

Expected Fertility Penalty

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Gender earnings gap still persists in the 21st century. With women catching up with men on human capital dynamics and their participation rate at its historical peak, one would expect gender convergence to accelerate, but the evidence points to the contrary. While it has been shown that motherhood is the main reason why the gender wage gap persists, a puzzling pattern emerges from recent research: non-parent women of child-bearing ages still earn less than equally productive men (Gallen, 2023), despite supplying similar hours and having comparable credentials.

This unexplained residual gap points to discrimination that operates before women actually become mothers. Why do fertile women with no children earn less than equally productive male peers? The answer may lie in employers' expectations about future fertility. In this paper, I provide evidence for a widely discussed, yet under-studied explanation for the gender pay gap: an expected fertility penalty that affects young women in prime-childbearing ages. I argue that when firms experience productivity disruptions from employees taking maternity leave, they learn to anticipate future fertility costs and preemptively penalize newly hired women in their childbearing years—paying them up to 5% less than equally productive men based purely on the expectation that they might become mothers.

1 Empirical Strategy and Data

Using matched employer-employee data from the Netherlands (2010-2019), I employ a two-stage empirical approach. First, I use event studies to evaluate how fertil-

ity affects the residual wage gap by examining how the wage-productivity relationship evolves around the birth of the first child. Second, I take a quasi-experimental approach exploiting variation in the timing and intensity of coworkers giving birth to isolate the effects of expected fertility on young non-mother women.

I define a pass-through ratio quantifying how much observed productivity of workers passes onto their wage, thus residualizing the gap. The ratio compares actual wages to predicted wages based on a model trained on non-parenting male employees within each firm, controlling for education, experience, tenure, hours, effort (proxied by bonuses and premiums), and overtime work. For the expected fertility analysis, I estimate the effect of coworkers giving birth in the previous year on the wage/productivity ratio of new hires in firms, where the treatment intensity is defined by the percentage of females who gave birth in the workplace.

2 Findings

I find clear evidence of an expected fertility penalty affecting childless women. The analysis focuses on recently-hired employees in firms with 80-400 employees who have been bargaining for new wages, controlling for year, firm, and age fixed effects, as well as year-firm interactions. The pass-through ratio patterns show that women follow men in how their wage-productivity ratios evolve until they reach the fertile period of their careers (around age 25). However, as they reach ages where their coworkers start to give birth, this pattern breaks and their trend becomes downward while their male peers maintain a steady path.

Non-mother women in prime-childbearing ages are paid less compared to an identical male peer if coworkers gave birth in the previous period. The penalty exhibits a clear dose-response relationship with the intensity of workplace births: women hired by firms in the first quartile of birth intensity show no significant penalty, while those in the highest quartile earn wages approximately 5% less than those hired by firms with no recent births. This linear relationship demonstrates that firms are learning from productivity losses due to employees becoming parents and updating their expectations towards young women in prime-childbearing ages. The salience of births in the workplace plays a crucial role – in small firms where maternity leave disruptions are more

visible to management, the expected fertility penalty is larger the bigger the productivity loss experienced. This mechanism operates through recent, tangible experiences with maternity-related productivity losses rather than abstract statistical discrimination.

3 Future Work

The current analysis is limited to observing realized hirings and wage outcomes among women who successfully passed the hiring stage. This creates a potential selection bias, as firms may discriminate against women during the hiring process itself, leading to underrepresentation of women in firms with recent birth events. To address this limitation, I aim to study the gender ratio within firms over time following birth events to capture potential discrimination at the hiring stage.

Additionally, to test whether the mechanisms follow my interpretation that generous parental leave policies exacerbate fertility expectations, I plan to exploit changes to parental leave policies in the Netherlands over time. By analyzing whether the expected fertility penalty becomes more pronounced following periods when parental leave becomes more generous, I can provide stronger causal evidence for the role of anticipated leave costs in driving employer discrimination against women of childbearing age.