UNIVERSITY OF WARSAW | FACULTY OF ECONOMIC SCIENCES

WORKING PAPERS
No. 15/2025 (478)

# BEYOND USUAL SUSPECTS: REVISITING BARRIERS TO CHILDBEARING DECISIONS IN A LOW FERTILITY SETTING

ANNA KUROWSKA
ANNA MATYSIAK
MAGDALENA GRABOWSKA

LabFam
INTERDISCIPLINARY CENTRE
FOR LABOUR MARKET AND FAMILY DYNAMICS

WARSAW 2025

ISSN 2957-0506

WORKING PAPERS 15/2025 (478)


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

*Anna Kurowska*, Anna Matysiak, Magdalena Grabowska*

*Interdisciplinary Centre for Labour Market and Family Dynamics (LabFam), University of Warsaw*
**Corresponding authors: a.kurowska@uw.edu.pl*

**Abstract:** Fertility rates in developed countries have declined to historically low levels, yet the reasons remain incompletely understood. While economic insecurity, housing affordability, and gender inequality have been central to earlier research, recent attention has shifted to climate change and reproductive rights. This study examines the relative importance of contextual constraints on childbearing intentions among young adults in Poland. Using a factorial survey (N = 1,337), we compare how employment stability, housing affordability, childcare availability, men's domestic contributions, climate change, and abortion rights shape intentions to have a first or second child. Results confirm the enduring salience of economic security for fertility intentions across gender and parenthood status. Reproductive autonomy is most influential for childless women and important for mothers and partnered men. Childcare and equitable domestic arrangements support women's intentions but matter less for men. Climate concerns are less influential. Intentions of childless men appear less responsive overall.

**Keywords:** fertility intentions, factorial survey experiment, economic insecurity, reproductive autonomy, gender equality, childcare availability, climate change

**JEL codes:** J11, J13, J16

**Acknowledgements:** This research was supported by the National Science Centre in Poland under grant no. 2020/37/B/HS5/02703 (Principal Investigator: Anna Kurowska).

We also acknowledge the support of ChatGPT (version 4.0) to enhance the readability of our manuscript. Specifically, ChatGPT assisted us only with general text editing, such as rephrasing sentences, refining their structure, or checking grammar, while ensuring that the content remained entirely our own.

## 1. 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 and Brewster 1996; Engelhardt et al. 2004; Maysiak and Węziak-Białowłska 2016), gender inequality in childcare and housework (McDonald 2004; Goldscheider 2000; Goldscheider et al. 2015), rising instability of employment (Adsera 2004, 2005; Sobotka et al. 2011; Pailhé and 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 and 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 and Brinton 2022; Sheppard 2024). As a result, no clear consensus has emerged on the relative importance of these factors for 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 and Li 2024; Atalay et al. 2021; Florida et al. 2020; Lovenheim and Mumford 2013; Feijten and Mulder 2002) and increasing public concern about climate change (Schneider-Mayerson and 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 and 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 fill this gap by assessing the relative significance of multiple contextual—economic, institutional, cultural, and environmental factors—potentially driving low fertility in younger cohorts. We focus on fertility intentions as they represent the 'decisions made' about having a(nother) child, corresponding to one's fertility desires but constrained by 'situational considerations' (Miller 1994, p. 234). We employ an innovative approach recently adopted in demography—a factorial survey experiment—which enables a comprehensive analysis of the interplay between key drivers of fertility decisions, including childcare availability, men's involvement in domestic work, economic uncertainty, and housing affordability, as well as new, emerging concerns related to climate change and reproductive rights (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 and 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 assess and differentially weigh diverse contextual factors (economic, institutional, cultural, and environmental), and how these assessments shape their first and second birth intentions, with 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 and 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 and Beaujouan 2014; Brzozowska and 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 and Torbus 2019) and skyrocketing housing costs (Eurostat 2024). Access to childcare for children under three remains limited (Kurowska 2015; Grabowska and 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 and Tosun 2015). Lastly, Poland's strict abortion laws—tightened further by a 2020 Constitutional Tribunal ruling—may influence fertility decisions, especially among women (Matysiak and van der Velde 2025). In sum, Poland provides a rich setting for examining how a broad range of contextual factors—economic, institutional, 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.

## 2. 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 and unpacking the mechanisms through which they shape reproductive decision-making.

### *2.1. 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 and 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 and Yang 2020; Bogusz and 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 (Adsera 2005; Kreyenfeld 2010; Pailhé and 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 (Adsera 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 and 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 and 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 and Magda 2017; Pisarczyk and 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 and Vignoli 2013), we expect this factor to play a major role in fertility intentions among Poles.

### *2.2. 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 and Rindfuss 2000; Kossek and 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 and Bozano 2020), and career interruptions would impose excessively high opportunity costs for them (Lalive and 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 and 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 and 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 and Myck 2016; Matysiak and Mynarska 2021). Given these considerations, we expect access to childcare to be a significant determinant of fertility intentions among Polish women, as it represents a fundamental prerequisite for balancing employment with caregiving responsibilities.

*2.3. 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 and 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 and 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 and Trappe 2019; Frejka et al. 2018; Goldscheider et al. 2013). Finally, 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 and 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 and 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 and Nitsche 2016; Okun and 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 and Hertog 2017; Fanelli and 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 and Short 2004; Cooke 2009 for Italy), or no effect at all (Craig and Siminski 2011; 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 and 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 fathers' engagement in both childcare and housework will play an important role in shaping fertility intentions, particularly among Polish women. However, the relative importance of paternal involvement compared to other contextual factors—especially access to non-parental childcare—remains an open question.

*2.4. Housing Costs*

Rising housing prices may be another major source of fertility decline (Florida et al. 2021), given the huge increase in housing costs experienced by many developed countries (Byers 2025; Hermann and Whitney 2024; Dettmer et al. 2024). 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

1990; 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 and Wagner 2001; Feijten and Mulder 2002).

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 and Li 2024; Atalay et al. 2021; Florida et al. 2021; Lovenheim and 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 and Li 2024; Yi and Yi 2008; Ge and Zhang 2019).

The availability of housing should also 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.

*2.5. Climate Change*

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 and 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 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 and 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 and 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 gender inequality 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 and 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 and 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 and 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 scenarios are for the self-assessed likelihood of having a(nother) child, particularly in comparison to other contextual factors, in this country.

*2.6. Reproductive Rights*

Recent tightening of abortion laws in Poland and the United States has raised renewed concerns about how reproductive rights relate to fertility decisions. Overall, there is little ground to expect that abortion restrictions (liberalizations) lead to an increase (decrease) in planned childbearing. Some studies show that easier access to abortion lowers fertility, but particularly among teenagers (Levine et al. 1999; Ananat et al. 2007; Guldi 2008; Cabella and Velázquez 2022; Clarke and Mühlrad 2021) and thus primarily through the delay of an unplanned start of motherhood (Abboud 2025). A recent large-scale study found no evidence of a negative link between decriminalization and faster fertility decline (Fernández and Juif 2023). Similarly, there is some evidence that abortion restrictions increase fertility, as seen in post-Dobbs U.S. states, where birth rates rose by 2.3% (see, e.g., Dench et al. 2024), but mainly by increasing unplanned births (Bell et al. 2025). Nevertheless, long-term positive effects of abortion bans may be counterbalanced by greater contraceptive use (Kulczycki et al. 1996; Dench et al. 2024), abortion-seeking travel (Mayers 2023), 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 and van der Velde 2025). In these circumstances, we expect that the tightening of abortion law in Poland is an important factor preventing women from conceiving a child.

## 3. Data and methods

### *3.1. Experimental Design*

To assess the individual and relative importance of the six contextual factors distinguished in the previous section for first and second fertility intentions among young Poles, 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 and 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 and 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 and Gerson 2016) or a hypothetical couple (Carriero and 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 literature, namely: 1) employment and income security ("chances of finding a well-paid and stable job"), 2) access to affordable housing ("possibilities of purchasing one’s own dwelling"), 3) access to affordable and high-quality

childcare ("access to affordable good-quality nurseries or babysitters"), 4) involvement of men in domestic work ("men's share/participation in childcare and housework"), 5) the pace of climate change, and 6) reproductive rights ("the possibilities of legal pregnancy termination due to incurable fetal defects") (see Table 1). Each of the six factors had two levels. The base level represented the situation in the country—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.

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 and 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). We therefore blocked all 64 scenarios into 16 equal blocks with 4 scenarios each using the *skpr* package in R (Morgan-Wall and Khoury 2021). The resulting blocking yielded a D-efficiency of 99.83, indicating a nearly balanced and orthogonal design (Auspurg and Hinz 2015) and high precision of estimated factor effects (Aassve et al. 2023). 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 and Hinz 2015). An example scenario can be seen in Figure A1 in the appendix.

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

| **Factors** | **Description** | **Levels** |
|---|---|---|
| Employment security | The chances of finding a well-paid and stable job will be… | 0 as they are now<br>1 much better than now |
| Access to owned housing | The possibilities of purchasing one's own dwelling will be… | 0 as they are now<br>1 much better than now |
| Access to childcare | The access to affordable good (quality) nurseries or babysitters will be… | 0 as it is now<br>1 much better than now |
| Men's unpaid labor share | Men's share/participation in childcare and housework will be… | 0 as it is now<br>1 much higher than now |
| Climate change | The pace of climate change will… | 0 be the same as now<br>1 significantly slow down |
| Reproductive rights | The possibilities of legal pregnancy termination due to incurable fetal defects will be… | 0 as they are now<br>1 much better than now |

*3.2. 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 of the [blanked for the review]. 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** | **Median Education** | **% of singles** |
|---|---|---|---|---|
| Childless Females | 357 | 28.40 | Post-Secondary | 31.65 |
| Childless Males | 345 | 29.22 | Secondary | 54.78 |
| Mothers | 335 | 30.28 | Bachelor's degree | 7.16 |
| Fathers | 300 | 30.07 | Secondary | 4.67 |
| **Total** | 1,337 | 29.46 | Post-Secondary | 25.43 |

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 and 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.

