

The Disparate Impact of Up-or-Out Promotion Policy on Fertility Timing *

Kyung H. Park Nayoung Rim
Wellesley College U.S. Naval Academy

January 18, 2020

*We are grateful to Dan Black, Kerwin Charles, and Jens Ludwig for their guidance and help throughout this project. We would also like to thank Tom Coleman, Bob Michael, two anonymous referees, and seminar participants at Chicago Harris, the University of Chicago, Washington University in St. Louis, and Wellesley College for their helpful comments, and to Emily Rothkin for providing outstanding research assistance. Please send all correspondence to Nayoung Rim at rim@usna.edu.

Abstract

There is growing evidence that child birth can have especially adverse effects on the career advancement of women. Our study examines how this affects the fertility decisions of men and women on the partner track. We use the *After the JD* study, a rich panel data set on a nationally representative sample of lawyers, and find that women are more likely than men to delay their first child until after the promotion decision is resolved. This difference in fertility timing is not easily explained by gender-based sorting; however, descriptive evidence suggests that reduced employer investment in mothers and social norms that tie women to child care are relevant mechanisms.

JEL Codes: J13, J71

Keywords: Fertility timing, up-or-out policy, disparate impact, lawyers

1 Introduction

A well-known and controversial statistic is that women earn 80 cents on average for each dollar that men make.¹ Although there are numerous factors that contribute to the gender wage gap², recent economic research has begun to coalesce around the child penalty as the principle explanation for this result (Bertrand et al., 2010; Budig and England, 2001; Byker, 2016; England et al., 2016; Goldin and Mitchell, 2017; Kleven et al., 2019). The penalty refers to the fact that earnings trajectories of men and women are strikingly similar until child birth, after which female earnings immediately diverge and never recover. This pattern has been documented both in cross-sectional and longitudinal data (Bertrand et al., 2010; Wood et al., 1993), across diverse occupations (Adda et al., 2016), and across countries (England et al., 2016; Kleven et al., 2019). Thus, the evidence increasingly points to child-birth related career interruptions and labor supply reductions as a main contributor to the gender disparity in earnings.

What receives far less attention is the possibility that the child penalty may have important implications for gender differences in fertility and family formation. If having a child penalizes women professionally but not men, then women may endogenously respond perhaps by delaying their first child or by having fewer children relative to men. This may be especially true in professions that use up-or-out promotion policies (as in law, accounting, consulting, and academia) that require junior employees to work long hours for an extended period of review. At the same time, mitigating factors such as access to quality child care,

¹This statistic is from the 2017 Gender Wage Gap Fact Sheet published by the Institute for Women's Policy Research.

²For example, the literature finds that gender differences in human capital investment and productivity (Altonji and Blank, 1999; Gallen, 2018; Mulligan and Rubinstein, 2008; Polachek, 1981), bargaining skills (Card et al., 2016; Reuben et al., 2017), and gender norms (Bertrand et al., 2015) contribute to the gender difference in earnings. See also Blau and Kahn (2017) for a survey of explanations.

parental leave policies, or the ability to outsource home production may have offsetting effects such that there is no gender difference in fertility (Cortés and Pan, 2019). Thus, it is theoretically ambiguous as to whether facially neutral up-or-out promotion policies have disparate impact on fertility with respect to gender. The primary objective of this paper is to bring forth empirical evidence on this issue.

Our research question requires the study of a profession that uses up-or-out promotion policies, is fairly integrated with respect to gender, and provides rich information of its members. The legal profession satisfies these criteria. First, young associate attorneys in large private firms are known to be evaluated for promotion to partner after 7 to 10 years on the job. This probationary period is often characterized as a high-pressure environment that requires extensive work hours. Second, though numerous professions continue to be gender segregated, the legal profession is not one of them. Women constitute a slight majority of students enrolled in accredited law schools and more than one-third of the profession (Day, 2018). Finally, the American Bar Foundation commissioned a longitudinal survey called *After the JD* (AJD) that follows a nationally representative sample of law school graduates for the first 12 years of their careers. We use the AJD to analyze whether women on the partner track delay or reduce fertility more than their male peers.³

We find that women are less likely to have their first birth early in their careers relative to men. In particular, female lawyers are roughly 7.9 percentage points ($\sim 15\%$) less likely than men to have their first child in early-career (i.e. within the first 7 years of their careers) based on estimates from our preferred specification. This result is robust to an extensive set of demographic controls, and thus, not easily explained by systematic gender

³Although our analysis focuses on the legal profession, we show in the Appendix that fertility-related outcomes, such as age at first child and probability of being a parent, are similar in other high-skilled occupations, such as economists, chief executives, post-secondary teachers, accountants, and physicians.

differences in age, marital status, baseline ability, and income. An analysis of heterogeneous effects confirms that this pattern is specific to junior attorneys whose career advancement is structured by the up-or-out policy (e.g. those who begin their careers in large law firms) and more pronounced among those who expect to receive stronger consideration for promotion. One possible explanation is that child birth in early-career is more adversarial to the career advancement of women than men.

An alternative explanation is that women on the partner track have weaker preferences for children because women who want children early either exit the partner track or choose an alternative career from the beginning. Two findings belie this possibility.

First, if women who survive the longest on the partner track are those who prefer to be without children, then we would expect the negative gender gap in early-career to persist into late-career. We find the opposite; there is a reversal such that women are more likely than men to have their first birth in late-career (i.e. 9 years or later in their careers). In fact, the dynamics pivot precisely when the partnership rates of junior attorneys begin to rise, suggesting that the timing is linked to the up-or-out policy rather than differential sorting based on work-life balance. Further, we find only a modest gender difference in the number of children by the end of the survey, which undercuts the idea that the lower rate of early-career fertility reflects a stronger preference for childlessness among women.

Second, the AJD data is exceptionally rich. Among its comprehensive list of questions are those that explicitly ask respondents why they chose their given career path. We find that our results are highly robust to the inclusion of controls for baseline preferences over salary, prestige, work-life balance, and other important margins along which attorneys sort within the legal profession. This further supports the idea that the observed gender differences in fertility dynamics are not entirely an artifact of sorting.

We then examine potential mechanisms for the greater delay in fertility for women. We find suggestive evidence that women may be delaying in part because child birth elicits a negative employer response. Mothers in the AJD are much more likely than fathers to report adverse work consequences from child birth, including the loss of clients and challenging assignments and more questioning of their commitment to work. This result holds even after we control for gender differences in time allocation between home and work production. That child-birth may result in adverse work consequences has implications for who is promoted to partner. If employers reduce their investment in mothers more than fathers after child birth, then mothers may have to exhibit more exceptional qualities than fathers in order to signal the same level of ability and dedication to the firm.⁴ Indeed, the data are consistent with mothers being more positively selected than fathers *conditional* on being promoted to partner. In contrast, we find no analogous difference among women and men who are childless at the time of their promotion. This implies that mothers and fathers are evaluated under disparate promotion standards even though up-or-out policies are facially neutral.

We also consider the possibility that the gender difference in fertility timing is tied to social expectations that women, not men, should be the primary caregiver for children. We borrow from [Pan \(2015\)](#), who constructs a sexism index using survey questions from the General Social Survey that asks men about their views on the appropriate role of women in society. There is substantial variation across regions in the extent to which men believe in statements such as, “Men should achieve outside the house and women should take care of the home and family.” We use this geographic variation to show that women are especially more likely than men to delay child birth in regions where men have stronger attachments to

⁴As [Carbado and Gulati \(2000\)](#) write, “[P]lacing extra burdens on the outsider at the start (or having outsiders work with fewer resources) helps to ensure that the outsiders who win are superstars, and thus, from the employer’s perspective, not like other outsiders.” [page 138]

traditional gender norms. This finding comports with the accumulating evidence that gender norms weigh on the decision calculus of women and men ([Bertrand et al., 2015](#); [Bursztyn et al., 2017](#)).

Our findings contribute to existing work in additional ways. There is already a voluminous body of research that sheds light on the optimal timing of child birth. This literature has roots in demography, which finds that demographic characteristics such as the woman’s age and age at first marriage have strong implications for the timing of first and subsequent births ([Coombs and Freedman, 1970](#); [Finnäs and Hoem, 1980](#); [Heckman et al., 1985](#)). The economics of fertility pioneered by [Becker \(1960\)](#) shifted the emphasis towards the quality-quantity trade-off, the shadow price of children, and income as important determinants of fertility. Recent studies have begun to examine how changes in public policy affect fertility ([Bailey et al., 2019](#); [Lalive and Zweimüller, 2009](#)). In general, though, this literature focuses on women and pays less attention to how facially neutral policies that structure career advancement differentially impact the fertility timing of women and men. Thus, our study of the up-or-out promotion policy and its disparate impact on fertility links this literature to research on gender inequality in the labor market.

With respect to gender inequality, our study complements research that focuses on the gender gap in pay ([Azmat and Ferrer, 2017](#)). The emphasis on wages is, in part, motivated by [Becker \(1957\)](#)’s seminal work, whose theory illustrates why a wage disparity constitutes a compelling empirical test of employer prejudice. However, some scholars have noted that there is limited scope for employer prejudice to manifest in wages because the law proscribes unequal pay for the same work ([Charles, 2000](#); [Foote et al., 2003](#)). This argument is especially pertinent since attorneys in our study presumably understand precisely what recourse is available in the event the law is violated. Thus, our paper comports more with the strand of

research that finds that gender inequality in the workplace can surface along margins other than wages (Antecol and Cobb-Clark, 2009; Beaman et al., 2018; Egan et al., 2018; Laband and Lentz, 1993, 1998; Sarsons, 2019). Specifically, we find that women on the partner track delay fertility more than men, receive no additional pecuniary compensation for doing so, and that those who have children in early-career face disparate promotion standards relative to men.

2 Overview of Up-or-Out Policy

The labor market relies on a wide array of policies to organize the upward mobility of workers. Up-or-out policy is one example and is often used in fields that require workers to attain advanced education. Although specifics can vary from firm-to-firm, generally new workers enter the profession with an understanding that they will work long hours for an extended period of review that typically lasts between 7 to 10 years. At the end of this probationary period, senior colleagues review the worker’s performance and decide either to promote the worker or to terminate the relationship.⁵ Promotion is highly coveted due to significant improvements in pecuniary and/or non-pecuniary benefits. An important point is that federal law defines the boundary of permissible interactions between all up-or-out policies and workers of a protected class; for example, a female worker cannot be denied promotion to partner because she is deemed not feminine enough (*Price Waterhouse v. Hopkins*, 490 U.S. 228 (1989)).⁶ Thus, up-or-out contracts are devoid of explicit gender

⁵An important determinant of skill development and promotion is also firm investment. One potential reason for this type of compensation scheme is to induce workers to invest in firm-specific human capital (Prendergast, 1993).

⁶However, in *Zahorik v. Cornell University*, 729 F.2d 85 (2d Cir. 1984), the court found that the promotion denials of four female assistant professors did not violate Title VII even though male junior faculty were found to be promoted at higher rates than females (65.3% vs. 42.1%) citing that the tenure

classifications that would invite legal scrutiny otherwise.

Nonetheless, up-or-out contests could involve headwinds that unknowingly contribute to disparate impacts with respect to gender despite their facial neutrality. For example, in academia, the broad adoption of “clock stopping” policies, which allow both male and female junior faculty with newborn children to take more time to achieve performance markers required for promotion to tenure, has been found to help men secure promotion faster than women because men use their time on parental leave differently than women ([Antecol et al., 2018](#)). In addition, studies show that women are more frequently assigned to and accept less desirable tasks relative to men ([Babcock et al., 2017](#); [Carbado and Gulati, 2000](#)). Thus, standard protocols used to assign tasks to employees (e.g. seniority based task-assignment or a volunteer system) may have differential impact on the skill development and eventual promotion prospects of men and women.⁷

In the landmark case *Griggs v. Duke Power Co.*, the Supreme Court struck down a company policy that required employees to have a high school diploma in order to be considered for its higher paying jobs on the grounds that it disproportionately excluded African-American workers without sufficient evidence that the diploma was necessary to perform the job. Thus, a practice that is not expressly motivated by invidious prejudice can nonetheless be deemed unlawful when it has disparate impact on a protected class and the defendant cannot convincingly demonstrate that the practice in question is a “business necessity”.⁸

process was sufficiently related to departmental and college-wide interests and represented an “historically settled process”.

