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Childbearing across partnerships in Italy: Prevalence, demographic correlates, and social gradient

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Studies of childbearing across partnerships—having children with more than one partner—have generally focused on countries with relatively high separation rates. We complement this previous research with analyses for Italy using nationally representative, retrospective data and event-history techniques. This study offers three key findings. First, we detected a non-negligible share of childbearing across partnerships, although at substantially lower levels relative to other wealthy countries (5 per cent of parents aged 25–54 with at least two children). Second, multivariate analyses revealed an impressive similarity to the demographic correlates found elsewhere. Finally, we showed that childbearing across partnerships was initiated by the ‘social vanguard’ of new family behaviours but then diffused among the least well-off. Overall, this paper adds to the growing literature on childbearing across partnerships by showing the phenomenon to be demographically and sociologically relevant, even in countries with strong family ties and a limited diffusion of union dissolution.

Keywords: multi-partner fertility; Italy; family complexity; repartnering; union dissolution; fertility

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Introduction

Marriage appears to be losing its centrality in the majority of middle- and high-income countries, and cohabitation, divorce, childbearing within cohabitation, and repartnering have become common life-course events. Because most parental separation and repartnering occurs during the childbearing years, there has been a consequent increase in having children with more than one partner. This phenomenon is known as ‘multi-partner fertility’ or ‘childbearing across partnerships’ (Carlson and Furstenberg 2006; Guzzo and Furstenberg 2007; Manlove et al. 2008; Lappegård and Rønsen 2013; Thomson et al. 2014; Monte 2019; Stykes and Guzzo 2019; Thomson et al. 2020). Empirical studies of childbearing across partnerships (e.g. Thomson et al. 2014; Thomson et al. 2020, 2021) have focused typically on countries with relatively high parental separation rates, with estimates of the prevalence of childbearing across partnerships ranging between 6 and 35 per cent among parents with at least two children (Gray and Evans 2008; Thomson et al. 2014, 2021; Jalovaara and Kreyenfeld 2020). We complement previous work with analyses

for Italy, a country that—despite being all-to-often caricatured by the international literature as a traditional country in terms of living arrangements, kinship relationships, and gender roles—has undergone substantial changes in family behaviours in the last 20 years, resulting in increasing levels of diversity and complexity across multiple domains of family life (Meggiolaro and Ongaro 2008; Pirani and Vignoli 2016; Vignoli et al. 2016; Vignoli et al. 2018; Caltabiano et al. 2019; Guarneri et al. 2021).

The study of childbearing across partnerships is attracting growing levels of scholarly and general interest. Childbearing across partnerships often occurs in stepfamily constellations, with crucial consequences for kinship, family ties, childbearing, and child welfare (Manning and Smock 2000). The socio-economic disadvantage of families involved in such a process appears to be unusually similar across societies—including those with more extensive welfare programmes—and seems to increase in line with income inequality (Thomson et al. 2014). This is consistent with several facts regarding less educated individuals: they seem to be increasingly experiencing childbearing within cohabitation (Ventura and Bachrach 2000; Perelli-Harris et al. 2010); they

are increasingly likely to separate, especially as divorce becomes socially institutionalized (Härkönen and Dronkers 2006; Matysiak et al. 2014); and their exposure time to childbearing across partnerships is amplified by the relatively early age at which they tend to begin childbearing (Wilde et al. 2010).

Prior studies for Italy have focused on the precursors of childbearing across partnerships: cohabitation, childbearing within cohabitation, separation, repartnering, and stepfamily childbearing (De Rose 1992; Castiglioni and Dalla Zuanna 2008; Meggiolaro and Ongaro 2008, 2010; Salvini and Vignoli 2011; Meggiolaro and Ongaro 2015; Pirani and Vignoli 2016; Vignoli et al. 2018). The vast majority of this research has been limited to one or two steps of the overall process. In contrast, our study adopted a life-course perspective (Elder 1985; Bernardi et al. 2019), placing childbearing in the context of partnership careers. This approach—pioneered by Guzzo and Furstenberg (2007) and further developed by Lappegård and Rønsen (2013), Thomson et al. (2014), and Jalovaara and Kreyenfeld (2020)—recognizes that childbearing across partnerships is not the result of a single decision or cause. More specifically, we followed individuals from the birth of their first (or subsequent) child and examined three alternative life paths: having no further children; having a subsequent child within the same union; or having a subsequent child within a new union (or outside a union). We relied on the best and most recent nationally representative, retrospective data collected by the Italian National Institute of Statistics (Istat) in 2009 and 2016 in order to: (1) estimate the prevalence of childbearing across partnerships; (2) describe the main demographic correlates of this phenomenon; and (3) depict the social gradient of the individuals involved in the process, as well as whether any social gradient had changed over time.

Italy, a case (to) study

Many classify Italy as belonging to the Southern European or Mediterranean family model, where the family has remained pivotal and traditional attitudes have prevailed (e.g. Reher 1998; Viazzo 2003). Italy has been labelled ‘traditional’ in terms of values orientation, a feature due in no small part to the dominant role of the Roman Catholic Church (Caltabiano et al. 2006; Vignoli and Salvini 2014; Caltabiano and Dalla Zuanna 2021). Consequently, the international literature has often depicted Italy as the antidote to the broad changes to the family

occurring in other wealthy countries. However, things change.

From the mid-1960s, marriage slowly started to lose its centrality as individuals began to marry later and divorce more frequently, and especially as cohabitation arose as a prelude to marriage and childbearing outside marriage began to gain relevance (De Rose 1992; Meggiolaro and Ongaro 2008, 2010; Vignoli and Ferro 2009; Salvini and Vignoli 2011; Meggiolaro and Ongaro 2015; Pirani and Vignoli 2016; Vignoli et al. 2018). The early 2000s brought unexpected and rapid changes in Italian family demographics (Pirani et al. 2021). The number of marriages registered per 1,000 women decreased from roughly 650 in 2000 to 600 in 2008 and under 500 by 2015. Northern Italian regions led this downward trend, settling below 400 in that year. Regarding cohabitation, 20 years ago only two out of 100 couples lived in a non-marital union. In the mid-2010s, approximately 16 per cent of young adult Italians (but 22 per cent of Northern ones) chose this form of family arrangement, at least for part of their relationship. In addition, roughly one-third of children have been born outside marriage (most often in cohabitations), with even higher percentages in Northern and Central regions (35–39 per cent). The rising dynamicity of union patterns is even more visible when examining marital dissolutions and, again, differs by region. Marital separations have risen slowly but continuously since Italy’s 1970 divorce law was introduced, but an acceleration in this growth was registered at the turn of the century (Istat 2015; Guarneri et al. 2021; Pirani et al. 2021), passing from roughly 150 separations per 1,000 marriages in the 1990s to roughly 270 in the mid-2000s (corresponding to 80 and 144 divorces per 1,000 marriages, respectively). Since this time, union dissolution has continued to diffuse, and in recent years roughly 340 out of 1,000 marriages have dissolved—although the level was lower (approximately 260) for some southern regions. Cohabiting couples are characterized by higher dissolution rates compared with their married counterparts (Bastianelli and Vignoli 2022).

In contrast to these lively family-related transformations, total fertility has remained anchored to (lowest-)low levels across the last couple of decades. From the mid-1960s, Italian fertility started to decline from replacement level, with a certain delay relative to other European countries, but the decline became vertiginous in the 1980s. Over the last 20 years, total fertility has stagnated at 1.3–1.4 children per woman on average. Interestingly, in Italy, unintended childbearing is quite

limited due to reproductive decisions being carefully managed by couples: fertility realizations are highly consistent with previously stated intentions (e.g. Rinesi et al. 2011), and negative fertility intentions in particular have been proven to be almost perfect predictors of subsequent realizations (Régnier-Loilier and Vignoli 2011). In addition, rates of adolescent pregnancy are extremely low (Castiglioni et al. 2001; Sedgh et al. 2011).