*3.3. 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.

## 4. 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 intention | 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)

*4.1. 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 factors distinguished based on the past literature are important determinants of fertility intentions of women (with and without a child) and fathers. However, the relative importance of these factors varies, with owned housing accessibility and employment security 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.

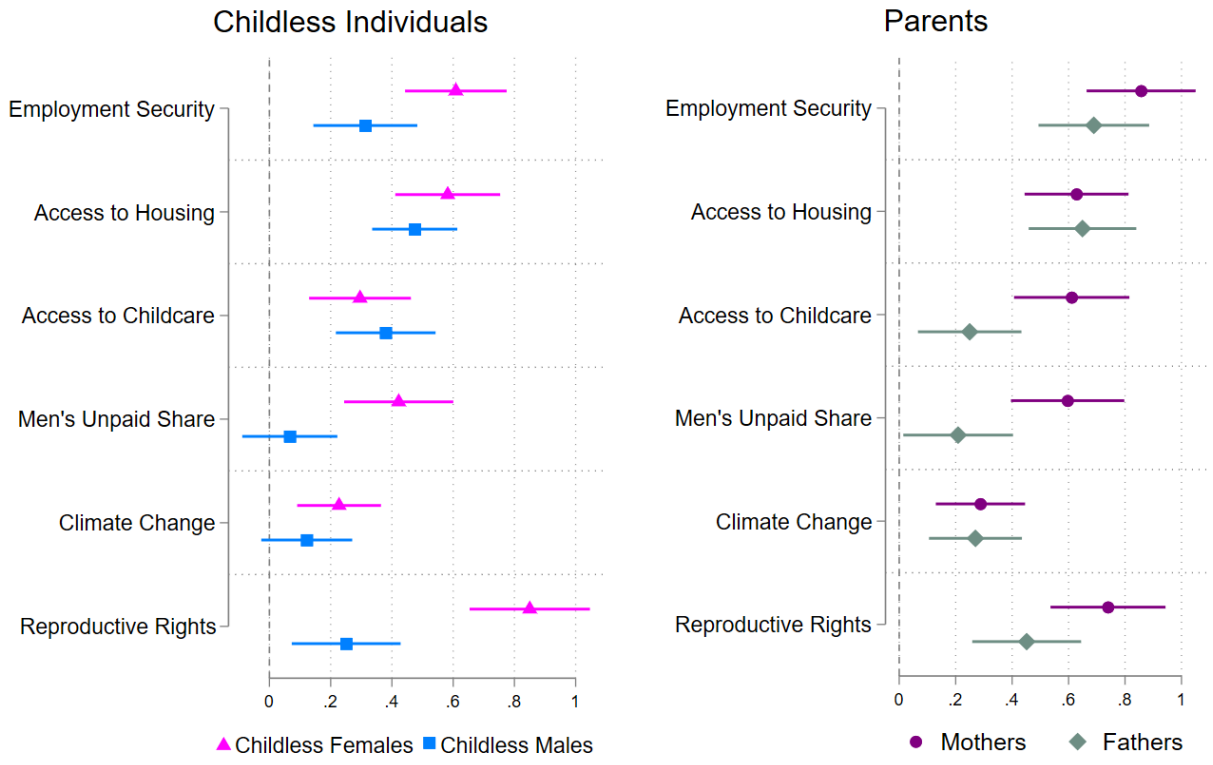
For childless women, access to abortion in the case of a malformed fetus turned out to be the most important factor. Employment security, owned housing accessibility, involvement of men in childcare and housework, and non-parental quality childcare availability ranked next. Finally, the climate change 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 access to owned housing, childcare availability, employment security, and reproductive rights. However, only the effects of housing and childcare availability are as strong as those among childless women, while reproductive rights and employment security matter less for the fertility intentions of childless men than childless women. Involvement of men in childcare and climate concerns turned out to be unimportant for fertility intentions of childless men.

Factors that play the greatest role for mothers' fertility intentions are employment security, housing accessibility, men's participation in domestic work, childcare availability, and reproductive rights. This ranking is similar as among childless women except for the fact that mothers value external childcare more strongly. The pace of climate change also matters 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 employment security, housing accessibility and reproductive rights. The effect of reproductive rights, furthermore, 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 share in unpaid domestic work, and climate change—are even less important for fathers, with the effects of men's role in domestic work and climate smaller than for mothers

Fig 1. Factors effects by subgroup




Source: own study

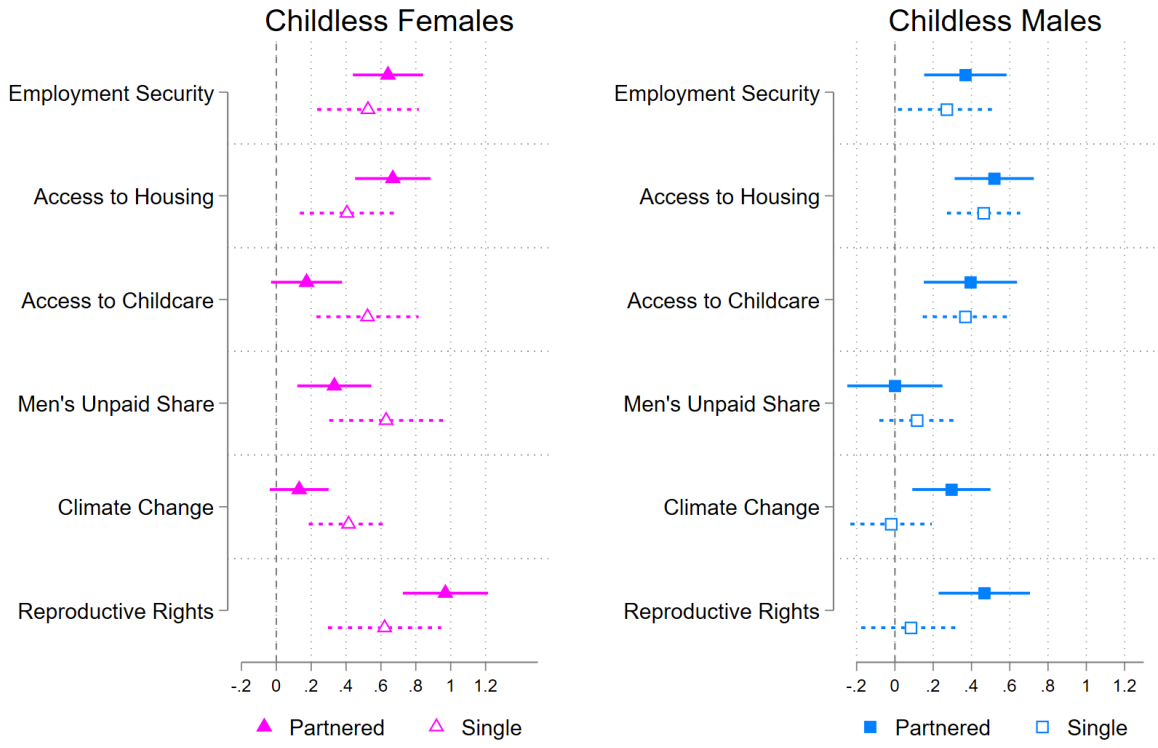
Note: the effects from linear regression with clustered standard errors and 95% confidence intervals

### *4.2. Heterogeneity Analysis*

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 Fig. 2, clearly illustrate that fertility intentions of partnered women were influenced by the presented factors to varying degrees, whereas for single women, all factors appeared to matter similarly. For partnered women, reproductive rights were most important, followed by employment security, housing availability, and engagement of men in unpaid labour. Childcare availability and the pace of climate change did not matter significantly for the fertility intentions of partnered women.

Different patterns emerged among childless men. Single childless men were least sensitive to changes in the examined factors, with their fertility intentions not being affected at all by gender roles in the domestic sphere, climate change prospects, or women's reproductive rights. What mattered for single men was mostly housing accessibility and access to external childcare. For partnered childless men, in turn, housing availability and access to childcare played a similarly important role as employment security, climate concerns, and women's reproductive rights. Only the division of unpaid labour turned out not to be an important factor determining partnered men's intention to become a father.

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




Source: own study

Note: the effects from linear regression with clustered standard errors and 95% confidence intervals

In a similar vein, we also assessed whether the importance of factors for fertility intentions varies by education level (see Fig. 3). We found some heterogeneity in the importance of the studied

factors for fertility intentions with respect to the education level of our respondents. In general, access to childcare turned out to be important for highly educated childless women and fathers, but not for their less-educated counterparts. The same was observed in the case of climate change concerns, which turned insignificant for lower-educated childless individuals and mothers, as well as for reproductive rights, which were not significant for childless, lower-educated men. An interesting finding emerged for fathers: among the highly educated, fertility intentions did not significantly respond to changes in men's involvement in domestic work, whereas a small but significant effect was observed among those with lower levels of education.

