

Extending the Reproductive Horizon: Exploring Beliefs, Preferences, and Decision-Making

Negar Ziaeian

University of Warwick

negar.ziyaieyan@gmail.com

Zahra Khanalizadeh

University of Washington

zkhnl@uw.edu

Abstract

Limited fertility windows create a prominent tradeoff between career development and motherhood timing. Emerging assisted reproductive technologies, such as IVF, extend this window to some degree, and the share of IVF-conceived births continues to rise worldwide. Yet little is known about how women incorporate access to these technologies into decisions about when to have children. This project studies women's beliefs about natural fertility, age-related decline, and the extent to which IVF can compensate for biological constraints, and asks whether misperceptions about these factors influence willingness to postpone childbearing. We field a survey and discrete choice experiment with women aged 20–30 in the United Kingdom to measure how beliefs about fertility and IVF shape preferences over motherhood timing and career investment. We estimate the income premium that makes respondents indifferent between early childbearing and postponement and examine how information about IVF success and costs shifts these tradeoffs. A real-stakes outcome complements stated preferences.

Background and Motivation

Economic research shows that fertility timing is tightly linked to women's labor market trajectories. The motherhood penalty generates persistent employment and earnings losses, documented across many countries (Kleven et al., 2024). Young women anticipate these constraints when making human-capital decisions: they choose majors and career paths with an eye toward expected future family formation (Wiswall and Zafar, 2021). Female fecundity declines sharply after the mid-30s, which shortens the period during which demanding career investment is compatible with achieving desired fertility (Dessy and Djebbari, 2005). Structural shifts in women's educational and labor market expectations (Goldin, 2006) and rising fertility gaps (Stone, 2023) underscore the growing importance of beliefs in shaping fertility timing.

This tension between biological constraints and career development has motivated interest in assisted reproductive technologies (ART), such as IVF, as a potential solution. ART can extend women's reproductive window by enabling conception at ages when natural fertility has declined. The share of ART-conceived births continues to rise, and evidence from Israel shows that access to IVF can shift both marriage timing and human capital investment because it is perceived as insurance against age-related fertility decline (Gershoni and Low, 2021a,b). The behavioral impact of IVF therefore depends critically on women's beliefs about its success rates and accessibility, yet these beliefs remain largely unexamined.

Recent UK evidence suggests that while ART expands opportunities for later childbearing, it operates within strict biological limits. ART accounts for about 3 percent of total fertility and nearly 15 percent of births among women aged 45–50, mostly via donor eggs (Bruckamp and Lazzari, 2025). This pattern suggests that IVF cannot fully offset natural fertility decline, making women’s beliefs about both biological constraints and IVF effectiveness central to timing decisions. If women overestimate IVF’s ability to compensate for age-related decline, they may postpone childbearing beyond the point where even assisted reproduction remains viable.

These fertility-career tradeoffs are further shaped by gender norms and expectations about household labor division. Women’s fertility preferences increasingly diverge from men’s when childcare burdens fall disproportionately on women. Fertility is higher in societies where men share caregiving and lower where traditional norms persist (Goldin, 2024). Women who anticipate unequal domestic burdens may perceive stronger career-motherhood tensions, potentially viewing IVF as a more attractive option for postponement. Conversely, those expecting egalitarian partnerships may face different calculations about optimal timing.

Despite these insights, little is known about how young women form beliefs about natural fertility, age-related decline, and IVF success, or how these beliefs interact with career aspirations and gender-role expectations to shape the willingness to postpone motherhood.

Research Questions

We study how young women form beliefs about fertility and how these beliefs shape childbearing decisions. We address three questions. First, how accurately do women perceive natural fertility at different ages and the extent to which IVF can compensate for age-related decline? Second, how do these beliefs, along with career expectations and anticipated household labor division, influence preferences over motherhood timing? Third, to what extent does providing information about IVF success rates and costs alter the tradeoff women make between early childbearing and delaying motherhood for higher future income? By combining belief elicitation, randomized information treatments, a discrete choice experiment, and a real-stakes behavioral task, we isolate how fertility perceptions and gender norms interact to shape fertility-career decision-making.

Design and Methods

We field an online survey and discrete choice experiment (DCE) with women aged 20–30 residing in the United Kingdom. The survey collects socioeconomic characteristics, expected future income, fertility intentions, desired family size, and detailed measures of gender-role attitudes, including opinions about the division of childcare and household labor within couples. The belief modules elicit respondents’ expected conception probabilities at different ages and their perceptions of IVF success rates and treatment costs.

All respondents answer three belief questions before randomization: their expected natural conception probability at ages 25–30, their expected natural conception probability at ages 35–39, and their expected conception probability at ages 35–39 with IVF access. These questions prime respondents to consider and quantify both age-related fertility decline and IVF’s potential to compensate for it. Respondents are then randomized into three information arms: one group receives accurate information on IVF success rates, another receives accurate information on IVF costs, and a third receives no information.

Respondents next complete a sequence of vignette-based choices between early motherhood with lower income and delayed motherhood with higher income trajectories. Income levels vary around each respondent's baseline income expectation to identify the income premium required to make them indifferent between early and delayed childbearing. This indifference point serves as the main outcome, allowing us to estimate how belief elicitation and information treatments shape preferences over motherhood timing.

Finally, a real-stakes donation task measures behavioral responses to the treatments. Respondents allocate a donation among three options: a campaign that raises awareness about age-related fertility decline and IVF, a campaign that helps cover IVF treatment costs for couples who cannot afford it, or a neutral, broadly supported charity.

Pilot Evidence

Pilot data from five waves of the survey, with a collective sample size of roughly 175 respondents (30, 20, 40, 40, and 45), reveal substantial uncertainty and systematic misperceptions. Respondents tend to overestimate IVF success rates at later ages and underestimate the speed of natural fertility decline. On average, respondents estimated IVF success rates at age 37 to be 47%, compared to the clinical reality of 27-36% ([Fertility and Institute, 2025](#)). Reported cost expectations also diverge markedly from actual UK treatment prices. These patterns underscore the need to measure how fertility-related beliefs, and corrections to those beliefs, influence women's willingness to postpone motherhood.

Planned Analysis

Within-respondent variation in the vignette choices identifies the income premium that makes postponing motherhood equivalent to early childbearing. For each respondent, we calculate this premium as the indifference point at which their preferred option changes across the randomized income levels. This provides a direct measure of the income increase required to make delayed motherhood as attractive as having children earlier.

We will compare these switch points across the three information arms: accurate IVF success information, accurate IVF cost information, and a no-information control group. We will estimate the average treatment effect of each information arm on the income premium using OLS regression, controlling for baseline beliefs and demographic characteristics. This identifies whether learning about IVF success rates or costs causally shifts the willingness to postpone motherhood.

We then link belief updating to both the vignette-based preferences and the real-stakes donation task to evaluate whether stated and behavioral responses move in similar ways. Taken together, these analyses will show how fertility-related beliefs shape motherhood timing decisions and whether misperceptions contribute to postponement beyond biologically feasible ages.

We will examine heterogeneous treatment effects by pre-treatment gender-role attitudes, specifically attitudes toward household labor division and childcare responsibilities. We hypothesize that women with more egalitarian views, who face starker career-motherhood tradeoffs, will exhibit stronger responses to IVF information treatments. This analysis tests whether fertility beliefs interact with expected gender dynamics to shape postponement decisions.

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