Italy is also widely recognized as the European country with the highest mean age at first birth. In the late 1990s Italian women gave birth to their first child at age 28 on average, with this age continuously increasing to reach 31 by 2016 (approximately 1.5 years above the European average). Naturally, this record-high mean age at first birth leaves limited time for separation, remarriage, and having a second child with another partner (see also Castiglioni and Dalla Zuanna 2008).

Proponents of the Second Demographic Transition (SDT) (Lesthaeghe and van de Kaa 1986) tend to interpret the changes that have occurred in recent decades as processes driven by emancipation from traditional social norms. Accordingly, these new family patterns began to spread across more secularized individuals, those with the highest socio-economic profiles, those from families of higher social origin, and those living predominantly in the north of the country (Pirani and Vignoli 2016; Caltabiano et al. 2019). De Sandre (1980) was the first to show the increase in marital instability among women of high socio-economic status in the first half of the 1970s, a finding later confirmed by De Rose (1992) and Vignoli and Ferro (2009), among others, using microdata. More recently, however, during a rapid rise in separations, Salvini and Vignoli (2011) found evidence to suggest a weakening in the positive educational gradient, as separation rates seemed to be increasing more abruptly among the less educated while plateauing among the highly educated. Regarding the rise in cohabitation, research focusing on Italy has shown that highly educated women initiated its diffusion, but the educational gradient is becoming null or even negative among more recent cohorts who are increasingly more likely to enter cohabitation as a first union (Guetto et al. 2016). Gabrielli and Vignoli (2013) also illustrated that in the most recent periods, the well-known North–South gradient in the diffusion of new family patterns (i.e. the greater prevalence of cohabitation and divorce in the secularized north) had weakened. Regarding repartnering, while Meggiolaro and Ongaro (2008) found no significant educational gradient, they

illustrated that repartnering was still more common in Northern Italy, likely due to the opportunities of a second union being facilitated by a higher acceptance of new family behaviours among family, peers, and society in general.

In Italy, the Roman Catholic Church has maintained a stronger and more marked presence in the socialization of young people when compared with other European contexts, such as France or Spain (Caltabiano et al. 2006), although the Church's force is gradually weakening (Minello et al. 2020; Stranges and Vignoli 2020; Caltabiano and Dalla Zuanna 2021). Additionally, the role of normative parental pressures on children's decisions concerning family and sexual life is especially important there due to the strength of family ties and obligations (Guetto et al. 2022). Parents tend to discourage non-normative behaviours in their offspring, and even adults tend to feel a high degree of parental pressure when making their own choices (Vignoli and Salvini 2014). Hence, strong family ties affect the speed at which new family behaviours are adopted, thereby fostering traditional family structures (Reher 1998). However, more highly educated parents may be more open to accepting the adoption of new family behaviours on behalf of their children (Di Giulio and Rosina 2007).

At the intersection of these major areas of change, a new reality is that a potentially sizeable fraction of adults are having (or will have) biological children with more than one partner. Such a possibility for Italy has hitherto been ignored by researchers and policymakers alike. Italy is absent from the literature on childbearing across partnerships, which has focused instead on wealthy countries with higher separation rates and less traditional family patterns. As such, our focus on the Italian context meaningfully complements the literature on childbearing across partnerships.

Childbearing across partnerships: The background

Between socio-cultural explanations and demographic fundamentals

The process of childbearing across partnerships develops at the crossroads of socio-cultural and other, more mechanic, demographic forces. In recent decades, scholars have examined the connection between socio-cultural shifts and family changes observed in the wealthiest countries under the umbrella of the SDT narrative. The underlying

idea of the SDT is that, in Western societies—particularly Nordic ones—the centrality of the family is declining in favour of more liberal demographic behaviours, such as divorce, cohabitation, and childbearing within cohabitation (Van de Kaa 1987). These new behaviours are viewed as stemming from the progressive independence of individuals who place a growing importance on self-realization, psychological well-being, and their own personal freedom of expression. Accordingly, the rise of individualism and secularization has prompted shifts in the moral code, thereby instigating and enabling major changes to family behaviour (Lesthaeghe 2020).

A new population-wide behaviour does not appear instantaneously. Rather, it emerges initially among certain population subgroups (the so-called trendsetters or forerunners, who usually belong to the top of the social pyramid) and later, if ‘appealing’, spreads to others (Livi Bacci 1986). Goode’s (1962, 1963, 1993) argument regarding marital dissolution and societal factors illuminates the dynamics beyond this diffusion process. He argued that at least initially, only couples from the highest social strata had the intellectual and economic means to divorce. Later, as divorce’s social acceptability increased, and its legal and economic barriers began to dissipate, the relationship between social status and divorce diminished and even reversed. Goode thus argued that marital dissolution would, in all probability, eventually become more common at the bottom of the social hierarchy. Extending Goode’s argument to other family events—including childbearing across partnerships—is relatively straightforward. In essence, the diffusion of new behaviours is ignited by a ‘social vanguard’ comprising highly educated individuals from upper-class families; then, as time passes, new family arrangements become democratized across social groups (Esping-Andersen and Billari 2015; for divorce, see Härkönen and Dronkers 2006; Matysiak et al. 2014; for the diffusion of cohabitation, see Ní Bhrolcháin and Beaujouan 2013).

These socio-cultural shifts facilitate the diffusion of new family patterns, in turn fostering childbearing across partnerships. Nonetheless, fundamental demographic forces are also responsible for the level of diffusion of childbearing across partnerships. First, the overall level of fertility clearly affects the strength of the process (Schoen 2020). By definition, childless individuals and those with one child cannot experience childbearing across partnerships. Second, the ages at first sexual debut and (especially) first birth influence both future childbearing and union

behaviours (Brown 1999; Giordano et al. 2006). Postponement of first birth may reduce the risk of separation, repartnering, and second birth with a new partner (Gibson-Davis 2011; Guzzo and Hayford 2011, 2012). Third, childbearing across partnerships is much higher in contexts where a high proportion of first births occur outside unions. The United States (US) is an archetypal example of such a context (Cherlin 2009).

A methodologically challenging issue

While an intuitive and straightforward definition of childbearing across partnerships can easily be proposed (i.e. the experience of having children with more than one partner), its demographic analysis requires at least three pivotal analytical decisions (Guzzo and Dorius 2016; Stykes and Guzzo 2019). These are not ancillary technical aspects: they require explicit discussion.

First, the choice of analysis perspective—whether that of parents or children—may lead to different results. Taking adults as the statistical unit of analysis is preferable if the interest is in documenting the prevalence of childbearing across partnerships and its associated characteristics (for more details, see Guzzo and Dorius 2016). We could derive conflicting estimates depending on which of the various populations we consider, ranging from all individuals to all parents with at least one child or all parents with at least two children. Conversely, when the researcher seeks to study children’s outcomes arising from their parents’ experiences of childbearing across partnerships, the unit of analysis could be the children with at least one half-sibling (or a similar operationalization) (Guzzo and Dorius 2016). Due to our aims, we decided to focus on adults’ experience of this process. Specifically, for the prevalence estimate of childbearing across partnerships, we focused on parents with at least two children, that is, those technically eligible to have children with more than one partner. For the study of the correlates, we followed adult individuals from the birth of their first (or subsequent) child to the eventual experience of childbearing in a different union.

