sufficient leads and lags of the onset of parenthood. Reliance on the ACS expands our measures of working conditions but does not provide longitudinal information. Nevertheless, the repeated-cross-sectional nature of the ACS ensures we can follow a representative sample of our cohorts for several years prior and as much as a decade after the birth of a first child. Summary statistics for our sample are reported in Appendix Table A5.

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 relative to the pre-parenthood period, and those who downgrade to a lower-paying firm.[27] 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 examine six measure of amenities from the ACS: full-time work, commuting time, remote work, an occupation-based measure of the wage returns to hours worked, any health coverage, and employer-sponsored health coverage.

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:

[26] Card et al. (2024) estimate industry-level earnings 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.

[27] We classify mothers based on a comparison of their employer's earnings premium 2 years before childbirth to the average firm premium among their employers in the five years post-childbirth.

$$y_{it} = \gamma_t + \sum_{r \neq -2} \eta_r^U Mom_i \cdot Up_i \cdot D_r + \sum_{r \neq -2} \eta_r^D Mom_i \cdot Down_i \cdot D_r + \sum_r \beta_r D_r + X_{it}\delta + \epsilon_{it}, \tag{7}$$

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 reported in Figure 9. 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 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). Note that this outcome changes only when mothers switch occupations. The results in panel (d) show that this outcome declines for all mothers, but the shift is substantially more pronounced for women who transition to lower-paying firms. This finding suggests that women are shifting to roles within the firm that are more substitutable, echoing the finding

from Figure 4 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 9 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.

Overall, 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.

6 Conclusion

Leveraging large-scale data on U.S. job ads and newly linked administrative and survey datasets on U.S. workers, firms, and fertility, this paper provides new insight into the career trajectories of parents and the drivers of gender inequality in the United States. Our analysis is motivated by a model where workers climb a career ladder and weigh the benefits of

gaining firm-specific human capital against the prospect of moving to a higher-paying firm. The model's key insight is that otherwise-productive job matches may be destroyed—or never created in the first place—when amenities cannot be adjusted within the firm. This dynamic can also bring about persistent inequality, even in the absence of factors such as discrimination, if the availability of important amenities like flexible work arrangements is systematically related to firm-side determinants of pay.

We use our nationally representative data to show that both of these features of our model can be found in the U.S. labor market. Amenities such as flexible work are substantially rigid across firms, and part-time or flexible work is disproportionately found at low-paying firms. These patterns provide context for three new facts we document about the gender earnings gap in the United States. First, women begin transitioning to lower-paying firms after parenthood, a pattern that contributes significantly to the gender earnings gap among parents; 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; and 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.

Taken together, our findings provide new evidence that amenities rigidity in firms amplifies 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. 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., 2026). 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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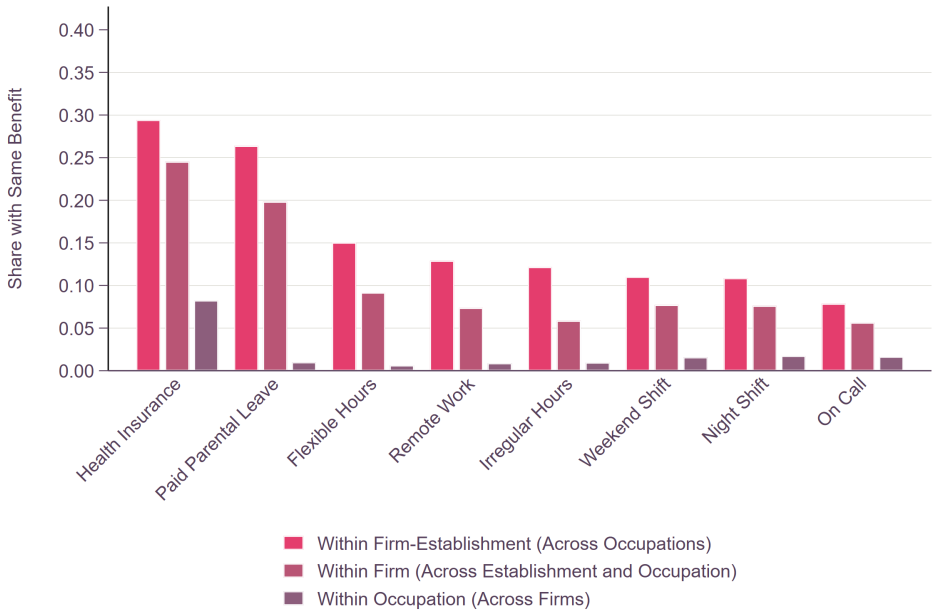
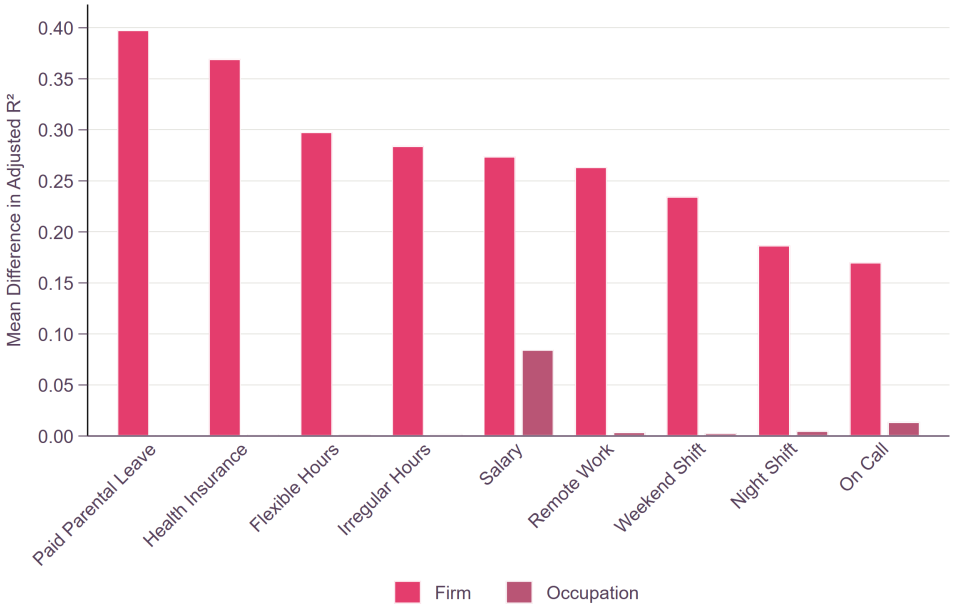
7 Figures and Tables

Figure 1: Evidence that Flexible Work Amenities Are Rigid in Firms

(a) Benefits Overlap Within and Between Firms



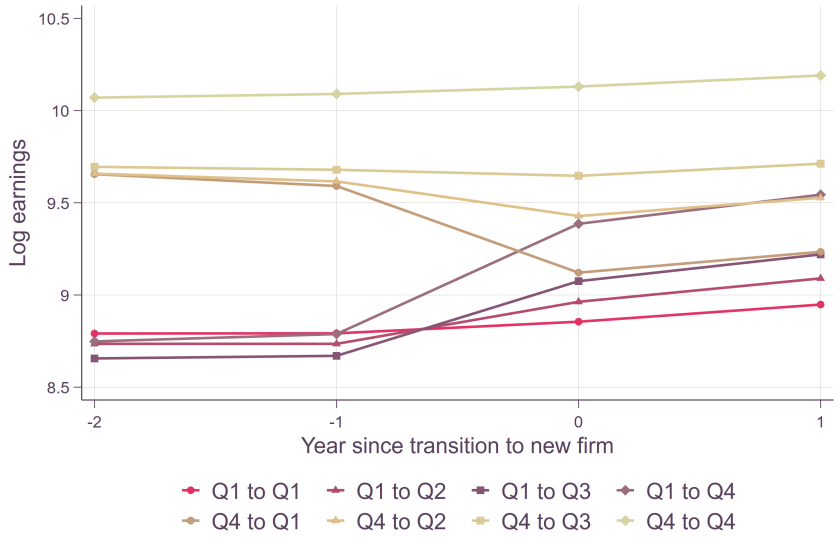
(b) Variation Explained by Firm vs. Occupation (Revelio)



Notes: Data drawn from Revelio job vacancy postings from the United States. Job-level amenities are measured using a search for relevant keywords. See Table A2 for a mapping of keywords to amenities. Panel (a) uses matched job pairs constructed in three sets. First, within each firm-establishment, we randomly pair job ads across different occupations. Second, for multi-establishment firms, we randomly pair job ads across different establishments and occupations within the same firm. Third, we randomly pair job ads across different firms within the same occupation and metro area, requiring the two firms to have different parent companies. For each pair, we compute an indicator for whether both jobs share the same amenity, conditional on at least one job having the amenity. We report the average of this indicator, collapsing first within the relevant grouping cell (firm-establishment, firm, or occupation-metro) and then averaging across cells to avoid overweighting large groups. Panel (b) is based on estimating equation 4 using the full sample of Revelio job ads data. The unit of analysis is the job ad. For each amenity, we regress an indicator for the job ad having the amenity on occupation and firm fixed effects. We then re-estimate the regression, dropping either the firm fixed effects or the occupation fixed effects, compute the difference in adjusted-R^2 relative to the full model, and plot the difference.