Fig. 3 Factors Effects by Education among subgroups


Source: own study

Note: the effects from linear regression with clustered standard errors and 95% confidence intervals

### *4.3. Sensitivity Check*

As a sensitivity analysis, we excluded from the analyses individuals who were indifferent to changes in factor levels and who consistently assessed their likelihood of having a child as 0

("definitely not") across all four scenarios. These individuals constituted approximately 7.6% of the sample and were predominantly those 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. We then employed the Wald test for linear hypotheses to examine whether the corresponding factor effects differed across groups relative to the main models. The results for mothers and fathers remained largely unchanged, except that the increased participation of men in unpaid 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—intensified. Moreover, childless men who intended to have children responded positively to scenarios involving increased male participation in unpaid labor. The effect of access to childcare also strengthened for this group. 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.

## 5. 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 and Wagner 2001; Kulu and Vikat 2007; Dettling and Kearney 2014), persistent difficulties in reconciling paid work and care (Rindfuss and Brewster 1996; Engelhardt et al. 2004; Matysiak and 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 filling this gap by adopting a novel methodological approach—a factorial survey experiment. We assessed the relative importance of both established and newly emerging

barriers to childbearing. The 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 and Solera 2022; Paradowska et al. 2023). It thus offers a unique context in which multiple constraints on childbearing intersect.

Our findings confirm the enduring salience of economic security for fertility planning. Stable employment, together with the ability to purchase one's own dwelling, emerged as foundational preconditions for childbearing—whether for entering parenthood or progressing to a second child. These factors strongly predicted fertility intentions for both women and men. This reinforces 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).

At the same time, our study highlights the importance of reproductive rights in fertility decision-making. Among childless women, concerns over restricted access to abortion were the most influential factor shaping intentions to have a child, while for mothers, reproductive autonomy was equally significant as economic considerations. This factor was also important for men, except for childless unpartnered individuals. These findings add weight to emerging evidence that restrictive reproductive policies which 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 and 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. As such, our findings challenge the policy positions of conservative governments that restrict reproductive autonomy and reinforce traditional gender roles to increase fertility (Gietel-Basten et al. 2022). Reproductive autonomy, rather than being antithetical to fertility, emerges here as a necessary condition for its realization.

Work–family reconciliation factors also played a significant role—particularly for women. Improved access to affordable, high-quality childcare and increased male participation in domestic labor increased fertility intentions, especially among mothers. For these women, the burdens of care are a lived reality, and these supports mattered as much as economic conditions or reproductive autonomy. Childless women were also responsive to these dimensions, albeit to a lesser extent. 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 and Billari 2015; Goldscheider et al. 2015). In contrast, men's fertility intentions—especially those of fathers—were largely unaffected by scenarios of greater male involvement in the domestic sphere. 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 reverse fertility decline, in line with prior studies linking egalitarianism with higher fertility (Brodmann et al. 2007; Miettinen et al. 2015; Kan and Hertog 2017; Fanelli and Profeta 2021; Leocádio et al. 2024).

Environmental concerns, though increasingly prominent in public discourse, had comparatively weak effects on fertility intentions. Climate change scenarios had limited influence, especially among childless men and individuals with lower education. This may reflect the perception of climate change as abstract or temporally distant, insufficiently immediate to shape fertility-related decisions (Schneider-Mayerson 2022; Dillarstone et al. 2023). Interestingly, despite women's generally higher environmental concern (Price and Bohon 2019; Bush and Clayton 2023), we did not observe significant gender differences in responsiveness to climate-related scenarios. Our findings align with Sheppard (2024), who found that a safe and green environment for children was secondary to more immediate material and social considerations.

Another notable finding that emerges from our study concerns differences between women and men. First, some factors, such as reproductive rights and involvement of men in childcare, played substantially less of a 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. For partnered childless men and fathers, these factors were significant but less important than for their female counterparts, and for unpartnered childless men, they were insignificant. This suggests not

only differences in the factors shaping decisions about having children between women and men, but also that reproductive rights and domestic unpaid work remain predominantly women's issues, though partnered men seem to be increasingly aware of their relevance. 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 changes presented. This pattern stood in sharp contrast to unpartnered childless women, whose intentions varied systematically with scenario characteristics. This detachment among unpartnered childless men may reflect a low level of engagement with parenthood as a life goal, the fact that men's fertility intentions are shaped by different constraints not captured by the study, or a lack of contemplation of family formation. It certainly warrants greater attention in future research.

Finally, educational differences played a modest moderating role. While economic factors were similarly important across educational strata, higher-educated respondents gave slightly more weight to climate change and quality childcare availability. Lower-educated fathers responded slightly positively to the prospect of greater male involvement in unpaid work, while this factor appeared not to be significant for highly educated fathers. This somewhat unexpected pattern may reflect heightened expectations and pressures among better-educated men around domestic engagement, or a desire among lower-educated men to see broader shifts in gender norms before adapting their own behaviors.

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 or climate concerns are not unique to the Polish context. While the specific salience of factors may vary by national setting, the underlying dynamics appear broadly applicable. Notably, although constraints on reproductive rights are a specific feature of the Polish case, 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 (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 enhances causal inference.

As with any empirical study, limitations must be acknowledged. Fertility intentions do not always result in actual births, and respondents may have discounted some scenarios they perceived as implausible in 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 more factors would have significantly increased the complexity of scenarios, potentially reducing response reliability. Despite these limitations, the study offers a methodologically innovative and contextually grounded perspective on the barriers to fertility in a very low-fertility setting. Our findings suggest that economic security, reproductive autonomy, 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 off one set of reproductive conditions against another, but instead address the full range of constraints shaping the decision to have children.

## 6. References

Aassve, A., Adserà, A., Chang, P. Y., Mencarini, L., Park, H., Peng, C., Plach, S., Raymo, J. M., Wang, S., and Yeung, W.-J. J. (2024). Family ideals in an era of low fertility. *Proceedings of the National Academy of Sciences*, 121(6), e2311847121. https://doi.org/10.1073/pnas.2311847121

Abboud, A. (2025). The impact of early fertility shocks on women's fertility and labor market outcomes. Journal of Family and Economic Issues. 46, 194–227. https://doi.org/10.1007/s10834-024-09981-9

Adsera, A. (2004). Changing fertility rates in developed countries: The impact of labor market institutions. Journal of Population Economics, 17, 17–43. https://doi.org/10.1007/s00148-003-0166-x

Adsera, A. (2005). Vanishing children: From high unemployment to low fertility in developed countries. American Economic Review, 95(2), 189–193. DOI: 10.1257/000282805774669763

Adsera, A. (2011). Where Are the Babies? Labor Market Conditions and Fertility in Europe. European Journal of Population = Revue Europeenne De Demographie, 27(1), 1–32. https://doi.org/10.1007/s10680-010-9222-x

Aiken, A. R. A., Starling, J. E., Scott, J. G., and Gomperts, R. (2022). Requests for self-managed medication abortion provided using online telemedicine in 30 U.S. states before and after the Dobbs v. Jackson Women's Health Organization decision. JAMA, 328(17), 1768–1770. https://doi.org/10.1001/jama.2022.18865

Aksoy, C. G. (2016). Short-term effects of house prices on birth rates. EBRD Working Paper, (No. 192).

Alderotti, G., Vignoli, D., Baccini, M., and Matysiak, A. (2021). Employment instability and fertility in Europe: A meta-analysis. Demography, 58(3), 871–900. DOI: 10.1215/00703370-9164737

Ananat, E. O., Gruber, J., and Levine, P. B. (2007). Abortion legalization and life-cycle fertility. Journal of Human Resources, 42(2), 375–397. https://doi.org/10.3368/jhr.XLII.2.375

Anelli, M., Giuntella, O., and Stella, L. (2021). Robots, Marriageable Men, Family, and Fertility. Journal of Human Resources. https://doi.org/10.3368/jhr.1020-11223R1

Arnocky, S., Dupuis, D., and Stroink, M. L. (2012). Environmental concern and fertility intentions among Canadian university students. Population and Environment, 34(2), 279–292. https://doi.org/10.1007/s11111-011-0164-y

Atalay, K., Li, A., and Whelan, S. (2021). Housing wealth, fertility intentions, and fertility. Journal of Housing Economics, 54, 101787. https://doi.org/10.1016/j.jhe.2021.101787

Auspurg, K., and Hinz, T. (2015). Factorial Survey Experiments. SAGE Publications, Inc. https://doi.org/10.4135/9781483398075

Baizán, P. (2009). Regional child care availability and fertility decisions in Spain. Demographic Research, 21, 803–842. https://doi.org/10.4054/DemRes.2009.21.27PubMed+3Demographic Research+3repositori.upf.edu+3

Baizán, P., Arpino, B., and Delclòs, C. E. (2016). The effect of gender policies on fertility: The moderating role of education and normative contexts. European Journal of Population, 32(1), 1–30. https://doi.org/10.1007/s10680-015-9356-y

Barreca, A., Deschenes, O., and Guldi, M. (2018). Maybe next month? Temperature shocks and dynamic adjustments in birth rates. Demography, 55(4), 1269–1293. https://doi.org/10.1007/s13524-018-0690-7

Bastianelli, E., Guetto, R., and Vignoli, D. (2023). Employment protection legislation, labour market dualism, and fertility in Europe. European Journal of Population, 39(1), 15. https://doi.org/10.1007/s10680-023-09662-7

Bastianelli, E. (2025). Climate change worries and fertility intentions: Insights from three EU countries. Journal of Marriage and Family, 87(2), 659–675. https://doi.org/10.1111/jomf.13048

Bauernschuster, S., Hener, T., and Rainer, H. (2016). Children of a (policy) revolution: The introduction of universal child care and its effect on fertility. Journal of the European Economic Association, 14(4), 975–1005. https://doi.org/10.1111/jeea.12158

Bell, S. O., Franks, A. M., Arbour, D., Anjur-Dietrich, S., Stuart, E. A., Ben-Michael, E., Feller, A., and Gemmill, A. (2025). US Abortion Bans and Fertility. JAMA, 333(15), 1324–1332. https://doi.org/10.1001/jama.2024.28527

Bertocchi, G., and Bozzano, M. (2020). Gender gaps in education (pp. 1-31). Springer International Publishing.