Second, the correct identification of the father and mother of a given child—which represents the foundation of studies of childbearing across partnerships—is heavily dependent on data availability. Ideally we would consult population (administrative) registers, thus relying on a unique identification code that enables the linkage between children and

biological parents beyond the existence of a union. Unfortunately, such registers are available only for a restricted number of countries (e.g. the Nordic ones in the European context, see Lappegård and Rønsen 2013; Jalovaara and Kreyenfeld 2020) and are rarely publicly accessible (Guzzo and Dorius 2016). This shortage of administrative data has fuelled the development of different strategies for identifying childbearing across partnerships, taking advantage of survey data typically based on retrospective fertility and union histories. This information enhances the possibility of *indirectly* identifying childbearing across partnerships using birth and partnership histories, assuming that different union spells represent different partners and that a child is from a specific partner if the date of birth lies within the start and end dates of said union. Accordingly, childbearing across partnerships is proxied by multiple-union childbearing. A number of assumptions must be made regarding, for instance: the correspondence between spells of co-residence and partner identification; the recall precision for event timing; and the treatment of births outside unions (Guzzo and Dorius 2016). These assumptions may lead us to overestimate the prevalence of childbearing across partnerships, especially in contexts where births outside co-residential unions are frequent (Stykes and Guzzo 2019). An alternative identification strategy is possible when a survey asks respondents *directly* if they have had children with more than one partner. Although the need for assumptions is more relaxed in this case, Stykes and Guzzo (2019) noticed that a potential social desirability bias might induce respondents to hide multiple-union childbearing, thereby leading to an underestimation of the phenomenon, especially for women and in more traditional contexts. Comparing alternative identification strategies, Stykes and Guzzo (2019) concluded that both approaches could produce credible estimates, with differences confined within a reasonably narrow range of values. Due to data constraints, we adopted a fertility and union career perspective, identifying childbearing across partnerships through the *indirect* method. In addition, we opted to provide minimum and maximum interval estimates to account for the possible assumptions, thus enhancing the robustness of our estimates (Stykes and Guzzo 2019).

Third, paths towards childbearing across partnerships vary, each implying other demographic processes over the life course. Specifically, childbearing across partnerships is intimately connected with union formation/dissolution processes (Guzzo 2014), thereby raising endogeneity issues. It

is well established that non-marital unions are generally less stable than marital ones, even in the presence of children (e.g. Manning et al. 2004), thus increasing the probability of childbearing across partnerships (e.g. Lappegård and Rønsen 2013; Lappegård and Thomson 2018). Moreover, while having children with a different partner is not impossible within an ongoing union, it is relatively unlikely (Guzzo 2014). The propensity to repartner once a previous union has dissolved is also expected to be of consequence, as is its sex differential (Monte 2019). It is thus reasonable to imagine that never-married individuals and those who have experienced a union disruption are more likely to have children from multiple unions. For these reasons, previous research seems conflicted as to whether partnership history should be accounted for in the analysis of childbearing across partnerships. While some researchers have opted to exclude this variable (e.g. Jalovaara and Kreyenfeld 2020), others have tested various specifications (according to data availability), such as marital status at first birth (e.g. Carlson and Furstenberg 2006; Manlove et al. 2008; Lappegård and Thomson 2018), prior marriage (Thomson et al. 2014), and marital history (Lappegård and Rønsen 2013; Monte 2019). We decided to exclude any measure of union history from our model (see also the Robustness checks subsection).

Empirical evidence

Bearing in mind that different study populations and analytical perspectives will produce variations in estimates (Guzzo 2014; Guzzo and Dorius 2016), the literature has suggested a prevalence of childbearing across partnerships ranging from ~6 to >20 per cent of parents with two or more children across European countries (e.g. Thomson et al. 2014, 2021; Jalovaara and Kreyenfeld 2020). In the US, roughly one-third of parents are estimated as having had children across partnerships (Monte 2019; Thomson et al. 2021).

The demographic correlates of childbearing across partnerships have been explored in previous research. Men and women tend to experience multiple-union childbearing differently (Monte 2019) due to the gendered characteristics of fertility constraints, union dissolution, repartnering, and co-residence with former children. The final result—also influenced by individual preferences and desires (Thomson 2004; Beaujouan and Solaz 2013)—is rarely straightforward (Lappegård and Thomson 2018; Jalovaara and Kreyenfeld 2020). Young age

at first birth has consistently been found to be a strong predictor of childbearing across partnerships for both females and males. The longer ‘exposures’ to entering and exiting relationships (which foster childbearing) are especially amplified by adolescent pregnancy (Carlson and Furstenberg 2006; Thomson et al. 2014). Parity also shapes childbearing across partnerships. Indeed, the probability of experiencing childbearing across partnerships declines when a parent already has two or more children (which also decreases the likelihood of forming a new partnership) (Thomson et al. 2012). Finally, partnership experience (when included, e.g. Carlson and Furstenberg 2006; Manlove et al. 2008; Lappegård and Rønsen 2013; Thomson et al. 2014; Lappegård and Thomson 2018; Monte 2019) indicates that the likelihood of childbearing across partnerships is generally higher for the never married, those unmarried at first birth, and those who have experienced a marital dissolution.

The social gradient in childbearing across partnerships has also been explored. Lappegård and Rønsen (2013) showed that for males the likelihood of having a child with a new partner is U-shaped, that is, positively related to both socio-economic advantage and disadvantage. Thomson et al. (2014) clearly highlighted a negative educational gradient in childbearing across partnerships in Australia, the US, Norway, and Sweden. Interaction models by time period also showed that the negative educational gradient in childbearing across partnerships emerged only in recent years and became steeper in the 2000s. Finally, Jalovaara and Kreyenfeld (2020) analysed childbearing across partnerships in Finland and Germany. While they found no consistent relationship between education and childbearing across partnerships in Germany, low education appeared to be associated with an increased likelihood of having children with different partners in Finland.

Research questions

Our paper poses three research questions for Italy:

- RQ1 (Prevalence): What is the proportion of individuals having children across partnerships? We expected the phenomenon of childbearing across partnerships to involve a lower share of parents in Italy compared with other countries. Family behaviours precluding childbearing across partnerships are on the rise in Italy, but this process has likely been counterbalanced

by important structural demographic forces: primarily low fertility and small proportions of births outside unions and at young ages.

- RQ2 (Demographic correlates): What demographic factors are associated with the probability of having children across partnerships? We anticipated the demographic correlates of childbearing across partnerships in Italy to be similar to those of other countries. Much of this similarity would likely be due to the role of ‘fertility fundamentals’ (Thomson et al. 2014, p. 502), namely that the share of the phenomenon is known to decrease with parity and age at first birth.
- RQ3 (Social gradient): What are the socio-economic correlates of childbearing across partnerships? Are they changing over time? Like other new family patterns, we expected the trendsetters of childbearing across partnerships in Italy to be less traditional individuals living in areas more open to the diffusion of new family patterns or highly educated people living in Northern Italy (Pirani and Vignoli 2016; Caltabiano et al. 2019). Nevertheless—as observed for other family-related behaviours, such as cohabitation and union dissolution (Salvini and Vignoli 2011; Gabrielli and Vignoli 2013)—we expected the positive social gradient of childbearing across partnerships to be weakening over time as new family behaviours diffuse.

Research design

Data

We obtained our data from two Italian surveys on Families and Social Subjects (FSS) conducted by Istat in 2009 and 2016. These are the most complete and reliable retrospective nationally representative surveys on Italian individuals and their families. The surveys collected information on approximately 24,000 households for roughly 50,000 individuals in 2009 and on 30,000 individuals aged 18 years and older in 2016; both reached an overall response rate of approximately 80 per cent. Because the 2009 survey collected information for all individuals living in the household, we included in our analysis only the ‘reference person’ who directly answered the survey (as in the 2016 survey). These data included detailed monthly information on men and women’s partnership and childbearing histories, which allowed us to follow an event-history

approach. Respondents were asked to provide start and end dates for all their unions, regardless of duration.