Figure 2: Firm earnings premia and log earnings, wages, and hours worked

(a) Changes in log earnings after job transition

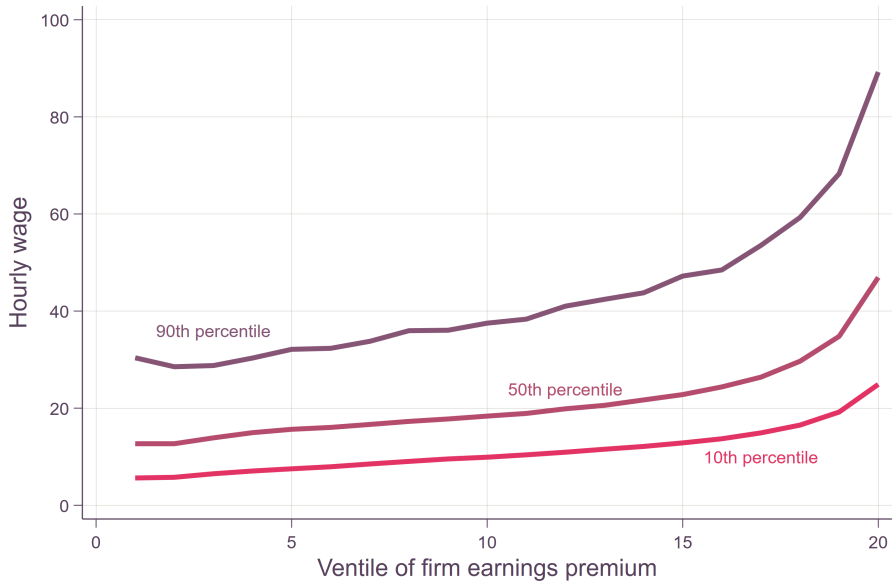


(b) Changes in firm earnings premia, hourly wages, and hours worked

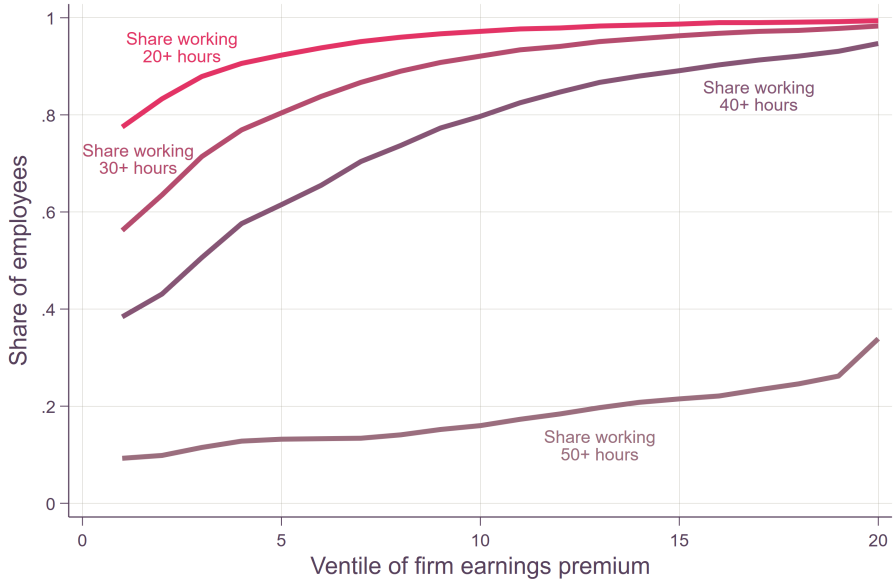
Notes: Sample includes workers in the 1997-2019 LEHD who worked 8 continuous quarters at origin firm before transitioning without interruption to a spell of at least 8 quarters at a destination firm. Panel (b) additionally restricts to workers who can be linked at the worker-by-calendar-quarter level to responses in the 2001-2019 American Community Survey. Panel (a) shows changes in log earnings around a change to a new firm, separately by quartile of earnings premium of the origin and destination firm. Transition to new firm happens in time 0. Panel (b) shows changes in log hourly wages and log hours worked between year before and second year after transition to firm (vertical axis) against change in earnings premium (horizontal axis). Event-study versions of panel (b) are reported in Figure A2. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY26-P2593-R13114)

Figure 3: Distribution of hours and wages across U.S. firms

(a) Firms with high earnings premia pay high wages across the distribution



(b) Firms with high earnings premia have low variation in hours worked

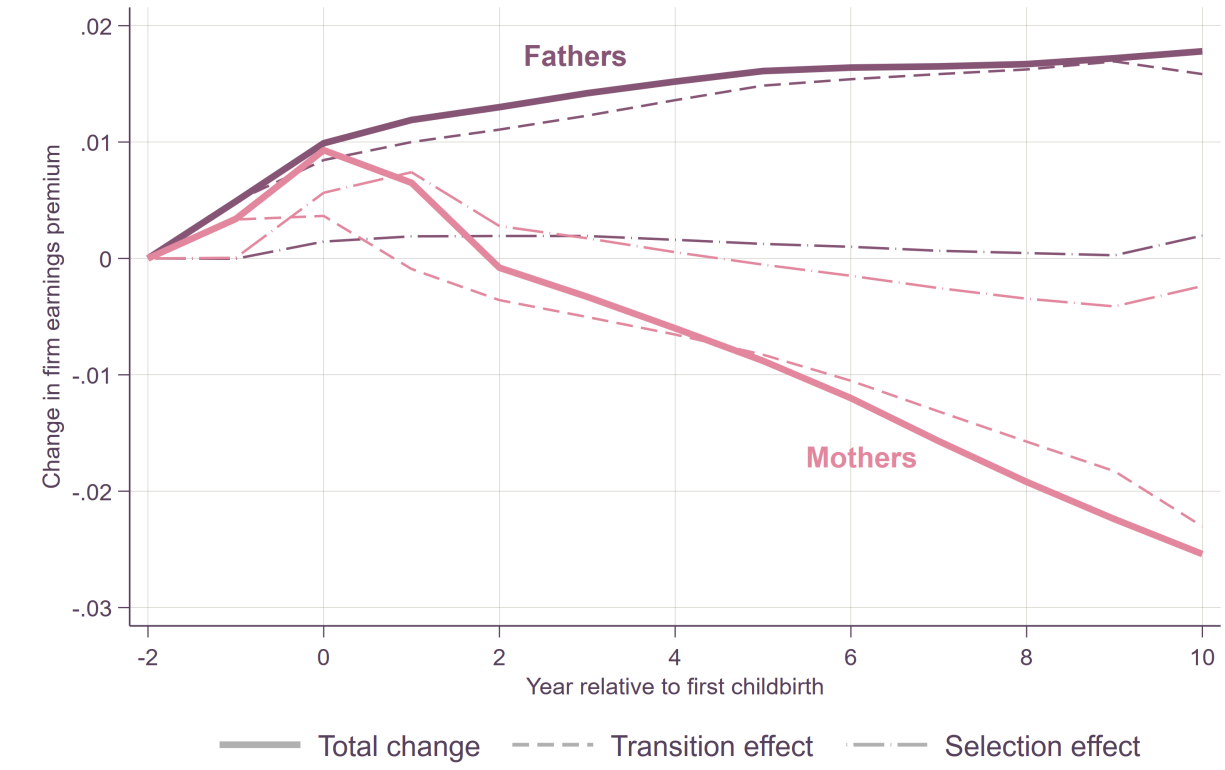


Notes: Sample constructed from linkage between 1997-2019 LEHD and 2001-2019 American Community Survey. Sample includes U.S. firms that can be matched to at least 10 workers at the firm-quarter level in the ACS. Wages are constructed by dividing earnings by the product of weeks worked and usualy hours worked in the last year. Percentiles and proportions are calculated within the firm and then averaged across firms within a ventile of firm earnings premium. See section 4.2 for details on estimation of firm earnings premium. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY26-P2593-R13114)

Figure 4: Changes in parents' employment within and between firms

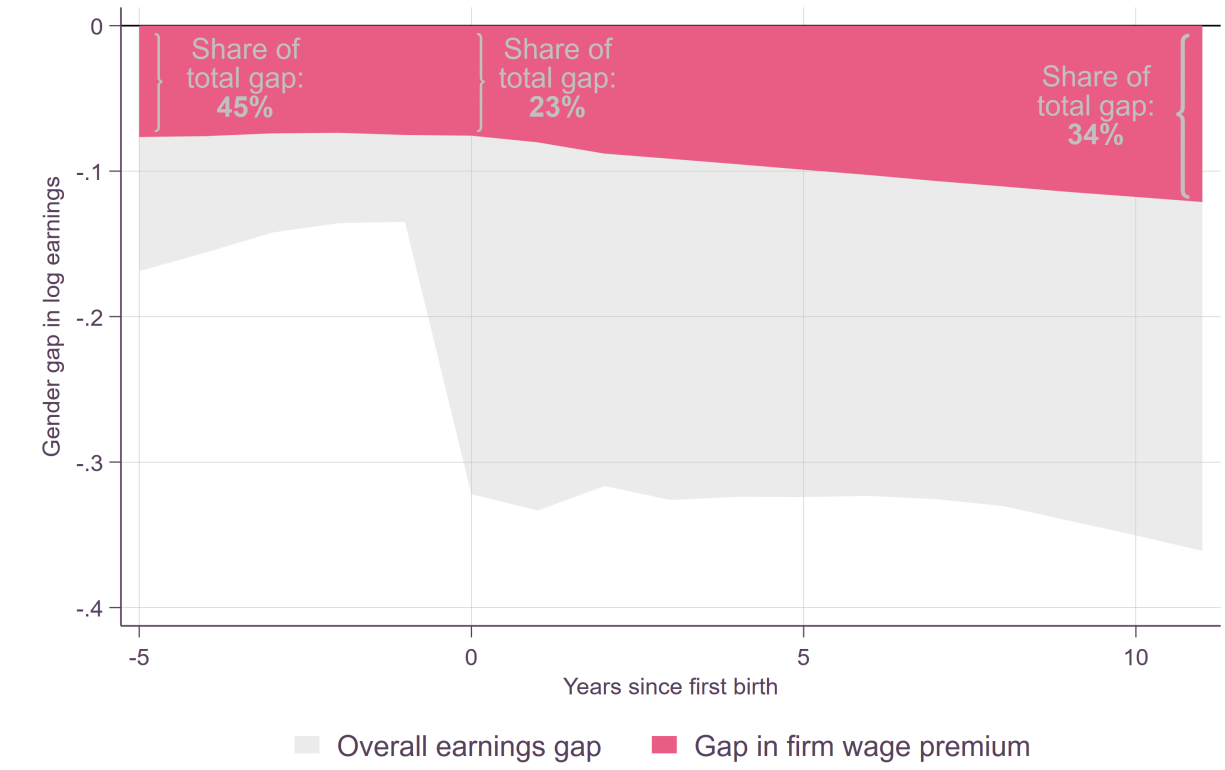
Notes: Sample constructed from workers in the 1997-2019 LEHD linked to fertility records from the CHCK, limited to women and men age 23-45 at first birth. The figure plots, on the x-axis, the average firm quality ($\psi_(j(i,t))$) for mothers and fathers in each year relative to having their first child, 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 5: Firm downgrading is driven by employer transitions



Notes: Sample constructed from workers in the 1997-2019 LEHD linked to fertility records from the CHCK, limited to women and men age 23-45 at first birth. 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)