⁷Empirical evidence affirms that task assignment is an important aspect of how firms invest in the skill development of their workers. See, for example, [Lehmann \(2013\)](#) who finds that the black-white gap in promotion rates are, in part, explained by racial differences in the quality of tasks that junior attorneys are assigned to early in their careers.

⁸As another example, in *Dothard v. Rawlinson* the Court struck down an employment practice because of its disparate impact on a protected class. State penitentiaries in Alabama only hired applicants whose height and weight exceeded minimum thresholds as prison guards. The Court ruled that the height and weight requirement unlawfully excluded women due to population height and weight disparities between

However, there are limits to disparate impact theory. In *Washington v. Davis*, the Court upheld the police department’s use of an aptitude test that disproportionately excluded African-Americans because it served the rational purpose of screening potential employees.⁹ In general, disparate impact theory provides a framework through which the Court balances the economic value of a given practice to the firm and its adverse impact on a protected group.

Up-or-out policies are necessary in part because the employer does not immediately know with certainty whether the worker is qualified for an elevated role (Barlevy and Neal, 2019). In the legal profession, a junior attorney who thrives in law school may be ill-suited for partnership because different skill sets are needed to excel in the respective roles. For example, the ability to foster new relationships with valuable clients and maintain existing ones may be relatively inessential for students but essential for partners. The up-or-out promotion policy allows the firm to navigate this informational asymmetry in various ways. First, the long probationary period allows the firm to observe myriad signals about the worker, improving the reliability of the firm’s inference of the worker’s latent ability. Second, extensive work hours also allow employees to distinguish themselves from one another to the extent that high ability lowers the marginal cost of effort. In this case, high-ability types are more likely to endure long hours, achieve high performance, and less likely to exit. Thus, both facets of the up-or-out policy help to minimize the firm’s risk associated with promoting

men and women. The Court did not find these requirements were necessary to perform the job. However, the Court upheld the ban on women in “close contact” positions on the grounds that women are more vulnerable to sexual assault.

⁹The Court used rational basis review because the plaintiff relied on a constitutional rather than a statutory claim. In this case, the Court found that the plaintiff needed to prove that the police department’s use of the aptitude test was motivated by discriminatory intent. In *Personnel Administrator of Massachusetts v. Feeney*, 442 U.S. 256 (1979), the Court found that knowledge of a disparate impact is not sufficient to prove invidious intent.

a worker who is, in fact, unfit for partnership.¹⁰

At the same time, up-or-out promotion policies are not without controversy. One issue stems from sizable racial and gender disparities in promotion rates¹¹; for example, in the legal profession, minorities comprise of roughly 17% of all lawyers in U.S. law firms but only 8% of its partners.¹² These statistics are concerning on at least two fronts. There is growing evidence that female leadership is important to the career advancement of women (Carbado and Gulati, 2000; Kofoed and McGovney, 2019; Kunze and Miller, 2017; Langan, 2018; Matsa and Miller, 2011).¹³ Thus, today’s scarcity of female partners may perpetuate this demographic imbalance. There is also the subject of *why* this imbalance exists. One explanation for why women earn less and are promoted at lower rates is because they underperform in comparison with men (Azmat and Ferrer, 2017). Less innocuous is the possibility that the performance gaps themselves reflect disproportionate burdens that seemingly neutral practices impose on women (Carbado and Gulati, 2000; Guinier et al., 1994). Our paper pursues this idea with an emphasis on fertility, which has received less attention in the discourse despite its standing as a foremost life decision.

¹⁰There are additional benefits associated with up-or-out promotion policies. For example, in academia, a common defense of the tenure system is that it insulates scholars from backlash that may arise from pursuing ideas outside the mainstream. In addition, tenure encourages senior faculty to hire the most talented candidates since tenure removes the possibility that the incoming faculty will replace them (Carmichael, 1988). Brown Jr (1997) argues that tenure allows senior faculty to monitor university administrators without fear of reprisal.

¹¹Another concern is that the up-or-out policy distorts effort in the post-probationary period among those who receive promotion. For example, in economics, Brogaard et al. (2018) finds that there is a decrease in research productivity both in terms of the quantity and social impact of publications, and in law, Yoon (2016) finds that legal scholars publish more in less competitive outlets and less in top-tier journals post-tenure.

¹²This statistic is from the 2017 Law Firm Diversity Survey Report by the Minority Corporate Counsel Association. Further, a 2019 report entitled *A Current Glance at Women in the Law* by the American Bar Association finds that among the 200 largest law firms, women constitute 45.9% of associates but only 22.7% of partners, 19% of equity partners, and 22% of managing partners.

¹³For example, Langan (2018) shows that in economics departments, the gender disparities in publications, promotion rates, and wages all fall when a woman replaces a male department chair.

3 After the JD and Descriptive Statistics

The *After the JD* is a research project commissioned by the American Bar Foundation and the National Association for Law Placement (NALP) in efforts to gather detailed information on members of the legal profession. The sample is drawn from the population of individuals who graduated from a U.S. law school between July 1, 1998 and June 30, 2000 and entered the bar for the first time in 2000. Thus, the AJD data are nationally representative of all lawyers who entered the bar in 2000.

The data are longitudinal and collected in three waves. Waves I, II, and III are administered between May 2002 and May 2003, July 2007 and May 2008, and May 2012 and January 2013, respectively, which ensures that researchers can follow individuals in early, mid, and late portions of their careers. Moreover, the survey is exceptionally detailed. There does not exist another data set (to our knowledge) in which researchers can observe how fertility timing relates to the promotion decision among workers subject to up-or-out policies, and examine its potential mechanisms to the same degree.¹⁴

We impose a few restrictions on the data. There are 4,538 individuals in Wave I, with 34% of initial respondents leaving the sample by Wave III. We keep all individuals who appear both in Wave I and Wave III of the AJD to focus on the subset of individuals for whom we observe baseline characteristics and whose fertility histories are not right-censored.¹⁵ By

¹⁴There are data sources on the legal profession including the University of Michigan Law School Alumni Survey (UMLS) and surveys published by the National Association for Law Placement (NALP). We use the AJD because it is better suited for our specific set of research questions. However, it is worth noting that we find similarities across data sets where there is overlap. For example, NALP states that the median first-year associate salary at large law firms was \$160,000 in 2014 ([National Association for Law Placement \(NALP\), 2014a](#)). When we restrict the AJD data to lawyers at law firms with at least 250 lawyers (our definition for “large firms”), the median reported salary after adjusting for inflation is \$167,259.13. As another example, NALP reports that the average law firm responding to its 2014 survey required its associates to bill 1,884 annual hours ([National Association for Law Placement \(NALP\), 2014b](#)). This is similar to the 1,870 average annual billed hours for lawyers at large firms in the AJD.

¹⁵A concern is that the attrition in the AJD is systematically related to the gender difference in fertility

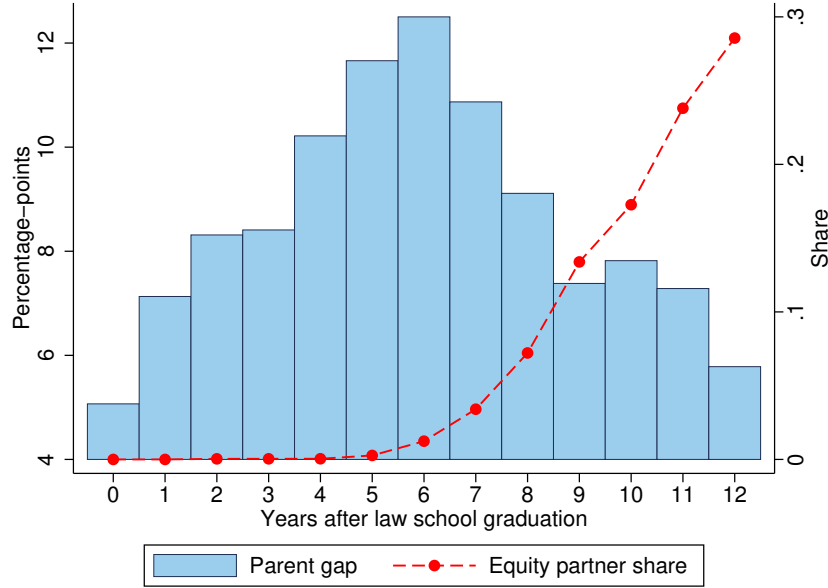
including Wave III in our analysis, our study builds on previous studies that use only the first two waves because the third wave was unavailable at the time of study (Azmat and Ferrer, 2017; Dinovitzer et al., 2009; Lehmann, 2013). We also drop 869 individuals who report missing values for key variables, such as gender and children’s age, and who report inconsistent job start- and end-dates. This leaves us with a final sample of 2,087 individuals. For some analysis, we transform the data into an individual-by-year panel in order to provide a richer characterization of fertility dynamics.

Figure 1 provides an illustration of the key empirical facts that motivate this study. The primary y-axis shows the gender difference in the probability of having at least one child, and the x-axis shows the number of years since law school graduation. In year 1, the male-female differential is roughly 7 percentage points, which implies that women are 45% less likely than men to begin their legal careers as a parent, given that 15.7% of men are parents in year 1. This difference steadily grows until year 6, where it peaks at 12.5 percentage-points, then gradually declines until year 9, where it stabilizes around 7 percentage points, and then falls again in year 12. The inverted-U shape implies that men are more likely than women to have children in early- and mid-career but that women eventually catch up in late-career. The fact that the gender difference does not persist is consistent with female lawyers *delaying* fertility relative to their male colleagues rather than eschewing parenthood altogether.

It is notable that the gender difference begins to close in year 7, which is precisely when promotion rates begin to rise. The secondary y-axis shows the probability of being promoted to equity partner, which is effectively zero until year 6 and rises thereafter. Between years

timing. However, in the Appendix, we present descriptive evidence that women with children are not more likely to exit the AJD prior to completion. In addition, our analysis uses inverse probability weights to account for the fact that our final sample may no longer be representative of our original population of interest due to the modest differences between “stayers” and the initial Wave I sample. In the Appendix, we show that our results are highly robust to removing the weights and to different approaches to estimating the weights.

Figure 1: Male-Female Difference in Share of Parents Over Time



Source: AJD restricted data.

Notes: This figure depicts the gender difference in parent status over time (bars) and the share of equity partners among lawyers in firms with at least 30 lawyers (dashed line).

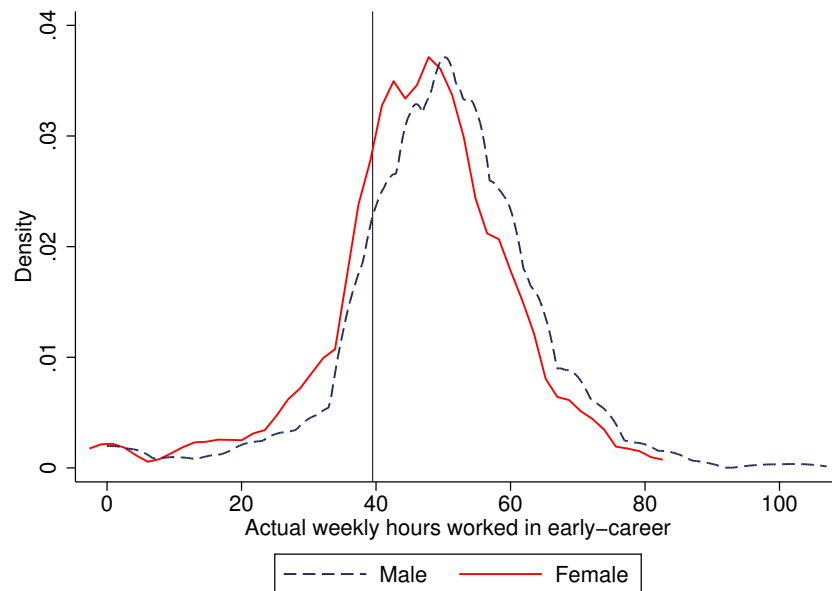
7 and 10, the unconditional probability of being promoted is 3.4%, 7.2%, 13%, and 17%, respectively. This is consistent with both survey data and anecdotal evidence that suggests the probationary period tends to last between 7 to 10 years.¹⁶ The fact that the relative increase in female fertility occurs precisely around the time when partnership decisions are made suggests that the delay in female fertility is linked to the up-or-out promotion policy.

