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Beyond Usual Suspects: Revisiting Barriers to Childbearing Decisions in a Low Fertility Setting

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Abstract

Fertility rates in developed countries have declined to historically low levels, yet the reasons remain incompletely understood. This study examines the relative importance of diverse macro contextual constraints on childbearing intentions among young adults (aged 20–35) in Poland, a country emblematic of Europe's fertility decline. Using a factorial survey design (N = 1,337), we compare how availability of stable and gainful employment, opportunities to purchase a dwelling, access to childcare, the overall level of men's involvement in domestic work, climate change prospects, and access to abortion shape the decision to have a first or second child. Results confirm the enduring salience of economic security—both employment and housing—for fertility intentions across gender and parenthood status. Access to abortion rights emerges as the most influential factor for childless women and a significant consideration for mothers and partnered men. Access to childcare and overall men's involvement in domestic sphere positively influence women's intentions but matter less for men, particularly those single and childless. Climate concerns are comparatively less influential. Men's intentions appear less responsive overall. Findings highlight the interplay of institutions and gender norms, and the limits of pro-natalist policies that neglect reproductive autonomy and gender equality.

Introduction

Since the late 20th century, developed countries have seen a shift toward smaller families (Zeman et al. 2018, 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). Most developed countries now report fertility well below replacement levels (OECD 2024b). As of 2023, the European Union's average total fertility rate (TFR) stood at 1.38, with eight out of 27 countries recording "lowest-low" fertility rates of less than 1.3, and only five reporting TFRs above 1.5 (Eurostat 2025a). Even lower fertility is observed in East Asia, with South Korea hitting a record-low TFR of 0.72 in 2023 (World Bank 2025).

Numerous studies have explored the causes behind both the initial fertility decline in developed countries in the latter half of the 20th century and the more recent downturn. Various economic, institutional, and structural determinants have been identified as contributors, such as incompatibilities between paid work and family life (Rindfuss & Brewster 1996; Engelhardt et al. 2004; Maysiak & Węziak-Białowłska 2016), gender inequality in childcare and housework (McDonald 2004; Goldscheider 2000; Goldscheider et al. 2015), rising instability of employment (Adserà 2004, 2005; Sobotka et al. 2011; Pailhé & Solaz 2012; Matysiak et al. 2021, 2023; Bastianelli et al. 2023; Hellstrand et al. 2024), and an overall sense of uncertainty (Vignoli et al. 2020a, 2022; Ohlsson-Wijk & Andersson 2022; Comolli 2023). However, most previous research focused on single determinants, assessing their importance individually, and only a few studies have attempted a systematic comparison of multiple fertility drivers (e.g., Han & Brinton 2022; Sheppard 2024). As a result, no clear consensus has emerged on the relative impact of these factors on childbearing decisions.

Furthermore, the relevance of certain factors might have changed over time. While income and employment security and the division of domestic work were shown to primarily drive fertility decline in the second half of the 20th century, new potential fertility determinants have started to be discussed since then. Among them, access to housing (see, e.g., Yu & Li 2024; Atalay et al. 2021; Florida et al. 2020; Lovenheim & Mumford 2013; Feijten & Mulder 2002) and increasing public concern about climate change (Schneider-Mayerson & Leong 2020; Muttarak 2021) have prompted questions about their role in shaping fertility intentions. Additionally, recent tightening of abortion laws in several countries worldwide (e.g., the US, Poland, Hungary, or Russia) has sparked debates about the impact of reproductive rights on fertility and attitudes toward childbearing (e.g., Jones & Pineda-Torres 2024). Notably, to the best of our knowledge, no published study has yet assessed the importance of new concerns about reproductive rights or climate change compared to other well-established determinants of childbearing identified in earlier decades.

This study seeks to address this gap by assessing the relative significance of multiple contextual—economic, institutional, cultural, and environmental—factors, as they are perceived by young adults,

potentially driving low fertility in younger cohorts. We focus on fertility intentions as they represent the decisions about having a(nother) child, corresponding to one's fertility desires but constrained by 'situational considerations' (Miller 1994, p. 234). In our study, the 'situation' refers to broader macro context shaping the opportunity structures in the future, in which individuals would make their childbearing choices. Framing all factors as elements of broader future opportunity structures allows for analytical comparability between factors while at the same time keeping all of the studied factors at a similar conceptual distance from an individual situation. We employ an innovative approach recently adopted in demography—a factorial survey experiment—which enables a comprehensive analysis of the interplay between key contextual drivers of fertility decisions, including opportunities at the labour and housing markets, regarding non-parental childcare, and men's role in domestic work, as well as new, emerging concerns related to climate change and access to abortion. The factorial design also holds potential for cross-national application, facilitating comparative insight into fertility decision-making across low-fertility settings.

While factorial survey methods have been used in various fields, their application to fertility research remains limited and typically restricted to single fertility determinants—such as economic uncertainty (Vignoli et al. 2022), housing prices (Wang et al. 2023), or family policies and organizational norms (Lui & Cheung 2021; Guetto et al. 2025). Other studies examining multiple influences have often addressed general fertility attitudes or family size norms rather than childbearing intentions (e.g., Karabchuk et al. 2022; Assave et al. 2024; Yu et al. 2023), or examined the role of individual life circumstances relative to each other on preferred timing of fertility (Sheppard 2024). Our study advances this literature by focusing explicitly on how individuals perceive and weigh the importance of availability of stable and gainful employment, opportunities of purchasing a dwelling, access to non-parental childcare, the overall level of men's involvement in domestic work, climate change prospects and highly restricted access to abortion, for their first and second birth intentions, with particular attention to variation by gender and parenthood status.

We use Poland as a case study, providing insight into broader patterns in low-fertility countries. Poland exemplifies the 'low-fertility trap' country (Lutz & Skirbekk 2005), with TFR hovering below 1.3 for decades and falling to 1.16 in 2023 (Statistics Poland 2024)—one of the lowest in the EU. Despite this, ideal family size remains higher, suggesting significant barriers to achieving fertility preferences (Sobotka & Beaujouan 2014; Brzozowska & Mynarska 2021). It also offers a unique lens to study multiple fertility barriers. Economic insecurity is widespread, particularly among youth facing precarious employment (Mrozowicki et al. 2018; Pisarczyk & Torbus 2019) and skyrocketing housing costs (Eurostat 2024). Access

to childcare for children under three remains limited (Kurowska 2015; Grabowska & Chłoń-Domińczak 2024), reinforcing the unequal burden on women (Zachorowska-Mazurkiewicz 2020). Environmental concerns are also rising amid severe pollution and climate-related disasters, while governmental priorities remain focused on economic growth over sustainability (Zaremba et al. 2022; Marcinkiewicz & Tosun 2015). Lastly, Poland's strict abortion laws—tightened further by a 2020 Constitutional Tribunal ruling by banning pregnancy termination in case of fetus defects—may influence fertility decisions, especially among women (Matysiak & van der Velde 2025). In sum, Poland provides a rich setting for examining how a broad range of contextual factors—economic, institutional, cultural and environmental—influence the decision to have (another) child. Our study aims to shed light on these dynamics, offering evidence that may inform fertility-related policy responses not only in Poland, but also in other low-fertility countries across the developed world.

Contextual Determinants of Fertility Decisions

Several contextual factors have been identified in the demographic literature as possible barriers to childbearing decisions since the mid-20th century. In the following sections, we elaborate on these factors, discussing what is currently known about their influence on fertility, unpacking the mechanisms through which they shape reproductive decision-making and formulating expectations regarding our study.

Employment and Economic (In)Security

The importance of employment and income has been emphasized in economic theories of fertility as early as the late 1950s and 1960s by Leibenstein (1957) and Becker (1960), which viewed the financial cost of children as a key constraint. More recently, scholars have expanded this perspective by not only highlighting the importance of employment and income but also stressing the role of job stability in fertility decisions (Kreyenfeld 2010; Mills & Blossfeld 2013). Rising employment insecurity—driven by globalization, labor market deregulation, and technological change—has made it harder for young adults to secure stable jobs (Kalleberg 2018; Yeung & Yang 2020; Bogusz & Bellani 2025). As childbearing is irreversible, many postpone it until they establish a more secure position in the labor market (Ranjan 1999) or gain greater clarity about their future income potential (Vignoli et al. 2020a).

Empirical studies support these theoretical insights, showing that young adults facing unemployment, working on fixed-term contracts, or perceiving economic uncertainty are less likely to have children compared to those in stable employment (Adserà 2005; Kreyenfeld 2010; Pailhé & Solaz 2012; Alderotti et al. 2021). Furthermore, fertility rates tend to decline in regions with high concentrations of industries

susceptible to automation—such as the automotive and electronics sectors—in both Europe and the United States (Matysiak et al. 2023; Anelli et al. 2021). Similarly, areas with elevated unemployment rates or during periods of economic recession often display lower fertility levels (Adserà 2011; Comolli 2017; Schneider 2015; Matysiak et al. 2021; Neels et al. 2024).

The impact of employment stability on fertility extends to both men and women. While New Home Economics saw women's employment as a barrier to fertility, newer approaches recognize its importance for family formation, especially amid male employment instability (Oppenheimer 1988, 1997; Macunovich 1996). Women's contributions to household income have become more substantial (Klesment & Van Bavel 2017) and help to buffer household risks (Lundberg 1985; Matysiak et al. 2024). Recent studies increasingly suggest a shift in the relationship between women's employment and fertility (Matysiak & Vignoli 2024, 2025) and demonstrate that instability in women's employment (fixed-term contracts) leads to fertility postponement (Alderotti et al. 2021).