Becker, G. S. (1960). An Economic Analysis of Fertility. NBER Chapters, 209–240.

Bergsvik, J. M., Fauske, A. L., and Hart, R. K. (2021). Can policies stall the fertility fall? A systematic review of the (quasi-)experimental literature on the effect of family policies on fertility. Population Studies, 75(1), 9–28. https://doi.org/10.1080/00324728.2020.1851749

Berrington, A. (2004). Perpetual postponers? Women's, men's and couple's fertility intentions and subsequent fertility behaviour. Population trends, 117, 9-19.

Bisi, S., Sturm, N., and Van Bavel, J. (2024). Climate change and fertility desires: An experimental study among university students in Belgium and Italy. Demographic Research, 51(2), 17–48. https://doi.org/10.4054/DemRes.2024.51.2

Bogusz H., and Bellani, D. (2025).Industrial robots and workers' well-being in Europe, WNE Working Paper No. 1/2025 (464), https://www.wne.uw.edu.pl/en/research/publishing/working-papers

Bohdanowicz, Z. (2021). Different Countries, Common Support for Climate Change Mitigation: The Case of Germany and Poland. Climate, 9(2), 27. https://doi.org/10.3390/cli9020027

Brauers, H., and Oei, P.-Y. (2020). The political economy of coal in Poland: Drivers and barriers for a shift away from fossil fuels. Energy Policy, 144, 111621. https://doi.org/10.1016/j.enpol.2020.111621

Brewster, K. L., and Rindfuss, R. R. (2000). Fertility and women's employment in industrialized nations. Annual Review of Sociology, 271–296. https://www.jstor.org/stable/223445

Brodmann, S., Esping-Andersen, G., and Güell, M. (2007). When Fertility is Bargained: Second Births in Denmark and Spain. European Sociological Review, 23(5), 599–613. https://doi.org/10.1093/esr/jcm025

Brzozowska, Z., and Mynarska, M. (2021). Fertility intentions and their realisation: Insights from the Polish Generations and Gender Survey. VID Working Papers, (pp. 1–17). https://doi.org/10.1553/0x003cced4

Bush, S. S., and Clayton, A. (2023). Facing change: Gender and climate change attitudes worldwide. American Political Science Review, 117(2), 591–608. https://doi.org/10.1017/S0003055422000752

Byers, D. (2025). How the property market has changed since 2000. The Times. Available at: ; Accessed January 30, 2025.

Cabella, W., and Velázquez, C. (2022). Abortion legalization in Uruguay: Effects on adolescent fertility. Studies in Family Planning, 53(3), 491–514. https://doi.org/10.1111/sifp.12204

Carriero, R., and Todesco, L. (2017). The Interplay between Equity and Gender Ideology in Perceived Housework Fairness: Evidence from an Experimental Vignette Design. Sociological Inquiry, 87(4), 561–585. https://doi.org/10.1111/soin.12162

Chudnovskaya, M. (2018). Housing context and childbearing in Sweden: A cohort study. Housing Studies, 34(3), 469–488. https://doi.org/10.1080/02673037.2018.1458288

Clarke, D., and Mühlrad, H. (2021). Abortion laws and women's health. Journal of Health Economics, 76, 102413. https://doi.org/10.1016/j.jhealeco.2020.102413

Cooke, L. P. (2009). Gender Equity and Fertility in Italy and Spain. Journal of Social Policy, 38(1): 123-140. doi:10.1017/S0047279408002584

Comolli, C. L. (2023). Social climate, uncertainty, and fertility intentions: From the Great Recession to the COVID-19 crisis. European Journal of Population, 39(1), 35. https://doi.org/10.1007/s10680-023-09684-1

Craig, L., and Siminski, P. (2010). Men's housework, women's housework, and second births in Australia. Social Politics, 17(2), 235-266. https://doi.org/10.1093/sp/jxq004

Davis, A. C., Arnocky, S., and Stroink, M. (2019). The problem of overpopulation: Proenvironmental concerns and behavior predict reproductive attitudes. Ecopsychology, 11(2), 92–100. https://doi.org/10.1089/eco.2018.0068

Dench, D., Pineda-Torres, M., and Myers, C. (2024). The effects of post-Dobbs abortion bans on fertility. Journal of Public Economics, 234. https://doi.org/10.1016/j.jpubeco.2024.105124

Dettling, L. J., and Kearney, M. S. (2014). House prices and birth rates: The impact of the real estate market on the decision to have a baby. Journal of Public Economics, 110, 82–100. https://doi.org/10.1016/j.jpubeco.2013.09.009

Dettmer, J., Cancryn, A., Hartog, E., and Taylor, N. (2024). Priced out of housing, many younger disillusioned voters embrace populism. Politico. Accessed January 30, 2025.

Dillarstone H, Brown LJ, Flores EC (2023) Climate change, mental health, and reproductive decision-making: A systematic review. PLOS Climate 2(11): e0000236. https://doi.org/10.1371/journal.pclm.0000236

Dülmer, H. (2007). Experimental plans in factorial surveys: Random or quota design? Sociological Methods and Research, 35(3), 382–409. https://doi.org/10.1177/0049124106292367

Dülmer, H. (2016). The factorial survey: Design selection and its impact on reliability and internal validity. Sociological Methods and Research, 45(2), 304–347. https://doi.org/10.1177/0049124115582269

European Environment Agency. (2024). Europe's air quality status 2024. https://www.eea.europa.eu/publications/europes-air-quality-status-2024

EIGE (2024) Gender Equality Index 2024 - Sustaining momentum on a fragile path, Publications Office of the European Union, Accessed at 13th of May 2025 https://eige.europa.eu/publications-resources/publications/gender-equality-index-2024-sustaining-momentum-fragile-path?language_content_entity=en

Engelhardt, H., and Prskawetz, A. (2004). On the changing correlation between fertility and female employment over space and time. European Journal of Population/Revue européenne de Démographie, 20, 35-62. https://doi.org/10.1023/B:EUJP.0000014543.95571.3b

Eurostat (2024) Housing in Europe. Interactive publication accessed on the 10th of March 2025 at: https://ec.europa.eu/eurostat/web/interactive-publications/housing-2024?utm_source=chatgpt.com#about-this-publication

Eurostat (2025a) Fertility statistics. Interactive publication accessed on the 14th of May 2025 at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Fertility_statistics

Eurostat. (2025b). Employment rates by sex, age and citizenship (%) [Data set]. Retrieved May 17, 2025, from ttps://ec.europa.eu/eurostat/databrowser/view/lfsi_emp_a__custom_16741860/default/table?lang=en

Esping-Andersen, G, and Billari, F., (2015). Re-Theorizing Family Demographics. Population and Development Review 41(1): 1–31. https://doi.org/10.1111/j.1728-4457.2015.00024.x.

Evertsson, M. (2016). Parental leave and careers: Women's and men's wages after parental leave in Sweden. Advances in Life Course Research, 29, 26–40. https://doi.org/10.1016/j.alcr.2016.02.002

Fanelli, E., and Profeta, P., (2021) Fathers' involvement in the family, fertility, and maternal employment: Evidence from Central and Eastern Europe. Demography, 58(5), 1931–1954. DOI: 10.1215/00703370-9411306

Faranda, D., Alberti, T., Coppola, E., and Antonescu, B. (2024). Heavy precipitations in storm Boris exacerbated by both human-driven climate change and natural variability. ClimaMeter, Institut Pierre Simon Laplace, CNRS. https://doi.org/10.5281/zenodo.14054777

Feijten, P., and Mulder, C. H. (2002). The timing of household events and housing events in the Netherlands: A longitudinal perspective. Housing Studies, 17, 773–792. https://doi.org/10.1080/0267303022000009808

Fernández, J. J., and Juif, D. (2023). Does abortion liberalisation accelerate fertility decline? A worldwide time-series analysis. European Journal of Population, 39, 36. https://doi.org/10.1007/s10680-023-09687-y

Florida, R., Mellander, C., and King, K. (2021). Housing costs, self-employment, and fertility. Population, Space and Place, 27(3), e2413. https://doi.org/10.1002/psp.2413

Frączyk, J. (2020). Nie tylko u nas ceny mieszkań rosną. Ale u nas dwa razy szybciej niż średnio w Unii. Business Insider. Accessed January 30, 2025.