These dynamics are interesting because the early- and mid-careers of junior attorneys are often characterized as periods of intense labor supply. Figure 2 highlights this point by showing the distribution of weekly hours worked by junior attorneys in early-career separately

¹⁶A 2012 survey by ALM Legal Intelligence found that 41% of new partners worked for 7-9 years before being promoted. The AJD data are consistent with the survey's findings as the equity partner share begins to increase significantly in year 7 and the largest increase occurs in year 9.

by gender. As a point of comparison, the vertical line shows that the average employed person with a bachelor’s degree or higher worked about 39.5 hours a week.¹⁷

Figure 2: Distribution of Hours Worked by Gender



Source: AJD restricted data, U.S. Bureau of Labor Statistics.

Notes: This figure depicts the distribution of weekly hours worked, separately for male and female lawyers. The vertical black line at 39.5 illustrates hours worked for an average college-educated employee.

There is significant mass to the right of this line under both distributions; specifically, roughly 85% and 75% of male and female junior attorneys work more than the U.S. average, respectively. The figure also shows considerable dispersion such that there is substantial mass at higher levels of labor supply. For example, roughly 25% and 10% of male and female junior attorneys work more than 60 hours per week, respectively. With regards to gender, there appears to be slightly more mass at higher values for males than females. Thus, male

¹⁷This statistic is from The U.S. Bureau of Labor Statistics, Economic News Release 2018, Table 4 “Employed persons working and time spent working on days worked by full- and part-time status and sex, jobholding status, educational attainment, and day of week, 2018 annual averages.” Retrieved from <https://www.bls.gov/news.release/atus.t04.htm>.

attorneys supply more labor *and* are more likely to start families than females two years into their careers, on average.¹⁸

Table 1 provides descriptive statistics for various baseline characteristics. Overall, male and female lawyers are similar along numerous dimensions. For example, women attend prestigious law schools, participate in general law review, and secure judicial clerkships at similar rates as men. GPAs are also similar at both the undergraduate and law school levels. These summary statistics suggest men and women enter the legal profession with similar levels of cognitive ability.

There are, however, substantive differences along other margins. For example, women are 4.5 percentage points less likely than men to have ever been married in early-career.¹⁹ This gender difference in marital rates may partially explain the gender difference in fertility timing to the extent that people have a preference for having children after finding a life-partner. Our empirical analysis will account for differences in baseline attributes by including them in the conditioning set.²⁰

¹⁸There is also important variation in hours worked across firm type within the legal profession. For example, AJD respondents who begin their legal careers in private firms with 250 attorneys or more work roughly 6 more hours per week relative to those who begin in the public sector (51.28 vs. 45.02 weekly hours).

¹⁹Bertrand et al. (2015) shows that marriages are less likely to form when women are expected to earn a greater share of household income than their partners because these relationships would violate the gender norm that “the wife should earn less than the husband”. Thus, if female attorneys are expected to earn more than males in their respective marriage markets, then this gender norm may help to explain the discrepancy in marital status.

²⁰In the Appendix, we examine whether the gender difference in fertility arises because women are delaying marriage until after the promotion decision. This would provide an alternative explanation for why we see that women exposed to up-or-out policies are more likely than men to start their families in late-career. However, we find that women are less likely than men to be married in late-career, and, importantly, that this gap is stable across different sectors.

Table 1: Descriptive Statistics

Characteristic	N	Share of Respondents			p-value
		Everyone	Males	Females	
Female	2,087	45.8%			
Race and ethnicity	2,061				
White		82.2%	83.9%	80.2%	0.0472
Black		4.1%	3.2%	5.2%	0.0199
Hispanic		3.5%	3.3%	3.8%	0.5173
Asian		5.9%	5.4%	6.6%	0.2745
Other		4.2%	4.3%	4.1%	0.8810
U.S. News' 2003 law school ranking	2,068				
Ranked 1-10		8.9%	9.1%	8.6%	0.7062
Ranked 11-20		9.0%	8.9%	9.2%	0.7779
Ranked 21-100		49.2%	49.6%	48.7%	0.7513
Tier 3 (101-137)		17.7%	16.7%	19.0%	0.3097
Tier 4 (138-178)		13.1%	13.5%	12.6%	0.6348
Foreign degree		0.5%	0.1%	0.9%	0.0681
Unaccredited school		1.6%	2.1%	1.0%	0.0507
General law review	2,002				
Member		20.6%	20.7%	20.5%	0.9382
Editor		12.3%	11.7%	13.0%	0.4774
Judicial clerkship	483	14.9%	13.5%	16.3%	0.4923
Ever-married status					
In early-career	2,066	64.9%	66.9%	62.4%	0.0982
In late-career	2,056	90.2%	92.0%	88.1%	0.0288
Have children	2,087				
By law school graduation year		9.6%	11.9%	6.9%	0.0011
10 years after law degree		61.2%	64.8%	56.9%	0.0045
Birth year (median)	2,087	1972	1972	1973	
Law school graduation year	2,087	1999.5 (0.6)	1999.5 (0.6)	1999.5 (0.6)	0.6314
Undergraduate GPA (standardized)	1,428	-0.01	-0.17	0.14	0.0000
Law school GPA (standardized)	1,277	0.00	-0.04	0.04	0.2420
Number of positions	1,801	3.1	3.0	3.1	0.7340
Length of stay at a position (years)	1,801	4.1	4.2	4.0	0.2291
Initial number of cases	1,199	8.3	8.2	8.3	0.6869
Early-career weekly hours	1,695	48.2	49.8	46.3	0.0001
Early-career salary	1,904	\$ 82,934	\$ 88,113	\$ 76,683	0.0000
Late-career salary	1,869	\$ 165,563	\$ 198,412	\$ 125,207	0.0000
Mid-career annual billed hours	771	1,545	1,616	1,435	0.0139

Source: AJD restricted data.

Notes: N is the number of individuals. The last column reports the p-value from the hypothesis test that female and male shares/means are equal. "Early career" variables are from the Wave 1 survey (2002-2003), "mid career" variables are from the Wave 2 survey (2007-2008), and "late career" variables are from the Wave 3 survey (2012-2013). Salary is total gross annual salary including bonus, profit sharing/equity distribution, and stock options. Billed hours is reported only for those in private law firms.

4 Empirical Model

Our empirical analysis examines whether women and men differ in their timing of first birth in relation to the partner clock. We partition the partner clock into two periods – “early-career” and “late-career”, which are defined as the first seven years after law school graduation and nine or more years after law school, respectively. This classification is motivated by the fact that the modal duration of the probationary period is reported to be eight years in the AJD. Our outcome variables of interest are binary variables, *early parenthood* and *late parenthood*, that indicate whether one’s first birth occurs in early- or late-career, respectively.²¹ We run the following linear probability model for each outcome variable:

$$Y_i = \beta_0^Y + \beta_1^Y \cdot F_i + X\gamma^Y + \varepsilon_i^Y \quad (1)$$

where Y_i is either *early parenthood* or *late parenthood*, F_i is an indicator variable for whether individual i is female, X is a vector of individual-specific baseline characteristics, and ε_i is the error term. The superscripts on the parameters reflect the fact that their values depend on the outcome variable, Y . The main parameter of interest is β_1^Y ; β_1^{Early} and β_1^{Late} represent the female-male difference in the conditional probability of having a first child in early-career and late-career, respectively.

An extensive set of controls are included in X . The demographic characteristics include race and ethnicity, age, initial marital status, law school graduation date, and geographic location at the time of initial survey. The demography literature finds that the first three

²¹Our results are robust when we use another approach to determine how to partition the partner clock to define early- and late-career. Specifically, we regress a year indicator variable and a quartic time trend against the change in share of parents and choose the year that maximizes the R^2 of the regression. The growth rate in parent share peaks in year 6, so pregnancies before year 6 are classified as “early” and pregnancies after year 6 are classified as “late”. Our findings do not change with the alternative threshold; see Appendix for results.

(race, age, and marital status) are important determinants of fertility timing, and, as shown in the descriptive statistics, marital status correlates with gender in our sample. We condition on law school graduation date to account for potential cohort effects. Geographic fixed effects adjust for all unobserved and persistent region-specific factors that plausibly affect the gender difference in fertility timing. We also include controls for spousal employment status at time of initial survey, early-career household income, respondent’s early-career salary, initial firm’s size, early-career weekly hours worked, and area of law.²²

In addition, we control for baseline ability by including standardized undergraduate and law school GPAs, U.S. News’ 2003 law school ranking, participation in law review, judicial clerkship, number of initial job offers, and number of bar exam attempts. Although GPA and law school ranking are standard measures of cognitive ability, the other variables capture additional dimensions of ability. For example, when screening clerkship applicants, judges typically use a holistic review of diverse inputs, such as grades, writing samples, letters of recommendation, and interviews.²³ Further, a judicial clerkship is a highly valued position by both law students and the labor market; for example, large law firms have been known to pay sizable signing bonuses for judicial clerks. Thus, our measures account for multiple facets of ability that may affect performance on the partner track.

A prime concern is that preferences over fertility timing may be gendered, thereby driving selection into or out of the partner track. In this case, our estimates of β_1^Y will reflect gender

²²In the Appendix, we also show results from a specification in which we control for the predicted spousal age of male respondents. This exercise is motivated by the possibility that fertility decisions may differ across two distinct households—say, one with a 30 year old male lawyer and a second with a 30 year old female lawyer—due to systematic differences in the age of their respective partners. We find that the results are qualitatively similar across specifications.

²³For example, the American Bar Association published advice on securing judicial clerkships, which highlights the importance of having a well-rounded application (<https://www.americanbar.org/groups/litigation/committees/jiop/articles/2016/jiop-alumni-advice-tips-securing-judicial-clerkship/>).

differences in preferences for work-life balance rather than potential differences between women and men in the cost of child birth early in the partner clock. Our analysis speaks to this concern in two ways. First, we emphasize that gender-based sorting and the up-or-out policy should have opposite impacts on the gender difference in fertility timing. If women who have a strong preferences for children either avoid the partner track from the start or exit earlier to have children, then women who remain on the partner track should have relatively strong preferences for childlessness. In this case, we would expect $\hat{\beta}_1^{Early} > 0$ and $\hat{\beta}_1^{Late} < 0$. In other words, women would be more likely than men to have their first birth in early-career *and* less likely to have their first birth in late-career.

Alternatively, women who remain on the partner clock may have similar preferences for children as men but differ instead in their shadow price. Child birth in early-career may be especially adverse to women’s career advancement to the extent that child care is expected to crowd out more of their labor supply in comparison to men’s. As a result, women may be more likely than men to delay fertility until late-career to smooth time-intensive endeavors over time. In this case, we expect $\hat{\beta}_1^{Early} < 0$ and $\hat{\beta}_1^{Late} > 0$, or that women are less likely than men to have their first birth in early-career but *more* likely to have their first birth in late-career. Thus, the competing explanations have distinct predictions on the joint signs of $\hat{\beta}_1^{Early}$ and $\hat{\beta}_1^{Late}$.

Second, the AJD is exceptionally rich, allowing us to directly control for gender differences in work-life balance preferences. For example, we include fixed effects for the initial area of law (e.g. corporate, immigration, tax), which accounts for differences in norms across fields. In addition, the AJD includes an extensive set of questions on why respondents chose their initial sector and initial job, allowing us to further account for variation in preferences holding the area of law constant. Specifically, the AJD asks respondents to rate the importance of

various attributes, such as salary, office collegiality, expected hours worked, prospects for advancement, and work-life balance. Because there are numerous questions, we use factor analysis to reduce the dimensionality of the data. In the Appendix, we show that our results are similar when we use a “kitchen-sink” approach and include all of these questions jointly in X .²⁴

In addition to equation (1), we present estimates from a more flexible model that yields year-specific gender differences in the hazard rate (i.e. the probability of first birth in a given year). This requires transforming our data set into an individual-by-year panel and then estimating the following model:

$$Y_{it} = \alpha_i + X_{it}\gamma + \sum_{k=1}^{12} \tau_{it}^k + \sum_{k=1}^{12} \tau_{it}^k \times F_i + \varepsilon_{it} \quad (2)$$

where Y_{it} is equal to 1 if person i becomes a first-time parent in year t , α_i is an individual fixed-effect, X_{it} is a vector of time-varying characteristics²⁵, τ_{it}^k is an indicator variable that equals 1 in the k -th year relative to law school graduation and 0 otherwise, F_i is a binary variable for females, and ε_{it} is the error term. The panel is unbalanced since in any given year the sample only includes those who were childless in previous years. This structure allows us to interpret our main parameters of interest, τ_{it}^k and $\tau_{it}^k \times F_i$, as the hazard rate for males and the female-male difference in the hazard rate, respectively.