The trend of increasing employment instability has not bypassed Poland. Despite relatively low youth unemployment, fixed-term contracts are common among young adults—36% in 2023, above the EU average—and often serve as dismissal tools, especially for the less educated (Kiersztyn 2016). Employers also resort to alternative employment arrangements, such as civil law contracts or self-employment, which are not only less stable but also circumvent minimum wage regulations and provide weaker social protection (Lewandowski & Magda 2017; Pisarczyk & Torbus 2019). All in all, establishing a stable position in the labour market is fairly difficult for young adults in Poland. Given prior evidence that stable and gainful jobs are a crucial precondition for childbearing decisions in Poland (Matysiak 2009; Matysiak & Vignoli 2013), we expect that availability of stable and gainful employment plays a major role in fertility intentions among Poles.

Access to Childcare

While employment provides essential financial security, it also demands time that is necessary for childbearing and childrearing, creating tensions between paid work and care (Brewster & Rindfuss 2000; Kossek & Lee 2017). While in the past women left employment—at least temporarily—after entering parenthood, this is no longer a viable option for many. On average, younger generations of women are becoming increasingly better educated than men (Van Bavel et al. 2018; Bertocchi & Bozano 2020), and career interruptions would impose excessively high opportunity costs for them (Lalive & Zweimüller 2009; Evertsson 2016). As a result, women return to paid employment more quickly after birth than they did in

the past (Han et al. 2008; Smeaton 2006), which makes access to alternative childcare arrangements essential.

By reducing the opportunity costs of parenting, external childcare is considered to have a positive effect on childbearing (McDonald 2002). Nordic countries offer a well-documented example of how expanding childcare supported female employment and prevented fertility decline in the second half of the 20th century (Rindfuss et al. 2007, 2010). Positive effects of childcare availability on childbearing were also found in other countries, such as Belgium (Wood & Neels 2019), Germany (Bauernschuster et al. 2016), or Spain (Baizán 2009), with stronger positive effects reported for highly educated women (Baizán et al. 2016) and higher parities (see Bergsvik et al. 2021 for a review).

Childcare provision in Poland remains significantly limited. In 2022, only 17% of children aged 0–2 were enrolled in formal childcare facilities (OECD 2024a). Participation rates among children aged 3–5 are substantially higher, reaching 87%, but still remain below European standards (OECD 2024a). The recently introduced 'Active Parent' subsidy supports private care costs but does not address the persistent structural shortage of locally available childcare options. The limited availability of childcare may serve as a major constraint on women's fertility intentions in Poland, as it complicates the reconciliation between employment and caregiving responsibilities. Labour force participation among Polish women aged 25–49 is notably high at 82.6%, exceeding the EU average of 77.1% (Eurostat 2025b). This is likely due to high female educational attainment (56% of women vs. 37% of men aged 25–34 with tertiary education in 2023), social norms shaped by historical maternal employment, and widespread economic necessity (Matysiak & Steinmetz 2008; Myck et al. 2020). Withdrawing from the labour market to provide full-time childcare is not a viable option for most prime working-age Polish women (Karbownik & Myck 2016; Matysiak & Mynarska 2021). Given these considerations, we expect access to non-parental (paid) childcare to be a significant determinant of fertility intentions among Polish women, as it represents a fundamental prerequisite for balancing employment with caregiving responsibilities.

Men's Involvement in Domestic Work

Access to high-quality institutional or non-parental childcare alone may be insufficient to facilitate the reconciliation of women's employment with childbearing and childrearing. It has been widely argued that the persistence of the "second shift" at home has contributed to declining fertility rates across many developed countries in the latter half of the 20th century and that greater male involvement in childcare and housework could reverse this downward trend (McDonald 2002; Goldscheider 2000; Esping-Andersen & Billari 2015; Goldscheider et al. 2015).

More equal sharing of domestic tasks can support childbearing by facilitating a better work-family balance among women (Zhang et al. 2023) and allowing them to sustain full-time employment (Fanelli & Profeta 2021). Furthermore, when women perceive the division of household and caregiving responsibilities as equitable or fair, their marital satisfaction increases, which, in turn, may enhance their intention to have a(nother) child (Köppen & Trappe 2019; Frejka et al. 2018; Goldscheider et al. 2013). More importantly, strong social norms promoting father involvement—such as expectations for men to take parental leave—can further encourage higher fertility among women by reinforcing shared responsibility in parenting (Lappegård & Kornstad 2020).

Nevertheless, greater male involvement in childcare and housework may also shape men's intentions regarding family expansion. On the one hand, it can enhance men's satisfaction with fatherhood and strengthen family bonds (Wilson & Prior 2009), thereby fostering their fertility intentions. On the other hand, however, it may reduce men's leisure time and exacerbate work-family tensions, which could, in turn, negatively influence their fertility decisions (Matysiak & Nitsche 2016; Okun & Raz-Yurovich 2019).

Empirical studies generally support these arguments, though some mixed findings have also been reported. Studies from Italy, Denmark, and Finland suggest that men's involvement in childcare or housework is often associated with a higher likelihood of second births (Brodmann et al. 2007; Miettinen et al. 2015). Other studies conducted in East Asia or Central and Eastern European countries, including Poland, also reported positive effects of men's housework and/or childcare on women's fertility desires and intentions (Kan & Hertog 2017; Fanelli & Profeta 2023; Leocádio et al. 2024). A few studies, though less frequently, found a U-shaped relationship, with the highest second birth risks reported at medium levels of men's involvement at home (Torr & Short 2004; Cooke 2009 for Italy), or no effect at all (Craig & Siminski 2010; Cooke 2009 for Spain).

In Poland, women—particularly mothers—continue to bear a disproportionately large share of unpaid domestic labor, even when they are employed. In 2022, Polish mothers spent an average of 32.4 hours per week on childcare for their own children, whereas fathers dedicated only 6.2 hours. Moreover, Polish fathers remain less involved in domestic work compared to their counterparts in Nordic countries (Martín-Garcia & Solera 2022). While recent data suggest a gradual shift towards a more equitable distribution of care responsibilities, gender inequality in the division of housework is increasing (EIGE 2024).

Building on these insights, we anticipate that a broader societal engagement of fathers in both childcare and housework will play an important role in shaping fertility intentions, particularly among Polish women. When women observe that, in general, men in society are more actively involved in domestic work—spending more time on childcare tasks, including routine ones, and assuming a greater share of household

responsibilities—they are likely to expect similar involvement from their (future) partners. This, in turn, may positively influence their fertility intentions.

However, the relative importance of this factor compared with other contextual dimensions—particularly access to non-parental (paid) childcare—remains an open question. Moreover, it is unclear how men's own fertility intentions would respond to a scenario in which fathers' participation in domestic work increases at the societal level. Such a shift could be perceived as liberating from traditional gender stereotypes and thus encourage childbearing, but it could also be viewed as imposing additional domestic expectations, potentially making some men more reluctant to have (another) child.

Home Ownership

The purchase of one's own dwelling is a major economic investment, providing an indirect source of income security for the family (in the form of an 'imputed rent'; Vignoli et al. 2013) and an emotional commitment to the future (Saunders 2021; Chudnovskaya 2018). Owning one's home gives individuals a higher degree of control over their housing conditions, protection against the risk of eviction, and—as a consequence—higher quality of life (Vignoli et al. 2013). All in all, home ownership is often considered an essential step prior to childbearing (Mulder & Wagner 2001; Feijten & Mulder 2002).

In this context, rising housing prices may be a major source of fertility decline (Florida et al. 2021) as they limit opportunities for purchasing one's own dwelling and are experienced by many developed countries (Byers 2025; Hermann & Whitney 2024; Dettmer et al. 2024). The link between housing prices and fertility is not, however, unambiguous. On the one hand, rising prices positively impact the wealth of homeowners and thus may encourage childbearing among this group (the wealth effect) (see, e.g., Yu & Li 2024; Atalay et al. 2021; Florida et al. 2021; Lovenheim & Mumford 2013). On the other hand, they can hinder childbearing decisions among those who live in rented dwellings or are planning to buy a (new) house, as this increases overall costs related to having children (the crowding-out effect). Indeed, studies conducted in the US by Lovenheim and Mumford (2013), in the UK by Aksoy (2016), and in Australia by Atalay et al. (2021) have shown positive effects of rising housing prices on fertility (intentions) among homeowners and negative effects on childbearing decisions among renters/non-owners. Dettling and Kearney (2014) further examined US homeowners and found a negative fertility effect for first-time buyers and those who currently own a house but want to replace it with a larger one. In general, rising housing prices most likely constrain childbearing decisions of young people since they rarely own large properties and usually either still need to buy their first house or want to move to a bigger one before forming a family (Aksoy 2016; Yu & Li 2024; Yi & Yi 2008; Ge & Zhang 2019).

The opportunities of buying a dwelling should play a substantial role in the fertility decisions of young Poles for several reasons. The rental market is poorly developed in the country, and owning a flat or house is considered important as it provides ‘a safe place for the family’ and allows its members to ‘feel at home’ (Rubaszek 2019). In fact, Poland is one of the countries in the EU with the highest proportion of homeowners, which amounted to 87% in 2023 compared to the EU average of 69% (Eurostat 2024). At the same time, Poland has experienced one of the steepest increases in housing prices within the European Union in recent years (Frączyk 2020; Eurostat 2024), which has made acquiring one's own housing even more difficult.

