UNLOCKING FERTILITY: WHAT PREVENTS YOUNG ADULTS IN POLAND FROM HAVING (MORE) CHILDREN? EVIDENCE FROM A FACTORIAL SURVEY EXPERIMENT

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Extended Abstract

INTRODUCTION

In the second half of the 20th century, Europe began experiencing a shift towards smaller family sizes. This trend first emerged in the more developed nations of Western and Northern Europe. It gradually spread to Southern, and, eventually, Central and Eastern Europe, composed of the socialist states until the late 1980s (Zeman et al 2017, Sobotka et al 2019). After a brief stabilization in the 2000s, period fertility began to decline again during the Great Recession and the trend has continued since then (Gietel-Basten et al 2022). Consequently, the EU's average total fertility rate (TFR) dropped below 1.5, with eight out of 27 countries recording "lowest-low" fertility rates of less than 1.35 in 2022.

Numerous studies explored the causes behind both the initial fertility decline in the latter half of the 20th century and the more recent downturn (Bastianelli et al 2023, Comolli 2023, Matysiak et al 2023, Ohlsson-Wijk and Andersson 2022, Hellstrand et al 2024). Various socio-economic and institutional factors have been identified as contributors, but no clear consensus has emerged on the relative importance of these factors. Additionally, it remains unclear whether new determinants—such as concerns about climate change—have emerged or if older factors have gained importance, particularly in the wake of the Great Recession.

This study seeks to address this gap by employing an innovative approach—a factorial survey experiment—to assess the relative significance of various determinants driving fertility decline. The study focuses on Poland, but the findings are expected to provide insights into broader European trends. Poland's case is particularly notable; after its TFR hovered around 1.35, the rate dropped to a record low of 1.15 in 2023, marking one of the lowest fertility rates in the EU. The method offered in this study can also be extended to other European countries, potentially offering a deeper understanding of this pressing issue across the continent.

KEY DETERMINANTS OF FERTILITY DECLINE

Demographic literature pointed out numerous factors as important drivers of fertility decline in developed countries. The difficulties in reconciling paid employment with caregiving responsibilities are one of them (Rindfuss & Brewster 1996; Brewster & Rindfuss 2000; Engelhardt & Prskawetz 2004). As women entered the labor force massively in the 1970s and 1980s, it became clear that employment was not easily compatible with childbearing and childrearing. It has been widely argued that policies promoting work-family reconciliation are crucial for reversing the downward fertility trend (McDonald 2000). Among these, the provision of high-quality public childcare has emerged as a critical policy to reduce work-family conflict (Baizán 2009; Rindfuss et al. 2010).

However, with time public institutions alone have proven insufficient. The need for greater involvement of men in childcare and domestic responsibilities has been increasingly emphasized (Goldscheider 2000; Goldscheider et al. 2015). While men's participation in childcare and housework has been gradually increasing since the 1960s, women continue to bear a disproportionate share of household responsibilities across Europe. The individualization of parental leave—particularly the introduction of non-transferable leave for fathers—was introduced as a solution, starting in the Nordic

countries and eventually becoming mandatory across the EU with the European Directive on Work-Life Balance.

Employment instability has also been identified as a major determinant of fertility decline (Adsera 2004, 2005). Numerous studies demonstrated that employment instability, which increased as a result of globalization and deregulation reforms, prevents individuals from making long-term life decisions, including family formation (Kreyenfeld 2010, Pailhé and Solaz 2012, Alderotti et al 2021, Bastianelli et al 2023). Rising unemployment during economic recessions have also been identified as an important reason for fertility postponement (Sobotka et al 2011, Schneider 2015, Matysiak et al. 2021). More recently, structural changes in the labor market - such as the rise of labor-replacing technologies that substantially change the demand for labor - have further compounded the challenges of family planning (Matysiak et al. 2023; Bogusz et al. 2024).

Among important preconditions of family formation securing adequate housing has been often enumerated alongside achieving economic security (Thompson and Lee 2011). Rising housing costs, especially in major European cities, have exacerbated the situation over the past decade (European Cities Report 2018). Research consistently shows that home ownership is a significant factor in the transition to parenthood and subsequent childbearing (Mulder 2013). High housing costs, combined with the need to service mortgages, likely contribute to the postponement of childbirth. Recent studies confirm the negative relationship between high housing expenditures and childbirth (Buh 2024), while declining birth rates have been observed to be particularly strong among homeowners, likely struggling with mortgage payments (Tocchioni et al. 2021).

Finally, climate change has emerged as a potential determinant of fertility decline, particularly among younger generations. Keivabu et al. (2024) found evidence of reduced fertility following exceptionally hot periods in Spain. Concerns about the future well-being of children in a changing climate are also increasingly cited (Helm et al. 2021), though empirical support for this hypothesis remains scarce (Berrington et al. 2024).

OUR CONTRIBUTION & STUDY CONTEXT

While previous research enumerated several determinants of fertility decline, studies usually focused on one single factor and assessed its importance individually. Few studies have systematically compared the relative importance of the potential drivers of fertility decline. Additionally, existing studies have been non-experimental, relying heavily on observational data, which limits their ability to draw causal conclusions or to disentangle the relative importance of different factors affecting fertility. Furthermore, the determinants of childbearing among young adult cohorts have likely shifted significantly over the past decade. Consequently, it remains unclear which factors drive fertility decline among the young cohorts. Nevertheless, given the current historically low fertility rates, there is an urgent need for high-quality research to understand whether young adults would like to have children and identify barriers that prevent them from family formation and expansion.