To study childbearing across partnerships, we included men and women aged 25–54 at survey, corresponding to cohorts born in 1955–84 (for the 2009 survey) and 1962–91 (for the 2016 survey). We focused on individuals with at least one child at time of survey. We excluded cases with missing values on union/fertility histories (roughly 0.5 per cent of the sample) and parents with any adopted children (less than 1 per cent of those reporting having children). Twin births were treated as single events. The analytical sample included 12,938 individuals from both surveys with at least one child (7,680 men, 5,258 women; 5,760 surveyed in 2009 and 7,178 in 2016). The prevalence measure refers to the subsample of those with at least two children, which included 8,196 individuals (4,941 men and 3,255 women; 3,726 surveyed in 2009 and 4,470 in 2016).

Detecting childbearing across partnerships

Given the nature of our data, there was no mother or father identification code available for accurately identifying both parents of each child. In line with Thomson et al. (2014, 2021) and Jalovaara and Kreyenfeld (2020), and aware of the possible limitations, we chose to follow the indirect approach for identifying childbearing across partnerships (Guzzo 2014; Guzzo and Dorius 2016). By comparing the dates of childbearing and union histories, we attributed each birth to a specific union (and approximately to a specific partner). If two births originated from the same union, it was considered same-union childbearing; if the respondent was in different unions at the times of two births, we considered this to be childbearing across partnerships (multiple-union childbearing). This method is well suited to a country such as Italy, where pregnancies almost always occur within co-residential unions (De Rose and Dalla Zuanna 2013). We did not distinguish between marital and non-marital cohabitation, and when a premarital cohabitation transformed into marriage, we considered it to be the same union. We studied all higher-order parity transitions in the process, despite the large majority of cases pertaining to second-born children.

This procedure allowed us to assign the overwhelming majority of cases (94 per cent) to same- or multiple-union childbearing. Nevertheless, in the remaining 6 per cent of cases the respondents were

not in a partnership at the time of at least one birth, thereby frustrating the unequivocal event identification process. To disentangle these cases, we assumed that births occurring just before or after a union formation involved the same partner (Kreyenfeld et al. 2017; Stykes and Guzzo 2019), despite studies having occasionally documented the opposite (e.g. Guzzo 2017). Pregnancies and births may occur when parents are not formally cohabiting, although a co-resident union generally soon follows. Alternatively, and more rarely, a union may dissolve shortly after pregnancy or birth. On average, the spacing between births appears closer for people with a second child in the same union than for those having a second child with a new partner (Kreyenfeld et al. 2017). For clarity here, we describe the strategy followed with reference to the second child; however, we applied a similar approach when considering subsequent children.

In some cases (4 per cent), the first child was born outside a union, with a second child following within a union. In these situations, we checked the time between the first birth and beginning of the union. When this time was less than or equal to five years (the case over 75 per cent of the time), we assumed that the two children originated from the same relationship, attributing them to multiple-union childbearing only when the time exceeded five years. Conversely, in other rare cases (0.7 per cent), a respondent was in a union at the time of first birth but not the second. We considered these potentially ambiguous cases to be childbearing across partnerships if the respondent reported no subsequent new union; in the case of a further union, we checked the time (in months/years) between the two unions and the birth, attributing the latter to the closest union. Major complications arose in the case of subsequent births outside unions (1.1 per cent). Again, we accounted for the timing of childbearing and union histories, assuming that two (or more) births outside unions originated from different partners only when there was a relatively long time span between union and birth events (i.e. over five years, in only a small number of these cases). Finally, in the cases where no unions were reported by the individual (0.2 per cent), births were all considered as childbearing originating from different partners.

Method

To document the *prevalence* of childbearing across partnerships, we used descriptive sample statistics

augmented with population weights. Then, to examine the *demographic correlates* of childbearing across partnerships, and its *social gradient*, we adopted the perspective of individual fertility histories, converting the analytical sample to person-years and applying a discrete-time hazard regression in a competing risk framework. Competing risk models are suitable when studying a transition from one origin state (i.e. having had one child) and there is more than one destination or type of event (i.e. having a subsequent child in the same or a different union), assuming that these destinations are mutually exclusive.

The risk set was composed of individuals eligible to have children across partnerships (namely, those with at least one child). We thus followed individuals from the year of birth of their first child until the year of birth of their second. We identified a second birth in a new union as a case of childbearing across partnerships, excluding further observations. If the second birth occurred within the same union, we continued our observation, but at parity two. In the case of no additional children, we ceased our observation when the individual reached age 49 or at the time of interview.

We indicated with B the types of event. For each case, $b = 1$ if a second (or further) child was born in the same union, and $b = 2$ if the child was born in a different union. If *no event* (no second (or further) child) occurred in the time interval considered, $b = 0$. To obtain the discrete-time (cause-specific) hazard (conditional probability) of an event of type b during interval t for individual j , we estimated a discrete-time multinomial logistic regression model. The multinomial logit specification implies the estimation of b equations, contrasting event type $b = 1, 2$ with *no event* ($b = 0$) to estimate the cause-specific hazard $h_j^{(b)}(t)$, expressed as follows in logit form:

$$\log\left(\frac{h_j^{(b)}(t)}{h_j^{(0)}(t)}\right) = a^{(b)}(t) + \boldsymbol{\beta}^{(b)}\mathbf{x}_j^{(b)} + \boldsymbol{\gamma}^{(b)}\mathbf{z}_j^{(b)}(t) + u_j^{(b)},$$

where a represents the baseline duration (i.e. time since previous birth, in years), which we modelled with a piecewise specification (1–2, 3–4, 5–9, 10–14, or 15+ years); \mathbf{x}_j is a vector of time-constant covariates; \mathbf{z}_j is a vector of time-varying covariates; and $u_j^{(1)}$ and $u_j^{(2)}$ follow a multivariate normal distribution.

Variables

The discrete-time hazard regression model includes some demographic fundamentals and socio-economic characteristics. As we considered males and females jointly, we included a sex indicator variable (*male, female*) in the model specification, together with age at first birth (≤ 24 , 25–29, 30+) and parity (1, 2, 3+; time-varying).

We focused on period developments in childbearing across partnerships in Italy to pinpoint changes over calendar time (Ní Bhrolcháin 1992). We created a time-varying variable, starting at the beginning of the process (birth of first child) and updating it by year; this was then collapsed into two long periods: *2003 or before* and *2004 or after*. We identified this threshold after considering the diffusion of union dissolutions in Italy, a key precursor of childbearing across partnerships. As previously discussed, the pace of the impressive increase in marital separations at the end of the 1990s and beginning of the 2000s began to slow from approximately 2004.

Respondents' level of education was included as a time-varying specification, distinguishing between *lower-secondary*, *upper-secondary*, and *higher* education levels. Parental education— included as a marker for family social background —was measured as the highest educational level reached by parents, differentiating between *lower-secondary* vs *upper-secondary/higher* education, a dichotomization suggested by the extremely low share of tertiary-educated Italians in the earliest cohorts (e.g. Barone and Guetto 2020). To account for Italy's well-established regional gradient, we added a control for area of residence (*North/Centre* vs *South*). Finally, to verify the change over time in social gradient (if any), we interacted calendar time with respondents' education, parental education, and region (within the same model specification).

