

UNIVERSITÀ COMMERCIALE “LUIGI BOCCONI”

PHD SCHOOL

PhD program in: Public Policy and Administration

Cycle: 34th

Disciplinary Field (code): SPS/07

**Three essays in demography:
method, gendered generational
change, assortative mating, and
fertility.**

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PhD Thesis by

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2024

Chapter 1

Gendered Generational Change in Family: A Factorial Survey

Gendered Generational Change in Family: A Factorial Survey Experiment

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September 2023

Abstract

This study investigates the evolving dynamics of family ideals in the face of low fertility, changing partnership structures, and the rise in women's education across eight industrialized societies - urban China, South Korea, Japan, Singapore, Spain, Italy, Norway, and the US. Drawing on key theoretical concepts such as the second demographic transition and the gender revolution, we incorporate insights from social psychology theory to investigate the transformation of family preferences through an intergenerational identity perspective. To elucidate the multifaceted nature of family choices, we employ an innovative factorial survey experiment. Our findings highlight an identity motivated shift in family ideals, particularly among highly educated women, who actively distinguish their family preferences from the parental generation. They increasingly prioritize family communication, financial stability, and gender equity over traditional markers like marriage and child-rearing. Crucially, we do not find the same transformation among men. Furthermore, we found that on the aggregated level, cohorts with larger educational gains compared to their parental generation tend to perceive a more substantial generational difference both in parenthood and in the two-child fertility ideal. Once again, this association is observed only among women. This study underscores the interplay between

socioeconomic development and changing family ideals, pointing to a distinct intergenerational identity difference, especially among women, a feature likely to have profound implications for future demographic trends.

1 Introduction

Low fertility, shifting partnership dynamics, and the rise in women's education have become noteworthy. Starting from the theoretical concepts of the second demographic transition, the gender revolution, and the literature on marital disagreement and communication, this study reassesses the premise of stable family preference by incorporating an intergenerational identity approach to the gender perspective (Esping-Andersen and Billari, 2015, Sobotka and Beaujouan, 2014). Borrowing insights from social psychology theory and research to examine the motivation behind the changes in family patterns, we explore and synthesize two often overlooked aspects of demographic transition - the changing meaning of family and generational identity.

A key feature of societal development

Inspired by Maslow's Needs Theory, Van de Kaa and Lesthaeghe (1986) argue that the conventional expectations and structures of family, including marriage and parenthood, are often in conflict with higher-order needs like autonomy, self-expression, and self-actualization. Relying on the It is important to note, however, that Maslow's needs theory maintains that the need for belonging and love is foundational to higher-order need such as self-realization (Maslow, 1954). In the past, the family was constructed upon institutionalized partnerships, kinship, and ancestral lineage, where the emphasis on survival, security, and collective goals often took precedence over individual needs (Seltzer, 2019). However, in contemporary times, there is a pressing need to reinvent the meaning of family to accommodate higher-order needs.

As gender structure changes and women gain more education and marketable skills, both women and men tend to have equal status and bargaining power within the household. In instances of disagreements and conflicts, the traditional norm wherein the hus-

band, often the breadwinner, unilaterally makes decisions is gradually fading away. The conventional paradigm, emphasizing the husband's role as the ultimate decision-maker, is giving way to a more nuanced approach that prioritizes mutual understanding. The recent emphasis lies on cultivating family as a space where both individuals feel a sense of belonging, love, worthiness, and fulfillment.

This departure from traditional benchmarks of family, such as marriage and children, towards an emphasis on qualitative and process-oriented dimensions is marked by a conscious identity difference between two generations, particularly for women. In the process of socio-economic development, education expansion brought a generation of women to higher education and renewed occupation status (Van Bavel, Schwartz, and Esteve, 2018). While changes in education and work for women were underway, social norms and cultural values also double down on women; they are now required to be devoted workers and give "insensitive mothering" to their children (Epstein et al. 1999; Williams 2001; Hays 1996; Blair-Loy 2003). Essentially, women are expected to be their mothers and their fathers, with inequality both at home and in the labor market persists. Confronted with trade-offs between career and family that neither of their parents had to deal with, women, especially highly educated women, viewing themselves as a distinct new generation, are motivated to reinvent the meaning of family and conduct family life differently from the parental generation.

As family life is multi-dimensional, involving various actors and often featuring competing demands, individuals often need to contrast and balance the relative importance of different aspects of life, such as children, work-family balance, financial condition, gender relations, and relationships among family members and with the larger community. While it may be probable that, in an ideal setting, men and women across generations share similar family preferences, social norms and cultural values in reality impose different expectations and conditions for men and women. Investigating family from a multidimensional lens is therefore crucial for understanding how trade-offs are manifested across different generations.

We harness a new survey featuring a factorial survey experiment (FSE) that presents

families with randomized characteristics that vary on eight distinct dimensions. Moreover, the survey captures a comprehensive set of demographic details. Our sample encompasses respondents from eight industrialized societies: Italy, Spain, Norway, Japan, Korea, urban China, Singapore, and the USA. These countries differ in their family norms, labor market structures, developmental paths, and to some extent, fertility rates—though all fall below the replacement level. Through the family vignettes presented in the factorial survey experiment, we elucidate the multifaceted nature of family ideals thereby establishing how individuals, across gender and education lines, navigate the trade-offs involved when expressing their family preferences.

2 Theoretical Background

2.1 Changing family preferences

The declining fertility trend in many advanced countries raises the pressing question of its possible reversal. Classical theories, such as Becker’s New Home Economics (Becker 1974) and the Second Demographic Transition, suggest a bleak future. They propose that as societies evolve and women become more educated, the life-course priorities shift, leading to smaller families and lower fertility rates. As societies progress and fundamental needs are met, and as women gain more education and marketable skills, individuals—especially women—alter the way they structure their life trajectories. Priorities and timing regarding work, partnership, parenthood, and family life undergo transformation. More and more women pursue higher education and consider lifelong employment an integral part of their lives (Goldscheider and Kaufman, 2006). Society as a whole shifts towards later and smaller families. A clear consequence of these changes is low fertility, even reaching the lowest-low fertility levels, with total fertility rates falling below 1.3 (Kohler et al., 2002; Billari and Kohler, 2004).

Since women’s changing role in society has been a major force behind the many changes in family patterns, gender-focused theories have proposed that as society and family arrangements become more gender equal, fertility rate will eventually bounce back

to the replacement level (McDonald, 2000; Anderson and Kohler 2015; Esping-Andersen and Billari, 2015). However, a crucial aspect of this presumed revival of fertility depends upon the assumption that family preferences concerning partnership, parenthood, and family size remain stable (Esping-Andersen and Billari, 2015).

While scholars argue that the preferences for stable partnerships and a two-child family ideal persist (Anderson, 2016; Karney and Bradbury, 2020; Sobotka and Beaujouan, 2014; Thornton and Young-DeMarco, 2001), marriage is undergoing a process of deinstitutionalization, gradually replaced by cohabitation (Cherlin, 2004; Robbins, Dechter, and Kornrich, 2022). Additionally, the reliability of fertility desires as a predictor of actual fertility behavior has been questioned (Toulemon, 1996; Toulemon and Testa, 2005; Morgan and Bachrach, 2011; Bachrach and Morgan, 2013). Recent studies indicate that fertility desires are highly contextual and fluid (Trinitapoli and Yeatsman, 2018; Yeatsman, Trinitapoli and Garver, 2020). Qualitative research reveals that having two children is often taken for granted, seen as a choice among various other options and constraints (Brinton et al., 2018; Lebano and Jamieson, 2020). That being said, family preferences are evolving, especially concerning the importance attached to marriage and childbearing.

2.2 Reconciling individuality within the family collective

Marriage and children have been the cornerstone of family, and marriage shall come before children. However, the Second Demographic Transition (SDT), as described by Lesthaeghe and Van de Kaa in 1986, marked a significant shift in family dynamics, starting in the 1950s. This transition brought about notable changes, including a rising divorce rate, a shift from the prioritization of marriage to cohabitation, an increase in out-of-wedlock births, and a decline in overall fertility rates. This transformative trend initially emerged in Scandinavian countries and swiftly spread to Western Europe and Anglo-Saxon regions.

The driving force behind the SDT is the evolution of modernist and post-modernist values, shaped by economic and human development. These values have shifted people's priorities from materialistic concerns to non-materialistic ones, such as autonomy, self-

expression, and self-actualization. Consequently, this shift in priorities has led to a general rejection of traditional authority and a loosening of societal norms that once reinforced collective goals (Lesthaeghe, 2010). To bridge the gap between this ideological shift and changes in family-related behavior, the SDT operates under a substantial assumption: that the conventional expectations and structures of family, including both marriage and parenthood, are incompatible with higher-order needs like autonomy, self-expression, and self-actualization.

Similarly, gender theories also acknowledge that family life doesn't always align with an individual's pursuit of autonomy and self-actualization which are prioritized over family responsibilities (McDonald, 2000; Bernhardt 2004; Goldscheider 2015). This is evident in the rapid pace at which women adapt to earning income, and then soon shift from earning income as an add-on to a life-long commitment in contrast to the slow pace at which men catch up on family care (McDonald, 2002). Furthermore, gender revolution argues that the pivotal transformation in the family structure occurs when there is gender equity within the family, marked by men compensating for the reduced hours women spend on household tasks. Before gender equality becomes universal, individuals, particularly women, still need to weigh and balance between their individual needs and the collective goal. More significantly, how do individuals, particularly women, reconcile their individuality within the family collective?

An often overlooked aspect of Maslow's needs theory is that the need for belonging and love is more foundational than the need for self-realization. Family perhaps dwindles as a solitary and collective behavior, but it should continue to serve to fulfill the fundamental needs for belonging and love, ultimately facilitating the pursuit of autonomy and self-actualization. There is a consensus in modern psychology that both autonomy and belonging are fundamental human needs (Ryan and Deci, 2000; Baumeister Leary, 1995). Research shows that relationships fulfilling both autonomy and relatedness needs are linked to higher relationship satisfaction (Rankin-Esquer et al., 1997; Weinstein et al., 2016). However, in even the most loving relationship, disagreement and conflict are common. Jansen and Liefbroere (2006) found a moderate correlation ($r = 0.34$) between

partner's attitudes to gender roles and to parenthood. Testa and Bolano (2020) found that 17% of the couples do not agree on the fertility plan in the next 3 years. Traditional theories have primarily focused on the outcomes of such disagreements, examining how couples reach agreements regarding fertility decisions (Thomson, McDonald, and Bumpass, 1990; Miller and Pasta, 1996; Jansen and Liefbroer 2006).

While most studies suggest that men and women tend to have equal say in fertility decisions, and gender equity does not significantly affect women's decision-making power (e.g., Testa, Cavalli, and Rosina, 2014; Testa and Bolano, 2020), the actual decision-making process remains a bit of a black box. Therefore, I propose that we shift our focus away from the outcomes of these disagreements and instead emphasize the family as a venue where individuals can simultaneously meet their needs for both relatedness and autonomy. Specifically, I argue that it is the communicative process, rather than the outcome, that defines the modern family. A recent study highlights that communicative reaction to even destructive behavior from the other part is highly related to the fulfillment of both autonomy and relatedness needs in close relationships (Kluwer et al., 2020). Moreover, Kluwer and her colleagues demonstrate that the fulfillment of autonomy and relatedness is mediated through the couple's ability to maintain their individuality and sense of autonomy while in the presence of others (similar to family system theory concepts by Schnarch, 1997, and Skowron, 2000).

These researches in psychology point to the critical role of communication in reconciling self-oriented needs with the collective, where one feels connected and close to others. Regarding the erosion of family as a solitary and collective organization, I argue that the concept and significance of the family have evolved with the progress of development and modernization. The contemporary family now serves less and less as a means to an end (i.e., survival), and serves more and more as a space where both partners can fulfill their needs of belonging, love, autonomy, and self-actualization. However, this redefined concept of family has unexpected consequences on fertility largely driven by a prominent feature of development and modernization: higher education expansion.

2.3 Education and social identity

Over the past decades, women have made significant advances in higher education. Notably, there are now more women than men with tertiary education across Europe, East Asia, and Anglo-Saxon countries (DiPrete and Buchman, 2013; De Hauw et al., 2017; Van Bavel, 2012; Esteve et al., 2012, 2016). Yet, despite their increased earning potential and growing contributions to households, women continue to encounter inequalities both in the job market and within the households. This inequality intensifies once women become mothers. While the gender gap in employment and earnings between men and childless women has diminished, a persistent gap remains between women with children and those without across most Western countries (Budig and England, 2001; England, 2005; Budig et al., 2012, 2016). Within households, women still shoulder a disproportionate share of household chores, even when they are employed or contribute equally to household income (Greenstein 2000; Hook 2010; Sayer 2010, 2016; Schneider 2011; Campaña et al. 2023). Once they become mothers, the time spent on household and childcare tasks widens further, primarily due to the larger increase in the time women devote to childcare tasks (Craig and Mulan, 2010; Pailhe, Solaz, and Stanfors, 2021).

The potential conflict between work and child-rearing has been found to dampen and delay fertility (Shreffler Perretti and Drago, 2010; Brinton et al., 2018), and extensive research has explored the bargaining angle or "doing gender" perspective within households to address this conflict (Becker, 1969; West and Zimmerman 1987). The focus of this conflict has predominantly been between men (husband) and women (wife) (McDonald, 2000; Anderson and Kohler 2015). But the family process is not only between two partners; it is also inter-generational. Family spans and connects generations. The norms and values surrounding family life are passed down from previous generations. With regard to the conflict between work and child-rearing, as couples form families and confront unfair arrangements both inside and outside of the family realm, is gender-related tension the only factor at play here?

This study contributes to the ongoing debate of changing family dynamics by integrating insights drawn from social psychology. Social psychology research shows that

people identify more strongly with groups associated with higher social status (Becker et al., 2014). Easterbrook, Kuppens, and Manstead (2019) find that respondents from higher social classes consider identities that are indicative of their social class, such as education, occupation, and income, as more integral to their sense of self than identities based on basic demographics like gender or religion. Consequently, for both highly educated males and females, their level of educational attainment plays a crucial role in shaping their identity, potentially even more so than their gender. Although both female and male college graduates have benefited from meritocracy throughout their educational journeys, their experiences after graduating diverge significantly. Men could continue to harvest the benefit of meritocracy and higher education attainment in their career advancement and family forming. The status-quo norm, the legacy from the last generation benefits instead of burdening them. In contrast, women are confronted with trade-offs between career and family that their parents may not have encountered, and are often unrelated to their merit or qualifications. It is not surprising if they see themselves as a new generation distinct from the parental generation given the unique challenges they encounter in balancing career and family responsibilities.

Social identity theories (Tajfel and Turner, 1979; Turner et al., 1987) also suggest that people's self-concept is heavily influenced by the social groups they associate with. When a particular group membership becomes salient, individuals are motivated to see their own group (ingroup) more favorably than the other group (outgroup), and often behave in the prototypical way of the ingroup. The prototypical behavior of the highly educated revolves around leveraging their skills to advance their careers and realize their full potential. In contrast, the prototypical behavior of the parental generation is for women to prioritize family, especially in roles as wives and mothers, over other pursuits. As women grapple with the choice between work and family, the difference between them and the previous generation becomes more pronounced and salient. Consequently, this heightened awareness of intergenerational identity differences motivates the new generation of women to adopt behaviors that set them apart from the previous generation. This inter-generational identity difference potentially reinforces and amplifies the low fertility

preference of the new generation of women.

Building on the premise of highly contextual family preference and intergenerational identity differences, we use a novel experimental method to study the ideal family within a controlled context. Our aims are twofold. First, we aim to explore the relative importance individuals place on various aspects of family life, including fertility and marriage. We go beyond solely assessing respondents' own views on the ideal family, and delve into how they contrast and compare these views with those of the parental generation. Second, we aim to explore the heterogeneous effect of gender and education both on the micro-level and on the aggregated level. On the vignette response level, we investigate if there is sub-group heterogeneity in family ideal and perceived intergenerational differences in family ideal. On the aggregated level, we investigate if intergenerational education gain is related to perceived decrease value of parenthood between generations.

We sample a diverse set of eight countries: Italy, Spain, Norway, Japan, Korea, urban China, Singapore, and the USA that vary in family norms, developmental trajectories, and slightly in fertility rates that are all below replacement level. In alignment with the social identity perspective, our research finds that women, especially those highly educated, actively differentiate their family preferences from the parental generation. This difference is particularly evident in their recalibration of the relative importance of fertility, income, and communication. They prioritize good family communication, adequate income, and gender equity over parenthood, while recognizing that their parental generation held a contrasting preference. Although men also acknowledge some degree of intergenerational difference in family preferences, it does not lead to a significant shift in priorities. This social identity approach reveals the intergenerational tension in family dynamics for women. To be who they are, the new generation of highly educated women is motivated to renovate family life away from the previous generation. What used to be the core tenants of family must change.

3 Method

3.1 Survey design

The survey was administered online through Qualtrics in December 2021. It comprised the factorial survey experiment (FSE) and closed-ended questions regarding participants' demographic and socioeconomic backgrounds. Participants began with the demographic and socioeconomic questions before progressing to the vignettes.

3.2 Vignette and experiment design

The study utilized eight vignette factors, including union status, fertility, income level, community respect, family communication style, external family contact frequency, gender role, and work-life balance. Each factor ranged from 2 to 4 levels, summarized in Table 1. The order of factors was randomized for participants but remained consistent for each individual. An illustrative vignette is as follows:

“In the following you will find a description of Lisa and Robert’s family. Lisa and Robert are both around 45 years old. Lisa and Robert are cohabiting. Lisa and Robert have three children. Lisa and Robert’s combined income is lower than the country average. The family is not well respected in their community. Each parent and the children discuss their daily life infrequently, and they do not feel comfortable expressing their feelings and raising disagreements with each other. Lisa and Robert talk with their respective parents frequently and their children talk with all grandparents frequently as well. While Robert focuses on his career, Lisa focuses on taking care of the family and household responsibilities. Lisa does not feel conflicted between her family responsibilities and a potential career, while Robert feels conflicted between his career and the possibility to help out with family responsibilities.”

Given the vast number of potential vignette profiles (2304 in total), we employed the %mktex and %mktblock macros in SAS (Kuhfeld, 2002) to select a d-efficient subsample.

Following the general recommendation of presenting each participant with 5-10 vignettes, we subdivided a subsample of 576 vignettes into 96 blocks of 6 vignettes each. With a D-efficiency is 99.88, which surpasses the commonly accepted value of 90 (Auspurg and Hinz 2015), we ensured adequate statistical power to achieve unbiased estimates for the experiment. Participants were randomly assigned a block of vignettes.

To test the orthogonality between factors, we first conducted balance check and find that the correlation coefficients between different experimental variables are very close to zero (see Table 1 Appendix). To test the randomization of our experimental design, we find that there are no correlations between experimental variables and respondents' demographic characteristics, indicating that respondents were randomly assigned to rather than self-selected into different vignettes (see Table 2 Appendix). The successful randomization of vignette factors ensures high internal validity of the results and allows us to establish causal relations.

After each vignette, participants responded on a slider ranging from 0 (Strongly Disagree) to 10 (Strongly Agree), to statements such as "This describes a successful family" and "This describes a family that people in my parent's generation would consider successful." Participants were required to spend a minimum of 15 seconds on each vignette page before progressing, and the time they spent on each vignette was recorded.