To address this gap, this study utilizes a factorial survey experiment, a method that allows for the simultaneous testing of multiple factors and their interactions. This approach enables a more comprehensive analysis of the interplay between key drivers of fertility decisions, including childcare availability, men's involvement in childcare and housework, economic uncertainty, housing affordability, and climate change. Although factorial surveys have been applied in various fields of social science, their use in fertility research is relatively new. Previous studies have typically focused on specific determinants in isolation, limiting their ability to capture the complexity of fertility decision-making. By employing this method, our study seeks to provide a nuanced understanding of how different factors interact to shape fertility outcomes.

Our study is located in Poland, one of the countries entrenched in what has been termed the "low-fertility trap" (Lutz & Skirbekk 2005; McDonald 2002). Poland presents a compelling case for

this study, as it has experienced three decades of low fertility, with its TFR reaching a historical low of 1.15 in 2023 (GUS 2024). The factors outlined above are particularly relevant in the Polish context. Childcare provision in Poland remains inadequate (OECD Family Database), and men's involvement in the family is low (Fisher and Robinson 2011). While unemployment is relatively low, wage levels are insufficient to meet the rising cost of living, particularly in the face of skyrocketing housing prices. These economic pressures create significant barriers for young Poles who may otherwise consider starting a family. Moreover, the recent tightening of abortion laws, which prohibits women from performing an abortion in case of a fetus defect, adds a unique dimension to fertility decisions. Young women in Poland may fear having children due to restrictive abortion policies, especially in cases where fetal defects are detected. This fear, combined with the other socio-economic factors mentioned above, may contribute to further declines in fertility. However, it remains unclear which of these factors, if any, are most influential in shaping the fertility choices of young Poles.

Thus, our study aims to explore the role and relative importance of six contextual factors for increasing fertility rates among the youngest adult cohorts in Poland employing a quasi-experimental design. These are the five factors identified in the past literature, relevant for many European countries, namely i) income and job stability, ii) access to privately owned housing, iii) availability of quality childcare for children under three, iv) gender norms around care, v) climate change. In addition, we also verify the role of the access to abortion which is specific to the Polish context.

DATA & RESEARCH METHODS

In our study, we use a factorial survey experiment design to study the effects of contextual factors on the subjective probability of having a child. This is the first factorial survey experiment that looks at the relative importance of such diverse contextual factors for fertility decisions. Until now, studies in other countries focused on a much more narrow variety of aspects, such as economic uncertainty (Vignoli et al., 2022), housing prices (Wang et al., 2023), career aspirations and financial limitations (Marshall & Shepherd, 2018), education, income, employment and childcare services (Karabchuk et al., 2022), leave policies, working hours, childcare, housing prices and organizational norms (Lui & Cheung, 2021).

We run a single-profile conjoint experiment (Hainmueller et al., 2015) on a sample of individuals between the ages of 20 and 30 living in Poland. Our sample consists of both childless individuals and parents of 1 child, which allows us to study the probability of having the first child as well as the probability of having the second child. Each respondent is exposed to 4 scenarios that describe possible future within the next 10 years. Each scenario consists of 6 factors regarding the situation in the labor market, real estate market, childcare availability, involvement of men in childcare, climate change, and abortion law. In each scenario, a respondent assesses if they would decide to have a child (or another child) on a scale ranging from 0 (definitely not) to 10 (definitely yes). Since each factor has two levels, we have 64 possible scenarios in total. We block all of the possible scenarios into 16 sets using D-efficiency blocking (Dülmer, 2016). Then we randomly assign a set of scenarios to each respondent and randomize the order of scenarios within this block as well as the order of factors.

As our research methods, we use a multilevel linear regression model with a respondent's level following the previous experiments (for example, Aassve et al., 2024; Karabchuk et al., 2022). Using multiple assessments per respondent allows us to control for individual differences in fertility intentions. Importantly, we perform separate analyses for childless and parents of 1 child and for females and males, which allows us to account for possible heterogeneity in the relative importance of the studied factors.

EXPECTED FINDINGS

The data collection is starting now and we are confident it will finish in winter, leaving us enough time to perform the analyses and prepare the manuscript before the conference. For the moment we can

only present what we expect to find. We anticipate that economic factors i.e., good availability of a decent stable job and accessibility of dwelling purchasing will be the most important factors that positively influence the probability of having a child (or another child). We also expect that the strength of the effects of various contextual factors will be heterogeneous among several subgroups. First, we expect that some factors might be more important for females than males e.g., abortion or more equal household and childcare division. Similarly, there might be differences in the relative importance of various factors between childless individuals and parents of 1 child. For instance, the availability of good quality childcare might be more important for parents who possibly have already had experience with formal childcare. Conversely, it might be the case that climate change has a relatively stronger effect on childless individuals who are still deciding whether or not to have a child than on the people who are already parents and thinking of having the next child.

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