Table 1 reports descriptive statistics on the composition of the analytical sample, in terms of exposures and occurrences. A total of 409 individuals in our sample experienced childbearing across partnerships. Occurrences were, in some cases, irregularly distributed across the socio-demographic characteristics considered, but the categorizations chosen showed substantial robustness in the model findings. We also inspected the number of occurrences in each cell deriving from the interactions introduced in the model: most included a sufficiently high number (≥ 50) of events (only two cells, involving individuals

Table 1 Exposures (person-years) and occurrences of same- and multiple-union childbearing in Italy, by socio-demographic characteristics: absolute and percentage values

	Exposures (person-years)		Additional child in same union		Additional child in a different union	
	Absolute value	Percentage	Absolute value	Percentage	Absolute value	Percentage
<i>Total</i>	165,646	100.0	10,058	100.0	409	100.0
<i>Years from previous child</i>						
1–2	40,845	24.7	2,735	27.2	27	6.6
3–4	30,064	18.1	3,644	36.2	53	13.0
5–9	47,745	28.8	3,181	31.6	171	41.8
10–14	27,451	16.6	436	4.3	109	26.7
15+	19,541	11.8	62	0.6	49	12.0
<i>Sex</i>						
Men	91,977	55.5	6,037	60.0	187	45.7
Women	73,669	44.5	4,021	40.0	222	54.3
<i>Parity</i>						
1	76,130	46.0	7,885	78.4	302	73.8
2	71,279	43.0	1,768	17.6	78	19.1
3+	18,237	11.0	405	4.0	29	7.1
<i>Age at first child</i>						
≤24	53,360	32.2	2,954	29.4	239	58.4
25–29	59,029	35.6	3,620	36.0	105	25.7
30+	53,257	32.2	3,484	34.6	65	15.9
<i>Calendar time</i>						
2003 or before	77,200	46.6	6,027	59.9	199	48.7
2004 or after	88,446	53.4	4,031	40.1	210	51.3
<i>Education</i>						
Lower-secondary	95,403	57.6	5,662	56.3	235	57.5
Upper-secondary	52,395	31.6	3,159	31.4	122	29.8
Higher	17,848	10.8	1,237	12.3	52	12.7
<i>Parental education</i>						
Lower-secondary	135,967	82.1	8,081	80.3	302	73.8
Upper-secondary or higher	29,679	17.9	1,977	19.7	107	26.2
<i>Area of residence</i>						
North/Centre	97,358	58.8	5,585	55.5	282	68.9
South	68,288	41.2	4,473	44.5	127	31.1

Source: Authors' elaborations of Italian FSS data, 2009, 2016.

with higher education, did not meet this threshold for the two time periods).

Results

Prevalence

Table 2 shows the prevalence of childbearing across partnerships among parents aged 25–54 with at least two children. We found that 5 per cent of the sample—or, in terms of population-level estimates, some 490,000 parents—had children in multiple unions.

We found this to be more prevalent for women. Segmenting by parity illustrated that, as the number of children increased, so too did the prevalence of multiple-union childbearing. It also seemed that childbearing across partnerships

increased for more recent cohorts, although the difference was not statistically significant.

We are aware that this prevalence may have been affected by the identification procedure adopted. To gain confidence in our estimates, we used two parallel strategies. First, we validated our results through another data source, namely the Italian Survey on Births (Istat 2006). A sample of women who gave birth in 2012 were asked whether all their children were of the same partner, thereby making this survey a suitable alternative data source for addressing the prevalence of childbearing across partnerships directly. This data source revealed that over 4 per cent of children had siblings of different parentage. The similarity with findings for women from the FSS convinced us of the soundness of our indirect identification of childbearing across partnerships. Interestingly, Stykes and Guzzo (2019) warned of

Table 2 Prevalence of childbearing across partnerships in Italy: weighted percentages for individuals aged 25–54 at survey with at least two children

	Percentage with additional child in a different union (multiple-union childbearing)
<i>Total</i>	5.0
<i>Sex</i>	
Men	4.2
Women	5.9
<i>Number of children</i>	
2	3.6
3+	9.6
<i>Birth cohort</i>	
1955–64	5.0
1965–74	4.9
1975–91	5.2

Source: As for Table 1.

the possibility that social desirability bias could lead to underestimation of childbearing across partnerships, especially among women, when using direct questions.

Second, to account for potential distortions due to the assumptions made in the identification process, we attributed possibly ambiguous cases alternatively to same- or multiple-union childbearing, thus identifying a *range* for our prevalence estimate (Stykes and Guzzo 2019). When all potentially uncertain cases were coded as same-union childbearing, the prevalence reduced to 4.2 per cent, whereas it rose to 6.0 per cent when all potentially uncertain childbearing was considered as coming from multiple unions. These lower and upper bounds—while still confining the prevalence of childbearing across unions to limited values in Italy as compared with other countries—proved the phenomenon’s relevance and further enhanced the validity of our results. According to this interval, we estimated that between 410,000 and 580,000 of parents living in Italy with at least two children were involved in multiple-union childbearing.

Demographic correlates

Figure 1 reports the model results in terms of the predicted probabilities of having an additional child in a different union (and likely with a different partner) from the previous child. The confidence intervals are centred on the predictions, with lengths equal to $1.39 \times$ standard error. This was necessary for reaching an average level of 5 per cent for Type I errors in pairwise comparisons of a group of means (Goldstein and Healy 1995). Complete estimates, including the likelihood of having

an additional child in the same union, can be found in Table A1 (Appendix).

The probability of childbearing across partnerships was relatively low: 0.23 per cent on average (i.e. when covariates are at their reference level, depicted with a horizontal line in Figure 1). However, interesting differences emerged when considering the correlates of the process.

The probability of having a child in a different union seemed to be at its lowest within 1–2 years after the first birth. However, it progressively rose in line with time since previous birth, peaking around 5–9 and 10–14 years (0.37–0.41 per cent) before falling again. After a dissolution, time is needed for repartnering and, consequently, for another birth. Children born in different unions tend to be more widely spaced than children born within the same union (Kreyenfeld et al. 2017). Indeed, for this latter group, the highest probability of having a subsequent child was within 3–4 years of the previous one (see Table A1 in the Appendix).

Sex differences did not emerge in the multivariate analysis, with similar probabilities of having children across unions for men and women (0.24 and 0.22 per cent, respectively). Most births with a new partner were second rather than higher-order births, a result expected in the context of Italian lowest-low fertility levels. The likelihood of having an additional child within a new union was highest for individuals with only one previous child, then declined rapidly with increasing parity (probability 0.42 per cent for parity one, compared with 0.10–0.11 for higher parities).

We confirmed that early timing of the first birth was associated with a higher chance of multiple-union childbearing. Our model estimated a probability of 0.52 per cent for those who became

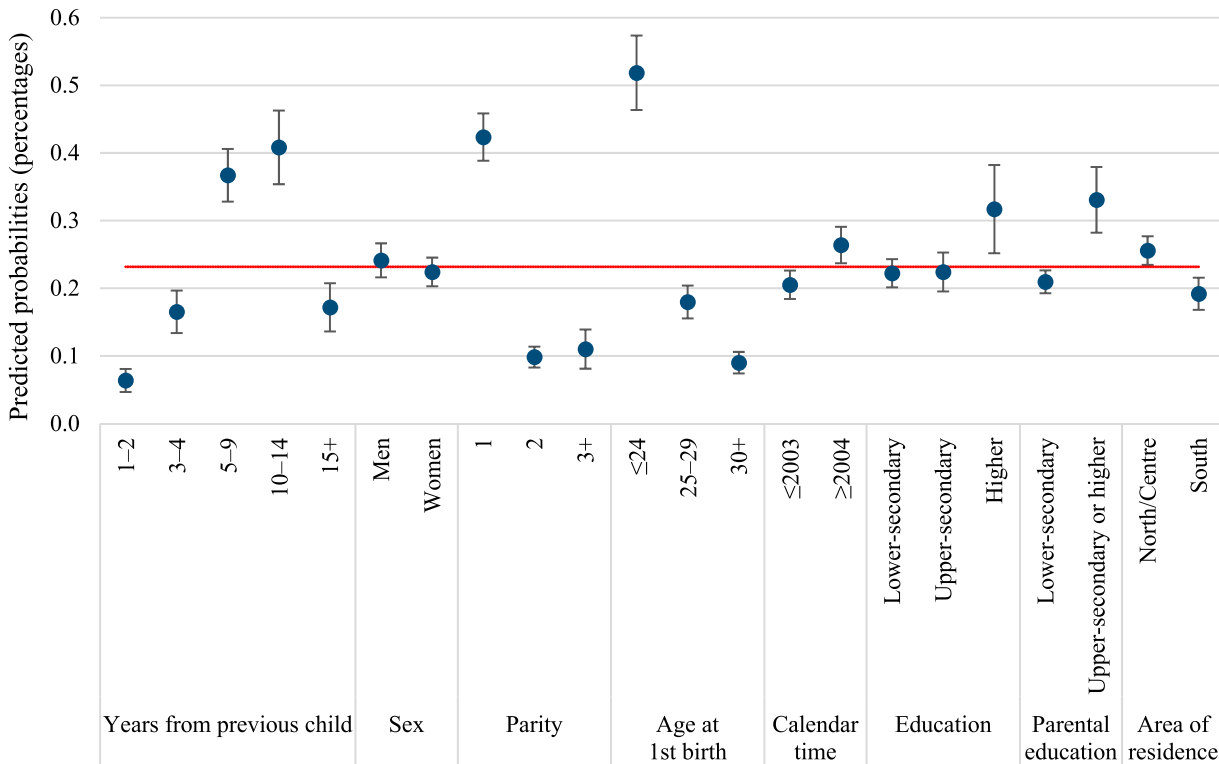


Figure 1 Predicted probabilities of childbearing across partnerships in Italy (results from discrete-time competing risk model on men and women aged 25–54 with at least one child)