Figure 6: Evolution of the gender earnings gap after parenthood

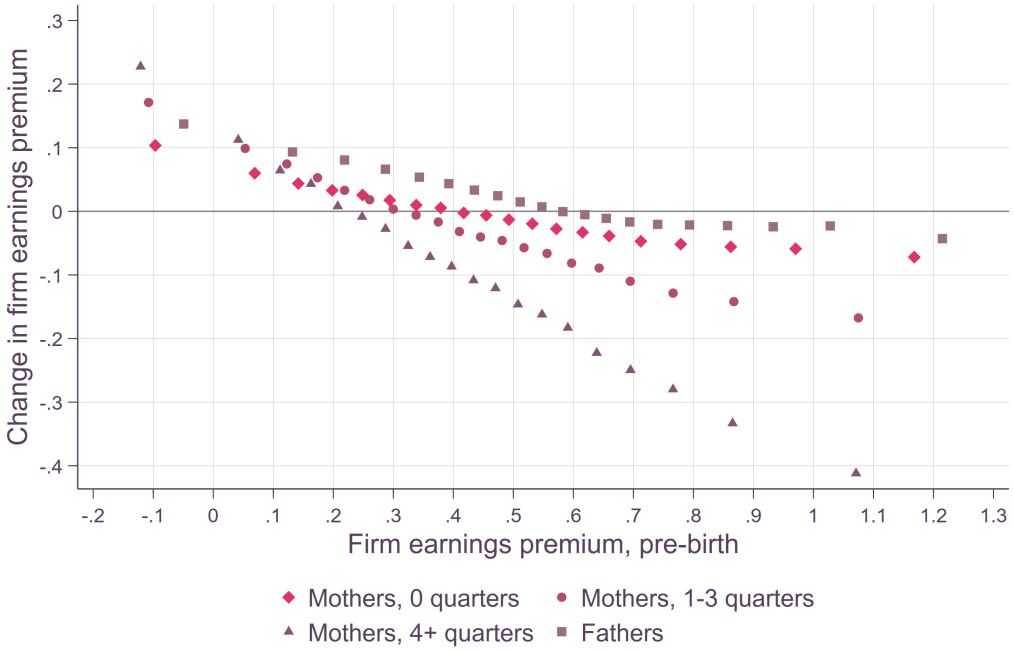


Notes: Sample constructed from workers in the 1997-2019 LEHD linked to fertility records from the CHCK, limited to women and men age 23-45 at first birth. The figure above plots the regression-adjusted gender earnings gap in log earnings and firm earnings premium by year relative to birth of first child. 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)

Figure 7: Changes in firm quality across the distribution

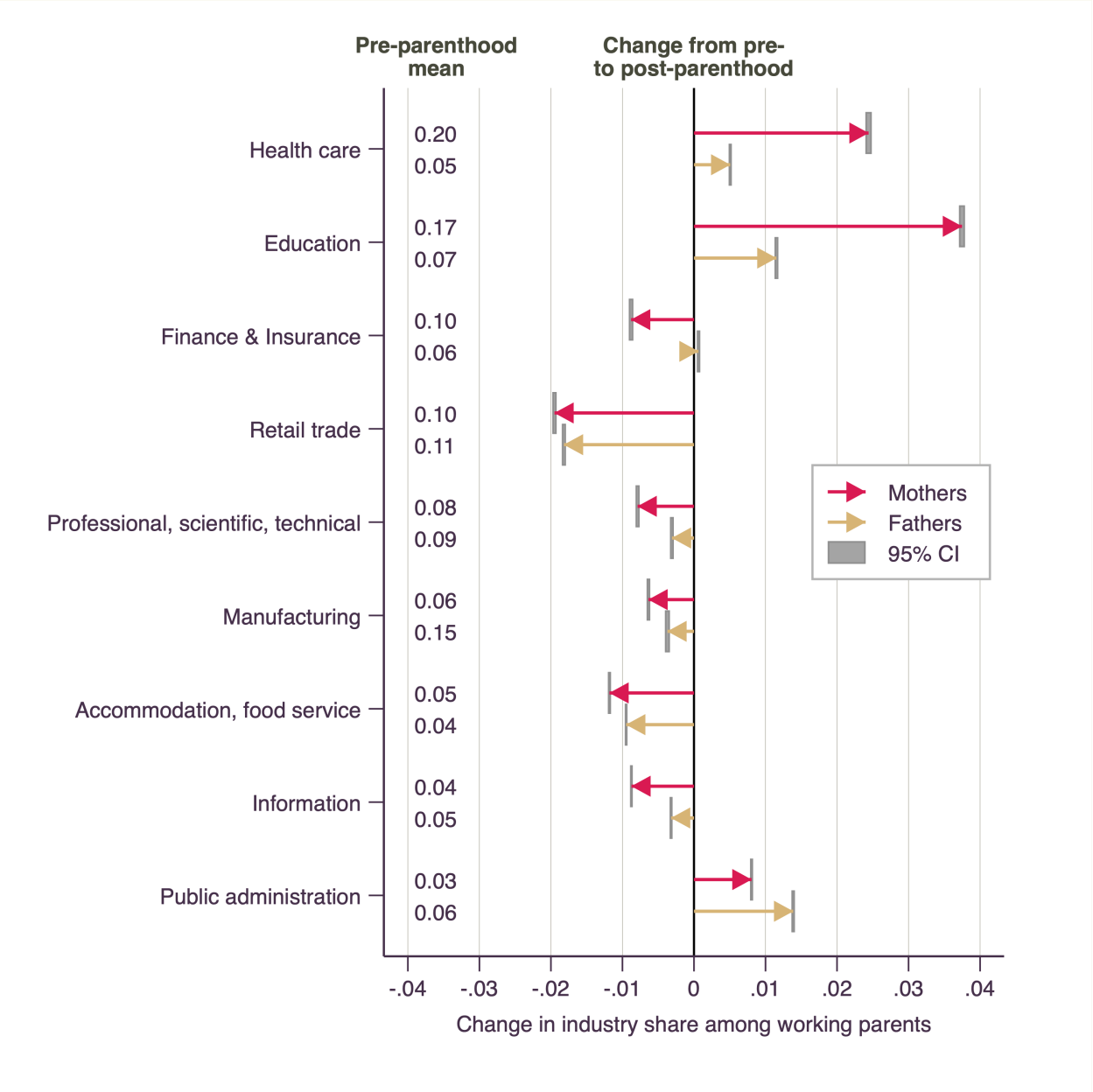
(a) Changes in firm quality for mothers and fathers, before and after birth of first child

(b) Changes in firm quality for mothers, by duration out of labor force



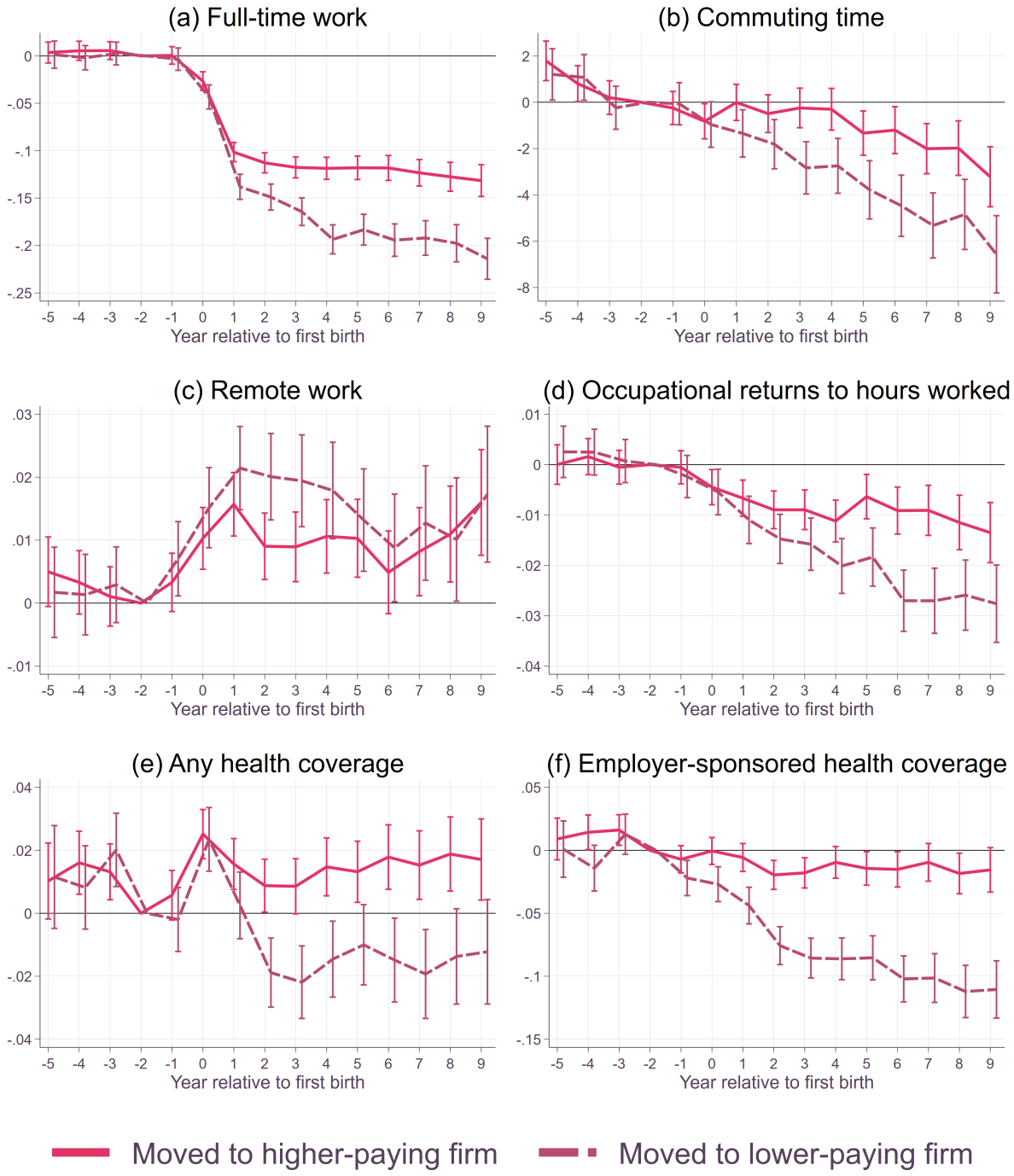
Notes: Sample constructed from workers in the 1997-2019 LEHD linked to fertility records from the CHCK, limited to women and men age 23-45 at first birth. The figure plots the average change in firm quality ($\bar{\psi}_{j(i),t\geq b} - \bar{\psi}_{j(i),t<b}$) by firm quality prior to childbirth for 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 7b, 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 8: Change in industry composition among working parents, before and after childbirth



Notes: Sample constructed from workers in the 1997-2019 LEHD linked to fertility records from the CHCK, limited to women and men age 23-45 at first birth. 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 9: Mother-father gap in job characteristics, by type of job transition after childbirth



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 earnings 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)

Table 1: 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)

Online Appendix

A Data and Measurement

This section provides additional detail on our data sources and sample criteria for our analysis of parents' career trajectories. 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.[28] 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 provides 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).[29]

[28]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 Genadek et al. (2022) 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).