3.3 Sample

We recruited participants from Kantar, our panel participant provider, using quota sampling based on age and gender for each country. Two age groups - 25-39 years olds and 40-50 years olds - divided by females and males each make up one fourth of the sample. We recruited varying number of participants from each country (1226, 1060, 927, 1085, 314, 1508, 1107, and 1585 for urban China, Italy, Japan, Korea, Norway, Singapore, Spain, and the US respectively). The average educational level is a short-cycle tertiary education (5.09 on the ISCED-2011 scale). Specifically, the shares with an educational level of bachelor's degree or higher constituted 54% of the Japanese participants, 52% of the Singaporean participants, 69% of the Korean participants, 70% of the urban Chinese

participants, 42% of the Norwegian participants, 42% of the Italian participants 56% of the Spanish participants, and 44% of the American participants. Monthly household income was adjusted to represent a three-person household in euro value, ranging from 2361 euros for Italy to 6923 euros for Singapore. Cohabitation is common in Europe, ranging from 16% to 27%, less common 6% in the US, and rare in Asia, from 0 to 3%. About 72% of the sample have at least one child, varying from 77% of the participants in China and 71% in the US to 35% in Japan. For those that have at least one child, they have on average 1.69 children, ranging from 1.22 in China to 2.21 in the US. Table 3 in Appendix shows the detailed descriptive statistics for the sample in each country.

3.4 Analytical Strategy

3.4.1 Heterogeneous Effects by Sex and Higher-education

We use the pooled sample of eight countries to estimate the heterogeneous effect of each factor on successful family by gender and higher education through a three-level random intercept fixed slope model, with vignette responses nested in individual participants in country:

$$Rating_{ijc} = \alpha_{jc} + \sum_{i=1} \beta_i VignetteFactor_{ijc} + e_c + u_{jc} + v_{ijc} \quad (1)$$

$Rating_{ijc}$ is the dependent variable (ranging from 0 to 10) measuring the extent to which a respondent rates the specific family profile presented as “successful” or “successful for the parent’s generation”. $VignetteFactor_{ijc}$ are experimental variables representing different family dimensions of the vignette i for respondent j in country c . Each factor is transformed into dummy variables with the reference level being the lowest level, such as lower than average income is the reference level to average and higher than average income. Commonplace gender role is the reference level. In addition, α_{jc} is the random intercept; e_c is the country-level error term; u_{jc} is the respondent-level error term; and v_{ijc} is the vignette-level error term.

3.4.2 Change in Education Attainment and Perceived Intergenerational Fertility Difference

We first use single country sample, which is stratified by gender and 5-year cohort to estimate a two-level random intercept model, with vignette responses i nested in individual participant j :

$$SuccessFam_{ij} = \alpha_j + \beta_1 Fertility_{ij} + \beta_2 FamCommunication_{ij} \dots + \beta_p GenderRole + u_j + v_{ij} \quad (2)$$

$SuccessfulFamily_{ij}$ is the dependent variable measuring the extent to which a respondent rates the specific family profile presented as “successful”. β_1 to β_p are the estimates for each vignette factor’s effect on the outcome.

$$ParentsGenSuccessFam_{ij} = \alpha_j + \kappa_1 Fertility_{ij} + \kappa_2 FamComm_{ij} \dots + \kappa_p GenderRole + u_j + v_{ij} \quad (3)$$

$SuccessfulFamily_{ij}$ is the dependent variable measuring the extent to which a respondent rates the specific family profile presented as ”successful for the parent’s generation”. κ_1 to κ_p are the estimates for each vignette factor’s effect on the outcome. In addition, α_j is the random intercept; u_j is the respondent-level error term; and v_{ij} is the vignette-level error term.

We then estimate the relationship between the perceived intergenerational difference in fertility and intergenerational education mobility with the 80 (sex * 5 cohorts * 8 countries) estimates of β_1 and κ_1 and intergenerational education shock. The model for the perceived intergenerational difference PID_g of each country stratified by sex and age cohorts (g) is specified as

$$PID_g = \alpha_1 + \gamma_1 IntergenEduChange + e_g \quad (4)$$

where $PID_g = \kappa_1 - \beta_1$ for each female or male age cohort in each country, and e_g is the residual. $IntergenEduChange$ is the difference between the average education level of the

respondent's cohort and the average education level of their same-sex parents.

4 Result

4.1 Family Ideals and Perceived Intergenerational Differences of Men and Women

Pooled-country result Figure 1 displays the experimental estimates for women and men separately (also see Table 4 in Appendix). Women consider marriage, parenthood (1 child relative to no children $\beta = 0.29$), and an egalitarian gender role (relative to commonplace gender role $\beta = 0.33$) as the least crucial aspects of the ideal family. In contrast, good communication ($\beta = 1.04$), an income higher than the average, community respect, work-family balance for both spouses, and frequent contact with (grand)parents are deemed more important. Men generally share these values, except they place slightly less emphasis on communication than women. Women give good communication more weight than men do ($\beta = 1.04$ vs. $\beta = 0.66$).

When assessing generational differences in family ideals, both men and women perceive shifts in the importance of having children, good communication, and gender roles. Especially for women, the trade-offs between these aspects are more pronounced when comparing their preferences to those of the previous generation. For instance, while women prioritize communication and income over parenthood, they believe their parents' generation held the opposite view. That is, anchoring their response between family ideal and family ideal for their parent's generation, women see themselves as more distinct in terms of family values compared to their parent's generation. Specifically, the importance of marriage and parenthood is being traded off for good communication and egalitarian gender role.

More importantly, the relative importance of having children compared to other dimensions of family life is perceived to be different between the two generations. For women considering their parents' generation, having two or three children ($\beta = 0.91$ compared to having no children) is seen as the most crucial aspect of family life. This

is followed by a higher-than-average income ($\beta = 0.84$ compared to lower than average), community respect ($\beta = 0.72$), and good communication ($\beta = 0.64$). In contrast, for female participants themselves, having one child ($\beta = 0.29$) or two children ($\beta = 0.38$) is less important than any other appreciated aspects of family life, and the most valued aspects are good communication ($\beta = 1.04$) and higher than average income ($\beta = 0.74$). In other words, women not only regard what used to be the “core” of family – marriage and children – as less central, but also see such differences in family values as what sets apart them from the parental generation. As for men, they also see decreased importance of parenthood and increased importance of communication and egalitarian gender roles between generations, albeit to a lesser extent.

While there are notable similarities between males and females regarding their ideal family, differences arise in how they prioritize fertility in comparison to income and gender roles. Women consider parenthood ($\beta = 0.29$, one child relative to no children) to be less important than average income ($\beta = 0.55$, relative to lower than average income) and egalitarian gender role ($\beta = 0.33$, relative to commonplace gender role). Conversely, men assign similar importance to both average and parenthood ($\beta = 0.36$ and $\beta = 0.48$), both of which are more valuable than egalitarian gender role ($\beta = 0.14$). These gender differences extend to the perceived intergenerational variations in the ideal family. Women believe that their parents’ generation places a higher value on parenthood compared to income and gender roles. In contrast, men perceive their parents’ generation as making a similar ranking, with parenthood placed slightly higher than income. That to be said, for women, having either an average income or adopting egalitarian gender role at home is seen as a prerequisite to parenthood, a perspective that differs from both their parents’ generation and that of men.

Single country result Figure 2 shows the result by country (also see Table 5 to Table 12 in Appendix) . There are no significant perceived generational differences in fertility in Norway, Singapore, and the USA. Also in these three countries, women and men have similar levels of preference for children, while in other countries, women tend to give parenthood less weight than men. In addition, in Norway, Singapore, and the USA,

for themselves and the parent's generation, parenthood and average level of income are given similar weight, with income slightly less important for the parent's generation for Singapore and USA, and reversed for Norway. In contrast, both women and men in other countries - urban China, Korea, Japan, Italy, and Spain not only perceive generational differences in fertility but also see the opposite relationship between children and income for two generations. For themselves, parenthood or having 2 children plays a lesser role than having average income (compared to having lower than average income) whereas parenthood trumps income for their parent's generation. Notably, Norway, Singapore and the USA are among the most wealthy and developed countries in the world and in our sample.

Family communication is the most important dimension for women, and it is way more important than marriage or fertility, except that Chinese women see higher-than-average income as slightly more important. Work-family balance for both genders, frequent contact with (grand)parents, and being respected in the community are considered important dimensions for family across countries and generations.

Cohabitation is not considered different from marriage in the three European countries, while in China and the US, marriage is slightly more valued but less valued than parenthood. However, in South Korea and Japan, marriage is considered more successful than having one child or 3 children. Furthermore, in Japan, women see parenthood and gender role as unrelated to family success, while men have a slight preference for having one or two children. Only women in Japan and Italy do not see egalitarian gender roles better than commonplace or traditional gender roles, and coincidentally, they also do not perceive generational differences in good communication.

In short, family is a renovated concept for women for which they set themselves apart from the previous generation. This transformation is characterized by a reduced emphasis on marriage and children and an increased focus on process-oriented aspects, such as effective communication, and gender equity, including work-life balance and egalitarian gender roles. Fertility decline is likely to be slow to rebound, not only because of the peripheral role of parenthood in family ideal but also because it serves as a marker of

distinct identity between two generations for women. While navigating family life, women seek to do things differently than the previous generations did. Men also perceive this intergenerational difference, albeit to a lesser extent.

Furthermore, women and men diverge in their prioritization of money, children, and gender roles. Women require a stable financial position or fairness in gender roles to become parents. Should either of these conditions change after having the first child, women are more inclined to stop at having only one child. In contrast, men are less motivated to challenge the established family dynamics shaped by the previous generation.

4.2 The Role of Education on Gendered Perceived Intergenerational Differences

Figure 3 and Table 13 in Appendix present the results of men and women separately, each with or without higher education attainment. Higher education attainment is defined as completing ISCED-2011 level 5, equivalent to short-cycle tertiary education.

Women with higher education do not significantly differ in their family ideals compared to those without it, except in their views on gender roles. Highly educated women see egalitarian gender roles more ideal than both traditional and commonplace gender roles, while less-educated women see both traditional and egalitarian gender roles as more ideal than commonplace gender roles.

Comparing the view on traditional vs. commonplace gender roles between higher educated women and those without, highly educated women seem to particularly value financial independence and contribution to the family. While egalitarian gender role is optimal, giving up their job is as bad as taking double burdens as suggested in the commonplace gender role. Interestingly, highly educated women perceive their parent's generation holding traditional gender roles more ideal than commonplace gender roles, similar to the views of women without higher education.

About perceived intergenerational differences, highly educated women perceive a much larger distance between themselves and their parent's generation on marriage (difference in $\beta = 0.32$ vs. 0.20), fertility (difference in $\beta = 0.71$ vs. 0.37), and communication

(difference in $\beta = 0.45$ vs. 0.37) than women without higher education. Again, this educational gradient of the perceived intergenerational difference is absent for men. Highly educated men do now see themselves as more different from their parent's generation than their lower educated counterparts.

Among highly educated women, they see their parent's generation and themselves make the opposite trade-offs between parenthood and income, as well as between parenthood and other qualitative aspects of family. That is, highly educated women see having two or three children trump all other aspects of family life, while the opposite is true for them (except for gender role). Such contrasting trade-offs made by two generations are not as evident among women with lower levels of education, and not among men, regardless of their education level.

Highly educated women are the forerunners in the gender revolution, but not in the strict gender equality sense. Interestingly, women taking double burden of working and taking care of the family is considered the least problematic aspect of family life, comparable with being childless. Instead, they see a sharp divide in the roles of parenthood, income, and communication between themselves and the parental generation. They actively aspire for a family that is not defined by specific outcomes (i.e., fertility) but rather by process (i.e., communication), not defined by status (i.e., marriage or gender role) rather by experience (i.e., work-life balance for both sexes), and not by quantity but by quality (i.e., income trumps fertility).

4.3 Intergenerational Education Mobility and Perceived Intergenerational Difference on the Aggregated Level

Table 3 shows the mean coefficients of generational change in education attainment and perceived generational difference in parenthood for each country. Women in China, Spain, and Korea have gained the most years (four to five years) of education compared to their mother's generation, followed by Women in Italy and Singapore who have gained more than three years. Women in Japan, Norway, and the USA have gained 1.3-1.6 years. Women in China and Spain also reported the highest level of perceived generational

difference in parenthood; 0.99 and 0.79 decrease. Women in Japan, Italy, and Korea reported a medium level of decrease (around 0.5) while women in Norway, Singapore, and the US reported a low level of decrease (around 0.3).

Men in China and Singapore have gained the most years followed by Italy, Spain, Korea, the USA, Japan, and Norway. In terms of decreasing in perceived value of parenthood, China, Spain, and surprisingly Norway are among the highest (around 0.5), followed by Korea, Italy (around 0.38), Singapore (0.3), Japan (0.24), and the USA (0.1).

Figure 4 shows that women in cohorts with larger educational gain also show higher levels of perceived generational difference in the importance of parenthood for family ideal. One additional year of education is associated with a 0.12 decrease in the value of parenthood from the parental generation to the current generation.

Figure 5 shows that women in cohorts with larger educational gain also show higher levels of perceived generational differences in the two-child fertility ideal. One additional year of education is associated with a 0.16 decrease in the value of having two children from the parental generation to the current generation.

This relationship between intergenerational education mobility and perceived generational decrease in the value of parenthood and the two-child ideal is only significant for women.

Moving from post-secondary education to tertiary education, 4 years of education gain translates to a 0.48 perceived decrease in the value of parenthood, and a 0.64 decrease in value of parenthood.

4.3.1 Sensitivity Analysis

The relationship between intergenerational education mobility and perceived generational decrease in the value of parenthood and the two-child ideal remains robust to the configuration of subgroups and the units of education mobility. Table 14 and Figure A1 in the appendix shows the linear regression estimates between intergenerational education mobility in years and perceived generational difference when the sample is only divided

into 32 subgroups (two age groups * gender * countries). Table 15 and Figure A2 in the appendix shows the linear regression estimates between intergenerational education mobility in ISCED-2011 levels and perceived generational differences.

5 Discussion

Modern family dynamics, especially among highly educated women, are marked by a conscious departure from traditional norms. The emphasis has shifted from predefined outcomes, like fertility, to processes and experiences, such as communication and gender equity. This transformation, however, also uncovers deeper intergenerational tensions, revealing the evolving nature of what constitutes a "family" in today's world.

In alignment with the social identity perspective, our research finds that women, especially those highly educated, actively differentiate their family preferences from the parental generation. This difference is particularly evident in their recalibration of the relative importance of fertility, income, and communication. They prioritize good family communication, adequate income, and gender equity over parenthood, while recognizing that their parental generation held a contrasting preference. Although men also acknowledge some degree of intergenerational difference in family preferences, it does not lead to a significant shift in priorities.

On the aggregated level, cohorts that benefited most from educational expansion have experienced the greatest educational gain compared to their parental generation. At the same time, women in these cohorts also perceived the largest generational decrease in parenthood and the two-child ideal. As society develops, rapidly in aspects like education, social norms and cultural values often lag, placing women in the challenging position of fulfilling doubled expectations and making grim trade-offs between work and family. The social identity approach reveals such intergenerational tension in family dynamics for women, in particular for highly educated women. Relying on education as an earned higher social class identity, the cohorts of women with the most educational gains are motivated to renovate family life away from the previous generation. If marriage and

fertility are no longer paramount for family, they could be liberated to pursue other goals in life.

Despite parenthood still being considered important for family, the number of children is rather irrelevant in all countries ranging from the front-runner in development and gender equality such as Norway to later comers such as China. If this preference is driven by generation-based identity, to revise fertility, a new generation of women needs to actively differentiate themselves in terms of the value of fertility in family from their parental generation to reverse fertility. But this time, the change must move from low fertility preference to high fertility preference.

The gender revolution theory suggests the reversal of fertility hinges on gender equity, particularly gender equity at home. This study paints a rather pessimistic picture of this argument. On the one hand, individuals including women, consider egalitarian gender roles marginal to family ideal, often more marginal than parenthood. On the other hand, Norway as one of the most developed, gender equal, higher fertility (among low fertility) countries is seeing an opposite gendered generational change. Norwegian men have gained the least education (0.7 years), and yet they have perceived a relatively large decrease in the value of parenthood (0.48). In fact, only Norwegian men consider parenthood and the two-child ideal irrelevant to family ideal, ranking them slightly lower in importance than Norwegian women.

Similar to Norwegian men, Japanese women also consider parenthood and the two-child ideal unimportant to family success. Japanese women and Norwegian men being the two groups that gained the least education from their parental generation, seem to represent two sides of a coin. Despite Japan's early development, women's roles in the society and at home have hardly changed during the past 60 years. Japan remains one of the least gender equal developed countries, and it is difficult for Japanese women to change their life through education. In response to this situation, Japan has revised the value of children. Norway, on the other end of the spectrum, has advanced far in gender equality, making Norwegian men shoulder more family responsibilities than men of other countries. However, since Norway developed early, Norwegian men neither experienced

upward education mobility nor improvement in their labor market position compared to their parental generation. In this case, it seems that fairness to women only translates into additional burden for men, dissuading Norwegian men from having children.

In conclusion, reversing the decline in fertility rates observed in the countries studied here will likely be challenging, not only because parenthood has become less central to family ideals but also because it serves as a marker of identity for women, distinguishing them from the older generation. As they navigate family life, women seek to do things differently from the prior generation. Men, while perceiving some generational differences, are less inclined to change the status quo. And in societies where structural change in gender relation are more advanced, men, instead of women perceive larger generational decrease in the value of children for a family.

Table 1: Vignette factors and levels.

Factors	#	Content
Union status	2	*Cohabiting Married
Fertility	4	*No children 1 child 2 children 3 children
Household income	3	*Below average Around average Above average
Community respect	2	*Not well-respected Well-respected
Family communication	2	*Not Comfortable Comfortable expressing feelings & raising disagreements
Contact with extended fam.	2	*Not frequently Frequently
Gender roles	3	*Commonplace (Both work, female does most of the household and family tasks) Traditional (Female homemaker, male breadwinner) Egalitarian (Both work, equally divided of household and family tasks)
Work-family balance	4	*Both fem. & male conflicted Fem. conflicted & male not conflicted Fem. not conflicted & male conflicted Neither fem. nor male conflicted

* Reference level.

Table 2: Intergenerational Change in Education Attainment by Country

	Sex	China	Italy	Japan	Korea	Norway	Singapore	Spain	USA	Total
Edu Attainment Change (<i>schooling years</i>)	Female	5.26 (1.61)	3.84 (2.81)	1.31 (1.98)	4.15 (1.78)	1.32 (2.74)	3.23 (3.49)	4.34 (2.64)	1.61 (2.33)	3.28 (2.85)
	Male	4.31 (1.57)	3.77 (2.75)	1.34 (2.01)	3.50 (1.62)	0.72 (2.84)	4.16 (2.87)	3.54 (2.69)	2.32 (2.53)	3.21 (2.61)
Perceived Change in Parenthood*	Female	-0.99 (0.24)	-0.53 (0.37)	-0.55 (0.15)	-0.49 (0.27)	-0.33 (0.24)	-0.24 (0.13)	-0.79 (0.23)	-0.33 (0.17)	-0.54 (0.34)
	Male	-0.51 (0.18)	-0.37 (0.20)	-0.24 (0.16)	-0.39 (0.14)	-0.48 (0.28)	-0.30 (0.12)	-0.49 (0.12)	-0.11 (0.26)	-0.34 (0.23)

Mean coefficients; SD in parentheses.