Frodermann, C., Hipp, L., and Bünning, M. (2024). Money Matters! Evidence From a Survey Experiment on Attitudes Toward Maternal Employment Across Contexts in Germany. Gender and Society, 38(3), 436–465. https://doi.org/10.1177/08912432241252601

Fu, X., Schneider-Mayerson, M., and Montefrio, M. J. F. (2023). The reproductive climate concerns of young, educated Chinese: 'When the nest is upset, no egg is left intact'. Environmental Sociology, 9(2), 200–215. https://doi.org/10.1080/23251042.2022.2132629

Frejka, T., Goldscheider, F., and Lappegård, T. (2018). The Two-Part Gender Revolution, Women's Second Shift and Changing Cohort Fertility. Comparative Population Studies, 43. https://doi.org/10.12765/CPoS-2018-09

Ge, Y. H., and Zhang, X. M. (2019). The effect of housing price on family fertility decision in China. Population Research, 1, 52–63.

Gietel-Basten, S., Rotkirch, A., and Sobotka, T. (2022). Changing the perspective on low birth rates: Why simplistic solutions won't work. The BMJ, 379. https://doi.org/10.1136/bmj-2022-072670

Goldscheider, F. K. (2000). Men, children, and the future of the family in the third millennium. Futures, 32(6), 525–538. https://doi.org/10.1016/S0016-3287(00)00005-7

Goldscheider, F., Bernhardt, E., and Brandén, M., (2013). Gender equality, family attitudes, and fertility intentions across Europe. Demographic Research, 29, 465-498. DOI:10.4054/DemRes.2013.29.40

Goldscheider, F., Bernhardt, E., and Lappegård, T. (2015). The gender revolution: A framework for understanding changing family and demographic behavior. Population and Development Review, 41(2), 207–239. https://doi.org/10.1111/j.1728-4457.2015.00045.x

Grabowska, I., and Chłoń-Domińczak, A. (2024). Rights-based approach in childcare policies for children under 3: A comparative perspective for Poland, Germany, and Italy. Polityka Społeczna, 603(8), 1–10. https://doi.org/10.5604/01.3001.0054.7538

Graham, A., Pickett, J. T., and Cullen, F. T. (2021). Advantages of Matched Over Unmatched Opt-in Samples for Studying Criminal Justice Attitudes: A Research Note. Crime and Delinquency, 67(12), 1962–1981. https://doi.org/10.1177/0011128720977439

Guetto, R., Alderotti, G., and Vignoli, D. (2025). Can Family Policies Enhance Fertility? An Ex Ante Evaluation Through Factorial Survey Experiments. Demography, 62(1), 311–334. https://doi.org/10.1215/00703370-11775048

Guldi, M. (2008). Fertility effects of abortion and birth control pill access for minors. Demography, 45(4), 817–827. https://doi.org/10.1353/dem.0.0026

Hainmueller, J., Hangartner, D., and Yamamoto, T. (2015). Validating vignette and conjoint survey experiments against real-world behavior. Proceedings of the National Academy of Sciences, 112(8), 2395–2400.

Hajdu, T. and Hajdu, G. (2022). Temperature, Climate Change, and Fertility. In: Zimmermann, K.F. (eds) Handbook of Labor, Human Resources and Population Economics. Springer, Cham. https://doi.org/10.1007/978-3-319-57365-6_262-1

Han, W. J., Ruhm, C. J., Waldfogel, J., and Washbrook, E. (2008). The timing of mothers' employment after childbirth. Monthly Labor Review/US Department of Labor, Bureau of Labor Statistics, 131(6), 15.

Han, S. W., and Brinton, M. C. (2022). Theories of postindustrial fertility decline: An empirical examination. Population and Development Review, 48(2), 303–330. https://doi.org/10.1111/padr.12490

Hellstrand, J., Nisén, J., and Myrskylä, M. (2024). Educational field, economic uncertainty, and fertility decline in Finland in 2010–2019. European Sociological Review, 40(5), 754-771. https://doi.org/10.1093/esr/jcae001

Helm, S., Kemper, J. A., and White, S. K. (2021). No future, no kids–no kids, no future? An exploration of motivations to remain childfree in times of climate change. Population and Environment, 43, 108–129. https://doi.org/10.1007/s11111-021-00379-5

Hermann, A., and Whitney, P. (2024). Home price-to-income ratio reaches record high. Housing Perspectives: Research, Trends, and Perspective from the Harvard Joint Center for Housing Studies. Accessed January 30, 2025.

Jacobs, J. A., and Gerson, K. (2016). Unpacking Americans' Views of the Employment of Mothers and Fathers Using National Vignette Survey Data: SWS Presidential Address. Gender and Society, 30(3), 413–441. https://doi.org/10.1177/0891243215597445

Jones, K. M., and Pineda-Torres, M. (2024). TRAP'd teens: Impacts of abortion provider regulations on fertility and education. Journal of Public Economics, 234, 105112. https://doi.org/10.1016/j.jpubeco.2024.105112

Kan, M. and Hertog, E. (2017). Domestic division of labour and fertility preference in China, Japan, South Korea, and Taiwan. Demographic Research. 36. 557-588. DOI:10.4054/DemRes.2017.36.18.

Karabchuk, T., Dülmer, H., and Gatskova, K. (2022). Fertility attitudes of highly educated youth: A factorial survey. Journal of Marriage and Family, 84(1), 32–52. https://doi.org/10.1111/jomf.12790

Karbownik, K., and Myck, M. (2016). For some mothers more than others. Economics of Transition, 24(4), 705-725. https://doi.org/10.1111/ecot.12104

Kalleberg Arne L. (2018). Precarious lives: Job insecurity and well-being in rich democracies. Cambridge: Polity.

Keivabu, R., Cozzani, M., and Wilde, J. (2024). Temperature and fertility: Evidence from Spain. Population Studies, 1–15. https://doi.org/10.1080/00324728.2024.2382152

Kiersztyn, A. (2016). Fixed-Term Employment and Occupational Position in Poland: The Heterogeneity of Temporary Jobs, European Sociological Review, Volume 32, Issue 6Pages 881–894, https://doi.org/10.1093/esr/jcw044

Klesment, M., and Van Bavel, J. (2017). The Reversal of the Gender Gap in Education, Motherhood, and Women as Main Earners in Europe. European Sociological Review, 33(3), 465–481. https://doi.org/10.1093/esr/jcw063

Köppen, K., and Trappe, H. (2019). The gendered division of labor and its perceived fairness: Implications for childbearing in Germany. Demographic Research, 40, 1413–1440. https://doi.org/10.4054/DemRes.2019.40.48

Kossek, E., and Lee, K. (2017). Work-Family Conflict and Work-Life Conflict. Oxford Research Encyclopedia of Business and Management. https://oxfordre.com/business/view/10.1093/acrefore/9780190224851.001.0001/acrefore-9780190224851-e-52.

Kotowska, I., Jóźwiak, J., Matysiak, A., and Baranowska-Rataj, A. (2008). Poland: Fertility decline as a response to profound societal and labour market changes? Demographic Research, 19, 795–854. https://doi.org/10.4054/DemRes.2008.19.22

Kreyenfeld, M. (2010). Uncertainties in female employment careers and the postponement of parenthood in Germany. European Sociological Review, 26(3), 351–366. https://doi.org/10.1093/esr/jcp026

Kuhfeld, W. F. (1997). Efficient experimental designs using computerized searches. In Sawtooth Software (Ed.), Sawtooth software. Research paper series. Retrieved from Sawtooth Software. http://homepage.stat.uiowa.edu/gwoodwor/AdvancedDesign/KuhfeldTobiasGarratt.pdf

Kulczycki, A., Potts, M., and Rosenfield, A. (1996). Abortion and fertility regulation. The Lancet, 347(9016), 1663–1668. https://doi.org/10.1016/S0140-6736(96)91491-9

Kulu, H., and Vikat, A. (2007). Fertility differences by housing type: The effect of housing conditions or of selective moves? Demographic Research, 17, 775–802. https://doi.org/10.4054/DemRes.2007.17.26

Kurowska, A. (2015). Zmiany dostępu do opieki nad dzieckiem w wieku poniżej trzech lat w polskich gminach przed wejściem w życie ustawy "żłobkowej" i po jej wdrożeniu. Problemy Polityki Społecznej, 30, 119-139.

Lalive, R., and Zweimüller, J. (2009). How does parental leave affect fertility and return to work? Evidence from two natural experiments. The Quarterly Journal of Economics, 124(3), 1363–1402. https://doi.org/10.1162/qjec.2009.124.3.1363

Lappegård, T., and Kornstad, T. (2020). Social Norms about Father Involvement and Women's Fertility. Social Forces, 99(1), 398–423. https://doi.org/10.1093/sf/soz124

Leibenstein, H. (1957). Economic backwardness and economic growth (pp. 58–67). Wiley.

Leocádio, V., Verona, A. P., and Wajnman, S., (2024). Exploring the association between gender equality in the family and fertility intentions: An explanation of the findings in low-fertility countries. Genus, 80(26). DOI: 10.1186/s41118-024-00234-z.

Levine, P. B., Trainor, A. B., and Zimmerman, D. J. (1996). The effect of Medicaid abortion funding restrictions on abortions, pregnancies and births. Journal of Health Economics, 15(5), 555–578. https://doi.org/10.1016/S0167-6296(96)00495-X

Levine, P. B., Staiger, D., Kane, T. J., and Zimmerman, D. J. (1999). Roe v Wade and American fertility. American Journal of Public Health, 89(2), 199–203. https://doi.org/10.2105/ajph.89.2.199

Levine, P. B. (2007). Sex and consequences: Abortion, public policy, and the economics of fertility. Princeton University Press.