[29]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.[30] 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 1 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

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

[30]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 shows 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 A5 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 A5 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' earnings losses after childbirth. We first present evidence on the gender earnings gap around parenthood, using our LEHD-CHCK sample and an event study design similar to Kleven et al. (2019a) and based on the regression

$$y_{ibt} = \gamma_t + \sum_{r \neq -2} \beta_r \mathbb{1}\{t - b = r\} + X_{ibt}\delta + \epsilon_{ibt}, \tag{8}$$

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.[31]

Figure A6a presents estimates of equation 8 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

[31] 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 8, 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.[32] 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 A6a, 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 8 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 A6b shows that these demographic controls can explain a relatively sizable share of the conditional earnings gap. The solid line in Figure A6b 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 8 with the sample of working mothers, as shown by the dashed line in Figure A6a) 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 5), 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 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.

[32] 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.

Appendix Figures and Tables

Table A1: Overview of Data Sources and Analysis Samples

Sample	Data Sources	Key Variables	Sample Criteria	Sample Size	Tables & Figures
Revelio job ads	Revelio Labs job vacancy data	Amenities (flexible hours, remote work, health insurance, paid leave, irregular hours, on-call, night/weekend shifts); firm; occupation (4-digit SOC); metro area	U.S. job postings with non-missing firm, occupation, and metro area	2.5–2.8M job ads	Figs. 1b, 1a; Tables A2, A3
Full LEHD (AKM estimation)	LEHD (1997–2019)	Quarterly earnings; firm identifier; worker identifier	Workers age 18–61; annual earnings $\geq$\$3,500; firms with $\geq$15 non-singleton person-years	25 states, $\approx$95% of U.S. employment	Firm earnings premia ($\hat{\psi}$) used throughout (Section 4.2)
LEHD job switchers	LEHD (1997–2019)	Log earnings; firm earnings premia quartile of origin and destination firm	$\geq$8 continuous quarters at origin firm; switch without interruption to $\geq$8 quarters at destination	16.7M worker-quarters	Fig. 2a
LEHD-ACS job switchers	LEHD (1997–2019) linked to ACS (2001–2019)	Log hours; log hourly wages; firm earnings premia quartile of origin and destination	LEHD job-switcher sample additionally linked to ACS	1.1M worker-quarters	Figs. 2b, A2
LEHD-ACS firm cross-section	LEHD (1997–2019) linked to ACS (2001–2019) at worker$\times$quarter	Log hourly wages; usual hours; remote work; employer-sponsored health insurance; occupation; hourly wages and hours worked by percentile within firm; firm earnings premium ventile	Firms with $\geq$10 ACS respondents at the firm-quarter level	132,000 firms, 6.7M workers	Figs. A1, 3a, 3b; Table A4
LEHD-CHCK (main analysis)	LEHD (1997–2019); CHCK; 2000 Census; SSA Numident	Log earnings; firm earnings premium; within-firm earnings position; industry (2-digit NAICS); tenure	Parents age 23–45 at first birth; first birth 2001–2010; born in LEHD state; earnings $\geq$\$3,500 in each of 4 pre-birth years; $\geq$1 year with earnings post-birth	2.17M mothers; 2.52M fathers	Figs. 4, 5, 6, 7a, 7b, 8, A3, A4, A5, A6; Tables 1, A5
LEHD-CHCK-ACS (parents + amenities)	LEHD (1997–2019); CHCK; 2000 Census; SSA Numident; ACS (2003–2019)	Full-time status; commute time; remote work; occupational returns to hours; health insurance (any source and employer-sponsored)	Parents age 23–45 at first birth; first birth 2008–2014; linked to ACS and to firm with estimable earnings premium	220,000 mothers, 254,000 fathers	Fig. 9; Table A5 (Panel B)

Notes: This table summarizes the data sources, key variables, sample restrictions, and associated exhibits for each analysis sample used in the paper. The LEHD covers 25 states (see Appendix A for details). AKM firm earnings premia are estimated on the full LEHD sample (1997–2019) and applied to subsamples as needed. "CHCK" refers to the Census Household Composition Key.

Table A2: Amenity Keyword Extraction from Job Postings

Amenity (or Disamenity)	**Keyword Phrases**
Health Insurance	"health insurance", "medical insurance", "health coverage", "medical coverage", "health benefits"
Paid Parental Leave	"paid parental", "paid maternity", "paid paternity", "paid family leave"
Flexible Hours	"flexible work schedule", "flexible working hours", "flexible work arrangement", "flex time", "flextime" *Excluded if:* "must have flexible", "must be flexible", "requires flexible", "ability to work flexible"
Remote Work	"remote work option", "work from home option", "remote-friendly", "fully remote", "hybrid remote", "100% remote", "completely remote", "remote opportunity" *Excluded if:* "not remote", "no remote"
Irregular Hours	"irregular hours", "variable hours", "inconsistent hours", "unpredictable schedule", "varying schedule", "long hours", "extended hours", "overtime required", "evenings and weekends"
On Call	"on call", "on-call", "oncall", "on call rotation", "on call schedule"
Night Shift	"night shift", "overnight shift", "graveyard shift", "third shift", "nights required"
Weekend Shift	"weekend shift", "weekends required", "weekend availability", "must work weekends", "weekend hours"

Notes: This table documents the keyword phrases used to extract amenities from job posting descriptions in the Revelio Labs dataset shown in Figure 1a. All searches are case-insensitive. Some amenities include exclusion criteria (shown in italics) to avoid false positives where similar phrases refer to job requirements rather than employer-provided amenities.

Table A3: Amenity Prevalence Across Samples

Amenity	**Proportion (%)**		
	Overall Sample	Variance Decomp.	Matched Pairs
Health Insurance	14.3	12.7	12.7
Paid Parental Leave	2.3	2.4	2.4
Flexible Hours	1.2	1.3	1.3
Remote Work	1.7	1.7	1.7
Irregular Hours	1.8	1.8	1.8
On Call	3.0	3.0	3.0
Night Shift	2.9	2.6	2.6
Weekend Shift	3.0	2.5	2.5
Observations	2,656,508	2,307,335	2,307,909

Notes: This table presents the proportion of job postings mentioning each amenity across three samples. We randomly sample 10 million Revelio job postings, which are then restricted to those in the U.S. in 2021-2025 with non-missing company, occupation, and metro area information (column 1). The variance decomposition sample (column 2) restricts further to firms with at least two locations and occupation-metro areas with at least two firms (used in Figure 1b). The matched pairs sample (column 3) restricts the overall sample to firms with at least two establishments, with a cap of 200 randomly-sampled establishments per firm (used in Figure 1a).

Table A4: Hours and wages are positively correlated with firm earnings premia

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome: Log hourly wage			Outcome: Log hours worked		
Firm earnings premium	0.982***	0.683***	0.705***	0.301***	0.206***	0.200***
	(0.000902)	(0.00101)	(0.00118)	(0.000515)	(0.000580)	(0.000680)
R-squared	0.230	0.449	0.455	0.094	0.215	0.218
Occupation		X	X		X	X
Industry			X			X

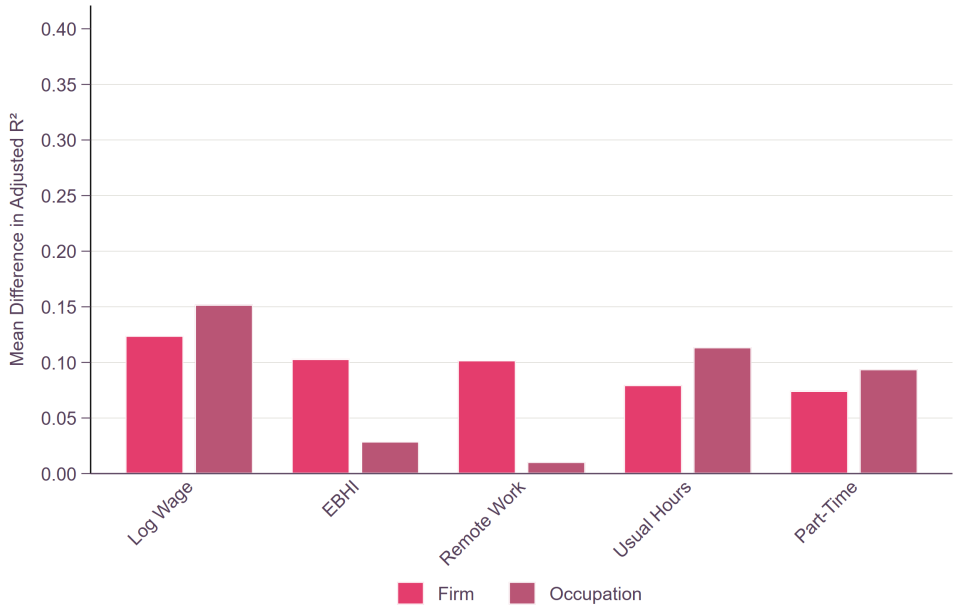
Notes: Data drawn from 1998-2019 LEHD linked to workers age 18-64 in the 2001-2019 American Community Survey. Columns 1-3 display coefficients from a regression of log hourly wage on firm earnings premium and, in some cases, fixed effects for 3-digit occupation and 3-digit industry. Columns 4-6 report estimates from identical regressions with log hours worked as the dependent variable. Regressions are weighted using ACS sampling weights. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R13114)

Table A5: 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)