Climate Change Prospects

Climate change can also affect childbearing decisions. Beyond the direct effects of acute natural disasters, extreme temperatures, or precipitation anomalies on the biological capacity to conceive and maintain a healthy pregnancy (see, e.g., Keivabu et al. 2024; Hajdu & Hajdu 2022; Barreca et al. 2018), concerns about climate change have recently emerged as a potential determinant of fertility decline in developed countries (Helm et al. 2021; Rotkirch 2020). These concerns relate to apprehensions regarding the planet’s future and the possibility of an ecological crisis. Some individuals, alarmed by the negative consequences of climate change, may worry about the well-being of future generations, who are likely to face deteriorating living conditions due to environmental degradation (Muttarak 2021; Peters et al. 2023). Others perceive remaining childless, or limiting the number of children they have, as a means of reducing their personal environmental impact (Puglisi et al. 2025). This perspective is rooted in a sense of moral responsibility (Schneider-Mayerson & Leong 2020) and the belief that human activity is the primary driver of the ecological crisis, leading them to limit their reproductive behavior (Bisi et al. 2024).

A growing number of studies have empirically examined the role of climate change concerns in shaping fertility attitudes, desires, or intentions (Arnocky et al. 2012; Davis et al. 2019; Schneider-Mayerson & Leong 2020; Helm et al. 2021; Rackin et al. 2023; Fu et al. 2023; Bisi et al. 2024; Özkan et al. 2025; Bastianelli 2025; Puglisi et al. 2025). While most of these studies report a negative association between climate-related concerns and fertility-related declarations, they do not assess the relative importance of these concerns compared to other factors influencing fertility decisions. It is thus unclear whether climate concerns are equally important determinants of fertility decline as other previously discussed factors, such as employment insecurity or men’s involvement in housework and childcare. Furthermore, many studies rely on narrow, non-representative samples drawn from specific subpopulations, such as university students (Bisi et al. 2024; Davis et al. 2019; Arnocky et al. 2012), individuals with heightened climate concerns (Fu

et al. 2023; Helm et al. 2021; Schneider-Mayerson & Leong 2020), or women attending health centers (Özkan et al. 2025).

Poland, similar to other post-socialist states in Central and Eastern Europe, inherited its high carbon-intensive economy from the former political and economic regime (Li et al. 2020) and is currently the largest hard coal producer in the EU (Brauers & Oei 2020), experiencing one of the highest levels of air pollution in the EU (European Environmental Agency 2024), as well as dramatic river floods due to excessive rainfall that are being attributed to climate change (Faranda et al. 2024). While there is little political will to discuss and address climate issues in this country (Brauers & Oei 2020), Polish society is aware of and concerned about climate change to a similar extent as other European nations (Bohdanowicz 2021; Paradowska et al. 2023). Therefore, it is warranted to explore how important climate change prospects are for childbearing intentions, particularly in comparison to other contextual opportunity structures, in this country.

Access to Abortion

Overall, there is little reason to expect that abortion restrictions (or liberalizations) directly lead to an increase (or decrease) in planned and desired births. This is because abortion is typically a conscious and deliberate decision to terminate an unplanned, unwanted, or mistimed pregnancy (see, e.g., Rocca et al. 2015; Chae et al. 2017). Several studies have found that easier access to abortion reduces fertility, particularly among teenagers (Levine et al. 1999; Ananat et al. 2007; Guldi 2008; Cabella & Velázquez 2022; Clarke & Mühlrad 2021), primarily by delaying the unplanned onset of motherhood (Abboud 2025). A recent large-scale study likewise found no evidence of a negative association between decriminalization and the pace of fertility decline (Fernández & Juif 2023). While some evidence suggests that abortion restrictions may increase fertility—as observed in post-Dobbs U.S. states, where birth rates rose by about 2.3% (Dench et al. 2024)—this effect appears to be driven mainly by an increase in unplanned births (Bell et al. 2025). More importantly, any short-term fertility increases resulting from abortion bans are likely to be offset over time by higher contraceptive use (Kulczycki et al. 1996; Dench et al. 2024), cross-border abortion-seeking (Myers 2024), or illegal procedures (Aiken et al. 2022).

Restrictions on reproductive rights may in fact reduce fertility as an effect of conscious fertility planning (Levine 2007). Women concerned about the potential costs or risks associated with pregnancy and childbirth may adopt more effective and widespread contraceptive practices (ibid.). In the U.S., both abortions and pregnancies declined following Medicaid abortion funding cuts, likely because women responded to the increased cost of abortion by avoiding pregnancy in the first place (Levine et al. 1996).

Likewise, the overturning of the U.S. Supreme Court's Roe v. Wade decision was followed by a spike in Google searches related to vasectomy (Sellke et al. 2022). Nevertheless, there is a scarcity of studies specifically testing the hypothesis that abortion bans negatively affect childbearing decisions. Recent restrictions on reproductive rights beyond the U.S.—such as in Poland, which has simultaneously recorded historically low fertility rates—highlight the critical need for such research.

The case of Poland can be clearly one in which women may avoid having children because of the changes in the abortion law. In 2020, Poland's Constitutional Tribunal ruled to outlaw abortions in cases of fetal abnormalities - which constituted around 97% of all abortion cases in this country (Zaręba et al 2021) - restricting legal abortions to instances of rape, incest, or threats to the mother's life. As a result, the ruling left women no choice than to carry an abnormal pregnancy to term and give birth to a seriously malformed fetus or even stillbirth. It not only triggered widespread protest but potentially led to some women's deaths as doctors were afraid to perform an abortion of a defect fetus which threatened women's lives (Pamula, 2023). A preliminary study observed a decline in the number of births nine months after the ruling (Matysiak & van der Velde 2025). In these circumstances, we expect that the recent tightening of abortion law in Poland, banning abortion on the grounds of fetal malformation, is an important factor preventing women from conceiving a child.

Data and Methods

Experimental Design

In this study, we assess the individual and relative importance of the six macro contextual factors - availability of a stable and gainful employment, opportunities of purchasing a dwelling, access to childcare, the overall level of men's involvement in domestic work, climate change prospects and access to abortion in a case of fetus malformation, for first and second fertility intentions among young Poles. To this end, we adopt a single-profile conjoint (Hainmueller et al. 2015), a quasi-experimental approach that allows us to study the effects of multiple factors simultaneously and compare the strengths of these effects. Our approach is designed to simulate complex real-life scenarios where individuals make decisions based on trade-offs between several factors (Auspurg & Hinz 2015), rather than assessing the importance of a single factor. This design closely reflects real-life decision-making processes, in which individuals and couples weigh perceived risks and rewards across multiple contextual dimensions when making fertility decisions (Miller 2011; see also Miller et al. 2004). In addition, the multiple factor design helps to minimize the effect of social desirability bias compared to direct single-item survey questions, due to the

multidimensionality of the presented scenarios (Auspurg & Hinz 2015). Furthermore, by randomly assigning respondents to different hypothetical scenarios, our quasi-experimental design allows us to obtain high internal validity and overcome potential correlations between studied factors, both of which are problematic in observational studies (ibid.).

Pseudo-experimental research has only recently been adopted in family demography. So far, it has mainly been used to study norms and attitudes toward childbearing or family-related factors, in which case respondents were asked what a hypothetical person (Frodermann et al. 2024; Yu et al. 2023; Jacobs & Gerson 2016) or a hypothetical couple (Carriero & Todesco 2017; Guetto et al. 2025; Karabchuk et al. 2022; Philipp et al. 2023) should do or what a 'successful family' is (Aassve et al. 2024). Only a few studies have used survey experiments to study respondents' own childbearing intentions/decisions (Vignoli et al. 2022; Wang et al. 2023; Sheppard 2024). We follow this rare approach, as we do not aim to assess how contextual factors affect attitudes toward childbearing (what others *should do* under certain circumstances) but rather how they affect respondents' own decisions (what they *would do* under specific circumstances). Therefore, we ask the respondents to refer to their own eventual decision in a given scenario.

The design of our scenarios is inspired by insights from the 'Narrative Framework' (Vignoli et al. 2020a, 2020b), which stresses the importance of narratives about the future for individual decisions related to childbearing. Accordingly, in our single-profile conjoint, respondents were confronted with four hypothetical scenarios of the future. After the first scenario was displayed, respondents were asked whether they would decide to have a child in such a scenario on an 11-item scale where 0 represents 'definitely not' and 10 corresponds to 'definitely yes' (see, e.g., Miller 2011; for the exact formulation of our question and an exemplary scenario, see the appendix). This scale is precise and commonly used in surveys, making it accessible for respondents (Sauer et al. 2014). After this first question was answered, respondents were presented with another scenario. After all four scenarios were displayed, respondents were also asked a series of questions about their family situation, place of residence, education level, labour market status, gender role attitudes, etc. We also asked them about the subjective importance of having children, their ideal family size, and their fertility intentions in the next three years.

Each future scenario presented to respondents was characterised by six dimensions (factors). These corresponded to the contextual factors identified in the previous section, namely: 1) availability of stable and gainful employment ('chances of finding a well-paid and stable job'), 2) opportunities of purchasing a dwelling ('possibilities of purchasing one's own dwelling'), 3) access to affordable and high-quality childcare ('access to affordable good-quality nurseries or babysitters'), 4) the overall level of men's

involvement in domestic work ('men's share/participation in childcare and housework'), 5) the pace of climate change, and 6) access to abortion ('the possibilities of legal pregnancy termination due to incurable fetal defects') (see Table 1). The similar framing of all factors ensures that all factors remain analytically comparable and positioned at a similar conceptual distance from one's individual situation.