Lewandowski, P., and Magda, I. (2017). Temporary employment, unemployment and employment protection legislation in Poland. Myths of employment deregulation: how it neither creates jobs nor reduces labour market segmentation, 143.

Li, J., Zhang, X., Ali, S., and Khan, Z. (2020). Eco-innovation and energy productivity: New determinants of renewable energy consumption. Journal of Environmental Management, 271, 111028. https://doi.org/10.1016/j.jenvman.2020.111028

Lovenheim, M. F., and Mumford, K. J. (2013). Do family wealth shocks affect fertility choices? Evidence from the housing market. The Review of Economics and Statistics, 95(2), 464–475. DOI: 10.1162/REST_a_00266

Lundberg, S. (1985). The Added Worker Effect. Journal of Labor Economics, 3(1, Part 1), 11–37. https://doi.org/10.1086/298069

Lui, L., and Cheung, A. K.-L. (2021). Family policies, social norms, and marital fertility decisions: A quasi-experimental study. International Journal of Social Welfare, 30(4), 396–409. https://doi.org/10.1111/ijsw.12488

Lutz, W., and Skirbekk, V. (2005). Policies addressing the tempo effect in low-fertility countries. Population and Development Review, 31(4), 699–720. https://doi.org/10.1111/j.1728-4457.2005.00094.x

Macunovich, D. J. (1998). Race and relative income/price of time effects on U.S. fertility. The Journal of Socio-Economics, 27(3), 365–400. https://doi.org/10.1016/S1053-5357(99)80095-X

Marcinkiewicz, K., and Tosun, J. (2015). Contesting climate change: Mapping the political debate in Poland. East European Politics, 31(2), 187–207. https://doi.org/10.1080/21599165.2015.1022648

Martín-García, T., and Solera, C. (2022). Does what the man studies affect what he does at home? Field of education and gender division of housework and childcare in Norway, Austria and Poland. Journal of Family Studies, 29, 1465 - 1492. https://doi.org/10.1080/13229400.2022.2051726.

Matysiak, A., and Steinmetz, S. (2008). Finding their way? Female employment patterns in West Germany, East Germany, and Poland. European Sociological Review, 24(3), 331–345. https://doi.org/10.1093/esr/jcn007

Matysiak, A. (2009). Employment first, then childbearing: Women's strategy in post-socialist Poland. Population Studies, 63(3), 253–276. https://doi.org/10.1080/00324720903151100

Matysiak, A., and Węziak-Białowolska, D. (2016). Country-specific conditions for work and family reconciliation: An attempt at quantification. European Journal of Population, 32, 475-510. https://doi.org/10.1007/s10680-015-9366-9

Matysiak, A., Nitsche, N., 2016, Emerging Trends: Family Formation and Gender. In: Scott, R., Buchmann M., Kosslyn S. (eds.) Emerging Trends in the Social and Behavioral Sciences. John Wiley and Sons, Inc. ISBN 978-1-118-90077-2.

Matysiak, A. and Mynarska, M. (2021). Motives for Combining Motherhood with Employment: Evidence for Medium and Highly Educated Polish Women Around the EU Accession. Central European Economic Journal, 8(55), 2021. 63-78. https://doi.org/10.2478/ceej-2021-0005

Matysiak, A., Sobotka, T., and Vignoli, D. (2021). The Great Recession and fertility in Europe: A sub-national analysis. European Journal of Population, 37(1), 29–64. https://doi.org/10.1007/s10680-020-09556-y

Matysiak, A., Bellani, D., and Bogusz, H. (2023). Industrial robots and regional fertility in European countries. European Journal of Population, 39(1), 11. https://doi.org/10.1007/s10680-023-09657-4

Matysiak, A., Kurowska, A., and Pavelea, A. M. (2024). His unemployment, her response, and the moderating role of welfare policies in European countries. Results from a preregistered study. Plos one, 19(8), e0306964. https://doi.org/10.1371/journal.pone.0306964

Matysiak, A., and Vignoli, D. (2024). Family Life Courses, Uncertain Futures, and the Changing World of Work: State-of-the-Art and Prospects. European Journal of Population, 40(1), 19. https://doi.org/10.1007/s10680-024-09701-x

Matysiak, A., and van der Velde, L. (2025). The Short-Term Fertility Impact of Abortion Law Restrictions: A Research Note, WNE Working Paper No. 12/2025 (475), https://www.wne.uw.edu.pl/en/research/publishing/working-papers

Matysiak, A., and Vignoli, D. (2025). The end of an era: The vanishing negative effect of women's employment on fertility, WNE Working Paper No. 9/2025 (472), https://www.wne.uw.edu.pl/en/research/publishing/working-papers

Myers, C. (2024). Forecasts for a post-Roe America: The effects of increased travel distance on abortions and births. Journal of Policy Analysis and Management, 43(1), 39–62. https://doi.org/10.1002/pam.22524

McDonald, P. (2002). Sustaining fertility through public policy: The range of options. Population, 57(3), 417–446. https://doi.org/10.2307/3246634

McDonald, P. (2004). Gender equity in theories of fertility transition. Population and Development Review, 26(3), 427-439. https://doi.org/10.1111/j.1728-4457.2000.00427.x

Miettinen, A., Lainiala, L., and Rotkirch, A., (2015). Women's housework decreases fertility: Evidence from a longitudinal study among Finnish couples. Acta Sociologica, 58(1), 5-22. https://doi.org/10.1177/0001699315572028

Miller, W. B. (1994). Childbearing motivations, desires, and intentions: A theoretical framework. Genetic, Social, and General Psychology Monographs, 120, 223–258.

Miller, W., Severy, L., and Pasta, D. (2004). A framework for modelling fertility motivation in couples. Population Studies, 58(2), 193–205. https://doi.org/10.1080/0032472042000213712

Miller, W. B. (2011). Differences between fertility desires and intentions: Implications for theory, research, and policy. Vienna Yearbook of Population Research, 9, 75–98.

Mills, M., and Blossfeld, H.-P. (2013). The Second Demographic Transition Meets Globalization: A Comprehensive Theory to Understand Changes in Family Formation in an Era of Rising Uncertainty. In A. Evans and J. Baxter (Eds.), Negotiating the Life Course: Stability and Change in Life Pathways (pp. 9–33). Springer Netherlands. https://doi.org/10.1007/978-90-481-8912-0_2

Morgan-Wall, T., and Khoury, G. (2021). Optimal design generation and power evaluation in R: The skpr package. Journal of Statistical Software, 99(1), 1–36. https://doi.org/10.18637/jss.v099.i01

Mrozowicki, A., Karolak, M., and Krasowska, A. (2018). Lost in transitions? Biographical experiences and life strategies of young precarious workers in Poland. Kultura i Społeczeństwo, 62(4), 69–89. https://doi.org/10.35757/KiS.2018.62.4.4

Mulder, C. H., and Wagner, M. (2001). The connections between family formation and first-time homeownership in the context of West Germany and the Netherlands. European Journal of Population, 17, 137–164. https://doi.org/10.1023/A:1010706308868

Muttarak, R. (2021). Demographic perspectives in research on global environmental change. Population Studies, 75(sup1), 77–104. https://doi.org/10.1080/00324728.2021.1988684

Myck, M., Roine, J., and Oczkowska, M. (2020, October). Transformacja (nie tylko) gospodarcza: Kobiety na rynku pracy w kontekście zmieniających się norm społecznych. (FROGEE Policy Brief, No. 2). CenEA, SITE.

Neels, K., Marynissen, L., and Wood, J. (2024). Economic Cycles and Entry into Parenthood: Is the Association Changing and Does it Affect Macro-Level Trends? Micro-Level Hazard and Simulation Models of Belgian Fertility Trends, 1960–2010. European Journal of Population, 40(1), 13. https://doi.org/10.1007/s10680-024-09695-6

Novelli, M., Cazzola, A., Angeli, A., and Pasquini, L. (2021). Fertility intentions in times of rising economic uncertainty: Evidence from Italy from a gender perspective. Social Indicators Research, 154, 257-284. https://doi.org/10.1007/s11205-020-02554-x

OECD (2024a). PF3.2: Enrolment in childcare and pre-school. OECD Family Database. https://www.oecd.org/els/soc/PF3_2_Enrolment_childcare_preschool.pdf

OECD (2024b), Society at a Glance 2024: OECD Social Indicators, OECD Publishing, Paris, https://doi.org/10.1787/918d8db3-en.

Ohlsson-Wijk, S., and Andersson, G. (2022). Disentangling the Swedish fertility decline of the 2010s. Demographic Research, 47, 345–358. DOI: 10.4054/DemRes.2022.47.12

Okun, B. S., and Raz-Yurovich, L. (2019). Housework, Gender Role Attitudes, and Couples' Fertility Intentions: Reconsidering Men's Roles in Gender Theories of Family Change. Population and Development Review, 45(1), 169–196. https://doi.org/10.1111/padr.12207

Oppenheimer, V. K. (1988). A Theory of Marriage Timing. American Journal of Sociology, 94(3), 563–591. http://www.jstor.org/stable/2780254

Oppenheimer, V. K. (1997). Women's employment and the gain to marriage: The specialization and trading model. Annual Review of Sociology, 23, 431–453. https://doi.org/10.1146/annurev.soc.23.1.431

Özkan, A., Kolcu, M., Yilmaz, A., and Akbaş, G. (2025). Is Ecological Anxiety Due to Climate Change Associated With the Fertility Preferences of Women? Journal of Evaluation in Clinical Practice, 31(1), e14265. https://doi.org/10.1111/jep.14265

Pailhé, A., and Solaz, A. (2012). The influence of employment uncertainty on childbearing in France: A tempo or quantum effect? Demographic Research, 26, 1–40. DOI:10.4054/DemRes.2012.26.1

Pamula, A. (2023). 6 Stories Show the Human Toll of Poland's Strict Abortion Laws, Time ,https://time.com/6320172/poland-abortion-laws-maternal-health-care/

Paradowska, M., Platje, J. and Suchecka, A. (2023). Polish climate policy in the opinion of young Poles - a pilot study. Economics and Environment, 4, 1-22. https://doi.org/10.34659/eis.2023.87.4.669

Peters, S., Striessnig, E., Testa, M. R., Trimarchi, A., Nitsche, N. (2023). Too worried about the environment to have children? Or more worried about the environment after having children? The reciprocal relationship between environmental concerns and fertility. MPIDR Working Paper WP-2023-023, 56 pages.