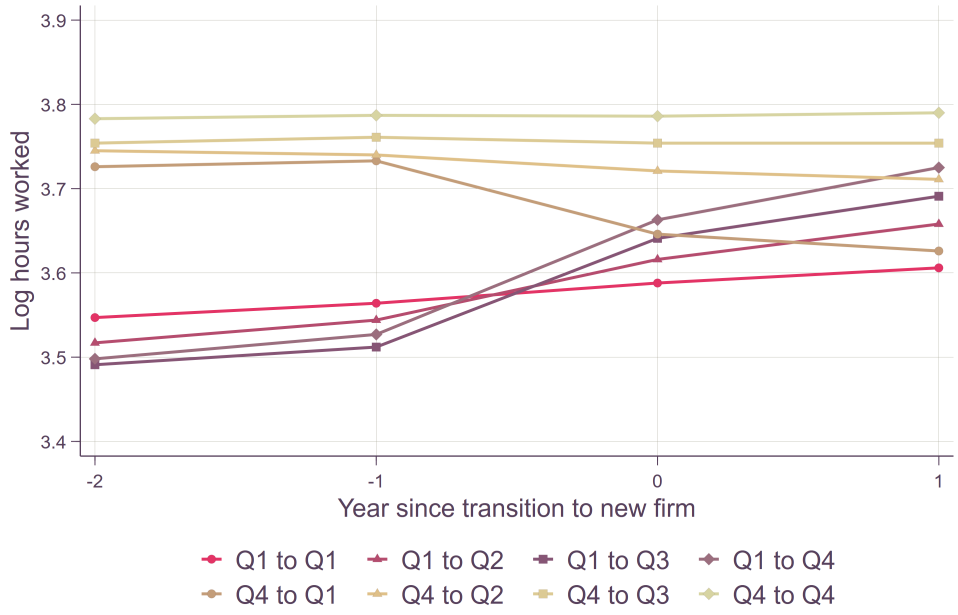
Figure A1: Evidence that Flexible Work Amenities Are Rigid in Firms (LEHD-ACS)



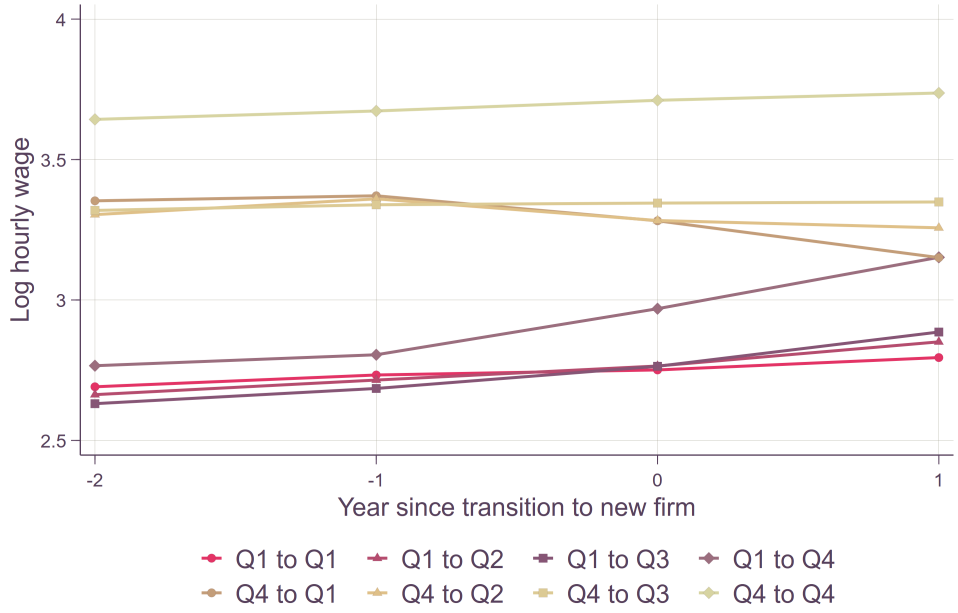
Notes: Data drawn from 1997-2019 LEHD linked to 2001-2019 ACS. Amenities are measured based on responses to the ACS. Figure is based on estimating equation 4. The unit of analysis is the worker-firm match. For each amenity, we regress an indicator for having the amenity on occupation and firm fixed effects. We then re-estimate the regression, dropping either the firm fixed effects or the occupation fixed effects, compute the difference in adjusted-R^2 relative to the full model, and plot the difference. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R13114)

Figure A2: Changes in hours and wages among workers who change jobs

(a) Change in log hours worked



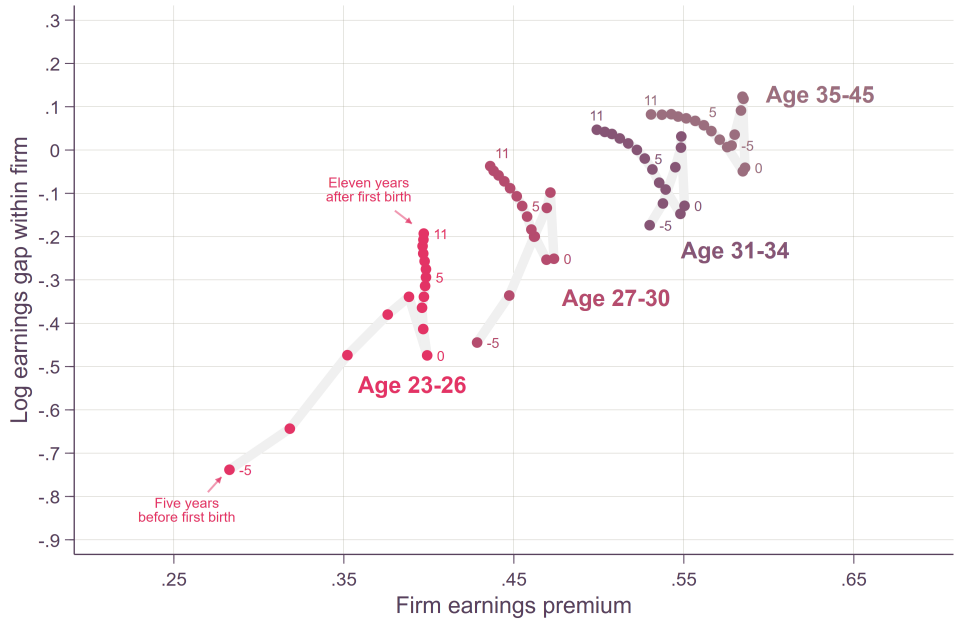
(b) Changes in log hourly wages



Notes: Sample includes workers in the 1997-2019 LEHD who worked 8 continuous quarters at origin firm before transitioning without interruption to a spell of at least 8 quarters at a destination firm, and who can be linked to responses in the American Community Survey. Panel (a) shows changes in log hours worked around a change to a new firm, separately by quartile of earnings premium of the origin and destination firm. Transition to new firm happens in time 0. Panel (b) shows changes in log hourly wages around a change to a new firm, separately by quartile of origin and destination firm earnings premia. ACS measures of hours and earnings ask about the prior calendar year, so estimates in event-time 1 reflect a combination of jobs at both the origin and destination firm. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R13114)

Figure A3: Parents' transitions within and between firms, by age

(a) Mothers' career trajectories by age at birth

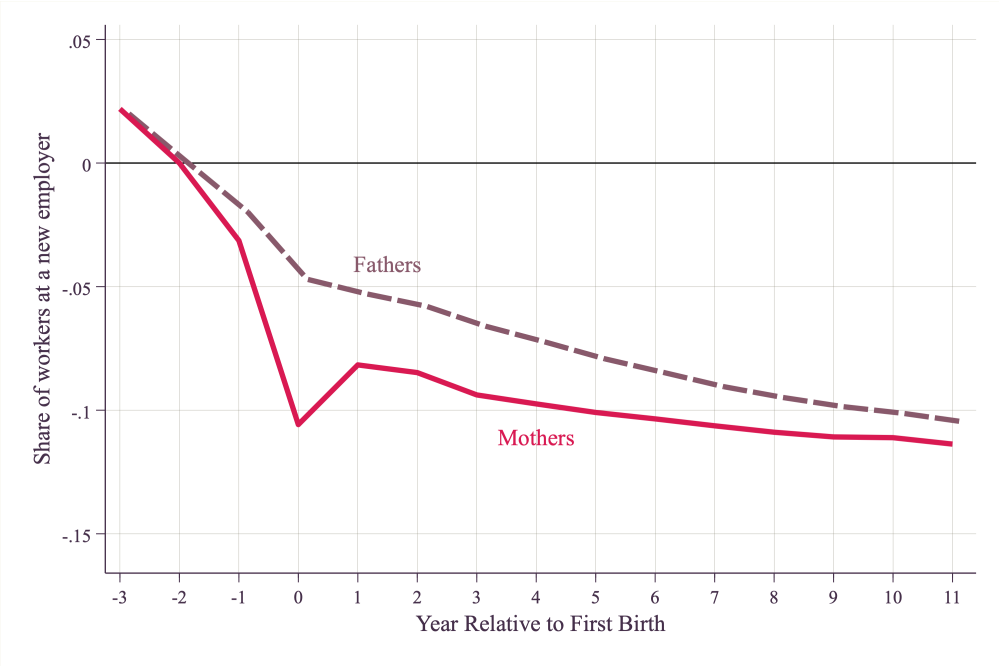


(b) Fathers' career trajectories by age at birth

Notes: Data is drawn from the 1998-2019 LEHD linked to parents' fertility histories constructed from the CHCK and 2000 Census. The figures 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, separately by age at the parent's first birth. Years relative to first birth are 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. Results were approved for release by the U.S. Census Bureau. (CBDRB-FY25-P2593-R13114)

Figure A4: 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 A5: Industry composition among working mothers, by length of labor-force interruption around childbirth