^G*enerationalchangecomparedtothesame – sexparentalpopulation.*

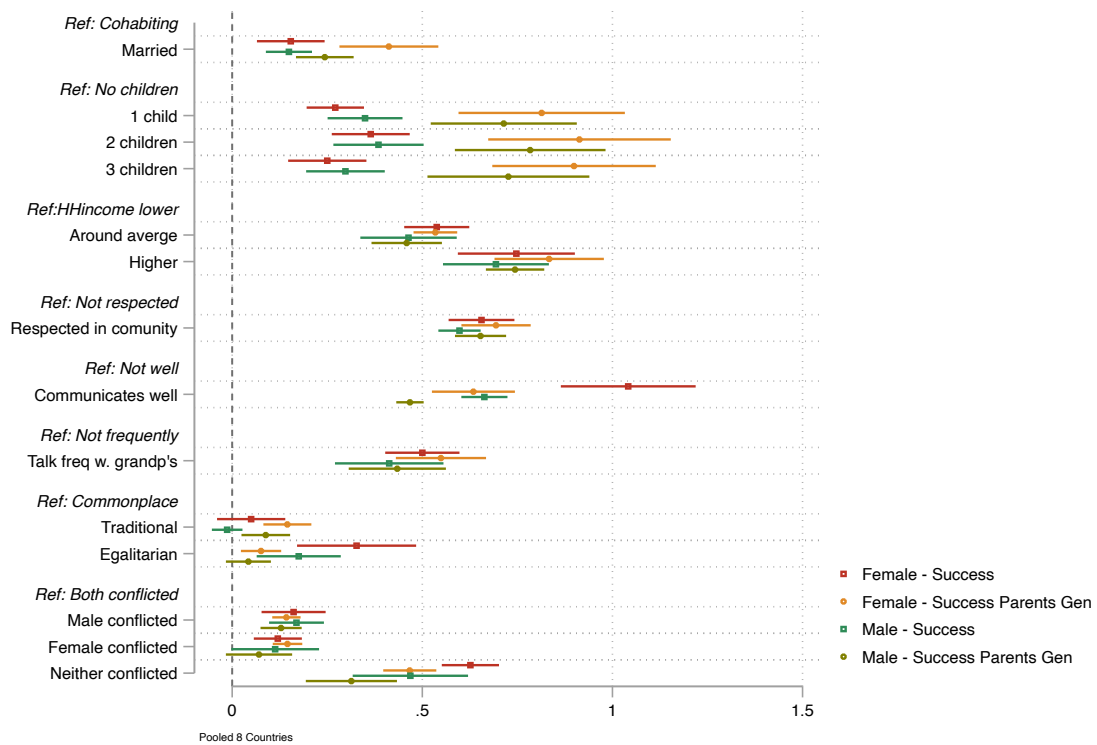
*Difference in having one child (compared to having no children) between successful family and successful family for parental generation.

Table 3: Intergenerational Education Mobility and Perceived Generational Difference

	Parenthood b/se	Two-child Ideal b/se
Female	0.07 (0.12)	0.24 (0.12)
IntergenEduMobility (yrs)	-0.03 (0.03)	-0.02 (0.03)
Female X IntergenEduMobility (yrs)	-0.12** (0.04)	-0.16** (0.05)
Constant	-0.29** (0.09)	-0.37** (0.09)
Observations	80	80

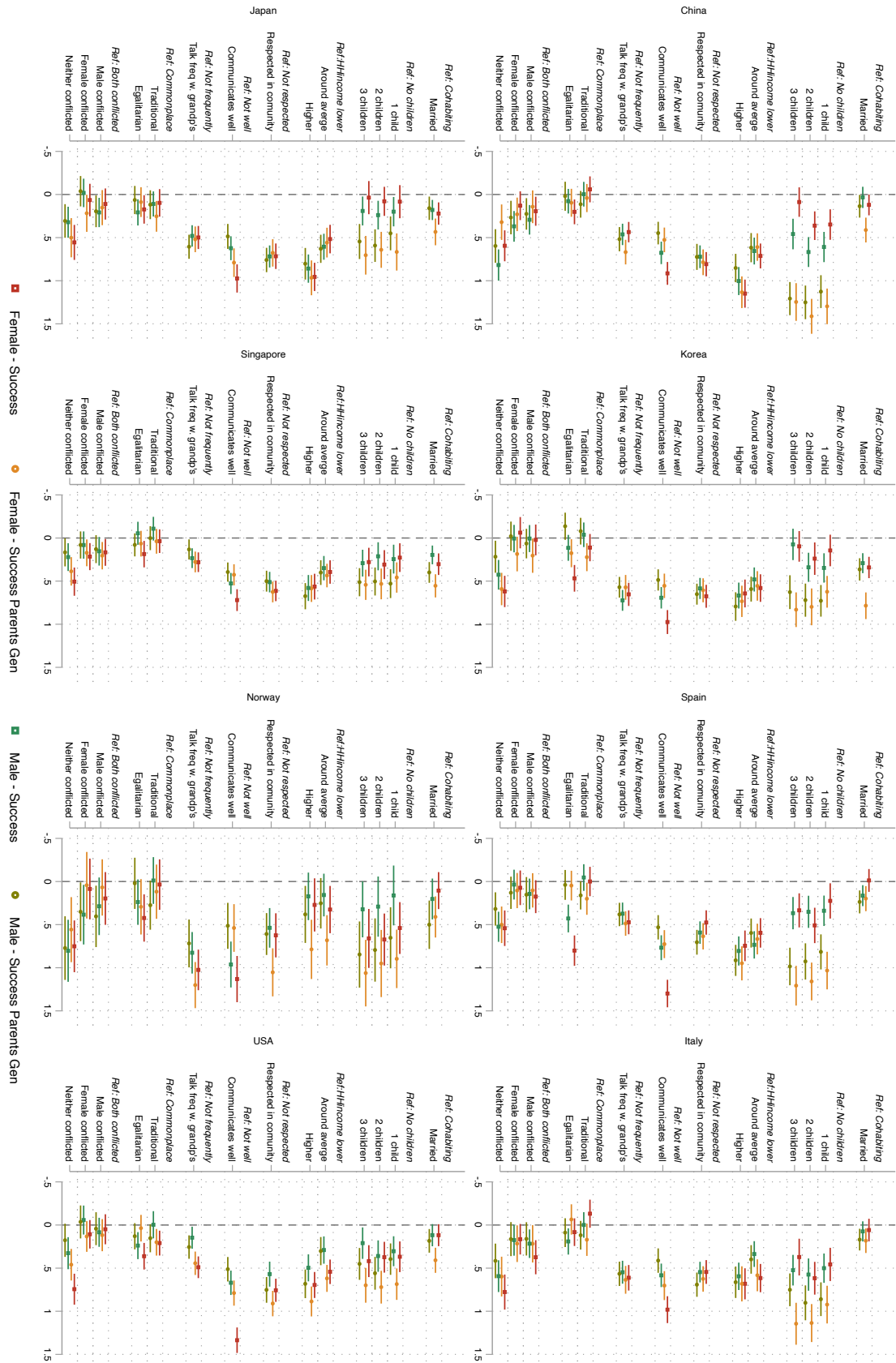
OLS; Robust SE. * p<0.05, ** p<0.01

Figure 1: Family ideals for respondent and parental generation by gender (Pooled sample of 8 countries).



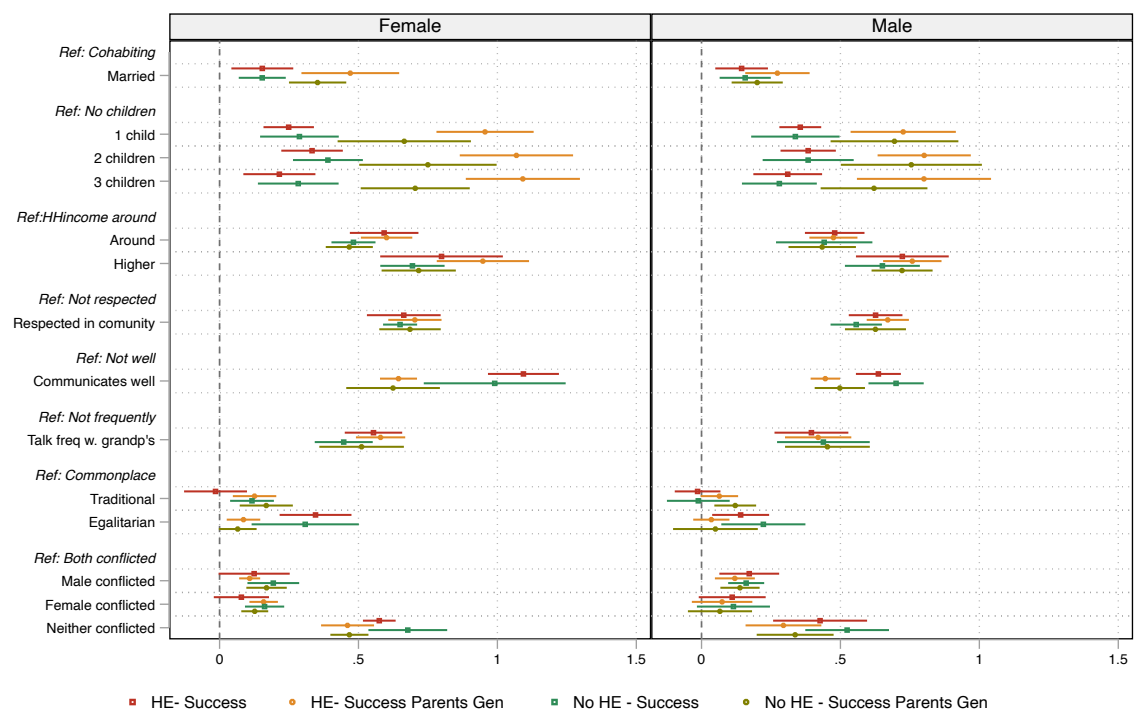
Note: Estimates from random intercept multilevel linear regression models with weighted observations. Respondents aged 25 to 50. Sample includes respondents from Italy, Spain, Norway, Japan, Korea, urban China, Singapore, and the USA.

Figure 2: Family ideals for respondent and parental generation by country by gender.



Note: Estimates from random intercept multilevel linear regression models. Respondents aged 25 to 50.

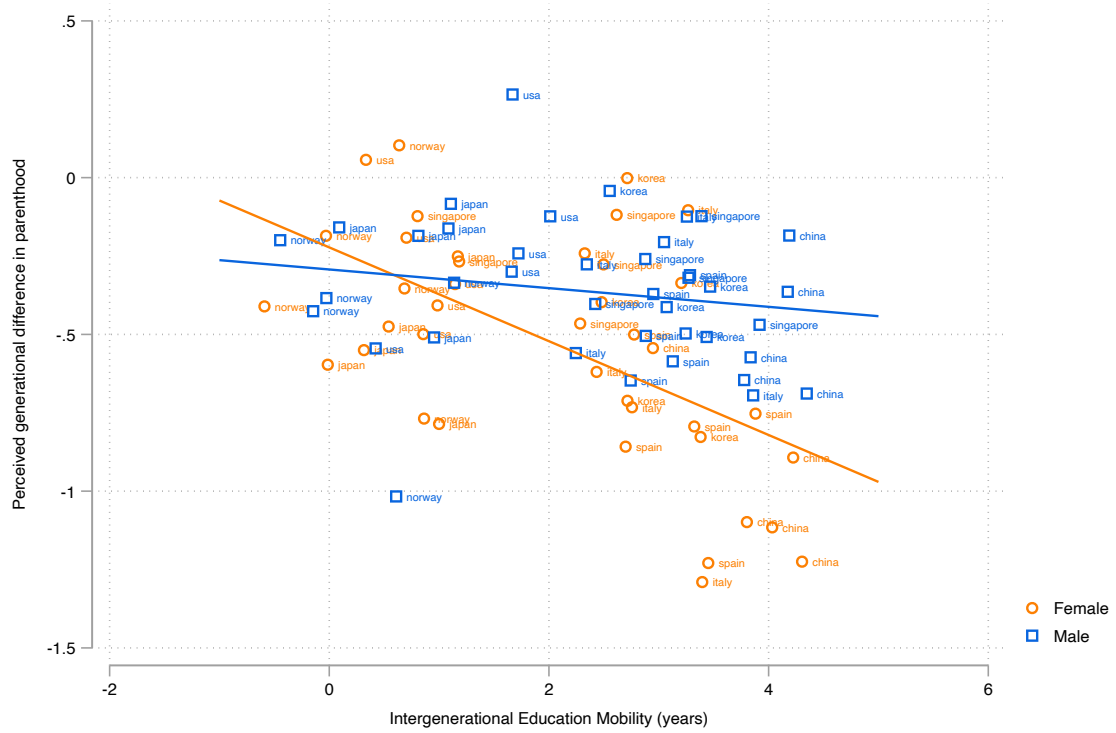
Figure 3: Family ideals for respondent and parental generation by higher education attainment by gender (Pooled sample of 8 countries).



All Countries

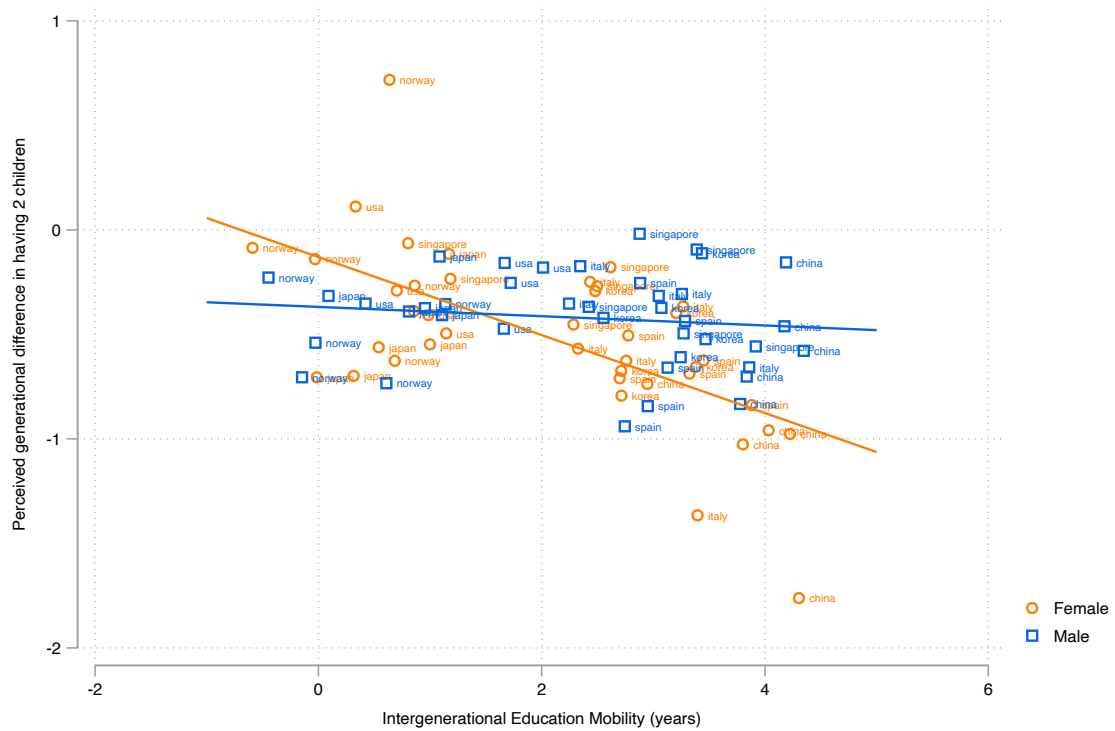
Note: Estimates from random intercept multilevel linear regression models. Respondents aged 25 to 50. Higher education is defined as having a long-cycle tertiary education degree (ISCED-6). Sample includes respondents from Italy, Spain, Norway, Japan, Korea, urban China, Singapore, and the USA.

Figure 4: Relationship between intergenerational education mobility and perceived intergenerational difference in parenthood



Note: Estimates from OLS linear models. Samples are populated by 8 countries * sex * 5 cohorts, in total 80 data points. Parenthood is the effect of one child compared to having no children. Parenthood is measured by the difference between the estimate of one's family ideal and that of one's perception of the parental generation.

Figure 5: Relationship between intergenerational education mobility and perceived intergenerational difference in the two-child fertility ideal



Note: Estimates from OLS linear models. Samples are populated by 8 countries * sex * 5 cohorts, in total 80 data points. Parenthood is the effect of two children compared to having no children. Parenthood is measured by the difference between the estimate of one's family ideal and that of one's perception of the parental generation.

Appendix - Gendered Generational Change in Family: A Factorial Survey Experiment

Table 1: Correlation between factors

	union stauts	fertility	HH income	respect	fam. communication	ext.fam. contact	gender role	work-family conflict
union status	1							
fertility	0.00483	1						
HH income	-0.00279	0.00410	1					
community respect	-0.00511	-0.00449	0.00320	1				
fam. communication	0.00847	-0.00181	0.00135	0.0131	1			
ext.fam. contact	0.0108	0.00567	0.0111	0.0104	-0.00443	1		
gender role	-0.00135	0.00125	-0.00250	0.00406	-0.00258	-0.0125	1	
work-family conflict	0.0103	-0.00431	0.000103	0.00572	0.00721	-0.00365	0.00418	1

Table 2: Correlation between factors and sample characteristics

	union	fertility	income	respect	famcom	extfamcom	genderrole	WLB	childedu	finsupport
female	0.00197	-0.00312	-0.000756	-0.00160	-0.00140	-0.00100	0.00118	-0.00239	0.000549	0.00141
edu_self	-0.000734	0.00192	-0.000708	0.000149	0.000139	0.00253	-0.000731	-0.00197	0.000164	-0.00105
married	0.000442	0.000384	-0.000267	-0.000804	-0.000273	0.00183	-0.00121	0.00116	-0.000963	-0.000590
single	0.000499	0.000231	0.0000449	0.00152	0.000586	-0.000464	0.000546	-0.000722	0.000184	-0.000582
catholic	-0.000983	0.00104	0.000253	0.000570	0.000242	0.000148	0.000373	0.000545	0.0001000	-0.000637
haschild	0.000318	-0.0000688	0.000980	-0.000888	0.000924	0.00155	-0.00201	0.00110	-0.000160	0.00127
working_self	-0.00232	0.000456	-0.000527	0.00306	0.00139	0.000699	-0.0000858	0.00199	-0.000105	0.00000183
hhinc_adjusted	0.00137	0.00109	-0.000652	-0.000513	0.00116	-0.000541	0.00117	-0.0000957	-0.000453	0.000137