Each of the six factors had two levels. The base level represented the situation in the country/worldwide—as subjectively perceived by the respondent ('as it is now'). The alternative reflected a substantial improvement in this situation ('much better than now'). We chose to consider improvements as alternative scenarios, and not deterioration, assuming that if individuals perceive a current aspect of the situation as a barrier to fertility, a positive change in this aspect should positively impact their childbearing intentions. Conversely, if a given dimension is not relevant for some individuals, a positive change should not affect their fertility intentions. This approach is consistent with the fact that the fertility level in Poland—when the study was conducted—was at its lowest-low levels (1.15 in 2023). We thus examine whether it could increase (or not) if certain economic, institutional, structural, or environmental aspects of the situation in which young individuals live improved. There is, however, one potential exception in the case of men. As we have argued in the previous section, for men, 'much higher participation of men in childcare and housework' may not necessarily be perceived as an improvement in their situation.

Table 1. Study factors (dimensions) and their levels.

Factors	**Description**	**Levels**
Availability of stable and gainful employment	The chances of finding a well-paid and stable job will be…	0 as they are now 1 much better than now
Opportunities to purchase a dwelling	The possibilities of purchasing one's own dwelling will be…	0 as they are now 1 much better than now
Access to childcare	The access to affordable good (quality) nurseries or babysitters will be…	0 as it is now 1 much better than now
Overall level of men's involvement in domestic sphere	Men's share/participation in childcare and housework will be…	0 as it is now 1 much higher than now
Climate change prospects	The pace of climate change will…	0 be the same as now 1 significantly slow down
Access to abortion	The possibilities of legal pregnancy termination due to incurable fetal defects will be…	0 as they are now 1 much better than now

With six factors, each with two levels, the number of all possible scenarios in our study is 2^6 = 64. Since it would not be feasible for every respondent to evaluate all scenarios, each respondent was confronted with only a subset of scenarios, called a block. There are two ways in which the scenarios can be divided into blocks: random blocking (Wallander 2009) or D-efficient blocking (Kuhfeld 1997; Dülmer 2007, 2016; Auspurg & Hinz 2015). We chose the latter, as this technique ensures that individual blocks provide the most accurate representation of the scenario universe and minimize the risk of correlation between study factors and redundant comparisons (Dülmer 2007, 2016). We therefore blocked all 64 scenarios into 16 equal blocks with 4 scenarios each using the *skpr* package in R (Morgan-Wall & Khoury 2021). The resulting blocking yielded a D-efficiency of 99.83, indicating a nearly balanced and orthogonal design (Auspurg & Hinz 2015) and high precision of estimated factor effects (Aassve et al. 2024). Each scenario was presented to respondents sequentially in the form of a table. The table format is recommended as it is less cognitively demanding and prevents factors from being overlooked in running text (Sauer et al. 2014). In addition, the table format enables full randomization of factor order across respondents, helping to eliminate potential order effects in the experiment (Auspurg & Hinz 2015). An example scenario can be seen in Figure A1 in the appendix.

Data and Sample

Respondents to our survey experiment were recruited from an online panel of the National Polish Research Panel Ariadna (*Ogólnopolski Panel Badawczy Ariadna*) in November 2024. This panel is Poland's largest online respondent panel, consisting of over 300,000 verified registered adult users. Participants are compensated with system points that can be exchanged for various rewards, such as electronics and cosmetics. Since panel registration is voluntary, our sample is an opt-in sample. The company running the panel ensures on a regular basis that it is representative of the Polish population with respect to major socio-demographic characteristics. Recent research (Graham et al. 2021) has shown that surveys conducted on opt-in online samples can produce results comparable to those of large-scale probabilistic surveys.

The study protocol and questionnaire obtained a positive opinion from the Ethics Committee at the University of Warsaw. Our sample consists of 1,337 women and men aged 20–35 who were either childless or had one child at the time of the interview. We excluded individuals who were currently expecting a child. We aimed for approximately equal samples of childless females, childless males, mothers, and fathers, with population quotas on age, education, and place of residence. In total, we have 5,348 respondent-scenario observations. A detailed description of the study sample, together with key socio-demographics, can be found in Table 2. For all subgroups, the median ideal number of children was 2, while having children was

considered ‘very important’ for parents and ‘neither important nor unimportant’ for the childless, when assessed on a 5-point Likert scale (1 – Very important, 2 – Rather important, 3 – Neither important nor unimportant, 4 – Rather unimportant, 5 – Not at all important).

Table 2. Descriptive statistics of the study sample

Subsample	Frequency	Average Age	Education	% of Singles
Childless Females	357	28.40	Low: 0.56% Medium: 53.5% High: 45.94%	31.65
Childless Males	345	29.22	Low: 3.19% Medium: 58.55% High: 38.26%	54.78
Mothers	335	30.28	Low: 1.79% Medium: 39.71% High: 58.50%	7.16
Fathers	300	30.07	Low: 3.00% Medium: 68.67% High: 28.33%	4.67
Total	1,337	29.46	Low: 2.09% Medium: 54.75% High: 43.16%	25.43

Notes: Low education: lower secondary or less; Medium education: vocational, secondary or post-secondary non-tertiary; High education: Bachelor's degree, Master's degree, PhD or higher

Blocks were randomly assigned to respondents with the requirement that every block be assessed by at least 10 respondents from each subgroup. It is recommended that each block be assessed by at least 5 respondents to ensure more stable and reliable estimates that are not prone to outliers (Auspurg & Hinz 2015). In the end, we achieved an even higher number of respondents per block: each block was assessed by at least 13 fathers, 15 childless males, 16 childless females, and 16 mothers. For each respondent, both the order of the four scenarios and the sequence of factors within them were randomized, minimizing potential order effects on responses.

Method

Since fertility intentions of childless individuals and parents, as well as of women and men, may be determined by different factors (Berrington 2004; Novelli et al. 2020; Sturm et al. 2023), we stratified our study by gender and parenthood status. We thus ran separate models for childless women, mothers, childless men, and fathers. Similar to previous studies that used an 11-item scale (Aassve et al. 2024; Vignoli et al. 2022; Frodermann et al. 2024), we used a linear model with clustered standard errors at the individual level.

Our outcome variable was the fertility intention expressed after a respondent was presented with a given scenario, and the independent variables were the factors associated with the scenario.

Due to the hierarchical structure of our data (each respondent was confronted with four scenarios), we estimated models for differences between each scenario assessment and the mean assessment for each individual. This approach allowed us to isolate the effects of respondent-specific characteristics such as differences in family orientation and fertility ideals, education, partnership status, labour market or financial situation, which could potentially affect the respondents' reactions to the presented scenarios. In addition to the general models estimated for each subsample, we also examined differences in our findings with regard to partnership status, by estimating separate models for singles and partnered childless females and males. We did not perform this check in the case of parents due to the small share of singles in these subsamples (see Table 2). Finally, we also conducted a heterogeneity analysis by respondents' education level.

Results

The mean intention to have a child for each group, together with between- and within-person standard deviations, can be found in Table 3. Parents of one child expressed, on average, higher intentions to have a child than childless men and women (6.21 and 6.62 vs. 5.32 and 5.67), likely because the great majority of the former were in unions at the time of the survey (see Table 2). Likely for the same reason, childless individuals also varied more strongly than parents in their intentions to have a child (between-respondent SDs were 2.88 and 2.76 vs. 2.47 and 2.20) (see Table 2). Mothers' fertility intentions were the most sensitive to changes in scenarios (within-respondent SD of 1.4), and those of childless males were the least sensitive (within-respondent SD of 0.97).

Table 3. Subsample-specific means and standard deviations of scenario assessments

Subsample	Mean likelihood of having a child across scenarios	Between-respondents SD	Within-respondent SD
Childless Females	5.32	2.88	1.22
Mothers	6.21	2.47	1.40
Childless Males	5.67	2.76	0.97
Fathers	6.62	2.20	1.23

Notes: Assessment on a scale from 0 (Definitely Not) to 10 (Definitely Yes)

Main Effects

The results of the experiment by subsample are depicted in Fig. 1, whereas a detailed table with regression results can be found in Table A1 in the Appendix. Estimates represent the marginal effect of an improvement in a given factor (dimension) on fertility intention as compared to the individual mean, estimated separately for childless women, childless men, mothers, and fathers. We also tested for statistical differences between factor effects within each group (childless women, childless men, mothers, and fathers) and between corresponding factor effects across the groups, using the Wald test for linear hypotheses (see Tables A2 and A3 in the Appendix).

First and foremost, our findings demonstrate that all studied factors are important determinants of fertility intentions of women (with and without a child) and fathers. However, the relative importance of these factors varies, with opportunities to purchase one's own dwelling and availability of stable and gainful employment ranking rather high for all four studied groups, and the prospects regarding climate change ranking rather low. Furthermore, important differences emerged among respondents depending on their gender and parenthood status.