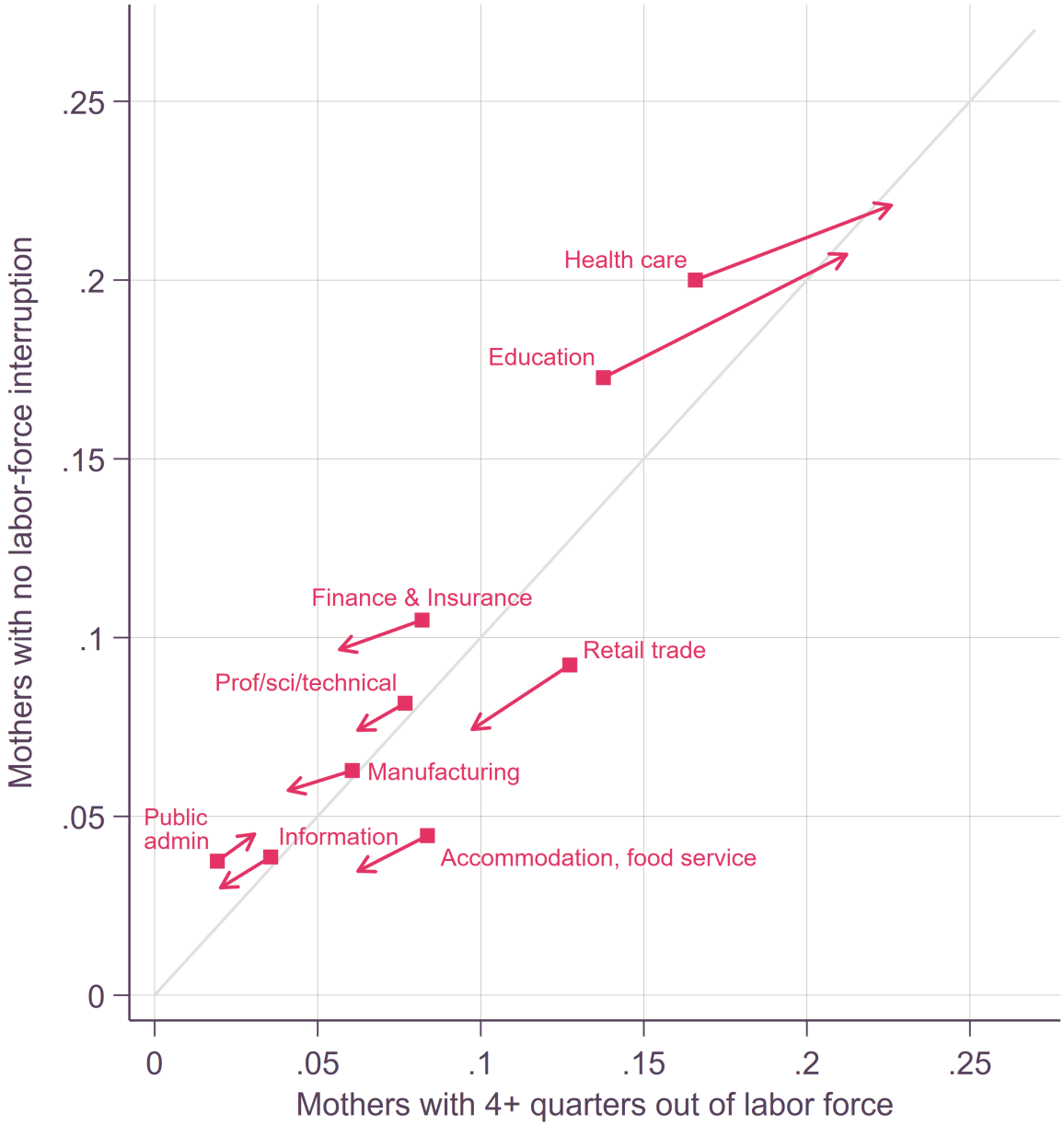
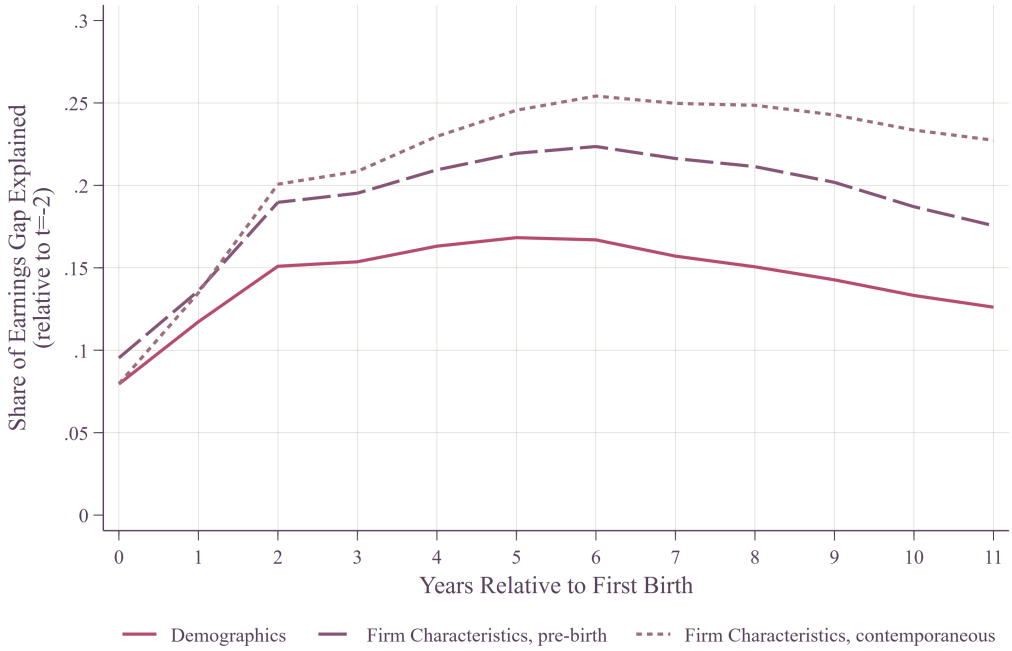


Figure plots share of working mothers in each two-digit NAICS industry prior to childbirth (markers), along with change in share of mothers in each industry after childbirth (length and direction of arrow). Estimates reported for mothers with 4 or more quarters of non-employment after first childbirth (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 A6: 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 A6a 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 A6b 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)

C Model Appendix

We solve the model by backward induction. For ease of notation, we suppress t subscripts. We use tildes to indicate choices made in the prior period, and all other variables refer to the current period. We assume throughout that offer distributions $F(\psi|a=0)$ and $F(\psi|a=1)$ are absolutely continuous with strictly positive density on their supports, ensuring that all regions of the offer space receive positive probability.

Period 2 Problem

At the start of period 2, an individual has access to their period-1 firm (with any accumulated human capital) as well as two new job offers: $\psi^0 \sim F(\psi|a=0)$ from an inflexible firm and $\psi^1 \sim F(\psi|a=1)$ from a flexible firm. Period 1 offers are not recalled; workers who leave their period-1 firm cannot return to it.

The worker chooses among the available options to maximize utility:

$$V = \log(y) + \alpha \log(\ell) \tag{9}$$

subject to:

$$y = \psi \cdot \exp(\gamma_e \mathbf{1}\{\text{stay at period-1 firm}\}) \cdot h \tag{10}$$

$$h + \ell + \xi_i = 1 \tag{11}$$

$$h = \bar{h} \quad \text{if at inflexible firm} \tag{12}$$

$$h \in [0,1] \quad \text{if at flexible firm} \tag{13}$$

We maintain the feasibility assumption $\bar{h} < 1 - \xi_f$, which ensures $1 - \bar{h} - \xi_i > 0$ for both genders and guarantees that working at an inflexible firm after parenthood is feasible. Since $\xi_f > \xi_m$, this condition is binding for women and implies it holds for men as well.

Optimal hours at flexible firms. At a flexible firm, the worker maximizes over h:

$$\max_h \ \log(\psi h) + \alpha \log(1 - h - \xi_i)$$

The first-order condition $1/h = \alpha/(1-h-\xi_i)$ gives:

$$h_i^* = \frac{1 - \xi_i}{1 + \alpha}$$

Note that $h_f^* < h_m^*$ since $\xi_f > \xi_m$, and both satisfy $h_i^* < \bar{h}$ since we assume $\bar{h} > h_0^* \equiv 1/(1+\alpha)$, the optimal hours without children, and $h_i^* \leq h_0^*$ for all i. Note also that the first-order condition implies $1 - h_i^* - \xi_i = \alpha h_i^*$, which we use below.

Define the adjustment factor for gender i:

$$A_i \equiv \frac{h_i^*}{\bar{h}} \cdot \left(\frac{1 - h_i^* - \xi_i}{1 - \bar{h} - \xi_i} \right)^{\alpha}$$

A worker is indifferent between a flexible offer ψ^1 and an inflexible offer $\psi^1 \cdot A_i$ of equal wage

premium: they prefer the flexible offer iff $\psi^1 A_i > \psi^0$. The adjustment factor depends on ξ_i, $\bar{h}$, and α; the dependence on ξ_i is what generates gender differences in sorting behavior.

Lemma 1. $A_f > A_m > 1$.

Proof. Step 1: $A_i > 1$ for all $\xi_i \geq 0$. For any $\xi_i \geq 0$, h_i^* is the unique maximizer of $f(h;\xi_i) \equiv \log(h) + \alpha \log(1-h-\xi_i)$ over $h \in (0, 1-\xi_i)$, by strict concavity. Since $\bar{h} > h_0^* \geq h_i^*$ ensures $\bar{h} \neq h_i^*$:

$$f(h_i^*;\xi_i) > f(\bar{h};\xi_i) \implies \log(h_i^*) + \alpha \log(1 - h_i^* - \xi_i) > \log(\bar{h}) + \alpha \log(1 - \bar{h} - \xi_i)$$

Rearranging and exponentiating gives $A_i > 1$ directly, for all $\xi_i \geq 0$.

Step 2: A_i is strictly increasing in ξ_i. Write $\log A_i = \max_h[f(h;\xi_i)] - f(\bar{h};\xi_i)$. By the envelope theorem:

$$\frac{d \log A_i}{d\xi_i} = \left.\frac{\partial f}{\partial \xi_i}\right|_{h=h_i^*} - \left.\frac{\partial f}{\partial \xi_i}\right|_{h=\bar{h}} = \frac{-\alpha}{1 - h_i^* - \xi_i} - \frac{-\alpha}{1 - \bar{h} - \xi_i} = \alpha \left[\frac{1}{1 - \bar{h} - \xi_i} - \frac{1}{1 - h_i^* - \xi_i}\right]$$

Since $\bar{h} > h_i^*$ implies $1 - \bar{h} - \xi_i < 1 - h_i^* - \xi_i$, the bracketed expression is strictly positive. Therefore A_i is strictly increasing in ξ_i.