Table 3: Descriptive Statistics by Country

	China	Italy	Japan	Korea	Norway	Singapore	Spain	USA	Total
Sample Description									
Age	37.80 (7.07)	39.51 (6.84)	39.77 (6.81)	38.76 (6.95)	39.92 (6.80)	36.82 (7.07)	38.75 (7.15)	38.83 (6.53)	38.56 (6.98)
Female	0.49 (0.50)	0.51 (0.50)	0.49 (0.50)	0.47 (0.50)	0.53 (0.50)	0.51 (0.50)	0.49 (0.50)	0.53 (0.50)	0.50 (0.50)
High school	0.99 (0.11)	0.92 (0.28)	0.97 (0.18)	0.99 (0.08)	0.95 (0.22)	0.86 (0.35)	0.90 (0.30)	0.96 (0.18)	0.94 (0.24)
High school <i>Parent's Generation</i>	0.62 (0.49)	0.61 (0.49)	0.92 (0.27)	0.75 (0.44)	0.88 (0.33)	0.59 (0.49)	0.53 (0.50)	0.86 (0.35)	0.70 (0.46)
Tertiary education (ISCED 6)	0.70 (0.46)	0.42 (0.49)	0.54 (0.50)	0.69 (0.46)	0.42 (0.49)	0.52 (0.50)	0.56 (0.50)	0.44 (0.50)	0.54 (0.50)
Tertiary education (ISCED 6) <i>Parent's Generation</i>	0.15 (0.36)	0.19 (0.39)	0.42 (0.49)	0.28 (0.45)	0.34 (0.48)	0.23 (0.42)	0.23 (0.42)	0.31 (0.46)	0.26 (0.44)
Single	0.15 (0.36)	0.29 (0.46)	0.52 (0.50)	0.43 (0.50)	0.30 (0.46)	0.34 (0.47)	0.31 (0.46)	0.30 (0.46)	0.32 (0.47)
Married	0.80 (0.40)	0.38 (0.49)	0.43 (0.49)	0.52 (0.50)	0.39 (0.49)	0.59 (0.49)	0.47 (0.50)	0.51 (0.50)	0.53 (0.50)
Cohabiting	0.03 (0.16)	0.27 (0.44)	0.00 (0.06)	0.02 (0.13)	0.22 (0.41)	0.03 (0.17)	0.16 (0.37)	0.06 (0.24)	0.08 (0.28)
No children	0.23 (0.42)	0.54 (0.50)	0.65 (0.48)	0.53 (0.50)	0.40 (0.49)	0.54 (0.50)	0.44 (0.50)	0.29 (0.45)	0.44 (0.50)
1 child	0.60 (0.49)	0.23 (0.42)	0.14 (0.34)	0.24 (0.43)	0.18 (0.38)	0.27 (0.44)	0.29 (0.45)	0.18 (0.39)	0.28 (0.45)
2 children	0.16 (0.37)	0.20 (0.40)	0.17 (0.37)	0.20 (0.40)	0.26 (0.44)	0.11 (0.32)	0.23 (0.42)	0.31 (0.46)	0.20 (0.40)
3 or more children	0.01 (0.08)	0.03 (0.18)	0.04 (0.20)	0.03 (0.16)	0.16 (0.37)	0.08 (0.27)	0.04 (0.19)	0.22 (0.41)	0.08 (0.26)
Number of children <i>if has child(ren)</i>	1.22 (0.43)	1.59 (0.66)	1.75 (0.74)	1.55 (0.61)	2.08 (0.96)	1.66 (0.95)	1.57 (0.67)	2.21 (1.06)	1.69 (0.86)
Fertility <i>all female</i>	0.97 (0.68)	0.80 (0.95)	0.64 (0.94)	0.74 (0.91)	1.36 (1.30)	0.85 (1.15)	0.84 (0.92)	1.77 (1.40)	1.02 (1.13)
HH income (euro) <i>adjusted for 3-person hh</i>	3320.71 (2871.88)	2361.29 (1816.73)	2687.04 (6114.61)	4196.76 (5221.87)	5228.80 (3825.39)	6923.50 (9657.60)	2354.27 (1444.39)	4522.69 (4656.64)	3985.35 (5563.94)
Experiment Outcome Variables									
Successful family	5.21 (2.41)	5.04 (2.39)	4.86 (2.13)	4.78 (2.19)	4.90 (2.26)	5.79 (2.21)	5.00 (2.39)	5.85 (2.63)	5.27 (2.39)
Parent's Gen Successful Fan	5.32 (2.54)	5.11 (2.50)	4.72 (2.29)	4.67 (2.29)	4.84 (2.43)	5.74 (2.27)	5.29 (2.50)	5.81 (2.72)	5.28 (2.50)
N	1226	1060	927	1085	314	1508	1107	1585	8812

Mean coefficients; SD in parentheses

Table 4: Three-level Mixed Model Pooled Countries by Gender

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.15** (0.05)	0.41** (0.07)	0.15** (0.03)	0.24** (0.04)
1 child	0.27** (0.04)	0.81** (0.11)	0.35** (0.05)	0.71** (0.10)
2 children	0.36** (0.05)	0.91** (0.12)	0.38** (0.06)	0.78** (0.10)
3 children	0.25** (0.05)	0.90** (0.11)	0.30** (0.05)	0.73** (0.11)
Around average	0.54** (0.04)	0.53** (0.03)	0.46** (0.06)	0.46** (0.05)
Higher	0.75** (0.08)	0.83** (0.07)	0.69** (0.07)	0.74** (0.04)
Respected in community	0.66** (0.04)	0.69** (0.05)	0.60** (0.03)	0.65** (0.03)
Communicates well	1.04** (0.09)	0.63** (0.06)	0.66** (0.03)	0.47** (0.02)
Talk freq w. grandp's	0.50** (0.05)	0.55** (0.06)	0.41** (0.07)	0.43** (0.07)
Traditional	0.05 (0.05)	0.15** (0.03)	-0.01 (0.02)	0.09** (0.03)
Egalitarian	0.33** (0.08)	0.08** (0.03)	0.18** (0.06)	0.04 (0.03)
Male conflicted	0.16** (0.04)	0.14** (0.02)	0.17** (0.04)	0.13** (0.03)
Female conflicted	0.12** (0.03)	0.15** (0.02)	0.11 (0.06)	0.07 (0.04)
Neither conflicted	0.63** (0.04)	0.47** (0.04)	0.47** (0.08)	0.31** (0.06)
Constant	2.84** (0.17)	2.55** (0.23)	3.55** (0.29)	3.29** (0.28)
var(country)	0.11** (0.04)	0.12** (0.04)	0.21** (0.09)	0.22** (0.08)
var(Respondent)	1.81** (0.11)	1.80** (0.11)	1.77** (0.12)	1.72** (0.10)
var(residual)	3.36** (0.21)	4.01** (0.24)	3.06** (0.20)	3.50** (0.22)
Observations	23995	23993	23862	23867

Note: 3-level Random Intercept Model. Robust SE. * p<0.05, ** p<0.01

Table 5: Two-level Mixed Model in China

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.12*	0.41**	0.03	0.14*
	(0.06)	(0.07)	(0.06)	(0.07)
1 child	0.35**	1.30**	0.61**	1.13**
	(0.09)	(0.11)	(0.09)	(0.10)
2 children	0.36**	1.41**	0.67**	1.25**
	(0.08)	(0.10)	(0.09)	(0.10)
3 children	0.09	1.25**	0.46**	1.21**
	(0.09)	(0.11)	(0.09)	(0.10)
Around average	0.71**	0.61**	0.66**	0.62**
	(0.07)	(0.08)	(0.08)	(0.09)
Higher	1.15**	1.13**	1.00**	0.85**
	(0.08)	(0.09)	(0.08)	(0.08)
Respected in community	0.81**	0.79**	0.72**	0.72**
	(0.07)	(0.08)	(0.07)	(0.08)
Communicates well	0.91**	0.53**	0.68**	0.45**
	(0.07)	(0.07)	(0.07)	(0.07)
Talk freq w. grandp's	0.44**	0.67**	0.46**	0.52**
	(0.06)	(0.07)	(0.06)	(0.07)
Traditional	-0.06	0.04	-0.00	0.11
	(0.08)	(0.08)	(0.07)	(0.08)
Egalitarian	0.20**	0.10	0.08	0.02
	(0.07)	(0.08)	(0.07)	(0.09)
Male conflicted	0.19*	0.14	0.29**	0.23*
	(0.09)	(0.10)	(0.09)	(0.09)
Female conflicted	0.13	0.23*	0.37**	0.27**
	(0.09)	(0.10)	(0.09)	(0.10)
Neither conflicted	0.60**	0.32**	0.82**	0.60**
	(0.09)	(0.10)	(0.09)	(0.10)
Constant	2.74**	2.64**	2.97**	3.06**
	(0.18)	(0.19)	(0.17)	(0.18)
var(Respondent)	2.02**	1.83**	1.91**	1.62**
	(0.15)	(0.15)	(0.14)	(0.14)
var(Residual)	3.03**	3.97**	3.22**	3.84**
	(0.13)	(0.15)	(0.13)	(0.14)
Observations	3418	3420	3559	3562

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 6: Two-level Mixed Model in Japan

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.22** (0.07)	0.43** (0.08)	0.18** (0.06)	0.16* (0.07)
1 child	0.08 (0.10)	0.67** (0.11)	0.20* (0.09)	0.45** (0.10)
2 children	0.08 (0.09)	0.64** (0.11)	0.24** (0.08)	0.59** (0.10)
3 children	0.04 (0.10)	0.70** (0.11)	0.19* (0.09)	0.55** (0.10)
Around average	0.52** (0.08)	0.56** (0.09)	0.61** (0.08)	0.63** (0.08)
Higher	0.96** (0.08)	0.97** (0.10)	0.86** (0.08)	0.80** (0.09)
Respected in community	0.72** (0.08)	0.68** (0.08)	0.72** (0.07)	0.76** (0.07)
Communicates well	0.97** (0.08)	0.79** (0.08)	0.62** (0.07)	0.49** (0.07)
Talk freq w. grandp's	0.50** (0.07)	0.52** (0.08)	0.48** (0.06)	0.61** (0.07)
Traditional	0.10 (0.08)	0.25** (0.09)	0.11 (0.07)	0.12 (0.09)
Egalitarian	0.17* (0.08)	0.09 (0.09)	0.21** (0.08)	0.06 (0.08)
Male conflicted	0.11 (0.09)	0.15 (0.10)	0.21* (0.09)	0.19* (0.09)
Female conflicted	0.06 (0.10)	0.22* (0.11)	-0.02 (0.08)	-0.04 (0.09)
Neither conflicted	0.56** (0.10)	0.50** (0.12)	0.32** (0.09)	0.31** (0.10)
Constant	2.94** (0.18)	2.35** (0.19)	3.14** (0.16)	2.89** (0.19)
var(Respondent)	1.66** (0.16)	1.71** (0.17)	1.61** (0.15)	1.63** (0.17)
var(Residual)	2.53** (0.13)	3.26** (0.17)	2.14** (0.11)	2.64** (0.13)
Observations	2362	2361	2435	2435

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 7: Two-level Mixed Model in Korea

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.34** (0.06)	0.79** (0.08)	0.29** (0.06)	0.36** (0.07)
1 child	0.14 (0.09)	0.62** (0.09)	0.35** (0.09)	0.73** (0.09)
2 children	0.24* (0.10)	0.80** (0.11)	0.34** (0.09)	0.72** (0.10)
3 children	0.10 (0.09)	0.83** (0.10)	0.07 (0.09)	0.63** (0.10)
Around average	0.58** (0.08)	0.56** (0.09)	0.48** (0.07)	0.59** (0.07)
Higher	0.64** (0.08)	0.73** (0.09)	0.67** (0.08)	0.79** (0.08)
Respected in community	0.68** (0.07)	0.61** (0.07)	0.58** (0.06)	0.65** (0.06)
Communicates well	0.97** (0.07)	0.55** (0.07)	0.69** (0.06)	0.49** (0.06)
Talk freq w. grandp's	0.65** (0.07)	0.57** (0.07)	0.72** (0.06)	0.57** (0.06)
Traditional	0.11 (0.08)	0.22** (0.08)	-0.04 (0.07)	-0.08 (0.08)
Egalitarian	0.47** (0.08)	0.18* (0.08)	0.11 (0.08)	-0.14 (0.08)
Male conflicted	0.02 (0.09)	0.20* (0.10)	0.01 (0.08)	0.06 (0.09)
Female conflicted	-0.06 (0.09)	0.19 (0.10)	0.01 (0.08)	-0.02 (0.09)
Neither conflicted	0.62** (0.09)	0.59** (0.10)	0.43** (0.09)	0.22* (0.09)
Constant	2.56** (0.18)	2.07** (0.18)	2.98** (0.17)	2.91** (0.17)
var(Respondent)	1.50** (0.13)	1.51** (0.14)	1.42** (0.12)	1.46** (0.13)
var(Residual)	2.81** (0.13)	3.34** (0.14)	2.63** (0.13)	3.00** (0.14)
Observations	2836	2838	3160	3160

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 8: Two-level Mixed Model in Singapore

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.30** (0.06)	0.55** (0.07)	0.20** (0.06)	0.40** (0.06)
1 child	0.23** (0.08)	0.46** (0.09)	0.25** (0.09)	0.53** (0.09)
2 children	0.31** (0.09)	0.53** (0.09)	0.21* (0.08)	0.50** (0.08)
3 children	0.28** (0.08)	0.54** (0.09)	0.29** (0.08)	0.51** (0.08)
Around average	0.39** (0.07)	0.44** (0.07)	0.35** (0.07)	0.40** (0.07)
Higher	0.56** (0.08)	0.59** (0.08)	0.58** (0.08)	0.67** (0.08)
Respected in community	0.61** (0.06)	0.63** (0.06)	0.51** (0.06)	0.50** (0.06)
Communicates well	0.72** (0.06)	0.43** (0.06)	0.53** (0.06)	0.40** (0.06)
Talk freq w. grandp's	0.28** (0.06)	0.28** (0.06)	0.23** (0.06)	0.13* (0.06)
Traditional	0.04 (0.07)	0.04 (0.07)	-0.11 (0.07)	0.00 (0.07)
Egalitarian	0.19* (0.08)	0.07 (0.08)	-0.05 (0.07)	0.08 (0.07)
Male conflicted	0.17* (0.08)	0.21* (0.08)	0.15 (0.08)	0.13 (0.08)
Female conflicted	0.22** (0.08)	0.17* (0.08)	0.08 (0.08)	0.08 (0.08)
Neither conflicted	0.51** (0.08)	0.39** (0.08)	0.22** (0.08)	0.17* (0.08)
Constant	3.90** (0.16)	3.80** (0.16)	4.72** (0.15)	4.47** (0.16)
var(Respondent)	1.57** (0.13)	1.64** (0.14)	1.53** (0.12)	1.72** (0.12)
var(Residual)	3.10** (0.13)	3.28** (0.14)	2.87** (0.13)	2.90** (0.13)
Observations	3858	3858	3696	3696

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 9: Two-level Mixed Model in Spain

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	-0.01 (0.07)	0.20** (0.07)	0.16** (0.06)	0.24** (0.07)
1 child	0.23* (0.10)	1.03** (0.11)	0.34** (0.09)	0.82** (0.10)
2 children	0.51** (0.10)	1.16** (0.11)	0.35** (0.10)	0.93** (0.11)
3 children	0.33** (0.10)	1.21** (0.12)	0.37** (0.10)	0.99** (0.11)
Around average	0.60** (0.09)	0.67** (0.09)	0.73** (0.08)	0.60** (0.09)
Higher	0.75** (0.09)	0.95** (0.10)	0.81** (0.09)	0.91** (0.09)
Respected in community	0.48** (0.07)	0.64** (0.08)	0.59** (0.07)	0.70** (0.07)
Communicates well	1.30** (0.08)	0.73** (0.08)	0.77** (0.07)	0.53** (0.07)
Talk freq w. grandp's	0.47** (0.07)	0.49** (0.07)	0.37** (0.07)	0.38** (0.07)
Traditional	-0.00 (0.09)	0.20* (0.09)	-0.05 (0.08)	0.16 (0.08)
Egalitarian	0.80** (0.09)	0.05 (0.09)	0.43** (0.08)	0.04 (0.09)
Male conflicted	0.18 (0.10)	0.10 (0.10)	0.14 (0.09)	0.15 (0.10)
Female conflicted	0.07 (0.10)	0.11 (0.10)	0.04 (0.09)	0.13 (0.10)
Neither conflicted	0.54** (0.11)	0.50** (0.11)	0.52** (0.09)	0.32** (0.10)
Constant	2.36** (0.19)	2.84** (0.19)	3.14** (0.17)	3.51** (0.19)
var(Respondent)	1.75** (0.15)	1.82** (0.17)	1.62** (0.14)	1.57** (0.14)
var(Residual)	3.50** (0.15)	4.09** (0.17)	3.12** (0.13)	3.71** (0.16)
Observations	3059	3058	3164	3166

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 10: Two-level Mixed Model in Italy

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.06 (0.07)	0.18* (0.07)	0.07 (0.06)	0.17** (0.06)
1 child	0.46** (0.10)	0.92** (0.11)	0.50** (0.09)	0.86** (0.10)
2 children	0.62** (0.10)	1.14** (0.11)	0.57** (0.10)	0.90** (0.10)
3 children	0.37** (0.11)	1.14** (0.12)	0.52** (0.09)	0.75** (0.10)
Around average	0.62** (0.08)	0.58** (0.09)	0.34** (0.08)	0.40** (0.08)
Higher	0.68** (0.09)	0.68** (0.10)	0.59** (0.08)	0.66** (0.09)
Respected in community	0.54** (0.07)	0.62** (0.08)	0.55** (0.06)	0.69** (0.07)
Communicates well	0.98** (0.08)	0.70** (0.09)	0.58** (0.07)	0.41** (0.07)
Talk freq w. grandp's	0.61** (0.08)	0.64** (0.08)	0.55** (0.07)	0.57** (0.07)
Traditional	-0.13 (0.08)	0.17 (0.10)	-0.00 (0.08)	0.12 (0.08)
Egalitarian	0.08 (0.08)	-0.06 (0.09)	0.19* (0.08)	0.09 (0.09)
Male conflicted	0.37** (0.10)	0.22* (0.11)	0.22* (0.08)	0.16 (0.10)
Female conflicted	0.16 (0.09)	0.22* (0.11)	0.18 (0.09)	0.16 (0.10)
Neither conflicted	0.78** (0.10)	0.60** (0.12)	0.59** (0.09)	0.42** (0.10)
Constant	2.61** (0.17)	2.45** (0.20)	3.01** (0.19)	2.87** (0.20)
var(Respondent)	2.16** (0.18)	1.92** (0.18)	1.92** (0.16)	1.80** (0.16)
var(Residual)	3.44** (0.16)	4.25** (0.18)	2.73** (0.14)	3.30** (0.16)
Observations	3002	3002	2938	2937

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 11: Two-level Mixed Model in USA

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.12 (0.06)	0.41** (0.07)	0.12 (0.07)	0.18** (0.07)
1 child	0.37** (0.09)	0.69** (0.09)	0.30** (0.09)	0.40** (0.09)
2 children	0.37** (0.09)	0.72** (0.10)	0.36** (0.09)	0.56** (0.10)
3 children	0.42** (0.09)	0.70** (0.10)	0.21* (0.09)	0.45** (0.09)
Around average	0.54** (0.07)	0.62** (0.08)	0.29** (0.08)	0.30** (0.08)
Higher	0.70** (0.08)	0.89** (0.09)	0.50** (0.08)	0.68** (0.08)
Respected in community	0.76** (0.07)	0.91** (0.08)	0.57** (0.07)	0.75** (0.08)
Communicates well	1.34** (0.08)	0.79** (0.07)	0.67** (0.07)	0.51** (0.07)
Talk freq w. grandp's	0.49** (0.06)	0.44** (0.07)	0.15* (0.07)	0.26** (0.07)
Traditional	0.21** (0.07)	0.20* (0.08)	-0.00 (0.08)	0.15 (0.08)
Egalitarian	0.36** (0.08)	0.04 (0.08)	0.24** (0.08)	0.13 (0.08)
Male conflicted	0.05 (0.09)	0.12 (0.10)	0.08 (0.09)	0.04 (0.10)
Female conflicted	0.11 (0.08)	0.13 (0.09)	-0.06 (0.09)	-0.04 (0.10)
Neither conflicted	0.74** (0.09)	0.46** (0.09)	0.33** (0.09)	0.18 (0.10)
Constant	3.07** (0.17)	3.39** (0.17)	4.88** (0.17)	4.57** (0.17)
var(Respondent)	2.11** (0.15)	2.25** (0.16)	2.27** (0.16)	2.17** (0.15)
var(Residual)	4.12** (0.14)	4.84** (0.16)	3.87** (0.17)	4.28** (0.17)
Observations	4506	4502	4052	4053

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 12: Two-level Mixed Model in Norway

	(1)	(2)	(3)	(4)
	Female		Male	
	Successful Family	Parents Gen	Successful Family	Parents Gen
Married	0.11 (0.11)	0.41** (0.12)	0.20 (0.12)	0.50** (0.14)
1 child	0.54** (0.15)	0.90** (0.17)	0.16 (0.18)	0.65** (0.18)
2 children	0.67** (0.15)	0.95** (0.20)	0.29 (0.18)	0.79** (0.19)
3 children	0.66** (0.17)	1.06** (0.20)	0.32 (0.17)	0.85** (0.20)
Around average	0.33* (0.14)	0.68** (0.15)	0.16 (0.13)	0.25 (0.15)
Higher	0.27 (0.16)	0.79** (0.18)	0.17 (0.14)	0.38* (0.17)
Respected in community	0.62** (0.13)	1.05** (0.14)	0.54** (0.12)	0.61** (0.12)
Communicates well	1.13** (0.14)	0.54** (0.14)	0.96** (0.14)	0.51** (0.14)
Talk freq w. grandp's	1.03** (0.12)	1.20** (0.14)	0.83** (0.12)	0.72** (0.14)
Traditional	0.04 (0.15)	0.12 (0.16)	-0.01 (0.14)	0.27 (0.14)
Egalitarian	0.42** (0.14)	0.29 (0.16)	0.24 (0.13)	0.02 (0.15)
Male conflicted	0.20 (0.16)	0.07 (0.17)	0.29 (0.17)	0.40* (0.18)
Female conflicted	0.09 (0.18)	0.04 (0.20)	0.38* (0.18)	0.35* (0.17)
Neither conflicted	0.75** (0.15)	0.56** (0.19)	0.80** (0.18)	0.77** (0.19)
Constant	2.45** (0.28)	2.04** (0.31)	3.27** (0.33)	2.78** (0.34)
var(Respondent)	1.16 (0.22)	1.17 (0.24)	1.76** (0.29)	1.72** (0.28)
var(Residual)	3.04** (0.27)	3.81** (0.29)	2.78** (0.21)	3.36** (0.24)
Observations	954	954	858	858