Philipp, M.-F., Büchau, S., Schober, P. S., and Spiess, C. K. (2023). Parental Leave Policies, Usage Consequences, and Changing Normative Beliefs: Evidence From a Survey Experiment. Gender and Society, 37(4), 493–523. https://doi.org/10.1177/08912432231176084.

Pisarczyk, Ł., and Torbus, U. (2019). Chapter 8: Precarious work in Poland: how to tackle the abuse of atypical forms of employment? https://www.elgaronline.com/edcollchap/edcoll/9781788973250/9781788973250.00016.xml

Price, C. E., and Bohon, S. A. (2019). Eco-moms and climate change: The moderating effects of fertility in explaining gender differences in concern. Social Currents. https://doi.org/10.1177/2329496519852691

Rackin, H. M., Gemmill, A., and Hartnett, C. S. (2023). Environmental attitudes and fertility desires among US adolescents from 2005–2019. Journal of Marriage and Family, 85(2), 631–644. https://doi.org/10.1111/jomf.12885

Ranjan, P. (1999). Fertility Behaviour under Income Uncertainty. European Journal of Population / Revue Européenne de Démographie, 15(1), 25–43. https://doi.org/10.1023/A:1006106527618

Rindfuss, R. R., and Brewster, K. L. (1996). Childrearing and fertility. Population and development review, 22, 258-289. https://doi.org/10.2307/2808014

Rindfuss, R. R., Guilkey, D. K., Morgan, S. P., Kravdal, Ø., and Guzzo, K. B. (2007). Child care availability and first-birth timing in Norway. Demography, 44(2), 345–372. https://doi.org/10.1353/dem.2007.0017PMC

Rindfuss, R. R., Guilkey, D. K., Morgan, S. P., and Kravdal, Ø. (2010). Child-care availability and fertility in Norway. Population and Development Review, 36(4), 725–748. https://doi.org/10.1111/j.1728-4457.2010.00355.x

Rotkirch, A. (2020). The wish for a child. Vienna Yearbook of Population Research, 18, 49-62. DOI: 10.1553/populationyearbook2020.deb05

Rubaszek, M. (2019). Private rental housing market underdevelopment: Life cycle model simulations for Poland. Baltic Journal of Economics, 19(2), 334–358. https://doi.org/10.1080/1406099X.2019.1679558

Puglisi, C., Muttarak, R., and Vignoli, D. (2025). Climate change concerns and fertility intentions: First evidence from Italy. Genus, 81(1), 1-23. https://doi.org/10.1186/s41118-025-00244-5

Sauer, C., Auspurg, K., Hinz, T., Liebig, S., and Schupp, J. (2014). Method effects in factorial surveys: An analysis of respondents' comments, interviewers' assessments, and response behavior (SOEP Papers on Multidisciplinary Panel Data Research 629). Berlin: German Institute for Economic Research (DIW)

Saunders, P. (2021). A Nation of Home Owners. Routledge. https://doi.org/10.4324/9781003137177

Schneider, D. (2015). The great recession, fertility, and uncertainty: Evidence from the United States. Journal of Marriage and Family, 77(5), 1144–1156. https://doi.org/10.1111/jomf.12212

Schneider-Mayerson, M., and Leong, K. L. (2020). Eco-reproductive concerns in the age of climate change. Climatic Change, 163(2), 1007–1023. https://doi.org/10.1007/s10584-020-02923-y

Schneider-Mayerson, M. (2022). The environmental politics of reproductive choices in the age of climate change. Environmental Politics, 31(1), 152–172. https://doi.org/10.1080/09644016.2021.1902700

Sellke, N., Tay, K., Sun, H. H., Tatem, A., Loeb, A., and Thirumavalavan, N. (2022). The unprecedented increase in Google searches for "vasectomy" after the reversal of Roe vs. Wade. Fertility and Sterility, 118(6), 1186–1188. https://doi.org/10.1016/j.fertnstert.2022.08.859

Sheppard, P. (2024). Using discrete choice modeling to understand the drivers of reproductive delay in the United Kingdom. International Journal of Population Studies, 11(3), 125–137. https://doi.org/10.36922/ijps.3600

Smeaton, D. (2006). Work return rates after childbirth in the UK - trends, determinants and implications: A comparison of cohorts born in 1958 and 1970. Work, Employment and Society. https://doi.org/10.1177/0950017006061271

Sobotka, T., Skirbekk, V., and Philipov, D. (2011). Economic recession and fertility in the developed world. Population and Development Review, 37(2), 267–306. DOI: 10.1111/j.1728-4457.2011.00411.x

Sobotka, T., and Beaujouan, É. (2014). Two is best? The persistence of a two-child family ideal in Europe. Population and Development Review, 40(3), 391–419. https://doi.org/10.1111/j.1728-4457.2014.00691.x

Sobotka, T., Matysiak, A., and Brzozowska, Z. (2019). Policy responses to low fertility: How effective are they? United Nations Population Fund.

Statistics Poland. (2024). Fertility Interactive dataset accessed on the 17th of May 2025 at:. Local Data Bank. https://bdl.stat.gov.pl/bdl/dane/podgrup/tablica

Sturm, N., Koops, J. C., and Rutigliano, R. (2023). The influence of partnership status on fertility intentions of childless women and men across European countries. European Journal of Population, 39(1), 20. https://doi.org/10.1007/s10680-023-09664-5

Torr, B. M., and Short, S. E. (2004). Second Births and the Second Shift: A Research Note on Gender Equity and Fertility. Population and Development Review, 30(1), 109–130. https://doi.org/10.1111/j.1728-4457.2004.00005.x

Van Bavel, J., Schwartz, C. R., and Esteve, A. (2018). The reversal of the gender gap in education and its consequences for family life. Annual review of sociology, 44(1), 341-360. https://doi.org/10.1146/annurev-soc-073117-041215

Vignoli, D., Rinesi, F., and Mussino, E. (2013). A Home to Plan the First Child? Fertility Intentions and Housing Conditions in Italy. Population, Space and Place, 19(1), 60–71. https://doi.org/10.1002/psp.1716

Vignoli, D., Bazzani, G., Guetto, R., Minello, A., and Pirani, E. (2020a). Uncertainty and narratives of the future: A theoretical framework for contemporary fertility. In R. Schoen (Ed.), Analyzing contemporary fertility (Vol. 51). The Springer Series on Demographic Methods and Population Analysis. Springer, Cham. https://doi.org/10.1007/978-3-030-48519-1_3

Vignoli, D., Guetto, R., Bazzani, G., Pirani, E., and Minello, A. (2020b). A reflection on economic uncertainty and fertility in Europe: The Narrative Framework. Genus, 76(1), 28. https://doi.org/10.1186/s41118-020-00094-3

Vignoli, D., Minello, A., Bazzani, G., Matera, C., and Rapallini, C. (2022). Narratives of the future affect fertility: Evidence from a laboratory experiment. European Journal of Population, 38(1), 93–124. https://doi.org/10.1007/s10680-021-09602-3

Wallander, L. (2009). 25 years of factorial surveys in sociology: A review. Social Science Research, 38(3), 505–520. https://doi.org/10.1016/j.ssresearch.2009.03.004

Wang, S., Wang, Y., and Shen, Y. (2023). The impact of supportive housing policy scenarios on marriage and fertility intentions: A vignette survey experimental study in Shanghai, China. Population Research and Policy Review, 42(6), 96. https://doi.org/10.1007/s11113-023-09844-5

Weeden, J., Abrams, M. J., Green, M. C., and Sabini, J. (2006). Do high-status people really have fewer children? Human Nature, 17(4), 377–392. https://doi.org/10.1007/s12110-006-1001-3

Wilson, K. R., and Prior, M. R. (2009). Father involvement: the importance of paternal Solo Care. Early Child Development and Care, 180(10), 1391–1405. https://doi.org/10.1080/03004430903172335

Wood, J., and Neels, K. (2019). Local childcare availability and dual-earner fertility: Variation in childcare coverage and birth hazards over place and time. European Journal of Population, 35(5), 913–939. https://doi.org/10.1007/s10680-018-9510-4

World Bank (2025) Fertility rate, total (births per woman). Interactive dataset accessed on the 14th of May 2025 at: https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=KR

Yeung, W.-J. J., and Yang, Y. (2020). Labor Market Uncertainties for Youth and Young Adults: An International Perspective. The ANNALS of the American Academy of Political and Social Science, 688(1), 7-19. https://doi.org/10.1177/0002716220913487

Yi, J. J., and Yi, X. J. (2008). Increasing housing prices and fertility decline in Hong Kong. China Economic Quarterly, 3, 961–982.