Model (2) is a more flexible version of model (1) since it allows for year-to-year changes in fertility. An important point is that model (2) controls for all time-invariant individual-

²⁴The details of the factor analysis are provided in the Appendix. This discussion includes results from different methods used to construct the factor scores. Our findings are very similar across the different specifications.

²⁵These include an indicator variable for whether the firm is a law firm or not, the firm’s size, respondent’s lagged predicted income, and spouse’s lagged predicted income.

specific characteristics through person fixed effects, α_i . To the extent that unobserved variables not captured in model (1) may affect the gender difference in fertility timing—for example, living in close proximity to grandparents who can help with child care—person fixed effects will account for this as well as for any differing preferences for children across individuals as long as they are constant over time. However, an advantage of model (1) is that it allows for more precise estimates because parsimoniously dividing the long partner clock into two periods uses fewer degrees of freedom. Thus, models (1) and (2) have different strengths and weaknesses. Model (1) yields more precise estimates of the gender difference in fertility timing. Model (2) allows for richer dynamics, which we use to provide visual evidence of how the gender difference in fertility timing relates to the partner clock.

5 Main Results

5.1 Gender Difference in Fertility

Panel A of Table 2 shows the gender difference in the probability of first birth in early-career conditional on various sets of controls. We begin with the unconditional gender gap in column (1), which states that female lawyers are 10.9 percentage points ($\sim 21\%$) less likely than male lawyers to have their first child in early-career. This estimate falls modestly to 7.8 percentage points when we control for demographic characteristics (column (2)). Although this represents a 28% decrease, we note that the 95% confidence intervals are sufficiently wide such that the two estimates are not statistically different from one another.²⁶ Thereafter, the gender gap is stable even after systematically adding controls for baseline

²⁶We estimate Huber-White standard errors, but little changes when we cluster the standard errors by firm type.

ability, job characteristics, income and spousal employment, and factor scores that proxy for baseline preferences for work-life balance. The estimated gender gap ranges between 7.9 to 9.3 percentage points, which implies that women are 15 to 18% less likely than men to have their first child in early-career. All of the estimates are statistically significant at the conventional 5% level.²⁷

Panel B of Table 2 shows the analogous gender difference in the probability of first-birth in late-career. In column (1), the unconditional gender difference is about 9.1 percentage-points, which implies that women are 29.68% more likely than men to have their first child in late-career. There is a modest reduction in the gap when we include demographic characteristics as controls, but the estimate is very stable thereafter. Overall, columns (2) to (6) imply that female lawyers are between 5.7 and 6.5 percentage points more likely than male lawyers to have their first child in late-career. All of the estimates are statistically significant at the conventional 5% level.²⁸

Together, Panels A and B strongly oppose the idea that our results are driven by gender-based sorting for two reasons. First, if our estimates were driven by preferences for work-life balance, then we would expect that controlling for area of law, labor supply, and the factor

²⁷The robustness to one’s own income and spousal income is interesting in light of the voluminous economics literature that shows that demand for children rises with income (Black et al., 2013; Dettling and Kearney, 2014; Lindo, 2010; Lovenheim and Mumford, 2013; Schaller, 2016) and that households have children earlier in the life-cycle in response to increases in permanent income. This is relevant because our descriptive statistics that show men earn roughly 12.97% more than women in early career despite their similar performance in law school. However, we find that the estimates are stable even when we control for gender differences in income.

²⁸Our effect sizes are not out of line with other studies in the literature. For example, Lalive and Zweimüller (2009) provides an example in which policies that affect the inter-temporal cost of child birth can have a comparable impact on fertility timing. The authors analyze the impact of a policy change in Austria that stipulated that “treated” mothers who had another child before 27.5 months were automatically eligible for a renewal of parental leave without having to fulfill the work requirement first. This change in the inter-temporal cost associated with child birth affected subsequent birth decisions. Specifically, the authors find that eligible mothers were roughly 8 percentage points more likely than non-eligible mothers to have another child within 17 to 28 months.

Table 2: Gender Difference in Early Parenthood and Late Parenthood

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Early parenthood						
Female-Male Gap	-0.109*** (0.0278)	-0.0782*** (0.0240)	-0.0811*** (0.0238)	-0.0925*** (0.0242)	-0.0806*** (0.0245)	-0.0789*** (0.0245)
Panel B: Late parenthood						
Female-Male Gap	0.0911*** (0.0280)	0.0603** (0.0239)	0.0627*** (0.0237)	0.0652*** (0.0243)	0.0574** (0.0247)	0.0581** (0.0247)
Observations	2,087	2,087	2,087	2,087	2,087	2,087
Controls for:						
Demographic characteristics		Yes	Yes	Yes	Yes	Yes
Ability proxies			Yes	Yes	Yes	Yes
Job characteristics				Yes	Yes	Yes
Income and spousal employment					Yes	Yes
Factor scores						Yes

Source: AJD restricted data.

Notes: Likelihood of early parenthood is 0.51 (males) and 0.40 (females). Likelihood of late parenthood is 0.44 (males) and 0.53 (females). Early parenthood is defined as having one's first child within 7 years after law school. Late parenthood is defined as having one's first child at least 9 years after JD. Childless lawyers are classified as having a late parenthood. Demographic characteristics account for race and ethnicity, age, law school graduation date, geographic location at time of initial survey, and initial marital status. Ability proxies include standardized undergraduate and law school GPAs, U.S. News' 2003 law school ranking, participation in law review, judicial clerkships, number of initial job offers, and number of bar exam attempts. Job characteristics control for initial firm's size, early-career weekly hours worked, and area of law. Income and spousal employment controls include spousal employment status at time of initial survey, early-career household income, and respondent's early-career salary. Factor scores are: social responsibility, earning potential, prestige, career development, firm's ranking, mission match, and financial security. Robust standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

scores would explain a sizable portion of the raw gender difference in fertility timing. Instead, the estimates are robust to these controls.²⁹ Second, if our results were driven by women having stronger preferences for childlessness, then we would expect women to have lower rates of first birth both in early-career *and* late-career. Instead, the patterns imply that women are less likely than men to have a first birth in early-career but *more* likely to have a

²⁹An alternative explanation for why the estimates in Table 2 are robust to factor scores is that the scores may be unreliable proxies of preferences related to work-life balance. However, in the Appendix, we show that controlling for factor scores completely explains away the fact that women are modestly less likely than men to start their first job in law firms. Thus, our factor scores are able to predict why women and men differ in their choice of initial firm type but cannot explain the gender difference in fertility timing.

first birth in late-career. In other words, the lower fertility rate in early-career is a temporary delay rather than a disparity that persists over time. On the whole, the evidence comports more with the idea that women delay fertility until late-career in strategic pursuit of their career advancement.

Table 3: Gender Differences in Fertility in Wave III

	Pr(Parent) (1)	Want more children? (2)	Number of children (3)
Female-Male Gap	-0.029 (0.025)	-0.038 (0.025)	-0.206*** (0.066)
Observations	2,087	2,087	2,087
Baseline controls	Yes	Yes	Yes

Source: AJD restricted data.

Notes: Each column is a separate OLS regression. Number of Children includes having no children. Baseline controls include demographic characteristics, ability proxies, job characteristics, employment controls, and factor scores. See notes in Table 2 for description of baseline controls. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Next, we extend our analysis to include the intensive margin. Table 3 shows a series of estimates in which we replace the dependent variable with the following outcomes observed in late-career (Wave III): (1) whether the respondent is a parent, (2) whether the respondent wants more children in the future, and (3) the total number of children. The estimates in columns (1) and (2) are not statistically significant and are fairly close to zero, which indicates that women catch up to men along the extensive margin by Wave III. The estimate in column (3) is statistically significant at the 1% level and states that women have 0.206 fewer children than men by late-career. This magnitude is moderate in comparison with other studies; for example, [Aaronson et al. \(2014\)](#) finds a fertility response along the intensive margin (due to substantial improvements in school quality) that is two to four times what we find here. On the whole, these results are not wholly consistent with female attorneys having relatively

stronger preferences for childlessness than males.³⁰

5.2 Heterogeneous Effects

In this section, we examine whether the up-or-out policy affects different lawyers’ fertility decisions differently. We examine two types of heterogeneous effects. First, we focus on lawyers who began their careers as associates in large law firms because they are expected to face more intense pressure to maximize labor supply in early-career.³¹ Thus, if the up-or-out policy is what drives our result, then the gender difference in the timing of first birth should be more pronounced among this group relative to attorneys as a whole.

To test this prediction, we construct an indicator variable for whether the respondent’s first position is an associate attorney in a large law firm, where “large” is defined as a firm with more than 250 lawyers.³² We include main and interaction effects between this variable, the female indicator variable, and the timing variables specified in model (2). This will yield estimates of the gender difference in the hazard rate (i.e., probability of first birth in a given year) separately for those who begin as associates in large law firms and for those who do not. For brevity, we refer to associates in large law firms and its complement as “large firm”

³⁰In the Appendix, we show estimates of the Wave III gender difference in the number of children using a count model and get essentially identical results.

³¹Our focus on those who begin their careers as associates in large private law firms has substantive implications. An associate who transitions out of a large private firm, perhaps because of child birth, is still categorized as someone who began their career on the partner track. If women exit the partner track at higher rates due to child birth, then these child-related transitions should push us towards the opposite finding that women who begin their careers on the partner track are more, not less, likely to have their first birth in early-career. Indeed, in the Appendix, we show that our results are more pronounced among those who begin and stay in large firms compared to those who exit.

³²We borrow the 250 threshold from [Lehmann \(2013\)](#), who uses the AJD to study racial disparities in promotion to partner. She writes, “I define a large law firm as a firm with 250 lawyers or more, just below the average size of 262 lawyers in our sample among those working in a private law firm. This definition is consistent with the typical distinction between large- to medium-sized law firms found in literature.” [page 21] Thus, the 250 threshold is not arbitrary but grounded both in descriptive statistics and the broader literature on the legal profession.

and “small firm” hereafter.³³

A drawback to this focus is that it ignores heterogeneity with respect to performance. High-performing associates, who are near the promotion margin, may be especially motivated to delay fertility in order to maximize labor supply before review. For low-performing associates, child birth is arguably less deleterious because their prospects for promotion are already diminished. This motivates a secondary analysis where we examine whether fertility dynamics differ with respect to mid-career performance.³⁴ We use mid-career billed hours, which is known to receive heavy weight in the partnership decision (Fortney, 2005). One methodological issue is that billed hours in mid-career may just as easily depend on fertility timing, indicating that our dependent variable and control variables would be jointly determined. To address the simultaneity bias, we use only the variation in billed hours predicted by predetermined correlates of ability, as in Bertrand et al. (2010). We define high- and low-performers as those whose predicted billed hours are in the top quartile and the bottom three quartiles, respectively. We use model (2) to estimate the gender difference in the hazard rates separately for each group.³⁵

We present graphical evidence of how the gender difference in fertility timing evolves year-to-year throughout the partner clock. We expect two patterns to emerge in the data. First, recall that our earlier results show that women are less (more) likely to have first birth

³³We show results from additional specifications that compare dynamics for those who begin in large firms and the public sector in the Appendix. We also show dynamics separately by gender. These patterns are closely aligned with the results presented in this section.

³⁴In the Appendix, we present a theoretical model that motivates this empirical exercise. The model shows that high-performing associates have more responsive demand for children in early-career because their production is closer to the threshold that employers use to decide promotion. Further, employers use different promotion thresholds for mothers vs. fathers due to greater uncertainty about women’s future labor supply after child birth.