Note: Two-level Random Intercept Model. * p<0.05, ** p<0.01

Table 13: Universe A Two-level Mixed Model All Countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Female				Male			
	Bachelor's		No Bachelor's		Bachelor's		No Bachelor's	
	Success Fam	Parents Gen	Success Fam	Parents Gen	Success Fam	Parents Gen	Success Fam	Parents Gen
Married	0.15** (0.06)	0.47** (0.09)	0.15** (0.04)	0.35** (0.05)	0.14** (0.05)	0.27** (0.06)	0.16** (0.05)	0.20** (0.05)
1 child	0.25** (0.05)	0.96** (0.09)	0.29** (0.07)	0.66** (0.12)	0.36** (0.04)	0.73** (0.10)	0.34** (0.08)	0.69** (0.12)
2 children	0.33** (0.06)	1.07** (0.10)	0.39** (0.06)	0.75** (0.13)	0.38** (0.05)	0.80** (0.09)	0.38** (0.08)	0.76** (0.13)
3 children	0.22** (0.07)	1.09** (0.10)	0.28** (0.07)	0.70** (0.10)	0.31** (0.06)	0.80** (0.12)	0.28** (0.07)	0.62** (0.10)
Around	0.59** (0.06)	0.60** (0.05)	0.48** (0.04)	0.47** (0.04)	0.48** (0.05)	0.47** (0.04)	0.44** (0.09)	0.43** (0.06)
Higher	0.80** (0.11)	0.95** (0.08)	0.69** (0.06)	0.72** (0.07)	0.72** (0.09)	0.76** (0.05)	0.65** (0.07)	0.72** (0.06)
Respected in community	0.66** (0.07)	0.70** (0.05)	0.65** (0.03)	0.69** (0.06)	0.63** (0.05)	0.67** (0.04)	0.56** (0.05)	0.63** (0.06)
Communicates well	1.09** (0.07)	0.64** (0.03)	0.99** (0.13)	0.62** (0.09)	0.64** (0.04)	0.45** (0.03)	0.70** (0.05)	0.50** (0.05)
Talk freq w. grandp's	0.55** (0.05)	0.58** (0.05)	0.45** (0.05)	0.51** (0.08)	0.40** (0.07)	0.42** (0.06)	0.44** (0.09)	0.45** (0.08)
Traditional	-0.01 (0.06)	0.13** (0.04)	0.12** (0.04)	0.17** (0.05)	-0.01 (0.04)	0.06 (0.03)	-0.01 (0.06)	0.12** (0.04)
Egalitarian	0.35** (0.07)	0.09** (0.03)	0.31** (0.10)	0.07 (0.03)	0.14** (0.05)	0.04 (0.03)	0.22** (0.08)	0.05 (0.08)
Male conflicted	0.12 (0.07)	0.11** (0.02)	0.19** (0.05)	0.17** (0.04)	0.17** (0.05)	0.12** (0.04)	0.16** (0.03)	0.14** (0.04)
Female conflicted	0.08 (0.05)	0.16** (0.03)	0.16** (0.04)	0.13** (0.02)	0.11 (0.06)	0.07 (0.06)	0.11 (0.07)	0.07 (0.06)
Neither conflicted	0.57** (0.03)	0.46** (0.05)	0.68** (0.07)	0.47** (0.03)	0.43** (0.09)	0.29** (0.07)	0.52** (0.08)	0.34** (0.07)
Constant	2.82** (0.20)	2.31** (0.23)	2.91** (0.21)	2.83** (0.23)	3.59** (0.34)	3.30** (0.32)	3.55** (0.25)	3.34** (0.26)
var(Country)	0.15** (0.08)	0.18** (0.08)	0.10** (0.05)	0.09** (0.04)	0.25* (0.14)	0.24** (0.11)	0.17** (0.07)	0.21** (0.08)
var(Respondent)	1.82** (0.15)	1.79** (0.20)	1.78** (0.11)	1.79** (0.09)	1.74** (0.14)	1.75** (0.16)	1.79** (0.10)	1.66** (0.06)
var(Residual)	3.13** (0.11)	3.90** (0.15)	3.58** (0.31)	4.09** (0.34)	2.88** (0.13)	3.33** (0.17)	3.30** (0.31)	3.73** (0.31)
Observations	12015	12010	11980	11983	14057	14060	9805	9807

Note: 3-level Random Intercept Model. * p<0.05, ** p<0.01

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Chapter 2

*"I Don't Want What the Norm
Wants."*

The Importance of Differentiating
Personal Values from Social Norms:
A Factorial Survey Experiment.

”I Don’t Want What the Norm Wants.”

The Importance of Differentiating Personal Values
from Social Norms: A Factorial Survey Experiment.

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September 2023

Abstract

Theories of demographic transition such as the Second Demographic Transition and the deinstitutionalization of marriage rely heavily on the weakening control of norm over behavior implying that a mismatch between personal value and perceived norm triggers changes that ultimately reshape the norm. However, social norms are often measured as aggregated personal values collected through social surveys. This study investigates the potential discord between social norms and personal values and how such discrepancy manifests in actual behavior. We conducted a factorial survey experiment in 8 countries - Spain, Italy, Norway, Japan, Korea, Singapore, urban China, and the United States - to explore respondent’s evaluation of perceived social norms and personal value separately. Consistent with the gender theories, women tend to report higher levels of norm-value discrepancy and show greater sensitivity and consistency in perceiving norm-value discrepancies compared to men. Women consider high fertility as normative but not as desired, and egalitarian gender roles as desired but not as normative. Reflecting on actual behaviors, individuals without children recognize parenthood as unsuccessful but they do not desire parenthood themselves. Our findings highlight the importance of

differentiating personal values from social norms in both conceptualization and empirical research to gain a more nuanced understanding and better tracking of demographic changes.

1 Introduction

In demography, there is a long tradition of linking norms and values with behavior, typically in a top-down manner (e.g., Malthus, (1798/1998); Lesthaeghe 1983; Oppenheim Mason.,983; Preston 1986; van de Kaa, 1987; Beck and Beck-Gernsheim, 2002; Cherlin, 2004). Norms are often theorized through an institutional lens, where they are viewed to guide people's values and, in turn, influence or restrict their behavior (Davis 1963; Portes 2006). However, changes to norms usually begin from the bottom up, as individuals or groups modify their values and behavior (Lesthaeghe and Surkyn 1988). These individual changes accumulate, eventually reaching a tipping point where they collectively reshape the norm (Esping-Andersen and Billari, 2015).

Over the past decades, theories on demographic transition such as Cherlin's (2004) deinstitutionalization of marriage and Ron Lesthaeghe and Dirk van de Kaa's (1983) Second Demographic Transition rely on the concepts of norm and value. For Cherlin, the declining universality of marriage reflects a loosening grip of social norms and an abundance of personal choices. For Lesthaeghe and Dirk van de Kaa, fertility decline is part of a greater emancipation process (Lesthaeghe, 1983; van de Kaa, 1987), that liberates individuals from restrictive norms, enabling them to make their *own* choices. Initiating change often requires individuals to opt for the *abnormal* choices that align with their personal values.

Extensive research stemming from these two theories has demonstrated the interplay among norm, value, and behavior, especially when examined at the macro level. Despite the common absence of explicit definitions and differentiation between the concepts of norms and values, values are typically assessed through large social surveys that inquire about individuals' attitudes and preferences, whereas norms represent aggregated values

at the population level. On the aggregated population level, it becomes apparent that norms and values are interwoven and challenging to assess separately. On the micro-level, studies on values primarily revolve around their connection with behavior. Consequently, we know little about whether there exists a discrepancy between perceived social norms and personal values, and how this potential discrepancy is related to actual behavior.

Furthermore, as highlighted by both theories, contemporary individuals are confronted with a multitude of life choices. Norms tend to lose their constraining or guiding influence when choices proliferate and consensus becomes elusive. Possibly most good things in life are valuable, but to lead the life they desire, individuals must choose what is more important and strike a balance among the various facets of their lives. Traditionally, family played a central, if not exclusive, role in a woman's life. In today's discussion about *family life*, the implication is that family needs to be structured optimally to harmonize with life in general. Hence, it is key to study family choices in a multidimensional context.

This study addresses the gap in our understanding of the discrepancy between perceived norms and personal values and how it is linked to demographic behavior differently for females and males. We employ a factorial experiment to explore the (potential) value-norm discrepancy in a multidimensional context in 8 low-fertility countries: urban China, Japan, Korea, Singapore, Spain, Italy, Norway, and the USA. We construct hypothetical family scenarios with 8 factors that combine the well-studied aspects of family - partnership status, fertility, household income, and gender role - with other important aspects of family life - work-family balance, communication within the nuclear family, contact with the extended family, relationship with the community. By evaluating a given family scenario's success and desirability desperately, we aim to investigate 1). if individuals perceive a discrepancy between social norm and their personal values; 2). if women, compared to men reported higher levels of discrepancy; 3). the dimensions that are mostly related to the potential discrepancy between social norms and personal values, and lastly 4). how the distinction between value and norm reflects on actual fertility behavior.

1.1 The Factorial Survey Experiment Method

Factorial survey experiment (FSE) is a highly efficient quantitative method to study how different factors contribute to forming a coherent judgment. It uses vignettes to describe situations or candidates that differ in multiple aspects to a different extent, and asks respondents to make a judgment of the given vignette ranging from a binary outcome (e.g., yes or no) to a continuous scale (e.g., 0-10 point). Combined with an easily accessible online survey platform and participant pool, it enables researchers to explore the causal relationship between a relatively large set of interesting attributes and a final judgment with a relatively small sample size in an economic and fast manner. However, it has not been popular in sociological or demographic research, while its close relatives, conjoint analysis and choice experiment have been widely and frequently used in marketing research, health economics, and political science (Green, Krieger, and Wind, 2004; de Bekker-Grob, Ryan, Gerard, 2012; De la Cuesta et al., 2021). In marketing research and health economics, choice experiments are often used to study the utility or willingness to pay for a certain product or service, while in political science and transportation and urban research, conjoint analysis or FSE are used to study what attributes are favorable for selecting a candidate (e.g., a transportation method, a political candidate, a deserving benefactor). In sociology, since in the first systematic presentation of FSE, Rossi and Anderson (1982) recommended using FSE to measure social judgment, most past research has been focused on studying “positive beliefs”: how things are and “normative judgments”: how things should be (Jasso 2006; Jasso and Opp 1997; Wallander, 2009). Indeed, FSE is particularly suitable for studying the norm as the key features of the FSE are multidimensionality and reduced social desirability bias (Auspurg and Hinz 2015; McDonald 2019). The rating tasks in FSE often fall in domains outside of the participant’s personal sphere, asking the participants to evaluate the correctness or fitness of a given product /candidate/situation objectively. For instance, concerning accepting or rejecting immigrants into one’s country, the aggregated rating can be a proxy of “what good immigrants are” or “what good immigrants should be” for a given society. For

a non-immigrant to respond to questions about accepting immigrants, the judgment is largely impersonal, and thus the response is likely to be consistently determined by the variation in the experimental variables.

Family is an important and intimate part of life. Evaluating the ideal family can elicit unintended associations related to one's own family life. Consequentially, the judgments related to social norms might be more impartial while judgments concerning personal values might reflect better the actual behavior and decision. As one of the main FSE is to reduce social desirability bias (SDB), it is important to understand how SDB manifests in family values. While the prevalent view is that SDB hinders the estimation of effect, SDB can also be seen as an indicator of value intensity (Fisher et al., 1999). The more important a certain value is to a person, the stronger the SDB affects the response outcome. Given the benefit of employing FSE is to simultaneously study multiple dimensions, most of the FSE methodology studies have focused on acquiring unbiased causal estimates for each factor. In most current applications of FSE or conjoint analysis studies, there exists either a binary outcome or a quantifiable dimension such as willingness to pay. In either case, the interpretation of factor estimates is straightforward, and hence there was also not much attention to the response pattern of the participants. Moreover, the unexplained variance (by the factors) was seen as solely an indicator of cognitive overloading without any emotive or motivative components (Saucer et al., 2011; Bansak et al., 2018). The current paper seeks to explore both the "explained" and "unexplained" variance beyond the current discussion providing new insights in conducting FSE in research questions that are continuous (e.g., value), more personal (private), and in a cross-cultural setting.

2 Method

2.1 Survey design

The survey was administered online through Qualtrics in December 2021. It comprised the factorial survey experiment (FSE) and closed-ended questions regarding participants' demographic and socioeconomic backgrounds. Participants began with the demographic and socioeconomic questions before progressing to the vignettes.

2.2 Vignette and experiment design

The study utilized eight vignette factors, including union status, fertility, income level, community respect, family communication style, external family contact frequency, gender role, and work-life balance. Each factor ranged from 2 to 4 levels, summarized in Table 1. The order of factors was randomized for participants but remained consistent for each individual. An illustrative vignette is as follows:

“In the following you will find a description of Lisa and Robert’s family. Lisa and Robert are both around 45 years old. Lisa and Robert are cohabiting. Lisa and Robert have three children. Lisa and Robert’s combined income is lower than the country average. The family is not well respected in their community. Each parent and the children discuss their daily life infrequently, and they do not feel comfortable expressing their feelings and raising disagreements with each other. Lisa and Robert talk with their respective parents frequently and their children talk with all grandparents frequently as well. While Robert focuses on his career, Lisa focuses on taking care of the family and household responsibilities. Lisa does not feel conflicted between her family responsibilities and a potential career, while Robert feels conflicted between his career and the possibility of helping out with family responsibilities.”

Given the vast number of potential vignette profiles (2304 in total), we employed the `%mktex` and `%mktblock` macros in SAS (Kuhfeld, 2002) to select a d-efficient subsample.

Following the general recommendation of presenting each participant with 5-10 vignettes, we subdivided a subsample of 576 vignettes into 96 blocks of 6 vignettes each. With a D-efficiency is 99.88, which surpasses the commonly accepted value of 90 (Auspurg and Hinz 2015), we ensured adequate statistical power to achieve unbiased estimates for the experiment. Participants were randomly assigned a block of vignettes.

After each vignette, they responded to statements on a slider ranging from 0 (Strongly Disagree) to 10 (Strongly Agree), gauging their agreement with statements such as "This describes a successful family" and "This describes a family that people in my parents' generation would consider successful." Participants were required to spend a minimum of 15 seconds on each vignette page before progressing, and the time they spent on each vignette was recorded.

2.3 Sample

We recruited participants from Kantar, our panel participant provider, using quota sampling based on age and gender for each country. The distribution was: 25% 25-39 years female, 25% 25-39 years male, 25% 40-50 years female, and 25% 40-50 years male. We recruited varying numbers of participants from each country (1226, 1060, 1045, 1085, 314, 1508, 1107, and 1585 for urban China, Italy, Japan, Korea, Norway, Singapore, Spain, and the US respectively). The average educational level is a short-cycle tertiary education (5.09 on the ISCED 1-8 scale). Specifically, the shares with an educational level of bachelor's degree or higher constituted 51.84% of the Japanese participants, 52.82% of the Singaporean participants, 66.72% of the Korean participants, 67.85% of the Chinese participants, 32.89% of the Norwegian participants, 43.36% of the Italian participants 54.54% of the Spanish participants, and 32.99% of the American participants. Monthly household income was adjusted to represent a three-person household in euro value, ranging from 2356 euros for Italy to 6761 euros for Singapore.

2.4 Analytical Strategy

To estimate the effect of each factor on perceived social norm and personal value, we use the pooled sample of eight countries to estimate a three-level random intercept model, with vignette responses nested in individual respondents that nested in country:

$$Rating_{ijc} = \alpha_{jc} + \sum_{i=1} + \beta_i VignetteFactor_{ijc} + e_c + u_{jc} + v_{ijc} \quad (1)$$

$Rating_{ijc}$ represents the dependent variables measuring the extent to which a respondent rates a given vignette presented as “successful” (i.e., social norm) and as desirable (i.e., personal value).

To estimate the effect of each factor on perceiving a given vignette as successful but not as desirable, we use the pooled sample of eight countries to estimate a three-level random intercept logistic regression model, with vignette responses nested in individual respondents that nested in country:

$$logit\{Pr(Normative_{ijc} = 1)\} = \alpha_{jc} + \sum_{i=1} + \beta_i VignetteFactor_{ijc} + e_c + u_{jc} + v_{ijc} \quad (2)$$

$Normative_{ijc}$ equals one when a given vignette is rated more successful than desirably. $VignetteFactor_{ijc}$ are experimental variables representing different family dimensions of the vignette i for respondent j in country c . In addition, α_{jc} is the random intercept; e_c is the country-level error term; u_{jk} is the respondent-level error term; and v_{ijc} is the vignette-level error term.

3 Result

3.1 Descriptive result

Table 2 shows the mean and standard deviation of the outcome variables. Both female and male respondents tend to the family scenarios portrayed in the vignettes more successful than desired. On average, 47% of the vignettes are rated more successful than desired

while 18% are rated more desired than successful. T-tests were conducted to compare female's and male's responses. Females are significantly more likely to give higher ratings of being successful than being desirable. That is, they tend to see the family scenarios as normatively fitting but not personally desirable.

3.2 Normative vs. Desired Family

Figure 1 displays the experimental estimates of successful and desirable ratings for women and men. Both women and men consider marriage, parenthood (1-child relative to no children), and an egalitarian gender role (relative to commonplace gender role) as the least crucial aspects of the successful or desired family. In contrast, good communication, an income higher than the average, community respect, work-family balance for both spouses and frequent contact with (grand)parents are deemed more relevant for both success and desirability. Men generally share these values, except they place slightly less emphasis on communication than women. There is no significant difference between ideal family from a normative perspective and from a personal value perspective. However, this lack of difference could result from contrasting factors that offset the influence of some over others.

Figure 2 shows how the discrepancy between social norms and personal values is associated with different dimensions of family life. For women, having three children is considered successful but not desired. This effect is absent for men, and men consider having no children more successful than desired. This difference illustrates the nuance in the fertility ideal. Upper (i.e., high fertility) and lower (childless) limits have different implications. Women are aware of the social reward of having high fertility but they would not want it for themselves. In contrast, men see the relaxing norm about being childless as undesirable.

Lower and upper limits are also seen asymmetrically on income. While men see lower-than-average income as more socially acceptable but not desirable, women see higher-than-average income as less normatively required but desirable.

There is also apparent gender difference in perceiving the importance of gender roles. Women, but not men see egalitarian gender roles as less normatively required but desirable.

Lastly, both men and women see frequent and healthy communication with extended and immediate family members, in addition to being respected in the community, as highly appreciated yet less commanded by the norm.

3.3 Norm-value discrepancy and fertility behavior

Figure 3 and 4 show how norms and values of parenthood and fertility relate to actual behaviors and plans. While both childless men and women who have no plan to have children do not see parenthood as desirable, women clearly see childlessness as a violation of the norm. Both women and men who have 1 child and no plan to have additional ones see parenthood as personally and normatively important while they see having 2 or 3 children as not desirable but successful. Individuals, particularly males that have two children (or 1 child with the plan) value having 2 children even more than the normative standard. Surprisingly, only females with 3 or more children (or 2 with the plan) value parenthood and three children personally more than the norm appreciates whereas their male counterparts do not show a discrepancy between social norm and personal value.