Yu, J., Shen, X., and Xie, Y. (2023). Economic resources, childcare services, and son preference: A conjoint analysis of fertility potential in China. China Population and Development Studies, 7, 383–417. https://doi.org/10.1007/s42379-023-00146-z

Yu, C., and Li, Y. (2024). Housing prices, social security, and fertility rate. Review of Economics of the Household. https://doi.org/10.1007/s11150-024-09748-z

Zachorowska-Mazurkiewicz, A. (2020). The division of paid and unpaid work between women and men: Theory, status, and prospects. Kobieta i Biznes, 1(4), 30–36.

Zaremba, D., Kulesza, M., and Herman, A. M. (2023). A wise person plants a tree a day before the end of the world: Coping with the emotional experience of climate change in Poland. Current Psychology, 42, 27167–27185. https://doi.org/10.1007/s12144-022-03807-3

Zaręba, K., Wójtowicz, S., Banasiewicz, J., Herman, K., and Jakiel, G. (2021). The influence of abortion law on the frequency of pregnancy terminations—A retrospective comparative study. International Journal of Environmental Research and Public Health, 18(8), 4099. https://doi.org/10.3390/ijerph18084099

Zeman, K., Beaujouan, É., Brzozowska, Z., and Sobotka, T. (2018). Cohort fertility decline in low fertility countries: Decomposition using parity progression ratios. Demographic research, 38, 651-690. DOI: 10.4054/DemRes.2018.38.25

Zhang, C., Liang, Y., and Qi, X. (2023). Division of Housework and Women's Fertility Willingness. Journal of Family Issues, 45(4), 795-812. https://doi.org/10.1177/0192513X231155666 (Original work published 2024)

## Appendix

Figure A1. An Example Scenario

*In a moment we will present you 4 different scenarios of the future in Poland and worldwide, and ask you to assess how likely you would decide to have a(nother) child in the described scenario.*

**Scenario 1:**

Imagine that …

| | |
|---|---|
| The chances of finding a well-paid and stable job will be… | **much better than now** |
| The possibilities of purchasing a flat will be… | **much better than now** |
| The access to affordable good (quality) nurseries or babysitters will be… | **as it is now** |
| Men's share/participation in childcare and housework will be… | **as it is now** |
| The pace of climate change will… | **significantly slow down** |
| The possibilities of legal pregnancy termination due to incurable fetal defects will be… | **as they are now** |

**Would you decide to have a child under such conditions?**

*Answer on the following scale where "0" means"Definitely not" and "10" means "Definitely yes"*

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Definitely Not** | | | | | | | | | | **Definitely Yes** |

Table A1. Regression results

| | (1) Childless Females | (2) Mothers | (3) Childless Males | (4) Fathers |
|---|---|---|---|---|
| **Employment Security** | 0.609*** | 0.857*** | 0.313*** | 0.689*** |
| | (0.0843) | (0.0981) | (0.0863) | (0.0996) |
| **Access to Housing** | 0.582*** | 0.628*** | 0.475*** | 0.649*** |
| | (0.0871) | (0.0936) | (0.0707) | (0.0969) |
| **Access to Childcare** | 0.296*** | 0.611*** | 0.380*** | 0.250** |
| | (0.0845) | (0.104) | (0.0828) | (0.0931) |
| **Men's Unpaid Share** | 0.422*** | 0.597*** | 0.0666 | 0.209** |
| | (0.0906) | (0.102) | (0.0789) | (0.0987) |
| **Climate Change** | 0.227** | 0.288*** | 0.122 | 0.270*** |
| | (0.0696) | (0.0804) | (0.0754) | (0.0836) |
| **Reproductive Rights** | 0.850*** | 0.740*** | 0.251*** | 0.452*** |
| | (0.0999) | (0.104) | (0.0903) | (0.0980) |
| **Constant** | -1.493*** | -1.860*** | -0.803*** | -1.259*** |
| | (0.132) | (0.148) | (0.117) | (0.119) |
| **Observations** | **1,428** | **1,340** | **1,380** | **1,200** |
| **R-squared** | **0.205** | **0.220** | **0.087** | **0.159** |

*Notes*: standard errors in parentheses are clustered at the individual level, *p < 0.05; **p < 0.01; *** p < 0.001

Table A2. Statistical differences between factors within each model according to the Wald test

| Factors | Access to Housing | Access to Childcare | Men's Unpaid Share | Climate Change | Reproductive Rights |
|---|---|---|---|---|---|
| **Employment Security** | **CF**: Equal<br>**CM**: Equal<br>**M**: Equal<br>**F**: Equal | **CF:** Not equal (>)<br>**CM:** Equal<br>**M:** Not equal (>)<br>**F:** Not equal (>) | **CF:** Equal<br>**CM:** Not equal (>)<br>**M:** Not equal (>)<br>**F:** Not equal (>) | **CF:** Not equal (>)<br>**CM:** Equal<br>**M:** Not equal (>)<br>**F:** Not equal (>) | **CF:** Not equal (<)<br>**CM:** Equal<br>**M:** Equal<br>**F:** Equal |
| | **Access to Housing** | **CF:** Not equal (>)<br>**CM:** Equal<br>**M:** Equal<br>**F:** Not equal (>) | **CF:** Equal<br>**CM:** Not equal (>)<br>**M:** Equal<br>**F:** Not equal (>) | **CF:** Not equal (>)<br>**CM:** Not equal (>)<br>**M:** Not equal (>)<br>**F:** Not equal (>) | **CF:** Not equal (<)<br>**CM:** Not equal (>)<br>**M:** Equal<br>**F:** Equal |
| | | **Access to Childcare** | **CF:** Equal<br>**CM:** Not equal (>)<br>**M:** Equal<br>**F:** Equal | **CF:** Equal<br>**CM:** Not equal (>)<br>**M:** Not equal (>)<br>**F:** Equal | **CF:** Not equal (<)<br>**CM:** Equal<br>**M:** Equal<br>**F:** Equal |
| | | | **Men's Unpaid Share** | **CF:** Equal<br>**CM:** Equal<br>**M:** Not equal (>)<br>**F:** Equal | **CF:** Not equal (<)<br>**CM:** Equal<br>**M:** Equal<br>**F:** Equal |
| | | | | **Climate Change** | **CF:** Not equal (<)<br>**CM:** Equal<br>**M:** Not equal (<)<br>**F:** Equal |
| | | | | | **Reproductive Rights** |

*Notes*: CF - childless females, CM - childless males, M - mothers, F - fathers, statistical significance level 5%

Table A3. Statistical differences between models according to the Wald test

| Factor | CF and CM | CF and M | CF and F | CM and M | CM and F | M and F |
|---|---|---|---|---|---|---|
| **Employment Security** | Not equal (>) | Equal | Equal | Not equal (<) | Not equal (<) | Equal |
| **Access to Housing*** | Equal | Equal | Equal | Equal | Equal | Equal |
| **Access to Childcare** | Equal | Not equal (<) | Equal | Equal | Equal | Not equal (>) |
| **Men's Unpaid Share** | Not equal (>) | Equal | Equal | Not equal (<) | Equal | Not equal (>) |
| **Climate Change*** | Equal | Equal | Equal | Equal | Equal | Equal |
| **Reproductive Rights** | Not equal (>) | Equal | Not equal (>) | Not equal (<) | Equal | Not equal (>) |

*Notes*: CF - childless females, CM - childless males, M - mothers, F - fathers, statistical significance level 5%, *equal effects for all models tested together using the Wald test for composite linear hypotheses

Table A4. Results of Sensitivity Analyses

| | (1) Childless Females | (2) Mothers | (3) Childless Males | (4) Fathers |
|---|---|---|---|---|
| **Employment Security** | 0.742*** | 0.791*** | 0.404*** | 0.726*** |
| | (0.100) | (0.121) | (0.0988) | (0.116) |
| **Access to Housing** | 0.762*** | 0.578*** | 0.499*** | 0.693*** |
| | (0.111) | (0.111) | (0.0864) | (0.116) |
| **Access to Childcare** | 0.387*** | 0.656*** | 0.506*** | 0.247** |
| | (0.108) | (0.116) | (0.101) | (0.111) |
| **Men's Unpaid Share** | 0.549*** | 0.593*** | 0.237** | 0.125 |
| | (0.110) | (0.131) | (0.0931) | (0.118) |
| **Climate Change** | 0.289*** | 0.202** | 0.171** | 0.275*** |
| | (0.0871) | (0.0981) | (0.0833) | (0.0981) |
| **Reproductive Rights** | 0.983*** | 0.575*** | 0.303*** | 0.419*** |
| | (0.122) | (0.119) | (0.105) | (0.117) |
| **Constant** | -1.856*** | -1.698*** | -1.059*** | -1.243*** |
| | (0.169) | (0.178) | (0.150) | (0.140) |
| **Observations** | **1,008** | **848** | **956** | **904** |
| **R-squared** | **0.261** | **0.207** | **0.124** | **0.148** |

*Notes*: standard errors in parentheses are clustered at the individual level, *p < 0.05; **p < 0.01; *** p < 0.001

University of Warsaw
Faculty of Economic Sciences
44/50 Długa St.
00-241 Warsaw
www.wne.uw.edu.pl
ISSN 2957-0506