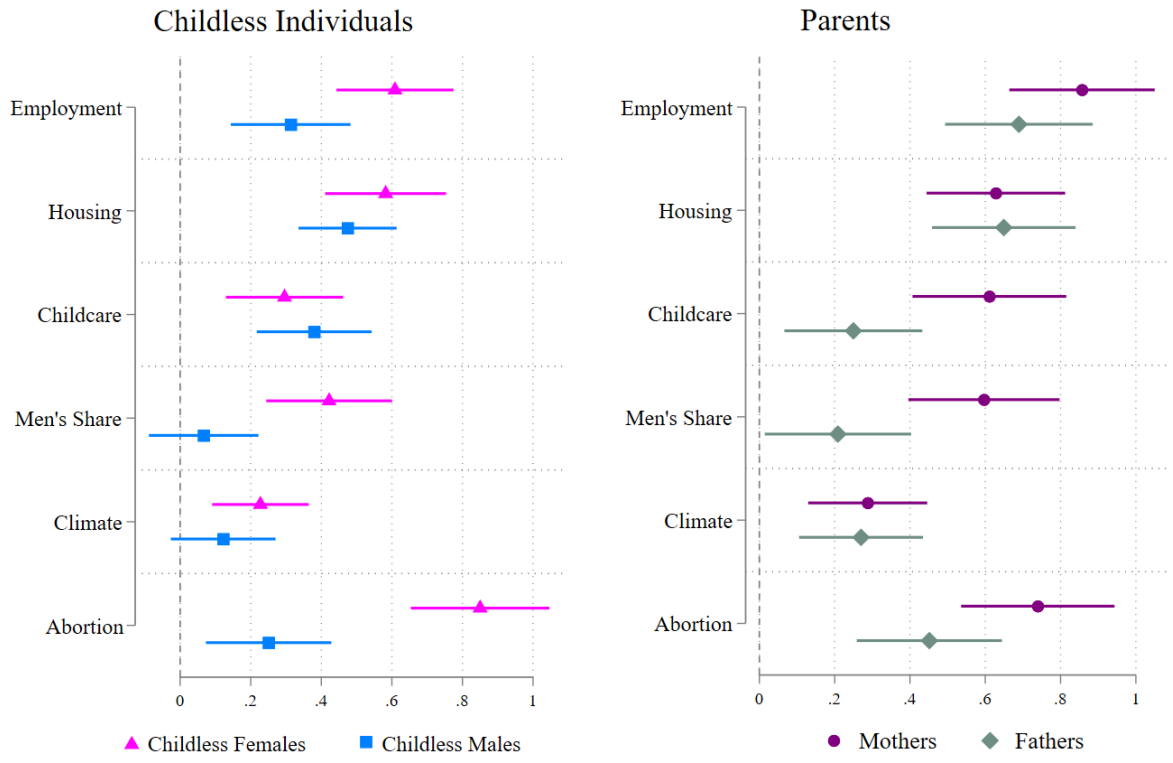
For childless women, access to abortion in the case of a malformed fetus turned out to be the most important factor. Availability of stable and gainful employment, opportunities to purchase one's own dwelling, the overall level of men’s involvement in childcare and housework, and access to childcare ranked next. Finally, the climate change prospects turned out to be the least important, though still significant.

Fertility intentions of childless men are least sensitive to the identified factors. Among those that turned significant are opportunities to purchase one's own dwelling , access to childcare, availability of gainful and stable employment, and access to abortion. However, only the effects of housing and childcare factors are as strong as among childless women, while access to abortion and availability of stable and gainful employment matter less for the fertility intentions of childless men than childless women. Overall level of men's involvement in childcare and prospects on climate change turned out to be unimportant for fertility intentions of childless men.

Factors that play the greatest role for mothers' fertility intentions are availability of stable and gainful employment, opportunities to purchase one's own dwelling, the overall level of men's involvement in domestic sphere, access to childcare, and access to abortion. This ranking is similar as among childless women except for the fact that mothers value external childcare more strongly. The prsopects for climate change also matter for mothers' fertility intentions, but its effect is weaker than the effect of the other factors.

Finally, similarly to mothers, the most important factors for fathers are: availability of stable and gainful employment, opportunities to purchase one's own dwelling and access to abortion. The effect of abortion access, however, is smaller than for females (both mothers and childless) and comparable to the one for childless males. The remaining three factors—childcare availability, men's involvement in domestic sphere, and climate change prospects—are even less important for fathers, with the effects of men's role in domestic sphere and climate change prospects smaller than for mothers.

Fig 1. Factor effects by subgroup



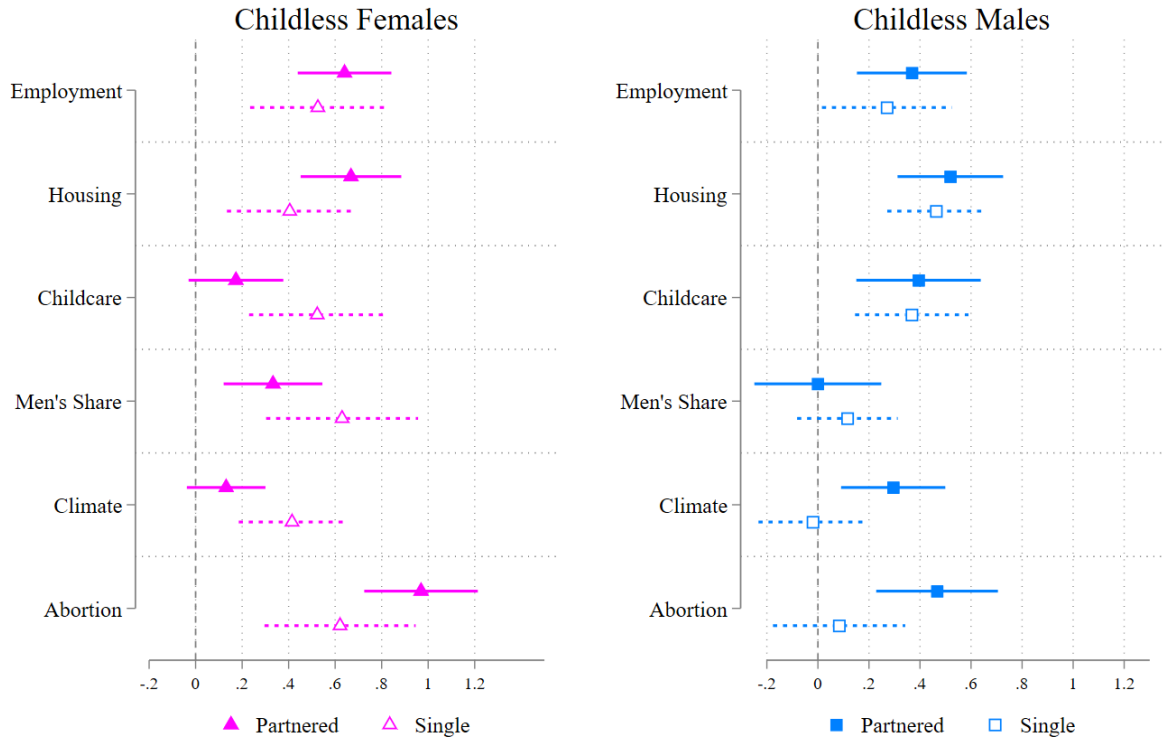
Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

Heterogeneity Analyses

While among parents the majority of respondents (over 90%) were in unions (see Table 2), childless individuals were quite diverse in that respect. Since having a partner may substantially alter how individuals think about their procreative plans (including heightened assessment of pregnancy risk), we also examined whether the fertility intentions of partnered childless individuals were different from those without partners.

Our findings, presented in Figure 2, indicate that fertility intentions of single childless women were influenced by all the factors examined. However, the magnitude of these effects was less differentiated than among partnered women. For childless men, similarly strong effects of employment, housing, and childcare factors were observed among both single and partnered respondents. At the same time, unlike partnered men, fertility intentions of single childless men were not affected by either climate change prospects or access to abortion.

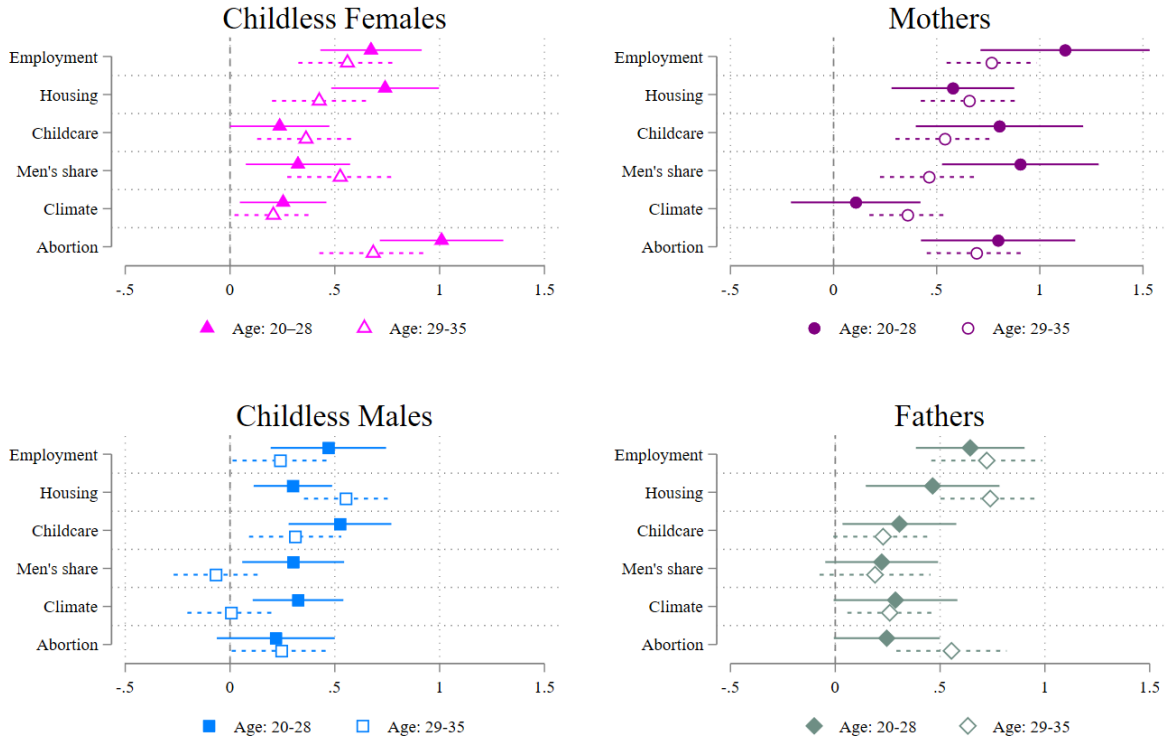
Fig. 2 Factor effects by partnership status among childless females and males



Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

We also examined how the importance of the contextual factors for fertility intentions varied between younger and older cohorts (Figure 3). Among women, the factor effects show slightly greater variation in the younger cohort, whereas among men, they are more pronounced in the older cohort. The findings also indicate that the overall lack of importance of the 'climate' and 'men's share' factors among childless men (Figure 1) is primarily driven by the older cohort. In contrast, among mothers, the observed positive effect of the 'climate' factor is largely attributable to the older cohort.