Notes: The horizontal line shows the baseline probability averaged over the other covariates. Confidence intervals show approximate 5 per cent significance levels for the comparison of pairs of predicted probabilities.

Source: Authors’ elaborations of Italian FSS data, 2009, 2016.

parents before age 25, decreasing to 0.18 and 0.09 for older age classes. Age at first birth seemed decisive for childbearing at higher parities (see Table A1, Appendix), but was especially relevant for multiple-union childbearing.

As expected, Figure 1 shows an increasing trend in the probability of childbearing across partnerships over time (0.26 per cent in 2004 and later, relative to 0.21 before 2004). This result became increasingly relevant when we considered that the relative risk of having a second child within the same union slightly decreased over time (Table A1, Appendix).

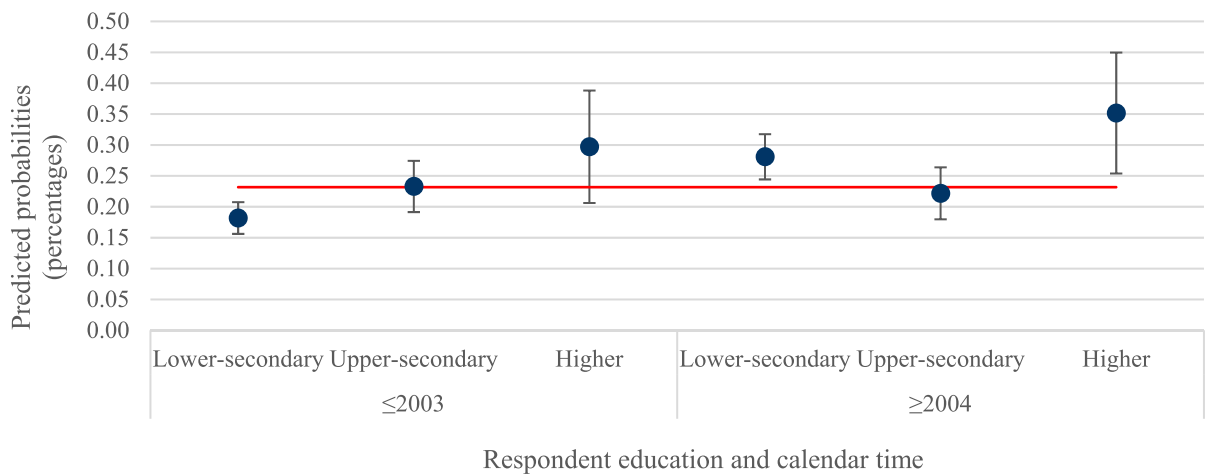
Social gradient

Figure 1 also illustrates the social gradient in childbearing across partnerships. Individuals with higher education showed an above-average likelihood of having children in different unions (0.32 per cent). This seemed to contradict the prevailing international literature, which has consistently stated that less educated individuals are over-represented among multiple-union parents. A positive effect of higher education has previously been noticed for

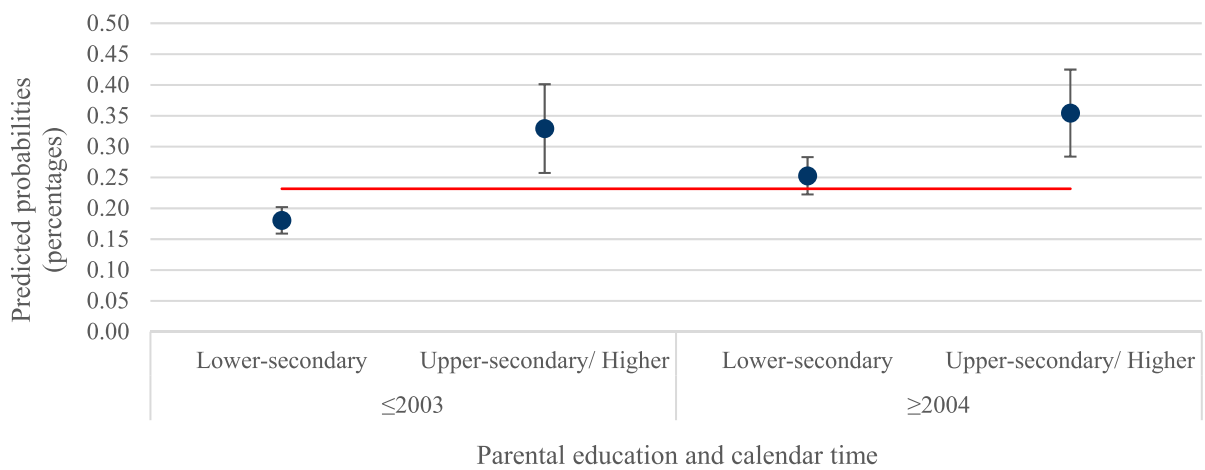
higher-order fertility in the Italian context (Impicciatore and Dalla Zuanna 2017; Impicciatore and Tomatis 2020). In line with these studies, Table A1 (Appendix) shows that people with higher education also displayed a greater probability of having additional children within the same union, although the effect seemed especially relevant for multiple-union childbearing. We also confirmed the same positive gradient for parental education. Finally, Southern Italian regions were characterized by a lower diffusion of new family-related behaviours, which was mirrored by the reduced probability of residents of this area experiencing childbearing across partnerships (0.19 per cent vs 0.26 for Northern and Central Italy).

Having documented the existence of certain social gradients (respondents’ and parents’ education and area of residence) in the probability of having children in multiple unions, we then sought to explore whether this association had changed over time. Figure 2 shows the predicted probabilities of the social gradient in multiple-union childbearing by calendar period (resulting from three interactions simultaneously added to the main model).