³⁵Our measure of predicted performance is strongly correlated with the actual probability of promotion. A one-standard deviation increase in predicted billed hours is associated with an 8 percentage-point increase in the likelihood of being promoted to partner (a 47% increase). In the Appendix, we show that using actual billed hours rather than predicted billed hours yields qualitatively similar results.

than men in early-career (late-career). This implies that the gender difference in hazard rates should dip at some point in early-career and then subsequently recover. It is worth noting, however, that the precise timing of the dip and recovery is not clear. For example, if associates receive strong signals from senior partners on their prospects for promotion prior to the actual decision, then the inflection point in the hazard rate could occur before partnership rates actually begin to rise. Second, we expect this pattern to be especially pronounced among those who begin their careers in large firms and those who are stronger candidates for promotion based on their mid-career performance because these are the junior attorneys whose career advancement is structured by the up-or-out policy.³⁶

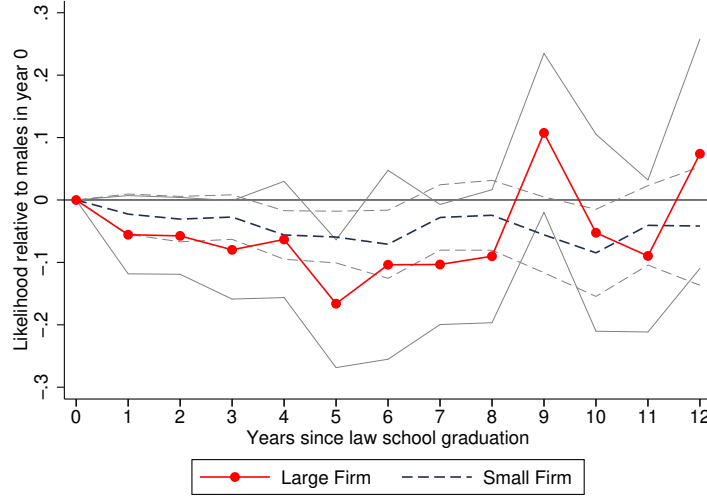
Figure 3 shows the gender difference in hazard rate separately for those who begin their career in large firms (solid line) and for those who do not (dashed line). The patterns are largely aligned with our expectations. The dashed line is fairly stable across all periods, implying that the promotion decision does not substantially structure the timing of first birth for those who begin their careers in small firms. The line is persistently less than zero, although not statistically significantly so, which implies that these women are less likely than men to have first birth in all periods. This may relate to the fact that our sample consists of highly educated persons and fertility declines with education, particularly especially for women (Aaronson et al., 2014).

In contrast, the solid line exhibits more inter-temporal variability. There is a sharp dip in year 5, followed by a gradual ascension between years 6 to 8, and then a dramatic one-time jump in year 9. Specifically, women are 16.6 percentage-points less likely than men to have their first birth in year 5, but nearly 11 percentage-points more likely in year 9.³⁷ Although

³⁶The length of the partner clock varies modestly across firms, and thus, our estimates reflect a weighted average across probationary periods of different lengths. This will attenuate the sharpness of a dip and subsequent recovery.

³⁷It is interesting that the gender difference in hazard rate drops in year 10. One explanation may be that

Figure 3: Gender Difference in Hazard Rate by Firm Type



Source: AJD restricted data.

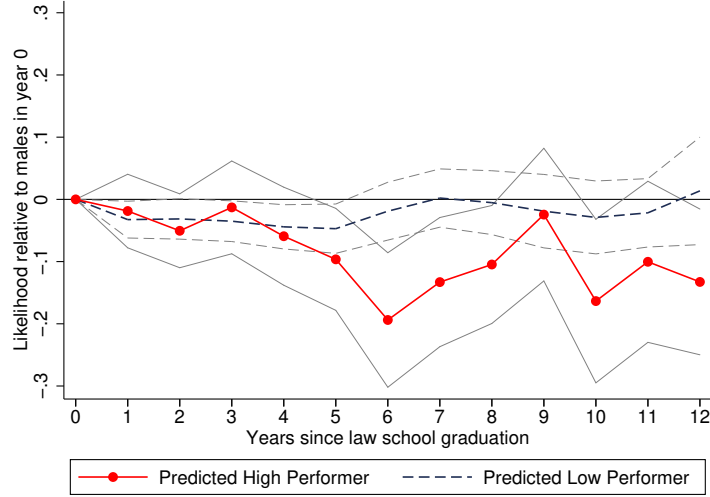
Notes: This figure depicts each year’s contribution to the female’s hazard of exiting the childless state relative to male’s in year 0, separately for lawyers in large firms and small firms. “Large firms” are lawyers whose first job was as an Associate in a law firm with at least 250 lawyers, and “small firms” are otherwise. Gray lines are 95% confidence intervals. $N = 15,356$. The sample is on the same 2,087 individuals in Tables 2 and 3, but the data have been transformed into a person-by-year panel in order to estimate the hazard rate.

most of the confidence intervals include zero, the pattern of dip and recovery is consistent with women who begin in large firms having a stronger motivation than men to delay first birth. In the Appendix, we show that the patterns are similar when we use more aggregated categorizations of attorneys based on their exposure to the up-or-out policy (e.g., those who begin their careers as associate attorneys vs. not).

Figure 4 shows the gender difference in hazard rate separately for high performers and low performers and their corresponding 95% confidence intervals. For low performers, the gender difference is negative for the first 5 years and then approaches zero thereafter. However, the

the median female lawyer is 38 years old in year 10, precisely when female fecundity is in decline ([Committee Opinion No. 589, 2014](#)). This is not true for men whose fecundity begins to decline around age 45 ([Harris et al., 2011](#)).

Figure 4: Gender Difference in Hazard Rate by Predicted Performance



Source: AJD restricted data.

Notes: This figure depicts each year's contribution to the female's hazard of exiting the childless state relative to male's in year 0, separately for predicted high performers and predicted low performers. Lawyers are classified as high performers if their predicted performance-level is in the top quartile and as low performers otherwise. Gray lines are 95% confidence intervals. $N = 18,081$. The sample is on the same 2,087 individuals in Tables 2 and 3, but the data have been transformed into a person-by-year panel in order to estimate the hazard rate.

magnitude of these gaps is far more modest than what we observe for higher performers. For high performers, there is even stronger visual evidence of a dip and subsequent recovery. The gender difference in hazard rate sharply declines in years 5 and 6, causing the hazards for the two groups to diverge considerably. Specifically, in year 6, the gender difference in the hazard rate is 19.4 and 2 percentage-points for high and low performers, respectively, and this 17.4 percentage-point difference is statistically significant at the 5% level. Thereafter, the gender difference steadily recovers until year 9. In this graph, the inflection point occurs in year 7, which is precisely when partnership rates begin to rise. Overall, the patterns in Figures 3 and 4 are consistent with the idea that the gender gap in fertility timing is linked

to the differential impact that first-birth has on the career advancement of women vs. men.³⁸

An important caveat is that many of the point estimates are not estimated precisely enough to reject a null effect. However, it is interesting that the patterns oppose the idea that the gender difference in the timing of first birth is driven by preferences related to work-life balance. In theory, preferences over work-life balance may affect fertility timing in several ways. For example, women with strong preferences for early child birth may eschew the partner clock from the start. This would imply that women who begin their careers in large firms have stronger preferences for childlessness, and thus, their hazard rates would be below that of men's in all periods. However, Figure 3 shows that women in large firms are more likely than men to have their first birth in late-career, which contradicts this hypothesis.

A second possibility is that preferences over work-life balance may evolve. For example, women may delay fertility initially in pursuit of partnership, but then develop relatively strong preferences for child birth later on. Although this would also generate a U-shaped pattern, it does not easily explain the observed differences between high and low performers in Figure 4. For example, we might expect women with low mid-career performance to update their preferences on fertility timing more as they receive inauspicious signals about their prospects for partnership. In this case, we would expect a similar, if not earlier, dip and recovery among low performers. This is the opposite of what we find.³⁹

³⁸When we use the more parsimonious specification in model (1) that partitions the partner clock into early and late periods, we find that high-performing women are roughly 15 percentage points (12 percentage points) less (more) likely to have first birth in early-career (late-career) than high-performing men. Both estimates are statistically significant at the 5% level. The analogous estimates for low performers are closer to zero and are not statistically significant at the 5% level.

³⁹An alternative explanation relates to gender differences in marital status. If there is a general preference for finding a life partner prior to having children and women are less likely to have a life partner in early-career than men, then this may explain the gender difference in fertility timing. However, in the Appendix, we show that the patterns are very similar when we restrict the sample to those who are already married in Wave I and when we include contemporaneous controls for marital status.

6 Potential Mechanisms

6.1 Motherhood Penalty

One potential mechanism for the fertility-timing disparity is that women anticipate an employer backlash in response to child birth. Women may be especially concerned about being transitioned from challenging cases to routine cases or that their employer will be less invested in their skill development after child birth. Such a response need not be motivated by employer distaste à la [Becker \(1960\)](#). Instead, employers may rationally invest less in women who have children because, on average, women reduce their labor supply more than men after child birth. For example, [Bertrand et al. \(2010\)](#) shows that women with children work substantially fewer hours per week (24% less) than men, whereas this gap is only 3% for childless workers.⁴⁰ In this section, we examine whether employers respond to child birth more negatively for women than men.

The AJD asks whether respondents experience adverse consequences due to child birth, such as questioning of their commitment to work, loss of challenging assignments, and loss of clients. Therefore, we are able to examine whether employers respond negatively to child birth, and if so, whether the response differs for mothers vs. fathers. Importantly, the AJD also includes questions on one’s involvement in child care, such as whether respondents leave work early for the child, arrange child care, or look after children during evening hours. Therefore, we can further assess whether a gender gap in adverse consequences can be explained by actual differences in time allocation between home and work. The results

⁴⁰In the Appendix, we show that women in the AJD are more likely than men to work part-time after having their first child and that those with young children work fewer hours relative to men with young children. Employers may view this as confirmatory evidence of negative stereotypes that mothers are less committed to their work after child birth, even though these statistics may reflect an equilibrium outcome driven in part by the employer’s own response towards women with children.

are organized in Table 4 in the following way. Each panel presents estimates of the gender gap in a specified adverse consequence and each column presents estimates from a different specification.

Table 4: Adverse Consequences Due to Child Birth

	(1)	(2)	(3)
Panel A: Questioning of Commitment to Work			
Female-Male Gap	0.258*** (0.0284)	0.249*** (0.0294)	0.224*** (0.0336)
Mean Male Outcome		0.133	
Observations	1,404	1,404	1,404
Panel B: Loss of Challenging Assignments			
Female-Male Gap	0.182*** (0.0194)	0.185*** (0.0205)	0.161*** (0.0214)
Mean Male Outcome		0.015	
Observations	1,393	1,393	1,393
Panel C: Loss of Clients			
Female-Male Gap	0.0769*** (0.0164)	0.0779*** (0.0175)	0.0765*** (0.0202)
Mean Male Outcome		0.022	
Observations	1,379	1,379	1,379
Controls for:			
Demographics and Ability Proxies	Yes	Yes	Yes
Employment		Yes	Yes
Division of Childcare Responsibilities			Yes

Source: AJD restricted data.

Notes: See notes in Table 2 for description of demographic controls and ability proxies. Employment controls include initial firm's size, initial weekly hours worked, initial area of law, billed hours in mid-career, spouse's initial employment status, early-career household income, and respondent's early-career salary. Division of childcare responsibilities include arranging for child care, leaving work for children's needs, and looking after children during daytime and evening hours. Robust standard errors are in parentheses. The number of observations shrinks from 2,087 because not all respondents answered survey questions on adverse consequences. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Panel A column (1) shows that women are substantially more likely than men to have their commitment questioned after child birth. Specifically, the gender difference is 25.8

percentage points. Put another way, nearly 40% of all mothers have their commitment questioned after child birth as the male mean is 0.133. Panels B and C show that women are also more more likely to lose challenging assignments and to lose clients after child birth. Specifically, the estimated gender gap in the likelihood of losing challenging assignments and clients is 18.2 and 7.7 percentage-points, respectively. All of these estimates are statistically significant at the 5% level. The fraction of men who report losing challenging assignments and clients due to child birth is only 1.5% and 2.2%, respectively. Thus, fathers are not subject to the same reduction in desirable assignments and clients that mothers experience after child birth.