In general, women have more clearly defined and differentiated fertility norms and values. The perception of the norm-value discrepancy (see figure 3) to childlessness is almost linear to quantum fertility. As mentioned earlier, women see having high fertility (i.e., having 3 children) as normatively approved but not personally valued. Yet, women who have three children perceive norms and values in the opposite way. This suggests that women who have 3 or more children consider high fertility personally relevant and desirable surpassing what social norms might command. Conversely, men with high fertility see a higher level of alignment between social norms and personal values with regard to parenthood and the number of children.

4 Conclusions

People recognize the nuanced distinction between social norms and personal values. This norm-value discrepancy manifests differently for women and men, indicating that women and men perceive and contend with the grip of social norms differently. Women consider childlessness not only personally undesirable but also socially unsuccessful, while men view childlessness as merely undesirable but normative. There's agreement among both genders that social norms overlook more relational and qualitative aspects of family life. They highly value frequent and healthy communication within the extended and immediate family, as well as being respected in the community, which is less mandated by societal norms. Additionally, women recognize that while they personally appreciate egalitarian gender roles, these are not as valued by societal norms.

Connecting the norm-value gap to actual fertility behavior, our research demonstrates that fertility choices are primarily influenced by personal values. Individuals whose behaviors diverge from societal norms are aware of the mismatch between their personal choices and societal norms. For instance, those who choose not to have children and have no intention of doing so are conscious that this choice opposes the societal norm.

In conclusion, individuals, especially females are well aware of the nuanced difference between norms and values. This difference revolves around the potential repercussions of contravening social norms, which carry negative connotations and implications. On the other hand, personal values reflect preferences and motivations for specific roles or behaviors. Not realizing personal values does not lead to negative social consequences such as being deemed unsuccessful. This study highlights the importance of distinguishing between norms and values in survey questions and empirical research, as this differentiation is critical for enhancing our understanding of demographic transitions and behavioral changes.

Table 1: Vignette factors and levels.

Factors	#	Content
Union status	2	Cohabiting Married
Fertility	4	No children 1 child 2 children 3 children
Household income	3	Below average Around average Above average
Community respect	2	Well-respected Not well-respected
Family communication	2	Comfortable expressing feelings & raising disagreements Not Comfortable
Contact with extended fam.	2	Frequently Not frequently
Gender roles	3	Traditional Commonplace Egalitarian
Work-family balance	4	Fem. not conflicted & male conflicted Fem. conflicted & male not conflicted Neither fem. nor male conflicted Both fem. & male conflicted

Figure 1: Normative and desired family

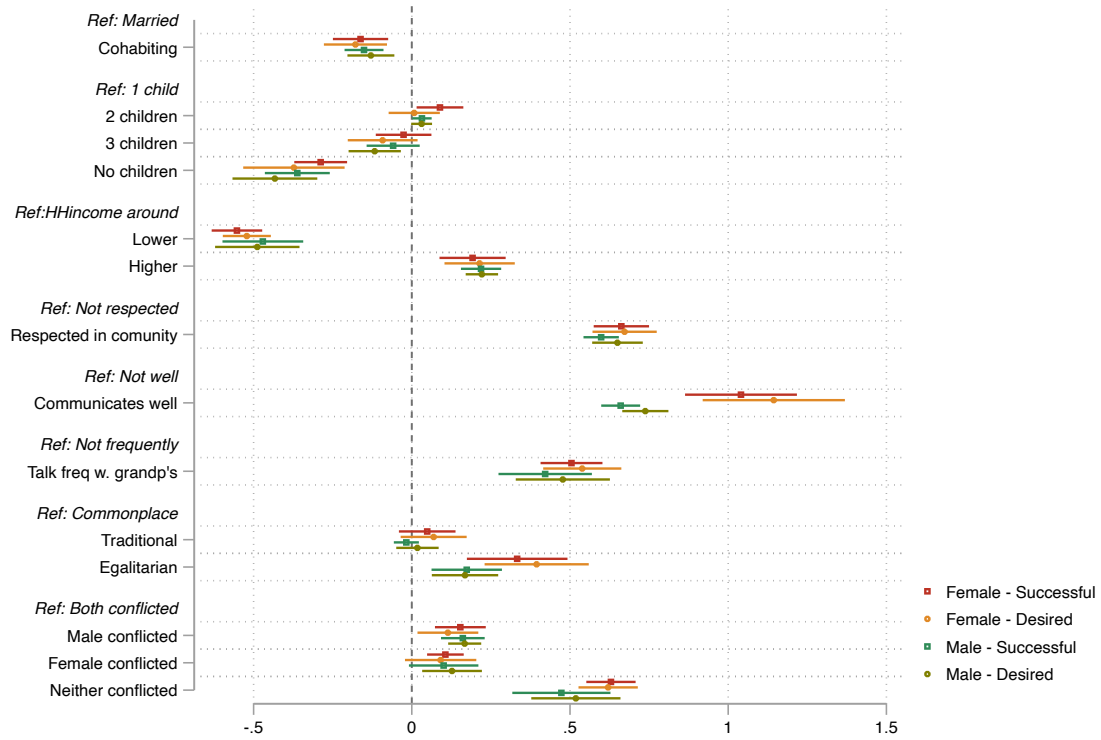


Table 2: Ratings of successful and desired family by sex

	Male	Female	Diff	T	Total
Ratings					
Successful family	5.44 (2.33)	5.10 (2.44)	0.35	15.86**	5.27 (2.39)
Desired family	4.92 (2.68)	4.33 (2.85)	0.59	23.35**	4.62 (2.78)
Comparison between ratings					
More successful than desired	0.44 (0.50)	0.49 (0.50)	-0.05	-17.72**	0.47 (0.50)
Aligned	0.36 (0.48)	0.35 (0.48)	-0.01	3.44**	0.35 (0.48)
More desired than successful	0.20 (0.40)	0.16 (0.36)	0.04	18.92**	0.18 (0.38)
Family plan and behavior					
No children no plan	0.27 (0.45)	0.27 (0.44)			0.27 (0.44)
No children with plan	0.19 (0.39)	0.17 (0.37)			0.18 (0.38)
1 child with plan	0.16 (0.37)	0.17 (0.38)			0.17 (0.37)
2 children & 1 child with plan	0.26 (0.44)	0.26 (0.44)			0.26 (0.44)
2 children with plan & 2+ children	0.11 (0.31)	0.13 (0.34)			0.12 (0.33)

Mean coefficients; SD in parentheses

Figure 2: Perceiving vignette as more successful than desired

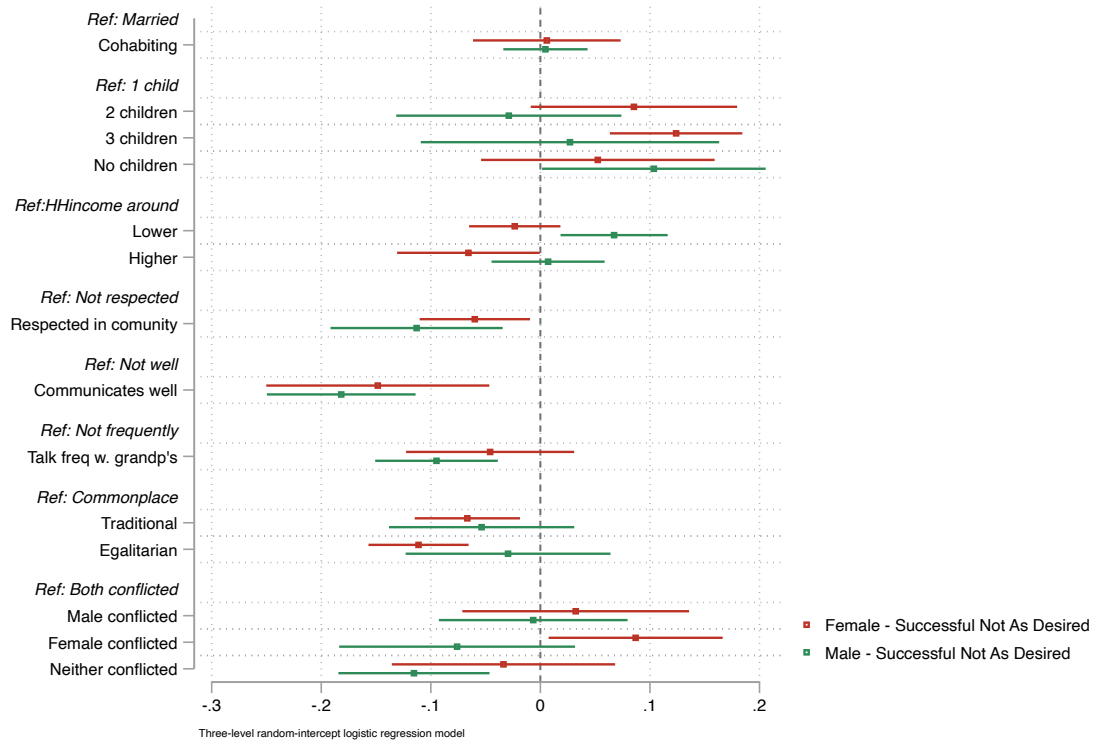


Figure 3: Perceiving vignette as more successful than desired

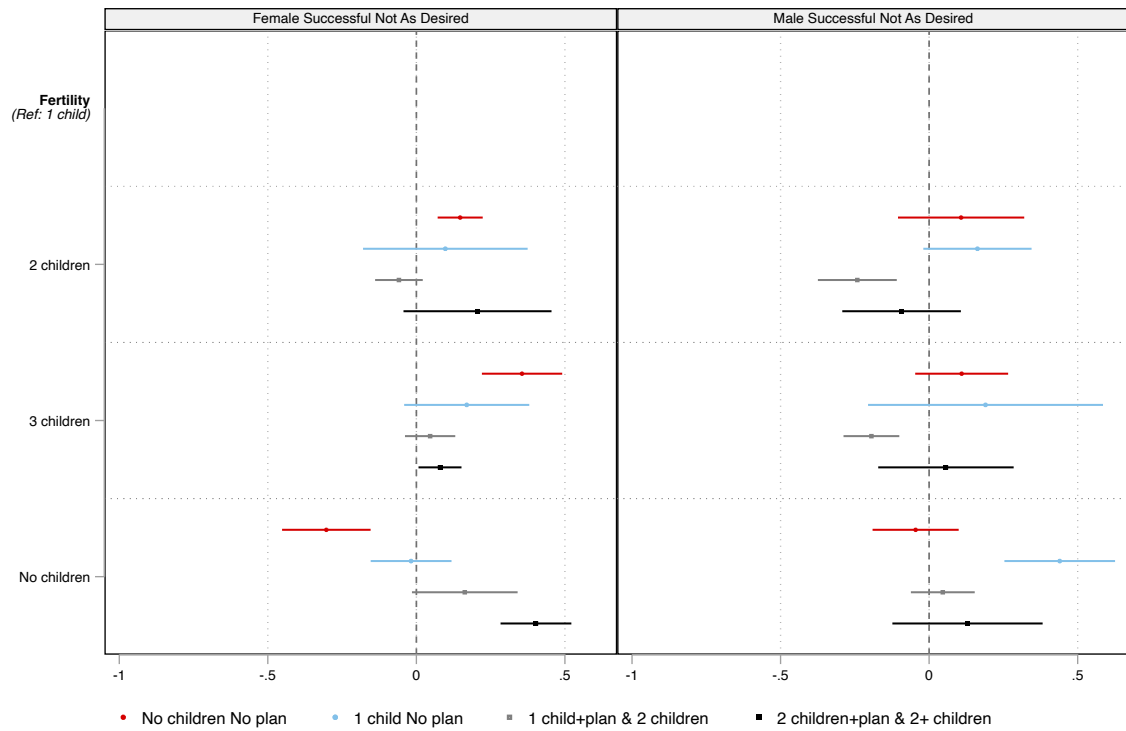


Figure 4: Perceiving vignette as more desired than successful

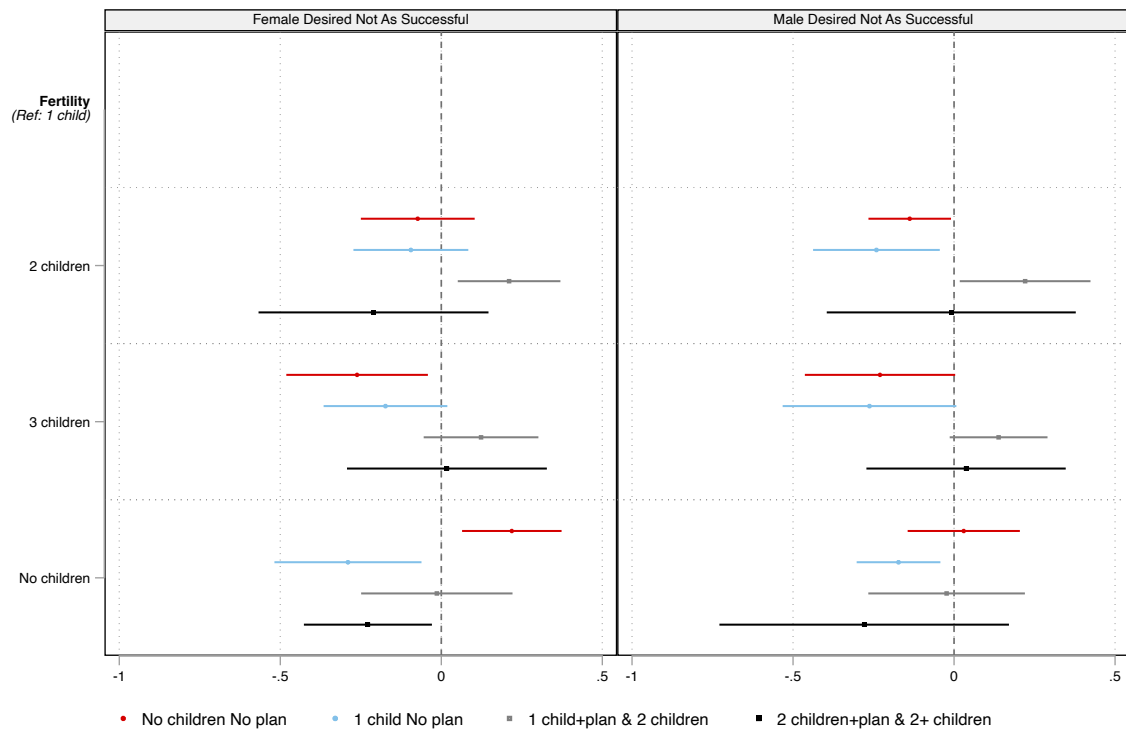
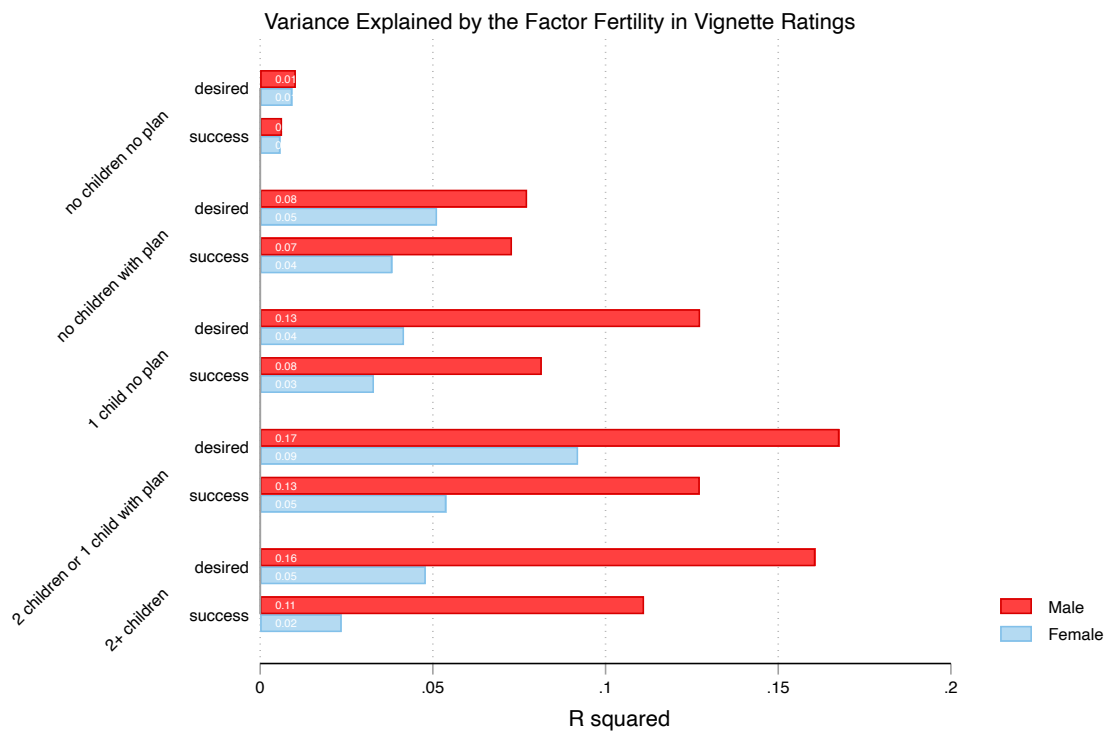


Figure 5: Perceiving vignette as more desired than successful



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Appendix - The Importance of Differentiating Personal Values from Social Norms: A Factorial Survey
Experiment.