(a) Respondent's education by calendar time



(b) Parental education by calendar time



(c) Area of residence by calendar time

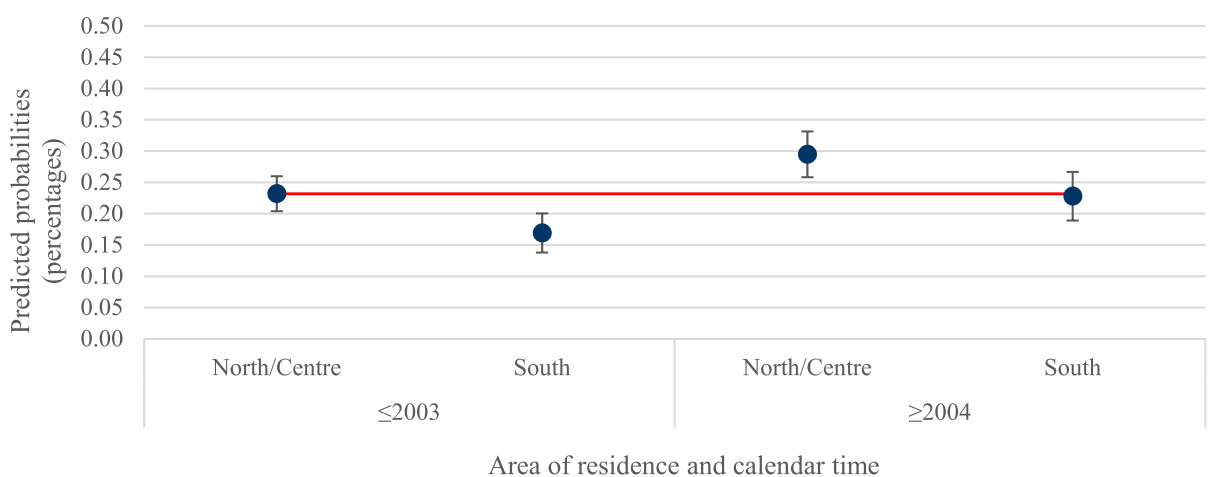


Figure 2 Predicted probabilities of childbearing across partnerships in Italy: results from discrete-time competing risk models on men and women aged 25–54 with at least one child, with calendar time interacted with (a) respondent's education; (b) parental education; and (c) area of residence

Notes: The model controls for all covariates included in Figure 1. The horizontal line shows the baseline probability averaged over the other covariates. Confidence intervals show approximate 5 per cent significance levels for the comparison of pairs of predicted probabilities.

Source: As for Figure 1.

Regarding respondents' level of education, the overall positive gradient previously described (Figure 1) seemed to hide a temporal variation (Figure 2(a)). Up to 2003, childbearing across partnerships was confined mostly to highly educated trendsetters: the probability of multiple-union childbearing was 0.30 per cent among highly educated individuals, relative to 0.18 and 0.23 for lower-secondary- and upper-secondary-educated individuals, respectively. From 2004, the probability of multiple-union childbearing showed a moderate increase for individuals with higher education (to 0.35 per cent) but, importantly, it also increased for their less educated counterparts (especially for those with the lowest education level, to 0.28 per cent). The disappearance of the educational gradient was therefore clear-cut.

A similar trend can be observed when considering parental educational level (Figure 2(b)). While in the earlier calendar period, the probability of childbearing across partnerships for individuals with more highly educated parents was almost double that of those with lower-secondary-educated parents (0.33 vs 0.18 per cent), the gap reduced in the following period. Multiple-union childbearing has nowadays become almost equally likely across individuals regardless of parental educational level (0.25 per cent for those with less educated parents vs 0.35 per cent for highly educated parents, with overlapping confidence intervals).

Finally, variations over time clearly appeared for the regional gradient (Figure 2(c)). The previously outlined Southern delay (Figure 1) stemmed from a regional gap which has closed over time and become irrelevant in recent years (probability 0.29 for Northern and Central areas vs. 0.23 for Southern ones after 2003, with overlapping confidence intervals).

Robustness checks

We ran a series of sensitivity checks to assess the robustness of the findings (results available on request). Readers may question whether our results were affected by the age selection made on the sample. Performing a check to include older individuals (namely those aged 55+ at time of survey) showed no significant differences in our results, whether in terms of prevalence or characteristics associated with childbearing across partnerships. Our analysis considered every child an individual had, whereas other studies have tended to focus only on the first two or three. We checked both

possibilities, but given the stability of the model estimates, we decided to include all higher parity transitions so as to increase the sample size slightly.

Regarding the model specification, we implemented a set of sensitivity checks. We first estimated separate models for men and women. Due to the reduced sample size, estimates generally presented higher confidence intervals, and the absence of substantial sex differences in the effects of the different correlates convinced us to report the results for men and women jointly. Additionally, as some may question the inclusion of age at first birth—older first-time mothers have less time in which to find a new partner and have additional children after union dissolution (Carlson and Furstenberg 2006; Gibson-Davis 2011; Guzzo and Hayford 2011, 2012)—we reran our models omitting this variable. Our findings were largely confirmed.

As previously noted, union status may be considered an endogenous variable in the process of (multiple-union) childbearing, leading to our decision to exclude it from the final model specification. When included for a robustness check, being in a union (time-varying specification) resulted in a higher probability of having an additional child with the same partner, while not being in a union increased the probability of multiple-union childbearing; but other correlate estimates were unaffected by the presence of this variable. Other variable specifications tested—for example, partnership history (*never married; married, never divorced; married then divorced*) or union status at first birth (*not in union; cohabiting; married*)—performed as expected without altering the model results. Regarding calendar time, we also tested other specifications accounting for small variations in the comparison of the two periods, but the results remained virtually unchanged.

Finally, following Stykes and Guzzo (2019), we estimated models considering different codings of potentially uncertain childbearing events (i.e. attributing ambiguous cases alternatively to same-union childbearing as a lower bound or to multiple-union childbearing as an upper bound) to document possible variations in the correlates' associations. Our results proved robust in all these different event specifications.

Discussion

Despite mounting evidence of childbearing across partnerships for several wealthy countries with relatively high parental separation rates (Carlson and

Furstenberg 2006; Guzzo and Furstenberg 2007; Gray and Evans 2008; Manlove et al. 2008; Lappegård and Rønsen 2013; Thomson et al. 2014; Monte 2019; Stykes and Guzzo 2019; Thomson et al. 2020, 2021), previous research has hitherto neglected Mediterranean countries, which are characterized by strong family ties. In response to this oversight, this study examined the prevalence, demographic correlates, and social gradient (and its change over time) of childbearing across partnerships in Italy.

First, we detected a share of childbearing across partnerships of 5 per cent among parents aged 25–54 with at least two children; a population-level estimate ranging from 410,000 to 580,000 individuals, depending on the assumptions made. The most recent estimates of childbearing across partnerships were generated by Thomson et al. (2021) from Harmonized Histories survey data for Belgium, Bulgaria, the Czech Republic, Estonia, France, Georgia, Hungary, Lithuania, Norway, Poland, Romania, Spain (women only), and Sweden. Their prevalence estimates suggested that the percentage of parents aged under 46 at interview with at least two children who had had children with more than one partner ranged from ~6 to >20 per cent. Our estimate—based on the method of Thomson et al. (2021), which considered whether all the respondent’s children were born in the same union or some in different unions—suggested that Italy displays the lowest share of childbearing across partnerships among the countries analysed in contemporary research. Nonetheless, parents having children across unions are a demographically and sociologically interesting group, which appears to be fuelled by socio-cultural changes that drive the diffusion of new family patterns and constrained by structural demographic forces. On the one hand, several SDT markers, such as cohabitation, childbearing within cohabitation, and union dissolution, are now spreading rapidly in Italy (Pirani and Vignoli 2016; Vignoli et al. 2016; Caltabiano et al. 2019; Pirani et al. 2021). On the other hand, several more mechanical forces seem to be pushing in the opposite direction: the lowest-low Italian fertility (few women have more than one child and, by definition, childbearing across partnership is visible only from parity two); the ingrained postponement of the first child and the lengthy average marriage duration (which leaves little space for separation, remarriage, and a second child with another partner); and the low number of children outside unions and at young ages (due to Italian youths’ effective and careful contraceptive use; Castiglioni et al. 2001; Guetto et al. 2022).

Accordingly, despite it being relatively straightforward to predict an increase in exposure to childbearing across partnerships due to the drastic rise in union dissolutions, we do not expect childbearing across partnerships to become commonplace in Italy in the near future. Like in other European countries (Van Bavel et al. 2012), completed fertility among divorced or widowed women in Italy tends to be much lower for those who do not remarry than those who do (Meggiolaro and Ongaro 2010). Microsimulation analyses by Winkler-Dworak et al. (2017) also suggested that repartnering does not fully compensate for the lower fertility associated with union disruption in Italy.