Within each panel, the estimates are very stable across the three specifications. The estimates range between 22.4 and 25.8 percentage-points (Panel A), 16.1 and 18.5 percentage-points (Panel B), and 7.65 and 7.79 percentage points (Panel C). Further, the estimates retain their statistical significance at the 5% level as we include additional controls. We note that because we explicitly control for labor supply and involvement in child care (in columns (2) and (3)), actual differences in time allocation cannot explain this motherhood penalty.

An alternative explanation is that employers may perceive mothers to be less reliable after child birth ([Budig and England, 2001](#)), and thus, question them more or transition them to less valuable assignments and to fewer clients.⁴¹ This is consistent with studies that find employers are less willing to invest in training women when there is increased uncertainty regarding their future labor supply ([Prada et al., 2015](#); [Thomas, 2016](#)).⁴² In

⁴¹For example, [Correll et al. \(2007\)](#) conduct an audit study in which employers are sent fictitious resume pairs that differ only in whether the applicant is listed as a “Parent-Teacher Association coordinator”. The authors find that mothers receive significantly fewer callbacks than fathers. Their result is consistent with the idea that employers stereotype mothers as being less reliable after child birth whereas fathers are viewed more favorably.

⁴²[Thomas \(2016\)](#) finds that Family and Medical Leave Act of 1993 increased employment but decreased promotion rates for women because the extension of parental leave dampens the employer’s willingness to invest in women because there is increased uncertainty about women’s future productivity. Also see Claire

equilibrium, employer beliefs may self-confirm if mothers reduce labor supply in part because the motherhood penalty effectively lowers their marginal return to effort.

A limitation of the preceding analysis is that self-reported discrimination may misrepresent the employer’s response to child birth, particularly given the gendered nature of the survey questions (Yavorsky et al., 2015). This motivates an additional exercise where we examine differences in qualifications between mothers and fathers who are promoted to partner. In theory, if employers transition mothers to less desirable assignments, reduce their client portfolio, or question their commitment more than fathers, then mothers may have to exhibit higher quality than their male counterparts to signal the same level of ability or dedication to the firm. To this end, we construct two samples of partners: (1) those who have their first birth prior to promotion (i.e. parent-first sample), and (2) those who are childless at the time of their promotion (i.e. partner-first sample). Then, we estimate gender differences in various skill dimensions within each sub-sample. The specific outcomes include initial caseload, participation in general law review, judicial clerkship, billed hours, and book of business (value of the attorney’s clientele).⁴³

Table 5 shows covariate-adjusted gender differences in skill *conditional* on being promoted to partner. In Panel A, the estimates in columns (1) to (4) are consistent with the idea that women who have children prior to promotion are more positively selected than otherwise similar men. These women receive roughly 1.4 more cases in early-career, are 22.2 percentage-points more likely to have participated in general law review, 25.3 percentage-points more likely to have been in an editorial role, and 45.7 percentage-points more likely to have held a

Cain Miller, “When Family-Friendly Policies Backfire,” *New York Times*, May 26, 2015.

⁴³An alternative approach is to estimate the gender gap in promotion rates in the pooled sample conditional on performance. In the Appendix, we show that women are less likely to be promoted than men conditional on performance. Specifically, the estimated gender gap is 3.6 percentage points (a 16.6% difference), and this estimate is statistically significant at the 10% level. Thus, this approach also suggests that it is more difficult for women to be promoted relative to men *ceteris paribus*.

Table 5: Gender Differences in Skill Among Equity Partners by Parental Status

	Initial caseload (1)	General law review: Member (2)	Editor (3)	Judicial clerkship (4)	Billed Hrs (std) (5)	Book of Business (6)
Panel A: Parent-first sample						
Female-Male Gap	1.394*** (0.523)	0.222** (0.105)	0.253*** (0.096)	0.457** (0.206)	-0.0676 (0.313)	-81,917 (161,682)
Avg. male likelihood	7.89	0.22	0.12	0.2	0.43	341,475.50
Observations	119	172	172	39	127	142
Panel B: Partner-first sample						
Female-Male Gap	-0.328 (0.331)	-0.0091 (0.090)	0.0676 (0.081)	0.305 (1.736)	0.469* (0.273)	-73,299 (125,264)
Avg. male likelihood	8.76	0.34	0.28	0.26	0.35	292,339.60
Observations	76	109	109	26	87	98
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls				Yes	Yes	Yes

Source: AJD restricted data.

Notes: Each column is a separate OLS regression. Billed Hours are standardized by firm size. "Parents-first sample" are lawyers who had children before they became equity partner. "Partners-first sample" are lawyers who had children after they became equity partner. The number of observations shrinks from 2,087 because the sample is restricted to equity partners. There are 292 equity partners, comprised of 179 lawyers in the "parent-first" sample and 113 lawyers in "partner-first" sample. The sample size differs across columns because not all respondents report answers to the outcome in question. Baseline controls include race and ethnicity, age, law school graduation year, geographic location at time of initial survey, and initial marital status. Firm controls include initial area of law and initial firm's size. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

judicial clerkship. All of these estimates are statistically significant at the 5% level. Among equity partners who were without children at the time they were promoted, the gender differences are more modest. For example, women receive 0.328 fewer cases than men in this sample, compared to women receiving 1.4 *more* cases than men in the parent-first sample.

Columns (2) through (4) consider participation in law review and judicial clerkships. Law review and judicial clerkships are highly valued both by law school students and the market, suggesting that they may be reliable signals of latent ability. For example, some large law firms have been known to pay sizable signing bonuses to former judicial clerks. Second, law reviews and judicial clerkships use a holistic review to select their members. It is standard

practice for law reviews to use writing competitions and for judges to require letters of recommendations and interviews as part of their screening process. Thus, gender differences in these accomplishments may reflect more intangible qualities, such as writing ability or deftness in interpersonal communication, that are also relevant inputs in the promotion decision.⁴⁴ Overall, these results are consistent with women being more positively selected than men in the parent-first but not partner-first sample.

Columns (5) and (6) focus on mid-career billed hours and book of business, which are important considerations in the promotion decision. Before we discuss these results, it is worth noting that our earlier results complicate the interpretation of gender differences along these dimensions. Recall that we find employers reduce investment in mothers relative to fathers after child birth. In this case, we expect women to *under-perform* in comparison with men (i.e. a negative gender gap) since the loss of clients and desirable assignments encumbers the accumulation of billed hours and book of business. If female partners were to perform on par with males (i.e. no gender gap), then this implies that women must *exceed* expectations since reduced employer investment diminishes their ability to achieve the same level of performance as men. Thus, in this context, a zero gender gap may very well indicate that women are *infra-marginal* to the extent that exceptional qualities are required to counterbalance these aforementioned challenges.

Panel A column (5) says that women and men in the parent-first sample bill similar hours; the difference is a modest 0.07 standard deviations. In other words, mothers who are promoted to partner bill comparable hours to fathers in spite of the motherhood penalty. Column (6) shows a greater discrepancy in book of business; in particular, women have a

⁴⁴For example, in *Price Waterhouse v. Hopkins*, the plaintiff Ann Hopkins was denied promotion at her accounting firm despite strong performance metrics because the partners found her personality to be overly aggressive and believed she was in need of a “course in charm school”.

client base whose value is roughly \$82,000 less (a 24% difference) than that of men in mid-career. In Panel B, the estimates show that women in the partner-first sample bill more hours than men (0.47 standard deviations) but have a book of business valued roughly \$73,000 less (roughly 25% difference) than that of men's in mid-career. Although none of these estimates are statistically significant at the 5% level, it is interesting that estimates across both panels suggest that women are modestly less efficient than men (in terms of dollar value per billed hour) because their clients are associated with less value. One potential explanation may be demand-side bias in which male clients have preferences for same-gender representation ([Rubino, 2018](#)).

In summary, our results show that women are more likely than men to report adverse consequences from child birth even after we control for differences in time allocation between home and work. This is consistent with the idea that employers reduce investment in mothers due to greater uncertainty over their future labor supply ([Barron et al., 1993](#)). This finding has important implications for who becomes partner. In particular, we find that women who have children prior to being promoted are more likely to receive greater responsibility in early-career (i.e., higher initial caseload) and secure highly coveted positions in law school and upon graduation (i.e., law review and judicial clerkship) relative to otherwise similar men. We find no analogous differences between men and women who are childless at the time of promotion. In addition, we find that mothers bill comparable hours to fathers, which is not necessarily expected given the reduction in employer investment. Overall, these results suggest that mothers and fathers are evaluated under disparate promotion standards.

6.2 Gender Norms

The previous results are intimately tied to the fast-expanding literature that document the importance of gender norms in labor and marriage-market outcomes. For example, [Bertrand et al. \(2015\)](#) finds that married couples experience greater dissatisfaction when wives violate the gender norm that “women should not earn more than their husbands”. In order to conform, wives on the cusp of exceeding 50% of household income exhibit a greater willingness to reduce labor supply, earn less than their potential, and increase home production. [Bursztyn et al. \(2017\)](#) finds that single women at elite MBA programs are less outspoken in class and less willing to reveal the strength of their career ambitions in order to conform to the social norm that “desirable women are not ambitious and assertive”. In our context, for women on the partner track, stronger expectations that “women and not men should be the primary caregivers of children” may affect the timing of first birth because of its implications for which parent bears more of the time-cost of child care within the household. We examine this next.

We borrow from [Pan \(2015\)](#), who constructs a sexism index using eight questions from the General Social Survey (GSS) that center on the appropriate role of women in society. For context, we list three of the eight statements below.⁴⁵

- A working mother can establish just as warm and secure a relationship with her children as a mother who does not work.
- It is more important for a wife to help her husbands career than to have one herself.
- It is much better for everyone involved if the man is the achiever outside the house and the woman takes care of the home and family.

[Pan \(2015\)](#) uses responses from male participants to compute separate sexism indices for

⁴⁵The other five statements are in the same vein.

white-collar and blue-collar occupations for each U.S. Census region. We use the white-collar index since our lawyer sample consists of white-collar workers. Census regions with more positive (more negative) scores on the sexism index are expected to have stronger (weaker) attachment to the gender norm that women should be the primary caregiver of children and not men.⁴⁶

Figure 5 shows the relationship between the gender fertility gap and the white-collar sexism index. Dots represents the estimated female-male difference in early parenthood (Panel A) and late parenthood (Panel B) among high-performers (as previously defined) in a given Census region. This analysis focuses on high performers because, as noted earlier, their fertility decisions are more responsive to the up-or-out policy.⁴⁷ We weight regions by their size, and the line that cuts through is the familiar line of best fit.⁴⁸

Panel A shows that female lawyers in regions with stronger attachment to gender norms are less likely than males to have their first birth in early-careers. Although the region with the strongest positive gender gap also has an above average sexism score (i.e., stronger attachment to gender norms), this region has the fewest people and thus exerts minor influence on the pattern overall. The downward sloping line of best fit corroborates that women are more likely to delay fertility where men have stronger attachments to traditional gender

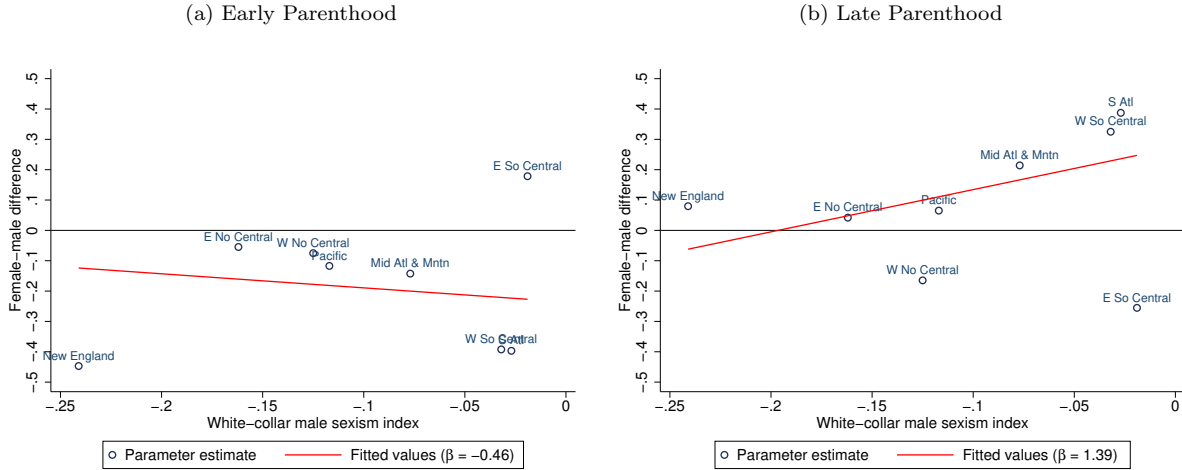
⁴⁶In the Appendix, we extract the portion of Table 5 from Pan (2015) that is relevant for our analysis. It shows that the attachment to traditional gender norms among white-collar males is strongest in the East South Central region and the weakest in New England.