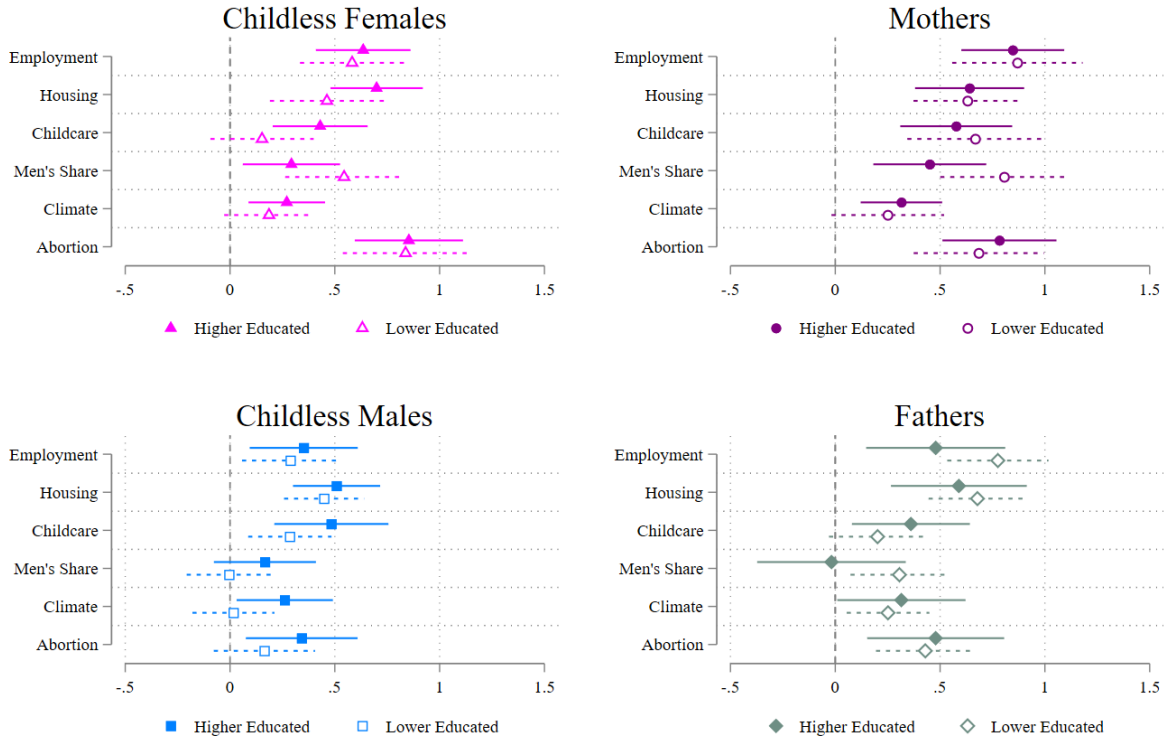
Fig. 3 Factor effects by age among subgroups



Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

In a similar vein, we also examined whether the importance of the contextual factors for fertility intentions varied by education level (Figure 4). The results show that the overall significant positive effect of the 'childcare' factor among mothers and the 'abortion' factor among childless men (Figure 1) are primarily driven by higher-educated individuals. Furthermore, the overall non-significant effect of the 'climate' factor among childless men (Figure 1) appears to be driven by the lower-educated men. An additional noteworthy finding emerged for fathers: fertility intentions among the highly educated fathers do not respond to changes in men's overall level of involvement in the domestic sphere.

Fig. 4 Factor effects by education among subgroups



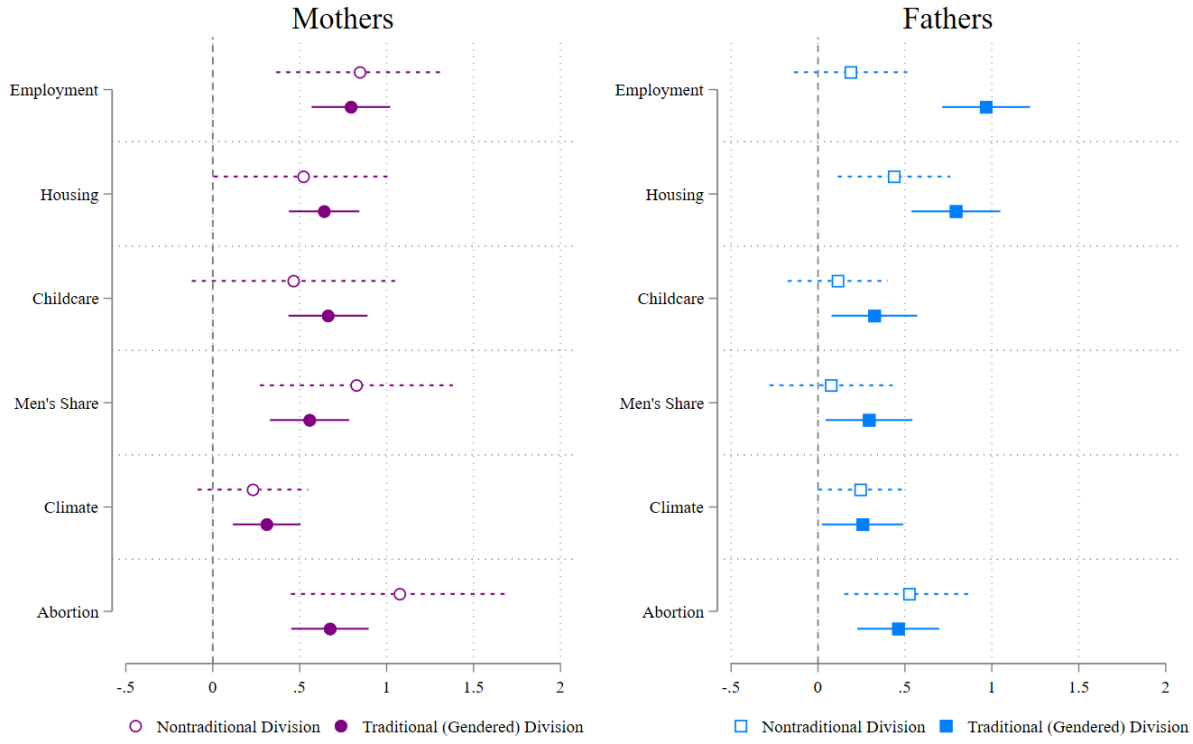
Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

As highly educated fathers are more likely to already share domestic responsibilities more equally, their lack of responsiveness to the 'men's share' factor is likely attributable to their already more egalitarian division of domestic work. Men's involvement in the domestic sphere can also be expected to play a more important role for fertility intentions of mothers with a gendered division of labor than for those who have achieved a more equal division. This expectation aligns with the notion that factors resonating with an individual's personal experience tend to exert a stronger influence (Trope & Liberman 2010). Mothers facing an unequal distribution of domestic tasks within their relationships may therefore be more likely to condition their future childbearing decisions on opportunities for more equal domestic arrangements. To explore this expectation empirically, we analyzed the heterogeneity of factor effects by the division of domestic labor—encompassing both childcare and housework—among fathers and mothers. Respondents were classified as having a traditional (gendered) division of labor when women reported spending more

time and men less time than their partners on domestic tasks—including childcare and housework—while the remaining respondents were classified as having a nontraditional division.

We found no significant differences in the role of the 'men's share' factor among mothers (Figure 5). However, as expected, among fathers, the effect of this factor was significant only for those with a traditional division of labor. Interestingly, men who reported a nontraditional division of domestic tasks were likewise not sensitive to the 'employment' factor. Notably, these fathers were twice as likely as those with a traditional division of domestic work (43% vs. 21%) to earn equal or lower income than their female partners, more likely to be out of active employment (14% vs. 5%), and less likely to declare willingness to work regardless of financial need (58% vs. 73%). The implications of these patterns are discussed further in the Discussion and Conclusion section.