Table 1: Correlation between factors

	union stauts	fertility	HH income	respect	fam. communication	ext.fam. contact	gender role	work-family conflict
union status	1							
fertility	0.00483	1						
HH income	-0.00279	0.00410	1					
community respect	-0.00511	-0.00449	0.00320	1				
fam. communication	0.00847	-0.00181	0.00135	0.0131	1			
ext.fam. contact	0.0108	0.00567	0.0111	0.0104	-0.00443	1		
gender role	-0.00135	0.00125	-0.00250	0.00406	-0.00258	-0.0125	1	
work-family conflict	0.0103	-0.00431	0.000103	0.00572	0.00721	-0.00365	0.00418	1

Table 2: Correlation between factors and sample characteristics

	union	fertility	income	respect	famcom	extfamcom	genderrole	WLB	childdu	finsupport
female	0.00197	-0.00312	-0.000756	-0.00160	-0.00140	-0.00100	0.00118	-0.00239	0.000549	0.00141
edu_self	-0.000734	0.00192	-0.000708	0.000149	0.000139	0.00253	-0.000731	-0.00197	0.000164	-0.00105
married	0.000442	0.000384	-0.000267	-0.000804	-0.000273	0.00183	-0.00121	0.00116	-0.000963	-0.000590
single	0.000499	0.000231	0.0000449	0.00152	0.000586	-0.000464	0.000546	-0.000722	0.000184	-0.000582
catholic	-0.000983	0.00104	0.000253	0.000570	0.000242	0.000148	0.000373	0.000545	0.0001000	-0.000637
haschild	0.000318	-0.0000688	0.000980	-0.000888	0.000924	0.00155	-0.00201	0.00110	-0.000160	0.00127
working_self	-0.00232	0.000456	-0.000527	0.00306	0.00139	0.000699	-0.0000858	0.00199	-0.000105	0.00000183
hhinc_adjusted	0.00137	0.00109	-0.000652	-0.000513	0.00116	-0.000541	0.00117	-0.0000957	-0.000453	0.000137

Table 3: Descriptive Statistics by Country

	China	Italy	Japan	Korea	Norway	Singapore	Spain	USA	Total
Sample Description									
Age	37.80 (7.07)	39.51 (6.84)	39.77 (6.81)	38.76 (6.95)	39.92 (6.80)	36.82 (7.07)	38.75 (7.15)	38.83 (6.53)	38.56 (6.98)
Female	0.49 (0.50)	0.51 (0.50)	0.49 (0.50)	0.47 (0.50)	0.53 (0.50)	0.51 (0.50)	0.49 (0.50)	0.53 (0.50)	0.50 (0.50)
High school	0.99 (0.11)	0.92 (0.28)	0.97 (0.18)	0.99 (0.08)	0.95 (0.22)	0.86 (0.35)	0.90 (0.30)	0.96 (0.18)	0.94 (0.24)
High school <i>Parent's Generation</i>	0.62 (0.49)	0.61 (0.49)	0.92 (0.27)	0.75 (0.44)	0.88 (0.33)	0.59 (0.49)	0.53 (0.50)	0.86 (0.35)	0.70 (0.46)
Tertiary education (ISCED 6)	0.70 (0.46)	0.42 (0.49)	0.54 (0.50)	0.69 (0.46)	0.42 (0.49)	0.52 (0.50)	0.56 (0.50)	0.44 (0.50)	0.54 (0.50)
Tertiary education (ISCED 6) <i>Parent's Generation</i>	0.15 (0.36)	0.19 (0.39)	0.42 (0.49)	0.28 (0.45)	0.34 (0.48)	0.23 (0.42)	0.23 (0.42)	0.31 (0.46)	0.26 (0.44)
Single	0.15 (0.36)	0.29 (0.46)	0.52 (0.50)	0.43 (0.50)	0.30 (0.46)	0.34 (0.47)	0.31 (0.46)	0.30 (0.46)	0.32 (0.47)
Married	0.80 (0.40)	0.38 (0.49)	0.43 (0.49)	0.52 (0.50)	0.39 (0.49)	0.59 (0.49)	0.47 (0.50)	0.51 (0.50)	0.53 (0.50)
Cohabiting	0.03 (0.16)	0.27 (0.44)	0.00 (0.06)	0.02 (0.13)	0.22 (0.41)	0.03 (0.17)	0.16 (0.37)	0.06 (0.24)	0.08 (0.28)
No children	0.23 (0.42)	0.54 (0.50)	0.65 (0.48)	0.53 (0.50)	0.40 (0.49)	0.54 (0.50)	0.44 (0.50)	0.29 (0.45)	0.44 (0.50)
1 child	0.60 (0.49)	0.23 (0.42)	0.14 (0.34)	0.24 (0.43)	0.18 (0.38)	0.27 (0.44)	0.29 (0.45)	0.18 (0.39)	0.28 (0.45)
2 children	0.16 (0.37)	0.20 (0.40)	0.17 (0.37)	0.20 (0.40)	0.26 (0.44)	0.11 (0.32)	0.23 (0.42)	0.31 (0.46)	0.20 (0.40)
3 or more children	0.01 (0.08)	0.03 (0.18)	0.04 (0.20)	0.03 (0.16)	0.16 (0.37)	0.08 (0.27)	0.04 (0.19)	0.22 (0.41)	0.08 (0.26)
Number of children <i>if has child(ren)</i>	1.22 (0.43)	1.59 (0.66)	1.75 (0.74)	1.55 (0.61)	2.08 (0.96)	1.66 (0.95)	1.57 (0.67)	2.21 (1.06)	1.69 (0.86)
Fertility <i>all female</i>	0.97 (0.68)	0.80 (0.95)	0.64 (0.94)	0.74 (0.91)	1.36 (1.30)	0.85 (1.15)	0.84 (0.92)	1.77 (1.40)	1.02 (1.13)
HH income (euro) <i>adjusted for 3-person hh</i>	3320.71 (2871.88)	2361.29 (1816.73)	2687.04 (6114.61)	4196.76 (5221.87)	5228.80 (3825.39)	6923.50 (9657.60)	2354.27 (1444.39)	4522.69 (4656.64)	3985.35 (5563.94)
Experiment Outcome Variables									
Successful family	5.21 (2.41)	5.04 (2.39)	4.86 (2.13)	4.78 (2.19)	4.90 (2.26)	5.79 (2.21)	5.00 (2.39)	5.85 (2.63)	5.27 (2.39)
Parent's Gen Successful Fan	5.32 (2.54)	5.11 (2.50)	4.72 (2.29)	4.67 (2.29)	4.84 (2.43)	5.74 (2.27)	5.29 (2.50)	5.81 (2.72)	5.28 (2.50)
N	1226	1060	927	1085	314	1508	1107	1585	8812

Mean coefficients; SD in parentheses

Table 4: Experiment 1 Three-level Logistic Model All Countries

	(1) Female HE - Normative b/se	(2) Female No HE - Normative b/se	(3) Female HE - Preferred b/se	(4) Female No HE - Preferred b/se	(5) Male HE - Normative b/se	(6) Male No HE - Normative b/se	(7) Male HE - Preferred b/se	(8) Male No HE - Preferred b/se
Married	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Cohabiting	-0.02 (0.05)	0.03 (0.04)	0.01 (0.05)	-0.02 (0.03)	0.08** (0.03)	-0.10** (0.04)	-0.01 (0.04)	0.09 (0.06)
1 child	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
2 children	0.08 (0.07)	0.10 (0.06)	-0.03 (0.11)	-0.03 (0.08)	-0.03 (0.07)	-0.03 (0.07)	0.03 (0.07)	-0.04 (0.02)
3 children	0.13 (0.07)	0.12* (0.05)	0.01 (0.10)	-0.03 (0.09)	0.04 (0.10)	0.01 (0.07)	0.00 (0.08)	-0.16* (0.08)
No children	0.00 (0.07)	0.10 (0.07)	-0.06 (0.12)	-0.04 (0.11)	0.15* (0.07)	0.03 (0.09)	-0.05 (0.09)	-0.06 (0.07)
Lower	-0.02 (0.03)	-0.02 (0.02)	0.09 (0.06)	0.02 (0.07)	0.03 (0.05)	0.12** (0.04)	-0.10 (0.07)	-0.04 (0.04)
Around	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Higher	-0.13** (0.04)	0.00 (0.05)	0.21** (0.06)	0.01 (0.06)	-0.02 (0.05)	0.04 (0.03)	0.02 (0.06)	0.12 (0.09)
Respected in community	-0.01 (0.05)	-0.11** (0.03)	0.14* (0.07)	0.02 (0.04)	-0.05 (0.05)	-0.20** (0.04)	0.11** (0.04)	0.12* (0.05)
NOT respected in community	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Communicates well	-0.11* (0.05)	-0.18** (0.07)	0.26** (0.04)	0.29** (0.05)	-0.15*** (0.04)	-0.23** (0.05)	0.10 (0.05)	0.08* (0.04)
Communicates NOT well	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Talk freq w. grandp's	-0.02 (0.04)	-0.07 (0.06)	0.22** (0.05)	0.06 (0.08)	-0.09* (0.04)	-0.10* (0.04)	0.10** (0.03)	0.07 (0.05)
Talk NOT frequently	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Traditional	-0.05 (0.04)	-0.08 (0.06)	-0.00 (0.08)	0.12 (0.10)	-0.08 (0.05)	-0.02 (0.07)	-0.03 (0.05)	0.11 (0.07)
Commonplace	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Egalitarian	-0.11** (0.03)	-0.11** (0.04)	0.08 (0.08)	0.15* (0.07)	-0.03 (0.04)	-0.03 (0.07)	-0.05 (0.08)	0.08* (0.03)
Male conflicted	0.07 (0.06)	-0.00 (0.05)	0.03 (0.06)	-0.01 (0.04)	-0.04 (0.04)	0.04 (0.08)	0.10 (0.11)	-0.07 (0.08)
Female conflicted	0.05 (0.08)	0.13* (0.05)	0.04 (0.10)	0.01 (0.06)	-0.12 (0.07)	-0.02 (0.07)	0.07 (0.08)	-0.03 (0.08)
Neither conflicted	-0.02 (0.05)	-0.05 (0.07)	0.09 (0.08)	0.09 (0.09)	-0.16** (0.05)	-0.06 (0.06)	0.16 (0.11)	-0.01 (0.07)
Both conflicted	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
_cons	0.52** (0.12)	0.21 (0.16)	-2.82** (0.23)	-2.19** (0.16)	0.17 (0.17)	0.19 (0.15)	-2.14** (0.28)	-1.99** (0.12)
var(_cons[country])	0.03* (0.02)	0.07 (0.04)	0.07* (0.03)	0.06 (0.04)	0.04 (0.03)	0.06 (0.03)	0.13* (0.06)	0.06 (0.04)
var(_cons[country pid])	1.59** (0.06)	1.37** (0.25)	1.74** (0.20)	1.33** (0.21)	1.54** (0.17)	1.35** (0.20)	1.73** (0.19)	1.29** (0.20)
Observations	12024	12000	12024	12000	14076	9810	14076	9810

Note: 3-level Random Intercept Model. * p<0.05, ** p<0.01

Chapter 3

Assortative Mating and Differential Fertility

During the past four decades, China's economy has grown fifty times. This fast-paced economic development has accelerated the completion of first demographic transition: while China's population doubled, its total fertility rate has shrunk to one quarter of its peak (from 6.4 to 1.6). Economic development also has narrowed the gender gap in life expectancy, education attainment, and labor force participation. As in 2010, women have received on average 8.8 years of education and men of 9.1 years (Attané, 2012), and in recent years, there are more women in tertiary education than men (Ji, 2015). Female labor force participation remained high around 70% in recent years (Zhang et al., 2008; Ji, 2015) coexisting with persisted and even enlarging gender wage gap and employer's discrimination towards females (Gustafsson and Li, 2000; Chi and Li, 2008; Zhang et al., 2008). Moreover, traditional norms and values have persisted through time (Whyte, 2005), and Confucian traditions regarding gender roles have revived in recent years (Zuo, 2003; Fincher, 2014). As Cultural Lag Theory predicted, cultural changes lagged behind rapid economical development (Ogburn, 1922). And the persisted traditional norms are more pronounced in the family life where men and women (to a less extent) still endorse the breadwinner male and homemaker women gender role (Kim et al., 2010; Ji, 2015; Zuo and Bian, 2001).

While all women in China enjoyed the dividends from economic development and share similar obstacles in public and private sphere, women from rural areas benefited less from education expansion yet carried heavier gender-related burdens. Despite education expansion has increased the number of students in tertiary schooling by more than six times, and closed gender gap in education for the compulsory 9-year education (Wu and Zhang, 2010). gender inequality in education is much higher than in rural area than in urban area. While urban female's the average years of schooling has surpassed urban men since the 1980 cohort, rural females still have the

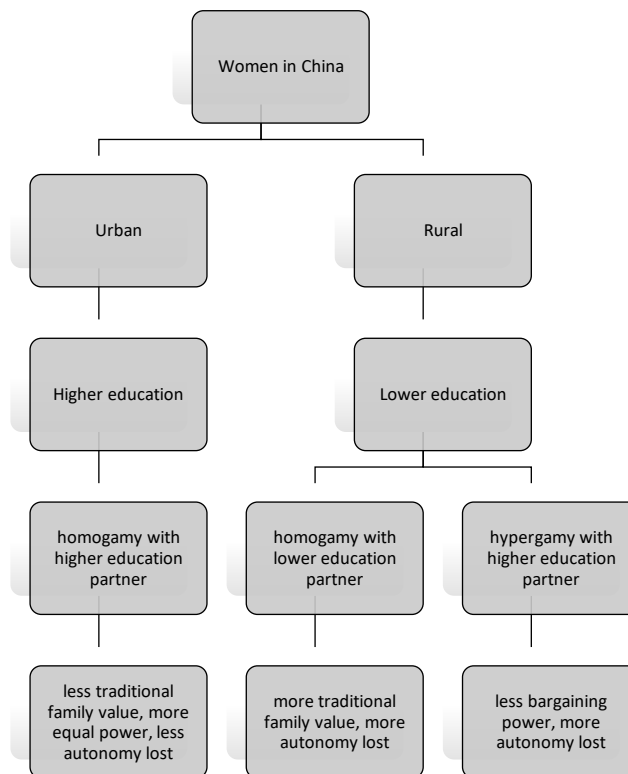
shortest education duration and lowest chance to transit from compulsory education to education level (Wu and Zhang, 2010; Yeung, 2013). In addition, urban females earned on average 17.5% less than urban males (e.g., Gustafsson and Li, 2000), whereas rural female earned on average 29.7% less than rural males (as in 2002; Magnani and Zhu, 2012). On top of the greater gender income gap, the urban-rural income gap is about 3 to 4 times (Sicular et al., 2007). Consequently, women from rural area are placed at the bottom of the social ladder and have least chance of climbing up.

If education and working hard contribute little in upward mobility for rural women, what about marriage? Heterogamy can reduce the social distance between spouses, and thus the prevalence of heterogamy versus homogamy is often seen as an indicator of social openness, inequality and mobility (Ermisch, Francesoni, and Siedler, 2006; Fernandez, Guner, and Knowles, 2005; Smits, 2003). Han (2010) studied the effect of education expansion on marriage pattern and found that the educational homogamy became more and more prevalent in rural China since the tertiary education expansion. One possible reason is that when more rural men went to university in urban area, rural women can only marry men left in the rural area with similar educational level. If the story ends here, then these rural women in a homogamous marriage would have similar bargaining power than their urban counterparts. However, given the larger gender income gap for rural population and more delayed and traditional gender role set for women, women in rural China may need to comprise much her autonomy in the family and private sphere compared to women in urban China. Indeed, while the sex ratio at birth (SRB) is very masculine skewed, it is even more skewed in rural China. The peak of SRB reached in 2005: 122.9 male births in the rural area and 117.1 male births in the urban area per 100 female births (UNICEF, 2018). Under the One Child Policy in China, it is inevitable to perform pre-natal abortion or post-natal sex selection to realize such unnatural level of SBR (Li, Yi, & Zhang, 2011). Theories explaining skewed SBR maintains that it is up to the woman to realize her son preference and subsequent voluntarily abort the female fetus

(e.g., Guilimoto, 2009), neglecting the evidence that men tend to have stronger son preference than women (Mason and Taj, 1987). Therefore, it is unclear how husband and wife resolve differences in son preference and reach to a mutual agreement of abortion (Bongaart, 2013). In the case of Chinese women aborting female fetus, I argue that there at least exist a proportion of women who made the decision to abort under the pressure of the husband instead of her own strong son preference.

This paper sets out to discuss the diverging destinies in marriage and fertility faced by rural and urban China (illustrated by Figure A). by investigating the effect of marriage pattern on fertility behavior and childrearing decisions.

Figure A.



The remaining part of this paper is organized as follows. First, I will review the literature on educational homogamy, educational inequality and cultural (value) change with regard to the urban-rural divide in China. Based on the literature reviewed, I derive testable hypotheses related to Figure 1. Then, I will present the research design and result. Lastly, I will conclude with indication for limitation and future study.

Assortative Mating and Education Inequality in China

Assortative mating refers to the nonrandom matching of individuals into relationship. One form of assortative mating is homogamy where *marriage* occurs between two individuals with similar trait such as educational homogamy. Since marriage is still almost universal in China, this paper focuses on homogamy, in particular education homogamy. Under an economic lens, both homogamy and heterogamy can maximize individual's utility depending on if the traits under investigation are complements or substitutes (Becker, 1981). Becker further argues that in an industrialized society where specialization brings higher return to scale, husbands specializing in work while women specializing in home (hence the classic breadwinner male and homemaker female) would bring more gains to the household. However, with women's increasing educational attainment and higher labor market participation, dual-earner family can bring in more return from schooling than single earner family. Hence, from an economic angle, educational homogamy is a better strategy for highly educated women and men (Kalmijn, 1991; Lewis and Oppenheimer, 2000; Schwartz and Mare 2005).

One important backdrop against educational homogamy in China is the rapid education expansion started in the 1970s. Education expansion had several effects on the population (Yang, 2014). First, it increased the average education level and decreased the overall educational inequality. Second, it decreased the gap between man and woman in all educational levels. Third, the rural-

urban inequality is the biggest source of educational inequality. That being said, higher education institutions have created with a marriage market with enlarging number of similarly educated candidates in urban area. Hu and Qian (2016) found that higher education expansion increased young men and women's preference for highly educated spouse, and it also boosted up the availability of highly and similarly educated candidates, which lead to an increase in educational homogamy by comparing the cohort educated before the education expansion and the cohort educated during the education expansion.

In an earlier research with both urban and rural samples, Han (2010) found similar result that educational homogamy was more prevalent in later cohort. In addition, she found that educational homogamy happened later in rural areas, but it quickly caught up and slightly surpassed urban area in the early 2000s. Since most of the higher education institutions (including universities and vocational schools) are in urban areas, students coming from rural area most probably remain in urban area. And since the tertiary education expansion, the marriage market in the rural area might have contained only men and women with lower education level (e.g., high school and below), and therefore rural residents become more likely to "like marry like". Still, rural men on average still have higher education, so hypergamy should still remain as dominant form of marriage in rural area.

Assortative Mating and Fertility Decisions

Since the 1980s, more males than females were born in China to an alarmingly unnatural level, even more so in rural areas. The peak of SRB reached in 2005: 122.9 male births in the rural area and 117.1 male births in the urban area per 100 female births (UNICEF, 2018). This masculine skewed SRB was consequential of son preference and made possible by prenatal sex selection and decreasing family size (Guilmoto, 2009). While the story always starts with a mutual son preference between the couple on the micro level, it is not clear how husband and wife resolve

differences in son preference and reach to a mutual agreement of abortion (Bongaart, 2013). In fact, the husband's role in reproductive behavior is largely overlooked in early demographic theories and researchers (Greene and Biddlecom, 2000). And modernization theory being the backbone of many demography theories prescribe that under the process of economic development and modernization, that union formation and fertility decisions become personal choices void of third party influence (e.g., families, state; Schwartz, 2013).

However, in a collectivist and patriarchal society like China where marriage is still near universal and marriage almost definitely lead to childrearing (Raymo, Park, Xie and Yeung, 2015), fertility decisions are seldom personal (autonomous) or feminine. Although bargaining power between partners are usually identified with on their relative earnings power or contribution to household income (e.g., Browning et.al. 1994), bargaining power within a household is multifaceted. Who has more power in deciding the vacation destination is different from who has more power in deciding if the woman bears a second child. I argue that assortative mating by education can proxy for intrahousehold bargaining power related to fertility decision in China for two reasons. First, children's education has been *the* central theme in East Asian parenting (Raymo et al., 2015). The high cost of private extracurricular education has been linked to lowest low fertility rate in South Korea (Anderson and Hans- Kohler, 2013). Given the strong intergenerational transmission effect of education, the spouse who has the higher educational level would be the more important factor in determining the child's success, and hence it gives the person with more education more bargaining power in fertility and parenting related decisions. Second, from the contribution to household income angle, in most countries there still exist a significant gender income gap even accounting for return for schooling. In addition, rural women in China suffer from lower education, and hence lost in the battle of gaining marital power long before getting married due to the increasing return to schooling and its deteriorating effect on gender income gap (Zhang et al., 2008).

In a recent study, Qian and Jin (2018) found that women were more likely to be pressured to consider having a second child by their husband if they have less marital power than their husband. And wife's marital power is negatively related to educational hypergamy, living with husband's parents, husband having higher income, and husband's parents having higher education level than wife's parents. Their study uses fertility intention to proxy for fertility behavior.

The current study utilizes a series of factors to identify the effect of marriage pattern on fertility decision and behavior. More specifically, I hypothesize that, hypergamy is related to lower likelihood of women taking charge in child-related decisions (Hypothesis 1A), but not related to other intrahousehold decisions (Hypothesis 1B). Moreover, hypergamy is related to higher likelihood of having last child (that is only the only child) as boy (Hypothesis 2A), and also higher likelihood of having only one daughter (Hypothesis 2B).

Method

Sample

All individual level data are from the Chinese General Social Survey (CGSS) of the year 2003, 2006, 2010, 2012, and 2015. Using the Probability Proportional to Size (PPS) sampling method, the CGSS has a relatively representative sample of adult Chinese (Bian & Li, 2012). Only responses from individuals who were born after 1955, only married once, and whose first born child was born in or after 1979 were used. Compared to 2010 census, the current sample consists of more females, more urban residents, and more urban Hukou holders. Since the sample is of parents, their age is older than the general population.