Second, regarding the demographic characteristics associated with childbearing across partnerships, our findings showed an impressive similarity with those from culturally different societies (e.g. Australia, Germany, Finland, Norway, Sweden, and the US). Indeed, the effects of age at first birth and parity were largely consistent with prior research (Guzzo and Furstenberg 2007; Manlove et al. 2008; Lappegård and Rønsen 2013; Thomson et al. 2014, 2020; Jalovaara and Kreyenfeld 2020). Those who had their first birth at a very young age were most likely to have children with different partners. Older first-time parents had less time available—and possibly a lower inclination—for a new start (Thomson et al. 2012). Higher parity reduced further childbearing, whether with the same or a different partner. Parents were most likely to transition to multiple-union parenthood at the second birth, and the probability of a birth with a new partner appeared to be highly reduced when a parent already had two or more children with their previous partner.

Third, and perhaps most interestingly, we showed that childbearing across partnerships was a family behaviour initiated in Italy by trendsetters: highly educated, Northern individuals from higher social backgrounds. The effects of these characteristics have weakened in recent years, with childbearing across partnerships becoming equally likely in more economically disadvantaged groups. This finding positions Italy strikingly in line with the prevailing effects highlighted by studies on other European countries, Australia, and the US. Indeed, low education has repeatedly been shown to be associated with a higher probability of childbearing across partnerships (e.g. Carlson and Furstenberg 2006; Guzzo and Furstenberg 2007; Manlove et al. 2008; Lappegård and Rønsen 2013; Thomson et al. 2014). Whether the change in the relationship between socio-economic status and childbearing

across partnerships was due to interlinked transitions over the life course (e.g. cohabitation, separation, repartnering) or to the process itself is difficult to isolate. In line with prior research (e.g. Goode's hypothesis (Goode 1962, 1963, 1993); later empirically supported by Härkönen and Dronkers 2006; Matysiak et al. 2014; Guetto et al. 2016), we argue that the relationship between childbearing across partnerships and socio-economic status has turned from positive to non-significant (or negative) due to the different stages in the democratization of new family-related behaviours across social groups (Blossfeld et al. 1995). In Italy, the change in the socio-economic gradient of childbearing across partnerships does seem to be occurring in parallel to a diffusion of new family behaviours, as the direct (i.e. financial) and indirect (i.e. social acceptance) costs of new family transitions weaken. We can thus offer initial evidence for a changing social gradient in childbearing across partnerships for a country in which new family behaviours have been pioneered by the social vanguard. Although the prevalence of childbearing across partnerships in Italy is the lowest among wealthy countries, our results pinpointed a growing socio-economic disadvantage of the families involved in this process, with potential implications for kinship, family ties, and child welfare (Cherlin 2010; McLanahan and Beck 2010).

We recall two key limitations to our study. First, are the possible drawbacks of indirect estimation based on retrospective surveys (Stykes and Guzzo 2019); however, the specific Italian context (characterized by a high share of childbearing in co-residential unions) and the sensitivity checks implemented should assure a certain strength in our results. Second, we acknowledge that an individual's socio-economic position is not completely exogenous to the process of childbearing across partnerships (Lundberg and Rose 2002; Gupta et al. 2007; Rogers and Stratton 2010). Accordingly, we interpret our results as close associations rather than causal effects.

Conclusions

The descriptive analysis offered in this paper is a necessary first step for including Italy within the growing international debate over childbearing across partnerships (multi-partner fertility). Through the use of nationally representative retrospective data and event-history techniques, we were able to provide three key findings. First, we detected a non-negligible share of childbearing

across partnerships, although at substantially lower levels relative to other wealthy countries. Second, multivariable analyses revealed an impressive similarity between the demographic correlates of the phenomenon found in Italy and elsewhere. Finally, we showed that childbearing across partnerships was initiated by the social vanguard of new family behaviours but then diffused among the more economically disadvantaged. Overall, even assuming that childbearing across partnerships remains at relatively low levels in the near future, this study has contributed important insights into an, as yet, largely overlooked life-course dynamic in Italy.

We conclude by reminding readers that childbearing across partnerships is not a new phenomenon in Italy. In the past, the process was driven not by union dissolution, but by mortality. Before the demographic transition, death during the childbearing years was not uncommon. A surviving spouse with children had little choice but to remarry, usually marrying another individual still of childbearing age and frequently therefore having further children. After the demographic transition, in the 'golden age of marriage' in the 1950s and 1960s, childbearing across partnerships declined. Following this, the increase in divorce, cohabitation, and second unions served as a new vehicle for childbearing across partnerships. Hence, complex families have always existed in Italy (Livi Bacci 1981; Breschi et al. 2008), but detecting and understanding patterns of childbearing across partnerships is becoming increasingly crucial and timely for the families formed through this process. Based on our finding that the least well-off are increasingly more likely to have children with more than one partner, childbearing across partnerships may be an important aspect of rising inequality, with significant implications for children, parents, and service providers.

Notes and acknowledgements

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Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix**Table A1** Relative risk ratios and predicted probabilities for the competing events of having an additional child within the same union or in a different union (reference outcome = not having an additional child): results from discrete-time competing risk model on men and women aged 25–54 with at least one child, Italy

	Additional child in the same union				Additional child in a different union (multiple-union childbearing)			
	Relative risk ratio	$P > z$	Predicted probability (percentage)	$P > z$	Relative risk ratio	$P > z$	Predicted probability (percentage)	$P > z$
<i>Years from previous child</i>								
1–2 (ref.)	1.000	–	5.696	0.000	1.000	–	0.064	0.000
3–4	1.939	0.000	10.269	0.000	2.792	0.000	0.165	0.000
5–9	1.189	0.000	6.642	0.000	5.882	0.000	0.367	0.000
10–14	0.293	0.000	1.760	0.000	6.077	0.000	0.408	0.000
15+	0.051	0.000	0.313	0.000	2.491	0.000	0.172	0.000
<i>Sex</i>								
Men (ref.)	1.000	–	6.118	0.000	1.000	–	0.241	0.000
Women	0.832	0.000	5.188	0.000	0.916	0.406	0.224	0.000
<i>Parity</i>								
1 (ref.)	1.000	–	9.302	0.000	1.000	–	0.424	0.000
2	0.239	0.000	2.473	0.000	0.215	0.000	0.098	0.000
3 +	0.194	0.000	2.021	0.000	0.240	0.000	0.110	0.000
<i>Age at first birth</i>								
≤24 (ref.)	1.000	–	6.792	0.000	1.000	–	0.519	0.000
25–29	0.874	0.000	6.059	0.000	0.341	0.000	0.180	0.000
30+	0.669	0.000	4.766	0.000	0.167	0.000	0.090	0.000
<i>Calendar time</i>								
2003 or before (ref.)	1.000	–	5.823	0.000	1.000	–	0.205	0.000
2004 or after	0.949	0.028	5.553	0.000	1.284	0.024	0.264	0.000
<i>Education</i>								
Lower-secondary (ref.)	1.000	–	5.717	0.000	1.000	–	0.222	0.000
Upper-secondary	0.945	0.023	5.435	0.000	1.005	0.969	0.224	0.000
Higher	1.159	0.000	6.512	0.000	1.446	0.032	0.317	0.000
<i>Parental education</i>								
Lower-secondary (ref.)	1.000	–	5.684	0.000	1.000	–	0.210	0.000
Upper-secondary or higher	1.026	0.382	5.808	0.000	1.586	0.000	0.331	0.000
<i>Area of residence</i>								
North/Centre (ref.)	1.000	–	5.259	0.000	1.000	–	0.256	0.000
South	1.243	0.000	6.395	0.000	0.761	0.012	0.192	0.000
Constant	0.126	0.000			0.002	0.000		

Note: Ref. is the reference category.

Source: Authors' elaborations of Italian FSS data, 2009, 2016.