Fig. 5 Factor effects by reported division of hours in domestic work among subgroups



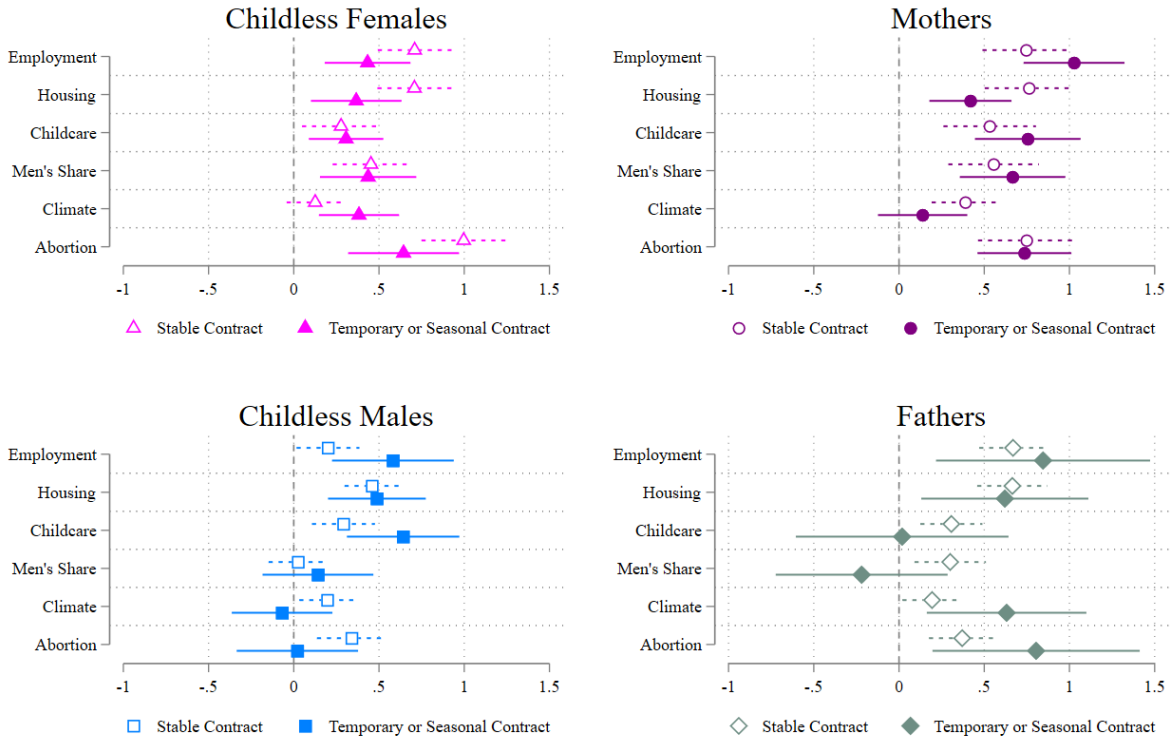
Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

Finally, in a similar vein to the previous argument, we examined whether individuals who had experienced negative circumstances related to employment or income assigned greater importance to the *stable and gainful employment* factor in shaping their fertility intentions than those without such experiences. To this end, we compared outcomes for (a) respondents with stable jobs and those with temporary or seasonal jobs, and (b) respondents who evaluated their household income situation positively ('living comfortably' or 'coping on present income') with those who evaluated it negatively ('finding it [very] difficult on present income').

The detailed results of these estimations are presented in Figures 6 and 7. We found little evidence that respondents' current labor market or income situations affected their reactions to the presented scenarios (see Table A4 in the Appendix for formal tests). Among childless men, mothers, and fathers, the effect size of the employment factor was only slightly higher for those on temporary or seasonal contracts compared with those on stable contracts, but the differences between these two groups were not statistically significant (see Table A4 in the Appendix).

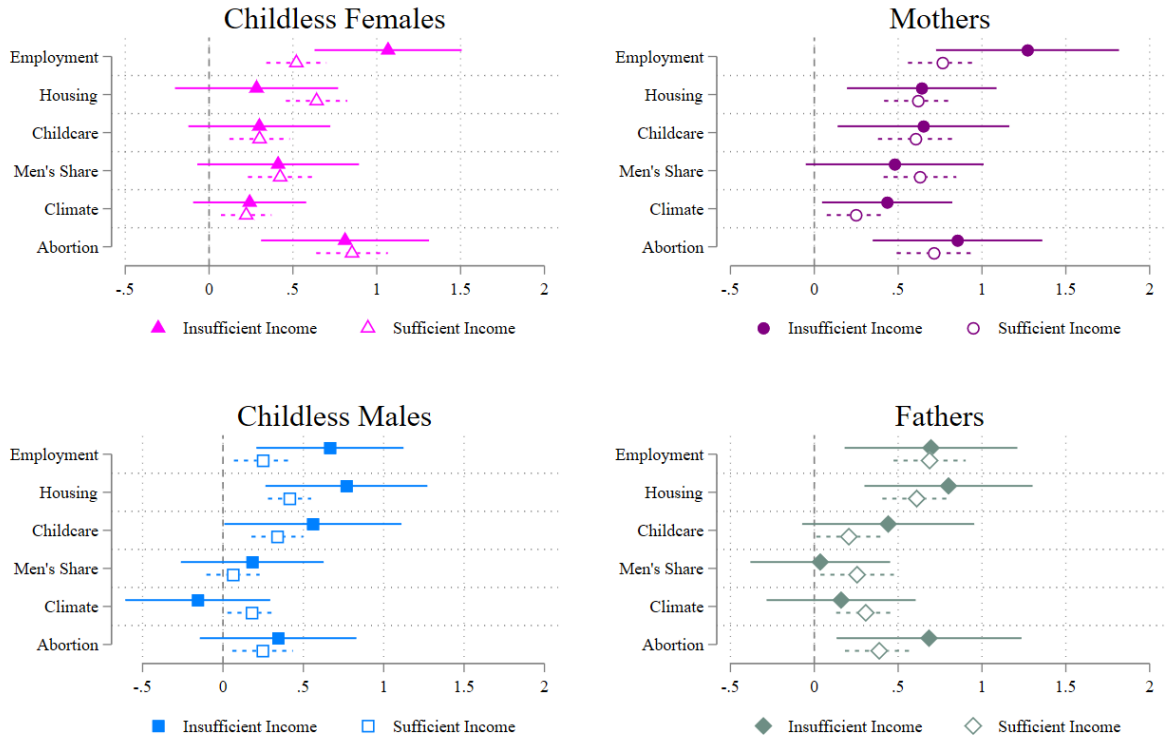
Among childless individuals and mothers, we found larger effect sizes of the employment factor among those who assessed their financial situation as difficult compared with those who evaluated it more favorably. Nevertheless, the difference was statistically significant only for childless women. Moreover, the effect of the employment factor remained relatively strong even among respondents who assessed their household income situation positively.

Fig. 6 Factor effects by employment stability among subgroups



Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for– availability of stable and gainful employment, 'Housing' for– opportunities to purchase a dwelling, 'Childcare' for – access to childcare, 'Men's share' for– men's involvement in domestic sphere, 'Climate' for– climate change prospects, 'Abortion' for – 'access to abortion'.

Fig. 7 Factor effects by subjective houshold income among subgroups



Note: the effects from linear regression with clustered standard errors and 95% confidence intervals; 'Employment' stands for the availability of stable and gainful employment, 'Housing' for the opportunities to purchase a dwelling, 'Childcare' for access to childcare, 'Men's share' for overall level of men's involvement in domestic sphere, 'Climate' for climate change prospects, 'Abortion' for 'access to abortion'.

Sensitivity Check

As a sensitivity analysis, we excluded from the analyses individuals who had already reached their ideal number of children (as measured by a separate question)—0 in the case of childless individuals and 1 in the case of parents. Most of those individuals were indifferent to changes in factor levels and consistently assessed their likelihood of having a child as 0 ('definitely not') across all four scenarios. We then employed the Wald test for linear hypotheses to examine whether the corresponding factor effects differed across groups relative to the models estimated on the complete subgroup samples. The results for mothers and fathers remained largely unchanged, except that the increased participation of men in domestic labor was no longer statistically significant in the model for fathers. Among childless individuals, some effects became more pronounced. Specifically, among childless women who expressed a desire to have children, all effects—except those related to access to childcare and climate change—were larger after excluding women with no desire to have children. Moreover, childless men who intended to have children responded

positively to scenarios involving increased male participation in domestic labor. The effect of access to childcare was also somewhat larger for this restricted group compared to full subsample. Detailed results of these analyses are presented in Table A4 in the Appendix. Overall, however, our main conclusions regarding the relative importance of the examined determinants of fertility intentions remain largely unchanged.

Discussion and Conclusion

Over the past several decades, many developed countries have experienced a sustained decline in fertility (Zeman et al. 2018; Sobotka et al. 2019). While this trend originated in the latter half of the twentieth century and briefly plateaued in the early 2000s, period fertility resumed its downward trajectory in the 2010s. A substantial body of literature has explored the causes of this decline, emphasizing economic precarity (e.g., Adserà 2005; Sobotka et al. 2011; Matysiak et al. 2021; Alderotti et al. 2021; Bastianelli et al. 2023), housing constraints (e.g., Mulder & Wagner 2001; Kulu & Vikat 2007; Dettling & Kearney 2014), persistent difficulties in reconciling paid work and care (Rindfuss & Brewster 1996; Engelhardt et al. 2004; Matysiak & Węziak-Białowolska 2016), and entrenched gender inequalities (e.g., McDonald 2002; Goldscheider et al. 2015). Yet, these factors alone appear insufficient to account for the continued fertility declines observed in recent decades. Emerging concerns—such as the impact of climate change and recent restrictions on reproductive rights in some countries—warrant renewed scrutiny of fertility intentions (Muttarak 2021; Gietel-Basten et al. 2022).

This study contributes to addressing this gap by adopting a novel methodological approach—a factorial survey experiment. We assessed the relative importance of both established and newly emerging macro contextual barriers, shaping the opportunity structures for childbearing. The survey experiment was conducted in Poland, a country with sustained lowest-low fertility since the early 2000s and a recent record-low TFR of 1.15 in 2023. Poland represents a critical case, characterized by widespread employment insecurity, rising housing costs, limited access to childcare, pronounced gender inequality in the domestic sphere, significant pollution, and recent rollbacks of reproductive rights (Kotowska et al. 2008; Kiersztyn 2016; Frączyk 2020; Martin-Garcia & Solera 2022; Paradowska et al. 2023). It thus offers a distinctive context in which multiple contextual constraints on childbearing intersect.