Step 3: $A_f > A_m$. Since A_i is strictly increasing in ξ_i and $\xi_f > \xi_m$, we have $A_f > A_m$. Combined with Step 1: $A_f > A_m > 1$. □

Workers entering period 2 at an inflexible firm $\tilde{\psi}^0$. Define $\bar{\psi}^0 \equiv \tilde{\psi}^0 \exp(\gamma_e)$. The worker's options are:

$$V^{\text{stay}} = \log(\bar{\psi}^0 \bar{h}) + \alpha \log(1 - \bar{h} - \xi_i) \tag{14}$$
$$V^{\text{new flex}} = \log(\psi^1 h_i^*) + \alpha \log(1 - h_i^* - \xi_i) \tag{15}$$
$$V^{\text{new inflex}} = \log(\psi^0 \bar{h}) + \alpha \log(1 - \bar{h} - \xi_i) \tag{16}$$

Since the stay and new inflexible options both involve working $\bar{h}$ hours, the choice between them reduces to comparing $\bar{\psi}^0$ and ψ^0 directly. The worker stays if:

$$\bar{\psi}^0 \geq \psi^1 A_i \tag{17}$$
$$\bar{\psi}^0 \geq \psi^0 \tag{18}$$

The worker switches to the new inflexible firm if:

$$\psi^0 > \bar{\psi}^0 \tag{19}$$
$$\psi^0 \geq \psi^1 A_i \tag{20}$$

The worker switches to the new flexible firm if:

$$\psi^1 A_i > \bar{\psi}^0 \tag{21}$$
$$\psi^1 A_i > \psi^0 \tag{22}$$

The post-period firm premium can be written compactly as:

$$\psi_i^{\text{post}} = \begin{cases} \max\{\bar{\psi}^0, \psi^0\} & \text{if } \max\{\bar{\psi}^0, \psi^0\} \geq \psi^1 A_i \\ \psi^1 & \text{if } \psi^1 A_i > \max\{\bar{\psi}^0, \psi^0\} \end{cases}$$

The continuation value is:

$$\varphi_i^0(\tilde{\psi}^0) = E_{\psi^0,\psi^1}\left[\log \psi_i^{\text{post}}\right] + c_i^0 \tag{23}$$

where c_i^0 collects terms not depending on the wage premium of the chosen firm. Since $A_f > A_m$, for any fixed $\tilde{\psi}^0$ and γ_e, the condition $\bar{\psi}^0 \geq \psi^1 A_i$ is strictly harder to satisfy for women:

$$P(\text{stay} \mid \tilde{\psi}^0, f) < P(\text{stay} \mid \tilde{\psi}^0, m) \quad \text{for all } \tilde{\psi}^0, \gamma_e$$

Workers entering period 2 at a flexible firm $\tilde{\psi}^1$. Define $\bar{\psi}^1 \equiv \tilde{\psi}^1 \exp(\gamma_e)$. The worker's options are:

$$V^{\text{stay}} = \log(\bar{\psi}^1 h_i^*) + \alpha \log(1 - h_i^* - \xi_i) \tag{24}$$
$$V^{\text{new inflex}} = \log(\psi^0 \bar{h}) + \alpha \log(1 - \bar{h} - \xi_i) \tag{25}$$
$$V^{\text{new flex}} = \log(\psi^1 h_i^*) + \alpha \log(1 - h_i^* - \xi_i) \tag{26}$$

Since the stay and new flex options both involve hours h_i^*, the choice between them reduces to comparing $\bar{\psi}^1$ and ψ^1 directly. The worker stays if:

$$\bar{\psi}^1 \geq \psi^0 / A_i \tag{27}$$
$$\bar{\psi}^1 \geq \psi^1 \tag{28}$$

The worker switches to the new inflexible firm if:

$$\psi^0 / A_i > \bar{\psi}^1 \tag{29}$$
$$\psi^0 \geq \psi^1 A_i \tag{30}$$

The worker switches to the new flexible firm if:

$$\psi^1 > \bar{\psi}^1 \tag{31}$$
$$\psi^1 \geq \psi^0 / A_i \tag{32}$$

The post-period firm premium can be written compactly as:

$$\psi_i^{\text{post}} = \begin{cases} \max\{\bar{\psi}^1, \psi^1\} & \text{if } \max\{\bar{\psi}^1, \psi^1\} \geq \psi^0 / A_i \\ \psi^0 & \text{if } \psi^0 / A_i > \max\{\bar{\psi}^1, \psi^1\} \end{cases}$$

The continuation value is:

$$\varphi_i^1(\tilde{\psi}^1) = E_{\psi^0,\psi^1}\left[\log \psi_i^{\text{post}}\right] + c_i^1 \tag{33}$$

where c_i^1 collects terms not depending on the wage premium of the chosen firm. Since $A_f > A_m$, for any fixed $\tilde{\psi}^1$ and γ_e, the condition $\bar{\psi}^1 \geq \psi^0/A_i$ is strictly easier to satisfy for women:

$$P(\text{stay} \mid \tilde{\psi}^1, f) > P(\text{stay} \mid \tilde{\psi}^1, m) \quad \text{for all } \tilde{\psi}^1, \gamma_e$$

Period 1 Problem

In period 1, workers have no children yet ($\xi_i = 0$). Each worker receives two job offers: $\psi^0 \sim F(\psi|a=0)$ from an inflexible firm and $\psi^1 \sim F(\psi|a=1)$ from a flexible firm, and chooses between them to maximize expected lifetime utility.

Hours choice in period 1. At flexible firms, since $\xi_i = 0$:

$$h_0^* = \frac{1}{1+\alpha}$$

identically for men and women. At inflexible firms, hours are fixed at $\bar{h} > h_0^*$.

Period 1 threshold. Workers choose the inflexible firm if:

$$\log(\psi^0 \bar{h}) + \alpha \log(1-\bar{h}) + \varphi_i^0(\psi^0) > \log(\psi^1 h_0^*) + \alpha \log(1-h_0^*) + \varphi_i^1(\psi^1)$$

where φ_i^j denotes the continuation value from entering period 2 at firm type j with period 1 wage ψ^j, as defined in equations (23) and (33). This defines a threshold $T_i(\psi^1)$ such that workers choose the inflexible firm if and only if $\psi^0 > T_i(\psi^1)$:

$$T_i(\psi^1) = \psi^1 \cdot \frac{h_0^*}{\bar{h}} \cdot \left(\frac{1-h_0^*}{1-\bar{h}}\right)^{\alpha} \cdot \exp\left[\varphi_i^1(\psi^1) - \varphi_i^0(T_i(\psi^1))\right] \tag{34}$$

Without recall, φ_i^0 depends on $T_i(\psi^1)$—the period-1 inflexible wage itself—making (34) an implicit equation in $T_i(\psi^1)$. Denoting the right-hand side as $R(T)$: $\varphi_i^0(T)$ is strictly increasing in T (a higher period-1 inflexible wage raises the probability of staying and realizing human capital gains, raising the continuation value), so $R(T)$ is strictly decreasing in T. Moreover, $R(T) \to \infty$ as $T \to 0^+$ (since $\varphi_i^0(T) \to -\infty$) and $R(T) \to 0$ as $T \to \infty$ (since $\varphi_i^0(T) \to \infty$). By continuity and strict monotonicity, there exists a unique fixed point $T_i(\psi^1)$ satisfying (34).

We show that the option value difference $\varphi_i^1(\psi^1) - \varphi_i^0(T_i(\psi^1))$ is strictly larger for women than men for all $\gamma_e > 0$, which from (34) directly implies $T_f(\psi^1) > T_m(\psi^1)$.

Step 1: At $\gamma_e = 0$, thresholds are identical. With $\gamma_e = 0$ there are no returns to staying at the period-1 firm. Without recall, the period-2 payoff depends only on the two new offers (ψ^0, ψ^1) and not on which firm was chosen in period 1. Therefore both continuation values reduce to the same expression:

$$\varphi_i^0 = \varphi_i^1 = E_{\psi^0,\psi^1}\left[\max\left\{\log(\psi^0\bar{h}) + \alpha\log(1-\bar{h}-\xi_i),\ \log(\psi^1 h_i^*) + \alpha\log(1-h_i^*-\xi_i)\right\}\right]$$

so $\varphi_i^1 - \varphi_i^0 = 0$ for all i, and since period-1 hours choices are gender-identical (h_0^* is the same for both), $T_f(\psi^1) = T_m(\psi^1)$ at $\gamma_e = 0$.

Step 2: For $\gamma_e > 0$, $\varphi_f^1(\psi^1) - \varphi_f^0(T_f) > \varphi_m^1(\psi^1) - \varphi_m^0(T_m)$. The relevant comparison from

(34) is between $\varphi_i^1(\psi^1) - \varphi_i^0(T_i(\psi^1, \gamma_e))$ for men and women, where both φ_i^0 and T_i depend on γ_e. We track the total derivative with respect to γ_e:

$$\frac{d}{d\gamma_e}\left[\varphi_i^1(\psi^1) - \varphi_i^0(T_i(\psi^1, \gamma_e))\right] = \frac{\partial \varphi_i^1}{\partial \gamma_e} - \frac{\partial \varphi_i^0}{\partial \gamma_e} - \frac{\partial \varphi_i^0}{\partial T} \cdot \frac{\partial T_i}{\partial \gamma_e}$$

We analyze each component in turn.

From (33), the human capital gain $\exp(\gamma_e)$ at a flexible firm is realized only when the worker stays. Since $P(\text{stay} \mid \tilde{\psi}^1, f) > P(\text{stay} \mid \tilde{\psi}^1, m)$ for all $\tilde{\psi}^1$ and all γ_e (from above), integrating over $\tilde{\psi}^1$:

$$\frac{\partial \varphi_f^1}{\partial \gamma_e} > \frac{\partial \varphi_m^1}{\partial \gamma_e} \quad \text{for all } \gamma_e \geq 0$$

From (23), the human capital gain at an inflexible firm is realized only when the worker stays. Since $P(\text{stay} \mid \tilde{\psi}^0, f) < P(\text{stay} \mid \tilde{\psi}^0, m)$ for all $\tilde{\psi}^0$ and all γ_e, integrating over $\tilde{\psi}^0$:

$$\frac{\partial \varphi_f^0}{\partial \gamma_e} < \frac{\partial \varphi_m^0}{\partial \gamma_e} \quad \text{for all } \gamma_e \geq 0$$

Combining:

$$\frac{\partial \varphi_f^1}{\partial \gamma_e} - \frac{\partial \varphi_f^0}{\partial \gamma_e} > \frac{\partial \varphi_m^1}{\partial \gamma_e} - \frac{\partial \varphi_m^0}{\partial \gamma_e} \quad \text{for all } \gamma_e \geq 0$$

Next we consider the cross-term $-(\partial \varphi_i^0/\partial T) \cdot (\partial T_i/\partial \gamma_e)$. We show this term is weakly less negative for women than men, so it reinforces rather than reverses the inequality from the direct terms.

First, $\partial \varphi_i^0/\partial T > 0$: a higher period-1 inflexible wage T raises the probability of staying in period 2 and realizing human capital gains, strictly increasing the continuation value.

Second, $\partial T_i/\partial \gamma_e \geq 0$: a higher γ_e raises the value of human capital accumulated at the period-1 firm. From (34), this raises φ_i^0 (through the staying probability), reducing the option value difference $\varphi_i^1 - \varphi_i^0$ on the right-hand side and pushing T_i upward. Therefore the cross-term $-(\partial \varphi_i^0/\partial T) \cdot (\partial T_i/\partial \gamma_e) \leq 0$ for both genders.