⁴⁷In the Appendix, we show the analogous graphs for low-performing lawyers. These figures show the opposite result in that low-performing women are moderately more (less) likely to have first birth in early-career (late-career) in regions where men have stronger attachment to traditional norms. Overall, these patterns are consistent with the idea that gender norms may interact with up-or-out policy in ways that condition the gender difference in fertility timing.

⁴⁸The Mountain region was combined with the Middle Atlantic due to low power; with only 75 observations, we were unable to obtain estimates for the Mountain region. The gender fertility difference estimate is reported under a newly constructed sexism index for the Mountain-Middle Atlantic region, which is weighted by population.

norms.⁴⁹

Figure 5: Gender Fertility Difference by Level of Gender Norms



Source: AJD restricted data, Pan (2015).

Notes: These figures plot region-specific gender differences in early parenthood and late parenthood by the level of gender norms. The level of gender norms is classified by the Census Region's white-collar male sexism index, which is constructed from the GSS survey (Pan, 2015). More positive values correspond with more gender-prejudiced attitudes. Size of circles represents the census region's population. Fitted values are weighted by population size.

Panel B shows the relationship between the gender difference in late parenthood and the sexism index. This figure shows an upward-sloping line of best fit, reinforcing the idea that women are especially more likely than men to have their first birth in late-career in regions where men have greater attachment to traditional gender norms.⁵⁰ Overall, these patterns suggest that gender norms are important because they structure expectations of how the

⁴⁹The coefficient on the best fit line is -0.46 which implies that 1 standard deviation increase in the sexism index is associated with a 2.91 percentage-point decrease in the female-male early parenthood gap since the standard deviation in the index is 0.063. This point estimate is statistically significant at the 1% level.

⁵⁰The coefficient on the best fit line is 1.39 which implies that a one-standard deviation increase in the sexism index is associated with a 8.7 percentage-point increase in the female-male late parenthood gap. This estimate is statistically significant at the 1% level.

time-cost of child care will be allocated across parents within the household.

In the Appendix, we provide additional evidence that the time-cost of child care is a substantive determinant of the fertility timing of men and women. Specifically, we use the Institute for Women’s Policy Research’s *Status of Women* 2015 report that grades each state on their family leave policies and institutional support for work-life balance.⁵¹ We conduct a similar exercise and ask whether the gender difference in early and late parenthood among high-performing lawyers differs by the strength of family-friendly policies in place. We find that women are more likely than men to delay child birth until late-career in states with poor institutional support. On the whole, our findings align with a literature that finds policies that affect the time-cost of child care, such as parental leave, may affect fertility as well as labor market outcomes (Lalive and Zweimüller, 2009).

7 Legal Implications

Our findings have substantive implications for the Equal Pay Act of 1963, which stipulates that employees of the opposite sex must receive equal pay for equal work barring a few considerations that allow for gender differences in pay. An especially relevant exception is that men and women can be compensated differently when there are differences in their “quantity or quality of production”. Our results suggest that this standard may be overly conservative. For example, we show that employers reduce investment more in mothers than fathers even after accounting for differences in their labor supply and child care. Because skill investments are important inputs to performance, this may generate differences in the “quantity and quality of production” between women and men with children who are oth-

⁵¹The grades are based on its paid leave legislation, quality of elder and dependent care, and the gender gap in parents’ labor force participation rates.

erwise similar in their ability, effort, and productivity. Therefore, employers may behave in ways that simultaneously diminish the ability of women to achieve similar performance as men but still survive legal scrutiny because women and men earn the same *conditional* on performance.

It is unclear whether Title VII of the Civil Rights Act of 1964 offers more recourse. Even though Title VII affords numerous protections from employer discrimination for minorities, the comparative advantage of Title VII lies in its ability to thwart discrete and overt forms of discrimination, such as exclusionary job requirements⁵², sexual harassment⁵³, and promotion denials⁵⁴ based on sex. In contrast, the mechanisms that drive our results are more subtle and not obviously in violation of the law. As noted earlier, employers may rationally invest less in women who have children because, on average, women reduce their labor supply more than men after child birth.⁵⁵ In this case, the employer response is not arbitrary but genuinely rooted in business interests. Moreover, if the employer can cite other legitimate reasons for reducing investment towards an individual employee, then it would be especially difficult to prove discriminatory *intent*, which is the legal standard used in disparate treatment cases.

Alternatively, our findings also imply that facially neutral up-or-out contests have disparate impacts with respect to both fertility timing and promotion standards applied to

⁵²See *United States v. Sheet Metal Workers Int’l Ass’n, Local Union No. 36*, 416 F.2d 123, 140 (8th Cir. 1969).

⁵³See, for example, *Meritor Savings Bank v. Vinson*, 477 U.S. 57 (1986) in which the Court affirmed that sexual harassment that creates a “hostile work environment” constitutes a violation of Title VII.

⁵⁴See *Price Waterhouse v. Hopkins*, 490 U.S. 228 (1989).

⁵⁵Legal doctrine is fairly consistent in its approach to taste-based discrimination in the sense that invidious intent is unequivocally impermissible (*Yick Wo v. Hopkins*, 118 U.S. 356 (1886), *Romer v. Evans*, 517 U.S. 620 (1996)). In contrast, the law interacts differently with statistical discrimination because its intent is not necessarily rooted in racial animus (Mungan, 2018; Ross and Yinger, 2006). For a statistical discriminator, race is only of interest insofar as it correlates with something else of interest. As a result, the courts have arguably shown greater tolerance for statistical vs. taste-based discrimination. For example, in *Hernandez v. New York*, 500 U.S. 352 (1991), the Court ruled that a prosecutor did not violate the equal protection clause by disproportionately excluding potential Latino jurors from the jury citing the prosecutor’s legitimate concern about their ability to accept the official translation of the trial testimony.

women and men. This is relevant because the Court has previously struck down facially neutral workplace practices that have exclusionary effects on minority groups. In these cases, an important consideration is the strength of the employer’s stated reasons for using the practice in question. In *Griggs v. Duke Power Co.*, the Court sided with the plaintiff, in part because the defendant could not demonstrate that the job requirement was, in fact, important for job performance. However, in our context, there is an extensive body of research that identifies numerous ways in which up-or-out promotion policies serve legitimate business interests. A leading argument is that the intense nature of the probationary period allows employers to obtain numerous signals of worker productivity, which substantially lowers the risk of promoting an unqualified person. Thus, it seems unlikely that our evidence would move the needle much in a disparate impact case.⁵⁶

Instead, our findings reinforce the idea that employer practices that currently disadvantage women are not necessarily those that are proscribed by the law. This tension is partly due to the fact that employers have already responded to the first wave of court cases that reined in more egregious forms of discriminatory behavior. More understated forms of bias continue to operate through institutional or cultural norms, in part because they are not obviously in violation of the current incarnation of sex discrimination law. For example, an employer that allows employees to negotiate their salary, allows senior colleagues to assign tasks, or extends parental leave to both men and women may unknowingly contribute to gender disparities in pay or promotion because women are worse negotiators ([Card et al., 2016](#)), more likely to accept less desirable tasks ([Babcock et al., 2017](#)), and less likely to devote time to work while on parental leave than men ([Antecol et al., 2018](#)). Thus, our

⁵⁶In addition, it is worth noting that the court has often showed deference towards academic institutions in cases involving discrimination in the tenure process. See, for example, *Fisher v. Vassar College*, 70 F.3d 1420, 1434-35 (2d Cir.1995), *Zahorik v. Cornell Univ.*, 729 F.2d 85, 92 (2d Cir.1984), and *Lieberman v. Gant* 630 F.2d 60, 68 (2d Cir. 1980).

study is well-aligned with [Sturm \(2001\)](#), who calls for structural reform in order to better counterbalance the deleterious effects of what she refers to as second-generation gender bias.

8 Conclusion

We use the *After the JD* study, a nationally representative panel data set of lawyers, and find that women are more likely than men to delay first birth. This gender difference in fertility timing is more pronounced among associates who are more likely to receive strong consideration for promotion. One possible explanation is that these women have different preferences for fertility than men. Gender-based sorting may lead to compositional changes in which women who have weak preferences for children remain in firms that require high levels of labor supply. However, our result is robust to a rich set of controls for baseline preferences for work-life balance. In addition, we find that the delay in fertility is not permanent in that women are more likely than men to have their first child in late-career after the promotion decision is resolved. Further, there is evidence of only a modest gender difference in the total number of children by the end of the survey, suggesting that our main result is unlikely to be driven by different preferences for family size.

Several pieces of evidence suggest that the empirical findings are tied to a gender difference in the relative cost of child birth in early-career vs. late-career. We find that women are much more likely than men to report adverse work consequences after child birth, such as loss of clients and challenging assignments, even when we hold labor supply and child care constant. This may motivate women to push child birth into late-career to the extent that employer investment in early-career is important for career advancement. In addition, we use regional variation in male sexist attitudes and find that women are more likely to delay

child birth in regions where men more strongly proscribe to gender norms that tether women to home production and child care. This suggests that social norms can also contribute to the wedge between men and women in the inter-temporal cost of child birth.

Our analysis relates to existing discourse on the welfare implications of delayed fertility. On one hand, children of older mothers have fewer behavioral issues, on average, than those of younger mothers even after accounting for socio-economic characteristics ([Trillingsgaard and Sommer, 2018](#)). Older mothers also raise their children with more economic resources because the earnings penalty associated with child birth lessens with age ([Buckles, 2008](#); [Miller, 2011](#)). On the other hand, the women in our data receive no additional pecuniary compensation from delaying child birth more than men, even though birth at advanced maternal age is associated with a higher risk of Down syndrome ([Penrose, 1967](#)), brain damage in-utero ([Durkin et al., 1976](#)), dyslexia ([Gillberg, 1980](#)), and other chromosomal irregularities. Although medical advances in egg-freezing technology may diminish these risks, these innovations may also amplify other non-biological concerns identified herein. In particular, employers may be more inclined to question the commitment of women who have children early on though fertility delay is associated with negligible downside risk.

There are limitations to our study worth noting. First, our results may have limited external validity due to substantive differences across fields. However, an alternative view is that we actually extend earlier work that finds, in law school, facially neutral pedagogical practices contribute to substantial gender differences in class rank even though women and men enter with equivalent credentials ([Guinier et al., 1994](#)). Our results suggest that gender-neutral practices can continue to impose greater burden on women even upon entering the profession. Another concern is that our study does not specify reasonable remedies to counter the reported disparate impacts. One reason is that the alteration of a discrete rule (e.g. clock

stopping policy or extension of parental leave) is unlikely to reverse the deep-seated patterns of interactions that drive our findings. Instead, a structural approach may be more effective in unwinding the complex dynamics that underlie our results.⁵⁷

⁵⁷[Sturm \(2001\)](#) provides several case studies as examples of structural reform. In addition, in *Cahill v. Nike Inc.*, 3:18-cv-01477, U.S. District Court, District of Oregon, four former Nike employees have filed a federal class-action lawsuit due to gender discrepancies in pay and repeated sexual harassment. The lawsuit seeks multifaceted reform in which Nike adopts specific plans to recruit, hire, and promote minority workers and to monitor Nike in order to ensure compliance with said plans.