Our findings confirm the enduring salience of economic security for fertility planning. Access to stable and gainful employment, together with the opportunities to purchase one's own dwelling, emerged as foundational preconditions for fertility intentions, particularly among partnered individuals—whether for entering parenthood or progressing to a second child. Either of these factors strongly predicted fertility

intentions for both women and men. The availability of stable and gainful employment proved especially important among those who viewed their income situation unfavorably, although it remained relevant even for respondents in stable and well-paid positions. Furthermore, while the effects of employment and housing opportunities were substantial even among childless and unpartnered individuals these effects may potentially result from these individuals perceiving employment and housing as preconditions of finding a partner first. Overall, our findings reinforce a well-established literature on the role of material stability in shaping reproductive decision-making (e.g., Macunovich 1998; Weeden et al. 2006; Kreyenfeld 2010; Sobotka et al. 2011; Comolli 2017; Matysiak et al. 2021), underscoring specific individual circumstances in which employment stability or access to housing opportunities become especially salient.

At the same time, our study highlights the importance of access to abortion in fertility decision-making in contexts where abortions are substantially restricted. Among childless women in Poland—particularly those who are partnered and young—concerns over highly restricted access to abortion were the most influential factor shaping intentions to have a child. Among mothers, access to abortion in cases of fetal malformation was as significant as economic considerations. This factor was also important for partnered men, especially older fathers, while it did not matter for unpartnered or lower-educated childless men. These findings add weight to emerging evidence that restrictive reproductive policies that constrain access to abortion may also discourage childbearing through anticipatory fertility avoidance (Levine et al. 1996). In particular, they corroborate preliminary evidence from Poland showing a decline in the number of births nine months after the abortion law was tightened (Matysiak & van der Velde 2025), as well as U.S.-based studies reporting increased interest in sterilization procedures following similar legal changes (Sellke et al. 2022). In societies where women's autonomy and gender equality have gained normative traction, reproductive restrictions may have the unintended consequence of deterring planned childbearing. Our findings therefore challenge the policy positions of conservative governments that restrict reproductive autonomy and reinforce traditional gender roles as a means to increase fertility (Gietel-Basten et al. 2022). Rather than being antithetical to fertility, basic abortion rights emerge as a necessary condition for its realization.

Work–family reconciliation opportunities also played a significant role—particularly for women. Improved access to affordable, high-quality childcare and more egalitarian norms regarding the share of domestic labor increased fertility intentions, especially among mothers. For these women, the burdens of care are a lived reality, and these two factors mattered as much as economic conditions or access to abortion in cases of fetal malformation. Childless women were also responsive to these dimensions, albeit to a lesser extent - particularly when partnered. These results underscore the enduring relevance of the 'unfinished gender revolution,' wherein asymmetries in caregiving responsibilities continue to impose opportunity costs that constrain women's reproductive choices (Esping-Andersen & Billari 2015; Goldscheider et al. 2015). By

contrast, men's fertility intentions—especially those of childless men and fathers who already reported an equal or greater share of domestic work—were largely unaffected by scenarios of greater male involvement in the domestic sphere at the societal level. However, we found no evidence that such scenarios reduced men's fertility intentions, suggesting that advancing gender equality in caregiving is unlikely to deter men from childbearing. On the contrary, it may represent a promising pathway to reversing fertility decline, in line with prior studies linking egalitarianism with higher fertility (Brodmann et al. 2007; Miettinen et al. 2015; Kan & Hertog 2017; Fanelli & Profeta 2021; Leocádio et al. 2024).

Environmental concerns, though increasingly prominent in public discourse, exerted comparatively weak effects on fertility intentions. Climate change scenarios had limited influence, particularly among childless men and individuals with lower levels of education. On the one hand, this may reflect the perception of climate change as an abstract or temporally distant phenomenon—insufficiently immediate to influence fertility decisions (Schneider-Mayerson 2022; Dillarstone et al. 2023). On the other hand, while people may know and care less about psychologically distant than about proximal situations, their greater reliance on high-level constructs when evaluating distant contexts may paradoxically lead to more confident predictions about such situations (Trope & Liberman 2010). In addition, decisions made in distant or hypothetical contexts are often guided by general attitudes, core values, and ideologies (ibid.), which—according to the Theory of Planned Behavior—serve as important background factors in fertility decision-making (Ajzen & Klobas 2013). Therefore, the relatively weak effect of the climate change prospects factor observed in our study likely reflects either modest concern about the implications of climate change for the living conditions of future generations (Muttarak 2021; Peters et al. 2023) or a limited sense of moral responsibility that might otherwise motivate individuals to restrict childbearing (Schneider-Mayerson & Leong 2020). Overall, our findings align with Sheppard (2024), who reported that the desire for a safe and green environment for children was secondary to more immediate material and social considerations.

Another notable finding that emerged from our study concerns differences between women and men. Some contextual factors—such as access to abortion and gender norms related to domestic work—played a considerably smaller role in men's fertility intentions than in women's. For women, abortion access and men's involvement in childcare were important determinants of fertility intentions. Among partnered childless men and fathers, these factors were significant but less influential than for their female counterparts, whereas for unpartnered childless men, they were insignificant. This suggests not only gender differences in the factors shaping decisions about having children but also that abortion rights and unpaid domestic work remain predominantly women's issues, even though partnered men appear increasingly aware of their relevance. These results align with existing literature showing that women experience higher levels of mental distress in response to abortion restrictions (Lee et al. 2025; Liu et al. 2023) and express

greater concern about gender inequalities, placing higher importance on achieving gender equality than men (Horowitz & Fetterolf 2020).

Another notable difference between women and men was the apparent attitudinal detachment of unpartnered childless men, whose fertility intentions were largely unresponsive to any of the contextual or ideologically loaded changes presented, including not only abortion rights and men's involvement in domestic work but also climate change. This pattern stands in sharp contrast to that of unpartnered childless women, whose intentions varied systematically with all three of these scenario characteristics. These findings align with studies showing that women are generally more concerned about climate change than men (Bush & Clayton 2023; Price & Bohon 2019), although in our study, this gender difference was confined to the specific group of unpartnered childless individuals. The detachment of unpartnered childless men from a broad range of contextual factors may also reflect a low level of engagement with parenthood as a life goal, the possibility that men's fertility intentions are shaped by different constraints not captured by this study, or a limited contemplation of family formation. This pattern certainly warrants greater attention in future research.

Finally, an interesting gender difference emerged between fathers and mothers when the factor effects were estimated separately for those with traditional (gendered) and nontraditional divisions of domestic labor. While for mothers all factor effects were similar across both subgroups, among fathers who reported a nontraditional (i.e., at least equal) division of domestic work, not only access to childcare and men's involvement in domestic work proved insignificant, but so did access to stable and gainful employment. A detailed analysis of these fathers' characteristics showed that these 'more egalitarian' fathers were also less likely to be the main breadwinners and tended to have a weaker attachment to employment in general, and therefore may have expressed lower concern about their individual employment opportunities as a precondition for childbearing. This pattern points to a promising direction for future research on how men's position in the labor market and breadwinning identity intersect with fertility intentions in more gender-equal partnerships.

Although this study was conducted in Poland, the insights are likely relevant for many other low-fertility societies. Economic insecurity, high housing costs, inadequate childcare, gender inequality, and climate concerns are not unique to the Polish context. While the specific salience of these factors may vary across national settings, depending on levels of employment instability or gender inequality, the underlying dynamics appear broadly applicable. Constraints on access to abortion, however, remain a distinct feature of the Polish case. Nonetheless, the study offers a broader warning: governments that adopt strongly pronatalist policies in response to fertility decline—particularly those that restrict reproductive freedoms—

may inadvertently exacerbate the very trends they seek to reverse. In this regard, the Polish experience serves as a cautionary example. Moreover, the factorial survey method employed here offers a replicable design for estimating the relative weight of multiple contextual determinants of fertility intentions (see also Sheppard 2024 for a similar tool used to investigate individual-level determinants of fertility timing). By simulating complex and realistic decision-making scenarios, this approach helps reduce social desirability bias and strengthen causal inference.

As with any empirical study, limitations must be acknowledged. Fertility intentions do not always translate into actual births, and respondents may have discounted some scenarios they perceived as implausible within the Polish context. Furthermore, while we selected six key contextual factors based on prior research, other potentially relevant influences—such as geopolitical instability—were not included for practical and design-related reasons. Including additional factors would have substantially increased the complexity of the scenarios, potentially reducing response reliability. Moreover, individuals' responses to certain factors may have been shaped by their personal circumstances related to those same domains (e.g., individuals with a stable position in the labor market and higher income may consider employment or housing factors less important than those in more precarious or disadvantaged situations). We examined the potential influence of respondents' job stability, subjective income evaluation, and the reported division of domestic labor on our outcomes, but found only limited evidence that these factors affected our results. Nonetheless, we were not able to assess the potential moderating role of an individual's housing situation in shaping the perceived importance of the *opportunities for purchasing a dwelling* factor for fertility intentions. However, we do not expect homeownership to have substantially affected our results. Even among young homeowners, dwellings are often relatively small, and as families expand, individuals frequently seek larger apartments or houses or relocate to better neighborhoods (Vidal et al. 2017; Kulu et al. 2013; Rabe & Taylor 2010).

Despite certain limitations, this study provides a methodologically innovative and contextually grounded perspective on the barriers to childbearing in a very low-fertility setting. Our findings indicate that economic security, access to abortion, and gender equality remain critical pillars of fertility decision-making. As policy debates around low fertility intensify, this research underscores the need for coherent, multidimensional responses that do not trade one set of reproductive conditions for another but instead address the full spectrum of constraints shaping individuals' decisions to have children.

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