Third, the cross-term is weakly less negative for women. Since $P(\text{stay} \mid \tilde{\psi}^0, f) < P(\text{stay} \mid \tilde{\psi}^0, m)$, the inflexible continuation value is less sensitive to the period 1 wage for women:

$$\frac{\partial \varphi_f^0}{\partial T} < \frac{\partial \varphi_m^0}{\partial T}$$

At $\gamma_e = 0$, $T_f = T_m$ so $\partial T_f/\partial \gamma_e = \partial T_m/\partial \gamma_e$ by symmetry. Therefore at $\gamma_e = 0$:

$$-\frac{\partial \varphi_f^0}{\partial T} \cdot \frac{\partial T_f}{\partial \gamma_e} > -\frac{\partial \varphi_m^0}{\partial T} \cdot \frac{\partial T_m}{\partial \gamma_e}$$

since $\partial \varphi_f^0/\partial T < \partial \varphi_m^0/\partial T$ and $\partial T_i/\partial \gamma_e > 0$.

Combining all terms at $\gamma_e = 0$. The total derivative of the option value difference is

strictly larger for women:

$$\frac{d}{d\gamma_e}\left[\varphi_f^1 - \varphi_f^0(T_f)\right]\Big|_{\gamma_e=0} > \frac{d}{d\gamma_e}\left[\varphi_m^1 - \varphi_m^0(T_m)\right]\Big|_{\gamma_e=0}$$

Since the option value differences are equal at $\gamma_e = 0$ and women's total derivative is strictly larger, the inequality $\varphi_f^1(\psi^1) - \varphi_f^0(T_f) > \varphi_m^1(\psi^1) - \varphi_m^0(T_m)$ holds for γ_e in a neighborhood of zero.

Global extension. For $\gamma_e > 0$ where $T_f > T_m$, the staying probability inequalities from above continue to hold for all $\tilde{\psi}^j$ and γ_e, since they depend only on $A_f > A_m$ and the switching conditions. Therefore the direct-term inequality persists globally. Moreover, $T_f > T_m$ reinforces the cross-term inequality: since $T_f > T_m$ means women face a higher inflexible threshold, women at inflexible firms stay with even lower probability relative to men, making $\partial\varphi_f^0/\partial T$ even smaller relative to $\partial\varphi_m^0/\partial T$. The total derivative inequality is therefore self-reinforcing: wherever $T_f \geq T_m$, women's total derivative exceeds men's, so $T_f > T_m$ is maintained. Since $T_f = T_m$ at $\gamma_e = 0$ and the inequality initiates immediately for $\gamma_e > 0$, we conclude:

$$\varphi_f^1(\psi^1) - \varphi_f^0(T_f(\psi^1)) > \varphi_m^1(\psi^1) - \varphi_m^0(T_m(\psi^1)) \quad \text{for all } \gamma_e > 0$$

From (34), $T_f(\psi^1) > T_m(\psi^1)$ for all $\gamma_e > 0$: women sort into inflexible firms at lower rates than men even before parenthood.

Empirical Predictions

This subsection proves the core empirical predictions of the model.

Proposition 1. *Before parenthood, women are less likely to work for inflexible firms compared to men.*

Proof. It suffices to show $T_f(\psi^1) > T_m(\psi^1)$ for all $\psi^1 > 0$ and $\gamma_e > 0$, since a higher threshold means a lower probability of choosing the inflexible firm for any given draw of offers, and the offer distributions are identical across genders. Because the option value differences are equal at $\gamma_e = 0$, the total derivative of women's option value difference exceeds men's for all $\gamma_e \geq 0$, and the inequality is self-reinforcing, giving $T_f(\psi^1) > T_m(\psi^1)$ for all $\gamma_e > 0$. Women therefore choose the inflexible firm with strictly lower probability than men before parenthood, even though there are no current gender differences in preferences, human capital, childcare, or the distribution of employment offers in period 1—the gap arises solely from anticipation of future childcare costs and costly firm switching. □

Proposition 2. *The gender gap in firm premium increases after parenthood.*

Proof. We first establish Proposition 3 (that $E[\Delta \log \psi \mid \tilde{\psi}, m] > E[\Delta \log \psi \mid \tilde{\psi}, f]$ for every $\tilde{\psi}$) and then apply it here. Since the period-2 offer distributions $f(\psi^0, \psi^1)$ are identical across genders, we write the difference in unconditional expectations as:

$$E[\Delta \log \psi \mid m] - E[\Delta \log \psi \mid f] = \iiint \left[\log \psi_m^{\text{post}} - \log \psi_f^{\text{post}}\right] f(\psi^0, \psi^1)\, d\psi^0 d\psi^1\, d\mu(\tilde{\psi})$$

where μ is any measure over $\tilde{\psi}$. By Proposition 3, for every fixed $\tilde{\psi}$:

$$\int\int \left[\log \psi_m^{\text{post}} - \log \psi_f^{\text{post}}\right] f(\psi^0, \psi^1)\, d\psi^0 d\psi^1 > 0$$

Since the inner double integral is strictly positive for every $\tilde{\psi}$, the triple integral is strictly positive under any measure $\mu(\tilde{\psi})$, regardless of how $\tilde{\psi}$ is distributed across genders. In particular this holds when the outer integral uses $P(\tilde{\psi} \mid m)$ on the left and $P(\tilde{\psi} \mid f)$ on the right, even though these distributions differ by Proposition 1. Therefore $E[\Delta \log \psi \mid m] > E[\Delta \log \psi \mid f]$. □

Proposition 3. *Conditional on initial firm quality ψ, women experience larger losses (or smaller gains) in ψ compared to men after parenthood.*

Proof. We show $E[\Delta \log \psi \mid \tilde{\psi}, m] > E[\Delta \log \psi \mid \tilde{\psi}, f]$ for any initial firm quality $\tilde{\psi}$. Since offer distributions are identical across genders:

$$E[\Delta \log \psi \mid \tilde{\psi}, m] - E[\Delta \log \psi \mid \tilde{\psi}, f] = \int\int \left[\log \psi_m^{\text{post}} - \log \psi_f^{\text{post}}\right] f(\psi^0, \psi^1)\, d\psi^0\, d\psi^1$$

In regions where both genders make the same choice, $\psi_m^{\text{post}} = \psi_f^{\text{post}}$ and the integrand is zero. We identify the regions of differing choices and show the integrand is strictly positive there.

Case 1: Initial inflexible firm $\tilde{\psi}^0$. Let $\bar{\psi}^0 \equiv \tilde{\psi}^0 \exp(\gamma_e)$. Choices differ only where women switch to new flex but men do not, defined by:

$$\psi^1 A_m < \max\{\bar{\psi}^0, \psi^0\} \leq \psi^1 A_f$$

This region has strictly positive measure since $A_f > A_m$ and offer distributions are non-degenerate. In this region $\psi_f^{\text{post}} = \psi^1$ and $\psi_m^{\text{post}} = \max\{\bar{\psi}^0, \psi^0\}$, with two subcases:

- If men stay: $\psi_m^{\text{post}} = \bar{\psi}^0 \geq \psi^1 A_m > \psi^1 = \psi_f^{\text{post}}$, where the last inequality uses $A_m > 1$.
- If men switch to new inflex: $\psi_m^{\text{post}} = \psi^0 > \bar{\psi}^0 \geq \psi^1 A_m > \psi^1 = \psi_f^{\text{post}}$.

In both subcases $\psi_m^{\text{post}} > \psi_f^{\text{post}}$, so the integrand is strictly positive on a set of positive measure. Therefore $E[\Delta \log \psi \mid \tilde{\psi}^0, m] > E[\Delta \log \psi \mid \tilde{\psi}^0, f]$.

Case 2: Initial flexible firm $\tilde{\psi}^1$. Let $\bar{\psi}^1 \equiv \tilde{\psi}^1 \exp(\gamma_e)$. Choices differ only where men switch to new inflex but women do not, defined by:

$$\psi^0 / A_f \leq \max\{\bar{\psi}^1, \psi^1\} < \psi^0 / A_m$$

This region has strictly positive measure. In this region $\psi_m^{\text{post}} = \psi^0$, with two subcases for women:

- If $\bar{\psi}^1 \geq \psi^1$ (women stay): $\psi_f^{\text{post}} = \bar{\psi}^1$, and since men switch to new inflex only when $\psi^0 > \max\{\bar{\psi}^1, \psi^1\} \cdot A_m = \bar{\psi}^1 A_m > \bar{\psi}^1$, we have $\psi_m^{\text{post}} = \psi^0 > \bar{\psi}^1 = \psi_f^{\text{post}}$.
- If $\psi^1 > \bar{\psi}^1$ (women switch to new flex): $\psi_f^{\text{post}} = \psi^1$, and since men switch to new inflex only when $\psi^0 > \max\{\bar{\psi}^1, \psi^1\} \cdot A_m = \psi^1 A_m > \psi^1$, we have $\psi_m^{\text{post}} = \psi^0 > \psi^1 = \psi_f^{\text{post}}$.

In both subcases $\psi_m^{\text{post}} > \psi_f^{\text{post}}$, so the integrand is strictly positive on a set of positive measure. Therefore $E[\Delta \log \psi \mid \tilde{\psi}^1, m] > E[\Delta \log \psi \mid \tilde{\psi}^1, f]$.

Combining. Since the result holds for both inflexible and flexible initial firm types, women experience strictly larger losses (or smaller gains) in firm premium compared to men after parenthood, at every point in the pre-parenthood distribution of firm quality. □

Under the FOSD assumption (equation 1 in the main text), the sorting patterns in Propositions 1–3 imply: (i) a gender gap in average firm wage premia exists before parenthood; and (ii) this gap widens after parenthood.

Proof. Equation (1) states $F(\psi|a=0) \leq F(\psi|a=1)$ for all ψ, meaning the CDF of inflexible firms lies weakly below that of flexible firms. This is first-order stochastic dominance of the inflexible distribution over the flexible distribution, which implies $E[\psi|a=0] > E[\psi|a=1]$: inflexible firms pay strictly higher wage premia on average.

For part (i): by Proposition 1, women sort into inflexible firms with strictly lower probability than men before parenthood. Since inflexible firms pay higher premia on average under FOSD, and women are less likely to be employed at such firms, women's average firm wage premium is strictly lower than men's before parenthood.

For part (ii): by Proposition 3, conditional on any initial firm quality $\tilde{\psi}$, women experience strictly larger losses (or smaller gains) in firm premium after parenthood than men. These losses reflect women's greater propensity to transition from inflexible to flexible firms after parenthood. Since inflexible firms pay higher premia and flexible firms pay lower premia under FOSD, women's transitions toward flexible firms reduce their average firm wage premium relative to men's. Integrating over the pre-parenthood distribution of firm quality, the gender gap in average firm wage premium widens after parenthood. □