Table 1.	Sample	2010 Census
N	19,800	133281086
		9
% Female	54.46	48.05
% Rural Residence	40.96	50.32
% Rural <i>Hukou</i>	49.69	69.70
% <i>Han</i>	91.58	91.60
% CCP member	10.00	
Age	39.72	36.70
Household Income in CNY	47957.82	
# Children	1.43	
% One child	64.76	
% Only one daughter	26.68	
% Last Born Son	59.55	

Respondents of all CGSS surveys were asked to list their family members, and their corresponding sex, birth year, education level, and relationship with the respondent. From this series of questions, I compiled the number of children, the gender of the children, and the sex of children.

Furthermore, I deducted if the respondents had only one child, the sex of child, and the sex of the first and last born.

In years of 2010 and 2015, there were also direct questions about how many sons and daughters the respondents had. While these questions might render a more accurate count of the children, I can not deduct the gender of the first born and last born if they have more than one child. However, there exist measurement error in these two measures. For example, there are 41 respondents reported that they had no children, yet on the list of family member, they reported that they had children, and their corresponding detailed information. All responses with inconsistent reporting of the number of children were removed.

Analytical strategy

Logistics regression will be performed to test the hypotheses. All analyses will first include rural hukou as a dummy variable, and then analysis will be performed separately between the rural sample and the urban sample for comparison. Hukou is part of the household registration system, and it is determined at birth, being either agricultural or non-agricultural. Hukou is central to the implementation of One Child Policy, since in 19 out of 31 provincial level administrative divisions in Mainland China (not including Hong Kong and Macau), couples have agricultural (rural) hukou were allowed to have a second child if the first child is a girl. While people with rural hukou could work and live in the city, they cannot enjoy the same welfare (including children's education) as people with urban hukou. Education is the most available and important way to change one's hukou status from rural to urban is to go to universities in the city (Wu and Treiman 2004).

Independent Variables

Education was measured in terms of the highest degree achieved, and there are six levels of education: no formal education/illiterate; elementary school (5-6 years), middle school (8-9 years), high school (11-12 years), some college degree that is not a 4-year bachelor degree (13-15 years), bachelor study (16 years), and post graduate studies (17+ years).

Homogamy is operationalized as the husband and wife have the exact same level of education. Hypergamy is operationalized as husband's education is higher than wife's, and vice versa for hypogamy.

Control Variables

Ethnicity, Chinese Communist Party (CCP) membership, and marriage cohort were entered into the model as control variables. Ethnic minorities were allowed to have two children (Li, Yi, and Zhang, 2015). CCP membership was found to be negatively influencing son preference (Murphy, Tao & Xu, 2011). They were all coded as dummy variables of either being the majority Han (1) or not, of a CCP party member or not. Marriage cohort is operationalized as a continuous variable from 1 to 5 indicating the decade of marriage from 1970s to 2010s.

Dependent Variables

The first set of dependent variables are related to decision making within the household. Child-related decision making is assessed by the question "who takes the lead in parenting children?". Non child-related decision making is assessed by the question "who makes the decision of what do at a special weekend?". Both questions have five choices: "mainly me", "mainly him/her (the partner)", "sometimes me, sometimes him/her", "together", "other people". In both cases, woman dominant decision making was coded as a dummy variable with 1 meaning the wife mainly makes the decision.

The first set of dependent variables are fertility behavior that had been committed to: only daughter and last born son were both coded as dummy variables. Only daughter refers to individuals who has only one female child. Last born son refers to the last born child being a boy and this boy is of at least second parity.

Result

Descriptive results

First, with regard to educational inequality between rural and urban, rural women are less educated than urban women. Urban women's median educational level progressed from middle school (junior high) to high school/vocational school since the cohort of 1970-1979. Rural women's median educational level progressed from primary school to middle school (junior high) since the cohort of 1975-1979. Both groups of women did not make significant progress in education since then.

Second, both rural and urban woman shift from hypergamy to homogamy upon reaching the education level of junior high (middle school, see Figure 1 for frequency of marriage pattern by women's education level). For rural woman, education level surpassing junior high means being more likely to marry less educated men. In contrast, for urban woman, surpassing junior high means being more likely to marry more or equally educated men. Among the 19800 individuals ranging from 18 to 60 years old at the time of the survey (2003, 2006, 2010, 2012 and 2015), homogamy has become the dominant mating pattern for both urban and rural population. Figure 2 depicts the change of mating pattern between rural and urban population across marriage cohorts. While urban population made the biggest shift from hypergamy to homogamy during the marriage cohort of 1990s, rural population made the biggest shift during the marriage cohort of 1980s.

Figure 1.

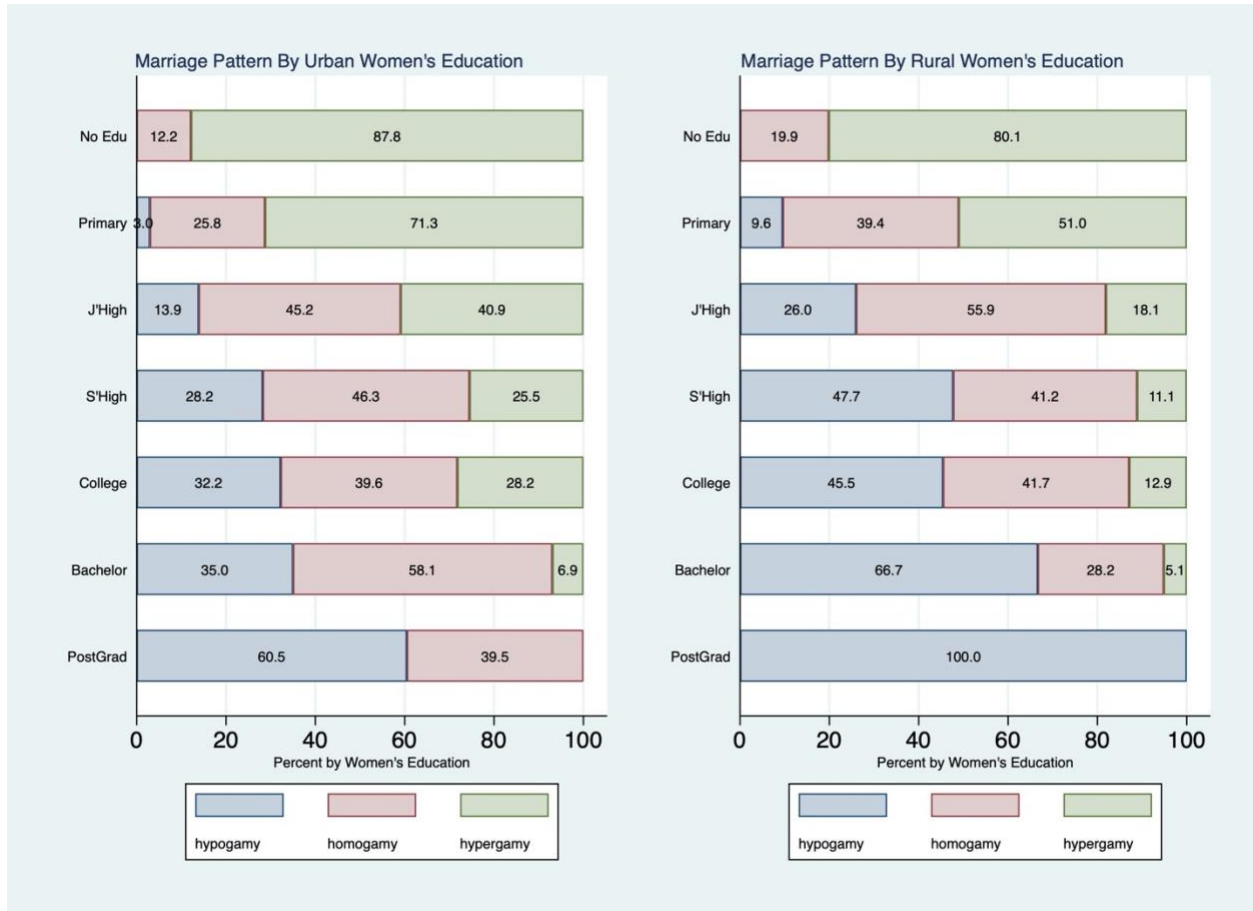


Figure 2.

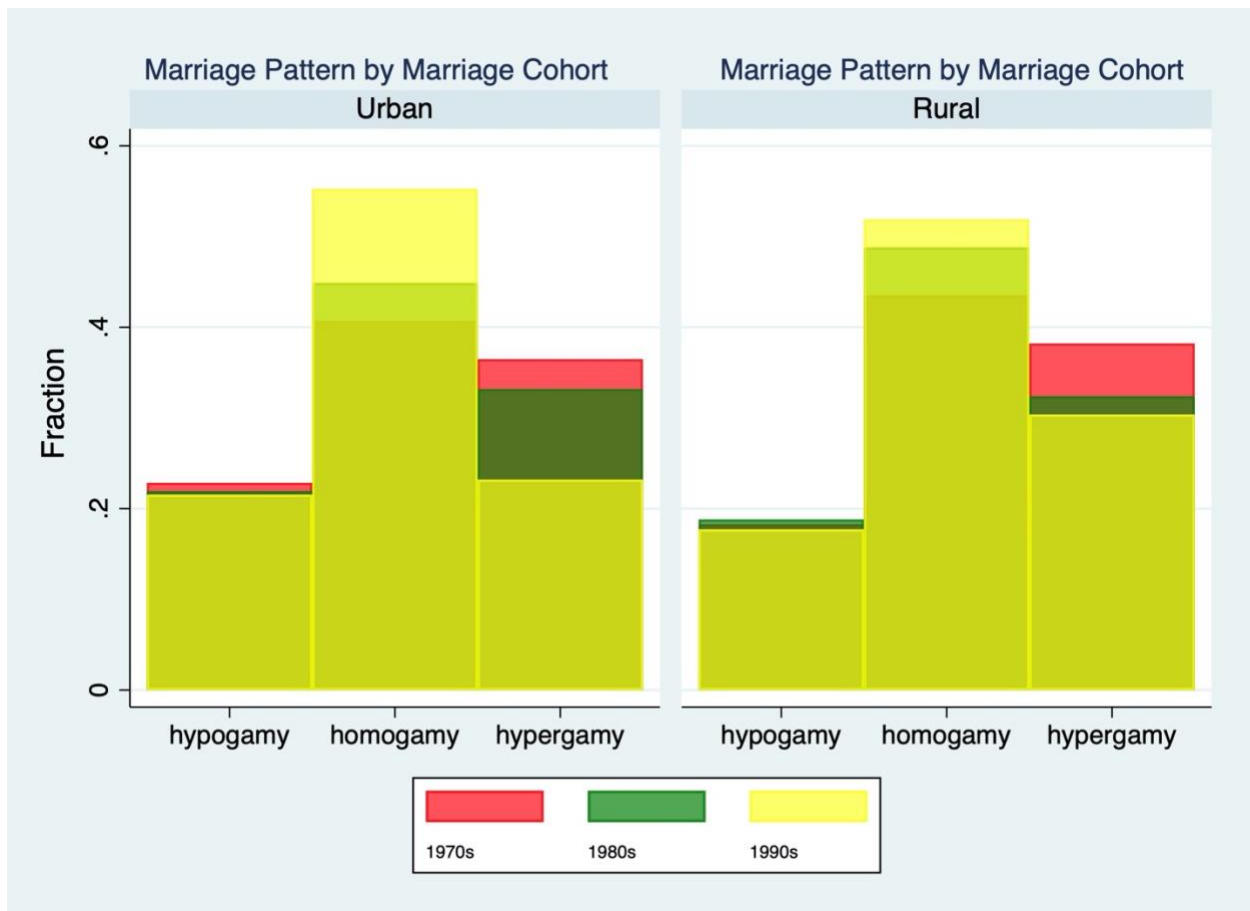


Table 2. Odds Ratio by Marriage Pattern

	Only		Last Born Son	
	Daughter		(parity >1)	
	Rural	Urban	Rural	Urban
Hypogamy (baseline)	0.21	0.62	0.47	0.09
Homogamy (to hypo)	0.86	1.03	1.02	1.04
Hypergamy (to hypo)	0.77	0.93	1.22	1.32

Table 2 shows odds ratio of having an only child as a girl and having the last child as boy assortative marriage pattern. Among the rural couples, hypergamous couples are the least likely to have only one daughter. Conversely, hypergamous couples are the most likely to have the last child (that is of second parity or higher) as son among rural couples. Among urban couples, marriage pattern only slightly influences the chance of having one daughter, but similar to their rural counterparts, urban hypergamous couples are the most likely to have the last child (that is of second parity or higher) among all the urban couples.

Regression result.

I show the standardized beta coefficient for more straightforward comparison the factors influencing between rural and urban women's decision-making power. Logistics regressions result predicting wife makes childrearing decisions (Table 3. column 1-3) or other (i.e., leisure) decisions (Table 3. column 4-6). Educational hypergamy is negatively related to women's decision making in childrearing decisions, but not related to in decisions related to leisure activities. Hypergamy has a bigger impact on urban woman's child-related decision-making power than on rural woman's. In addition, there is a cohort effect in the rural area: women of younger cohorts have more say in the family decision making process.

Logistics regressions result predicting a family having a boy as the last born and the boy is not the only child (Table 4. column 1-3) and having an only child as a girl (Table 4. column 4-6). After controlling for demographic variation directly impacting on the extent of One Child Policy, both marriage cohort and marriage pattern are significantly associated with fertility behavior. Hypergamous parents are less likely to have only one daughter, and they are more likely to have a boy as the last born child, especially when the first born is not a boy. The cohort effect is more pronounced in the rural sample, while the effect of marriage pattern is more pronounced in the

urban sample. Lastly, being in a homogamous relationship makes having only one daughter more possible for rural women.

Table 3. Logit Model predicting if wife has the main decision-making power

	(1)	(2)	(3)	(4)	(5)	(6)
	Mainly wife makes <i>childrearing</i> decisions			Main wife mainly makes <i>other</i> decisions		
		Urban	Rural		Urban	Rural
Rural hukou	-0.178 (0.0955)			-0.268 (0.127)		
CCP member	-0.096 (0.156)	0.014 (0.177)	-0.319 (0.377)	0.192 (0.186)	0.253 (0.209)	0.071 (0.407)
<i>Han</i>	-0.031 (0.169)	-0.348* (0.259)	0.258 (0.229)	0.240 (0.236)	0.113 (0.369)	0.379 (0.305)
First born son	0.020 (0.0943)	-0.134 (0.137)	0.165 (0.132)	0.109 (0.126)	0.329 (0.173)	-0.146 (0.186)
Marriage cohort	0.149 (0.0530)	-0.018 (0.0776)	0.338* (0.0722)	0.411* (0.0717)	-0.036 (0.0977)	0.964** (0.107)
Baseline: hypogamy	0.000	0.000	0.000	0.000	0.000	0.000
homogamy	-0.193 (0.127)	-0.254 (0.176)	-0.106 (0.187)	0.097 (0.177)	0.232 (0.237)	-0.095 (0.269)
hypergamy	-0.764** (0.139)	-0.987** (0.201)	-0.524* (0.197)	0.014 (0.186)	-0.001 (0.255)	0.097 (0.276)
<i>N</i>	2474	1132	1342	2097	1029	1068
pseudo <i>R</i> ²	0.015	0.025	0.016	0.007	0.005	0.018

Standardized beta coefficients; Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$

Table 4. Logit Model predicting having the last born as boy and having only one daughter

	(1)	(2)	(3)	(4)	(5)	(6)
	Last born son (parity > 1)			Only daughter		
		Urban	Rural		Urban	Rural
Rural hukou	1.878** (0.0479)			-2.162** (0.0589)		
CCP member	-0.192** (0.0797)	-0.856** (0.128)	0.040 (0.112)	0.237** (0.0973)	0.644** (0.138)	-0.016 (0.176)
<i>Han</i>	-0.210** (0.0676)	-0.630** (0.132)	-0.127** (0.0753)	0.360** (0.0993)	0.661** (0.146)	0.248** (0.112)
First born son	-1.291** (0.0406)	-1.543** (0.0814)	-1.217** (0.0469)			
Marriage cohort	-0.938** (0.0237)	-0.748** (0.0465)	-0.972** (0.0279)	1.109** (0.0345)	0.691** (0.0521)	1.522** (0.0463)
Baseline: hypogamy	0	0	0	0	0	0
homogamy	0.116 (0.0546)	0.412* (0.108)	0.050 (0.0645)	-0.157* (0.0705)	-0.046 (0.116)	-0.262** (0.0911)
hypergamy	0.331** (0.0549)	0.770** (0.108)	0.218** (0.0649)	-0.378** (0.0729)	-0.502** (0.114)	-0.371** (0.0945)
<i>N</i>	17067	7612	9455	7821	3493	4328
pseudo <i>R</i> ²	0.142	0.050	0.081	0.210	0.036	0.085

Standardized beta coefficients; Robust standard errors in parentheses

^ p<0.10, * p<0.05, ** p<0.01

Discussion

This paper examined the effect of mating pattern (i.e., hypogamy vs. homogamy vs. hypergamy) on the fertility behaviors and childrearing decisions. I found that across urban and rural sample, women

in a hypergamous marriage were least likely to have the main say in child-related decisions, and they were also the least likely to stopping having children regardless of the sex of the first child. The effect of assortative mating was found on top of the cohort effect and the heterogenous effect of the One Child Policy on different groups of the population.

The diverging destinies between rural and urban women come about before marriage. While rural women's education level clusters at the completion of 9-year compulsory education, urban women have been reaching for college degrees and higher. This educational inequality between rural and urban have two implications. On the one hand, the majority of rural women being lower educated would end up in a hypergamous marriage, which is related to less marital power and having more children especially when the first child is a girl. On the other hand, the majority of urban women being more and more highly educated would end up in a homogamous marriage with another highly educated partner, which does not significantly undermine their autonomy and martial power within the household.

There are several limitations to this study that should be addressed in the future. First of all, the dichotomy between rural and urban is operationalized by hukou status. Through the process of industrialization, urbanization and education expansion, many people who were born with rural hukou have transitioned to urban hukou, and the rural population that were left behind in this process have already been put into the disadvantaged position. The unexpected smaller effect of marriage pattern might be related to the unaccounted economic factors on both individual and regional level. The east-west inequality in China is not milder than the urban-rural inequality. Living in a village of a poor western province renders a drastically different experience than living in a village of an affluent eastern province. To account for the macro-level factors, multilevel model could be adopted (cf. DeHauw et al., 2017). Second, the *diverging* destinies are not modelled. Future research could benefit greatly through mathematical simulations to model the diverging destinies of

the young girls from rural and urban areas. Moreover, the assortative mating and diverging destinies are leading to a specific population structure with long-term political implications. For example, the millions of extra rural males due to the more skewed sex ratio in the rural area and the female urbanites' rapidly improving human capital (and physical capital given them being the sole inheritor of all of their urban parent's assets) are leading to the singlehood for both groups. The reproduction of the remaining population might jointly (re)produce a very stable medium voter base for the CCP.

Low fertility is sometimes framed as a compromise woman has to make in coping with the conflicting expectation between an economically productive and self-determined agent and a childbearing and rearing all-purpose homemaker. But for women to be able to escape the prescribed gender role, they have to bear the extra cost (Akerlof and Kranton 2000). This is possible for highly educated and financially solvent female urbanites as they can afford to delay or even withdraw from marriage and have only one child that is not a son. But for rural women who are short of human, social and physical capital, their marriage and fertility decisions are made through a series of compromises possibly started from mother's womb (Pande, 2003). Following McLanahan (2004)'s theory, this paper paves the way for future research in exploring that the diverging destinies of women and their children between rural and urban China.

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