References

- Aaronson, D., F. Lange, and B. Mazumder (2014). Fertility transitions along the extensive and intensive margins. *American Economic Review* 104(11), 3701–24.
- Adda, J., C. Dustmann, and K. Stevens (2016). The Career Costs of Children. *Journal of Political Economy*.
- Altonji, J. G. and R. M. Blank (1999). Race and gender in the labor market. *Handbook of Labor Economics* 3, 3143–3259.
- Antecol, H., K. Bedard, and J. Stearns (2018). Equal but inequitable: Who benefits from gender-neutral tenure clock stopping policies? *American Economic Review* 108(9), 2420–41.
- Antecol, H. and D. Cobb-Clark (2009). Racial harassment, job satisfaction, and intentions to remain in the military. *Journal of Population Economics* 22(3), 713–738.
- Azmat, G. and R. Ferrer (2017). Gender gaps in performance: Evidence from young lawyers. *Journal of Political Economy* 125(5), 1306–1355.
- Babcock, L., M. P. Recalde, L. Vesterlund, and L. Weingart (2017). Gender differences in accepting and receiving requests for tasks with low promotability. *American Economic Review* 107(3), 714–47.
- Bailey, M. J., T. S. Byker, E. Patel, and S. Ramnath (2019). The Long-Term Effects of California’s 2004 Paid Family Leave Act on Women’s Careers: Evidence from U.S. Tax Data. Working Paper 26416, National Bureau of Economic Research.
- Barlevy, G. and D. Neal (2019). Allocating effort and talent in professional labor markets. *Journal of Labor Economics* 37(1), 000–000.
- Barron, J. M., D. A. Black, and M. A. Loewenstein (1993). Gender differences in training, capital, and wages. *Journal of Human Resources*, 343–364.
- Beaman, L., N. Keleher, and J. Magruder (2018). Do job networks disadvantage women? Evidence from a recruitment experiment in Malawi. *Journal of Labor Economics* 36(1), 121–157.
- Becker, G. S. (1957). *The Economics of Discrimination*. University of Chicago Press.
- Becker, G. S. (1960). An economic analysis of fertility. In *Demographic and Economic Change in Developed Countries*, pp. 209–240. Columbia University Press.

- Bertrand, M., C. Goldin, and L. F. Katz (2010). Dynamics of the gender gap for young professionals in the financial and corporate sectors. *American Economic Journal: Applied Economics* 2, 228–255.
- Bertrand, M., E. Kamenica, and J. Pan (2015). Gender identity and relative income within households. *Quarterly Journal of Economics* 571, 614.
- Black, D. A., N. Kolesnikova, S. G. Sanders, and L. J. Taylor (2013). Are children normal? *The Review of Economics and Statistics* 95(1), 21–33.
- Blau, F. D. and L. M. Kahn (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature* 55(3), 789–865.
- Brogaard, J., J. Engelberg, and E. Van Wesep (2018). Do economists swing for the fences after tenure? *Journal of Economic Perspectives* 32(1), 179–94.
- Brown Jr, W. O. (1997). University governance and academic tenure: A property rights explanation. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, 441–461.
- Buckles, K. (2008). Understanding the returns to delayed childbearing for working women. *American Economic Review: Papers & Proceedings* 98(2), 403–407.
- Budig, M. J. and P. England (2001). The wage penalty for motherhood. *American Sociological Review*, 204–225.
- Bursztyn, L., T. Fujiwara, and A. Pallais (2017). "Acting Wife": Marriage Market Incentives and Labor Market Investments. *American Economic Review* 107(11), 3288–3319.
- Byker, T. (2016). The opt-out continuation: Education, work, and motherhood from 1984 to 2012. *RSF: The Russell Sage Foundation Journal of the Social Sciences* 2(4), 34–70.
- Carbado, D. W. and M. Gulati (2000). Conversations at work. *Oregon Law Review* 79, 103.
- Card, D., A. R. Cardoso, and P. Kline (2016). Bargaining, sorting, and the gender wage gap: Quantifying the impact of firms on the relative pay of women. *Quarterly Journal of Economics*.
- Carmichael, H. L. (1988). Incentives in academics: Why is there tenure? *Journal of Political Economy* 96(3), 453–472.
- Charles, K. K. (2000). A simple model of subtle discrimination. Technical report.
- Committee Opinion No. 589 (2014). Female age-related fertility decline. *Fertility and Sterility* 101(3), 633–634.

- Coombs, L. C. and R. Freedman (1970). Pre-marital pregnancy, childspacing, and later economic achievement. *Population Studies* 24(3), 389–412.
- Correll, S. J., S. Benard, and I. Paik (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology* 112(5), 1297–1338.
- Cortés, P. and J. Pan (2019). When Time Binds: Substitutes for Household Production, Returns to Working Long Hours, and the Skilled Gender Wage Gap. *Journal of Labor Economics* 37(2), 351–398.
- Day, J. C. (2018). More Than 1 in 3 Lawyers Are Women.
- Dettling, L. J. and M. S. Kearney (2014). House prices and birth rates: The impact of the real estate market on the decision to have a baby. *Journal of Public Economics* 110, 82–100.
- Dinovitzer, R., N. Reichman, and J. Sterling (2009). The differential valuation of women’s work: A new look at the gender gap in lawyers’ incomes. *Social Forces* 88(2), 819–864.
- Durkin, M., E. Kaveggia, E. Pendleton, G. Neuhäuser, and J. Opitz (1976). Analysis of etiologic factors in cerebral palsy with severe mental retardation. *European Journal of Pediatrics* 123(2), 67–81.
- Egan, M. L., G. Matvos, and A. Seru (2018). When Harry fired Sally: The double standard in punishing misconduct. Technical report.
- England, P., J. Bearak, M. J. Budig, and M. J. Hodges (2016). Do highly paid, highly skilled women experience the largest motherhood penalty? *American Sociological Review* 81(6), 1161–1189.
- Finnäs, F. and J. M. Hoem (1980). Starting age and subsequent birth intervals in cohabitational unions in current danish cohorts, 1975. *Demography* 17(3), 275–295.
- Foote, C. L., W. C. Whatley, and G. Wright (2003). Arbitraging a discriminatory labor market: Black workers at the Ford Motor Company, 1918–1947. *Journal of Labor Economics* 21(3), 493–532.
- Fortney, S. S. (2005). The billable hours derby: Empirical data on the problems and pressure points. *Fordham Urban Law Journal* 33, 171.
- Gallen, Y. (2018). Mother and the Gender Productivity Gap. Technical report.
- Gillberg, C. (1980). Maternal age and infantile autism. *Journal of Autism and Developmental Disorders* 10(3), 293–297.

- Goldin, C. and J. Mitchell (2017). The new life cycle of women’s employment: Disappearing humps, sagging middles, expanding tops. *Journal of Economic Perspectives* 31(1), 161–82.
- Guinier, L., M. Fine, and J. Balin (1994). Becoming Gentlemen: Women’s experiences at one Ivy League law school. *University of Pennsylvania Law Review* 143, 1.
- Harris, I. D., C. Fronczak, L. Roth, and R. B. Meacham (2011). Fertility and the Aging Male. *Reviews in Urology* 13, e184–e190.
- Heckman, J. J., V. J. Holtz, and J. R. Walker (1985). New evidence on the timing and spacing of births. *The American Economic Review* 75(2), 179–184.
- Kleven, H., C. Landais, and J. E. Søgaaard (2019). Children and gender inequality: Evidence from Denmark. *American Economic Journal: Applied Economics* 11, 181.
- Kofoed, M. S. and E. mcGovney (2019). The Effect of Same-Gender or Same-Race Role Models on Occupation Choice Evidence from Randomly Assigned Mentors at West Point. *Journal of Human Resources* 54(2), 430–467.
- Kunze, A. and A. R. Miller (2017). Women helping women? Evidence from private sector data on workplace hierarchies. *Review of Economics and Statistics* 99(5), 769–775.
- Laband, D. N. and B. F. Lentz (1993). Is there sex discrimination in the legal profession? Further evidence on tangible and intangible margins. *Journal of Human Resources* 28(2), 230–258.
- Laband, D. N. and B. F. Lentz (1998). The effects of sexual harassment on job satisfaction, earnings, and turnover among female lawyers. *ILR Review* 51(4), 594–607.
- Lalive, R. and J. Zweimüller (2009). How does parental leave affect fertility and return to work? Evidence from two natural experiments. *The Quarterly Journal of Economics* 124(3), 1363–1402.
- Langan, A. (2018). Female managers and gender disparities: The case of academic department chairs. Technical report. Working paper.
- Lehmann, J.-Y. K. (2013). Job assignment and promotion under statistical discrimination: Evidence from the early careers of lawyers.
- Lindo, J. M. (2010). Are children really inferior goods? Evidence from displacement-driven income shocks. *Journal of Human Resources* 45(2), 301–327.
- Lovenheim, M. F. and K. J. Mumford (2013). Do family wealth shocks affect fertility choices? Evidence from the housing market. *Review of Economics and Statistics* 95(2), 464–475.

- Matsa, D. A. and A. R. Miller (2011). Chipping away at the glass ceiling: Gender spillovers in corporate leadership. *American Economic Review* 101(3), 635–39.
- Miller, A. R. (2011). The effects of motherhood timing on career path. *Journal of Population Economics* 24(3), 1071–1100.
- Mulligan, C. B. and Y. Rubinstein (2008). Selection, investment, and women’s relative wages over time. *Quarterly Journal of Economics* 123(3), 1061–1110.
- Mungan, M. C. (2018). Statistical (and Racial) Discrimination, Ban the Box, and Crime Rates. *American Law and Economics Review* 20(2), 512–535.
- National Association for Law Placement (NALP) (May 2014b). New findings on associate hours worked and law firm leverage. Technical report.
- National Association for Law Placement (NALP) (October 2014a). 2014 Associate Salary Survey Press Release. Technical report.
- Pan, J. (2015). Gender segregation in occupations: The role of tipping and social interactions. *Journal of Labor Economics* 33(2), 365–408.
- Penrose, L. (1967). The effects of change in maternal age distribution upon the incidence of mongolism. *Journal of Intellectual Disability Research* 11(1), 54–57.
- Polachek, S. W. (1981). Occupational self-selection: A human capital approach to sex differences in occupational structure. *Review of Economics and Statistics* 63(1), 60–69.
- Prada, M. F., G. Rucci, and S. S. Urzúa (2015). The effect of mandated child care on female wages in Chile. Technical report, National Bureau of Economic Research.
- Prendergast, C. (1993). The role of promotion in inducing specific human capital acquisition. *Quarterly Journal of Economics* 108(2), 523–523.
- Reuben, E., M. Wiswall, and B. Zafar (2017). Preferences and biases in educational choices and labour market expectations: Shrinking the black box of gender. *The Economic Journal* 127(604), 2153–2186.
- Ross, S. L. and J. Yinger (2006). Uncovering discrimination: A comparison of the methods used by scholars and civil rights enforcement officials. *American Law and Economics Review* 8(3), 562–614.
- Rubino, K. (2018). The old boys network is as strong as ever – study finds male clients prefer male attorneys. <https://abovethelaw.com/2018/01/the-old-boys-network-is-as-strong-as-ever-study-finds-male-clients-prefer-male-attorneys/>.

- Sarsons, H. (2019). Interpreting signals in the labor market: Evidence from medical referrals. Technical report.
- Schaller, J. (2016). Booms, Busts, and Fertility Testing the Becker Model Using Gender-Specific Labor Demand. *Journal of Human Resources* 51(1), 1–29.
- Sturm, S. (2001). Second generation employment discrimination: A structural approach. *Columbia Law Review* 101, 458.
- Thomas, M. (2016). The impact of mandated maternity benefits on the gender differential in promotions: Examining the role of adverse selection.
- Trillingsgaard, T. and D. Sommer (2018). Associations between older maternal age, use of sanctions, and childrens socio-emotional development through 7, 11, and 15 years. *European Journal of Developmental Psychology* 15(2), 141–155.
- Wood, R. G., M. E. Corcoran, and P. N. Courant (1993). Pay differences among the highly paid: The male-female earnings gap in lawyers’ salaries. *Journal of Labor Economics* 11(3), 417–441.
- Yavorsky, J. E., C. M. Kamp Dush, and S. J. Schoppe-Sullivan (2015). The production of inequality: The gender division of labor across the transition to parenthood. *Journal of Marriage and Family* 77(3), 662–679.
- Yoon, A. H. (2016). Academic tenure. *Journal of Empirical Legal Studies* 13(3), 428–453.