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Union instability and fertility: an international perspective

Ana Laura Fostik, Mariana Fernández Soto,
Fernando Ruiz Vallejo and Daniel Ciganda

Abstract

We analyse the effects of union instability on cumulative fertility among ever-partnered women aged 25 to 49 years old in 25 countries from Europe and America. Our main research question is whether the relationship between union instability and fertility differs in countries with varying levels of fertility and union instability. We start thus by classifying countries according to their fertility level – defined by the Total Fertility Rate –, and their level of union instability – defined as the proportion ever-separated and the proportion ever-repartnered by age 40 –. Then, we estimate cumulative fertility by conjugal trajectory at the time of survey. Finally, we use Poisson regression models to analyse the effect of union dissolution and the effect of repartnering on the number of children ever born – up to age 45 – in each country. Our descriptive findings show that countries with low fertility tend to have low or moderate levels of union instability, whereas countries with higher fertility tend to have moderate or high levels of union instability. The results from our models show that while the effect of experiencing union dissolution by age 35 on the number of children ever born is negative in all countries, the effect of repartnering by age 35 is negative in some countries but positive in others.

1. Introduction

The estimation of the effect of union instability on fertility is one of the most relevant questions in family demography because it can provide insight into future fertility trends in the context of increasing separation and divorce rates. It is, however, a challenging research problem because this effect is the expression of competing mechanisms at the individual level. While the instability of unions can contribute to the reduction of aggregate fertility via the reduction of exposure to childbearing, the additional births associated with the formation of second or higher order unions can result in higher fertility levels. In other words, whether the effect of union dissolution on fertility is negative or not depends on whether the additional births associated to repartnering outweigh the reduction of exposure in a given context.

In this article, we contribute to the literature on the links between union instability and fertility by modelling cumulative fertility as a result of the conjugal trajectory followed by women in a large number of countries with varying levels of union instability and fertility. In order to do so, we harmonize partnership information from national surveys of Canada, Colombia, Uruguay and Mexico[1] to the Harmonized Histories dataset. The resulting dataset contains comparable information for 25 countries.

We start our analysis by classifying countries with respect to their empirical levels of fertility, as measured by their Total Fertility Rate at the time of survey, and their levels of union instability, measured as the prevalence of union dissolution and repartnering. We measure union dissolution at the aggregate level by computing the proportion of ever-partnered women aged 25 to 49 years old at the time of survey who separated from a marriage or a cohabiting union before age 40 or at the time of the survey. Repartnering is measured by computing the proportion of women who had experienced a second or higher order union before age 40 or at the time of the survey. In this first stage we aim to describe how the relationship between union instability and fertility changes in contexts characterized by different levels of union instability and fertility.

After providing a description of the dynamics of union dissolution and repartnering in the different contexts analysed, we model the number of children ever born up to age 45 or at the time of survey as the outcome of different characteristics of the partnership history using Poisson regression. In

[1] The harmonization for the Mexican dataset is currently underway; results will be updated in the coming weeks in order to include our findings for this country.

order to measure the impact of the timing of conjugal transitions in the life course, we will include first a variable measuring the conjugal situation by age 35 among women aged 35 to 49 years old, and in a second step we include a time-varying variable measuring conjugal and reproductive status at each point in individual biographies.

2. Conjugal instability and fertility: What effects? Which mechanisms?

2.1. Relationships between union instability and fertility

The demographic literature has been concerned with the links between union instability and fertility since the early 1970s, in times of an increasing deinstitutionalization of conjugal life; rising divorce rates, lower first marriage rates, increasing cohabiting unions.

Early studies focused on the differences in cumulative fertility between individuals who experienced union dissolution over their lifetime, and those who did not. Cohen and Sweet (1974) found that in 1965 in the United States, women who remained in their first union had 0.6 more children, on average, than those who had experienced either a divorce or the death of their spouse, although the magnitude of this difference was only 0.1 child once differences in ethnic origin and education were accounted for (Cohen & Sweet, 1974). Two decades later, Wineberg (1988) found that fertility in 1980 and 1985 was slightly higher among white remarried women, a finding that was explained by young ages at first birth, which is both correlated with higher fertility and higher union dissolution risks (Wineberg, 1988). Findings for England and Wales between 1986 and 1989 revealed that cumulative fertility among women tended to be similar among those in a first marriage and those remarried. Nevertheless, women who remarried took longer to achieve the same fertility level as those in their first marriage (Clarke, Diamond, Spicer, & Chappell, 1993). The longer birth intervals were not the result of preferences for delayed births, but the result of the time it takes to repartner after a separation (Diamond, Clarke, & Clarke, 1996), a finding later replicated by Kreyenfeld and Heintz-Martin (2015) for German men and women in 2011-12 (Kreyenfeld & Heintz-Martin, 2015).

In the same line, Pinnelli, De Rose, Di Giulio, and Rosina (2002) found a negative effect of union dissolution on fertility, while the formation of a new union had a positive effect among ever partnered women in 1992 in the United States, Sweden, Hungary, Italy and France. Nonetheless, women with more than one union did not necessarily exhibit higher fertility than those in intact

unions (Pinnelli et al., 2002). Studies for France show that, in 1999, men and women who separated had lower completed fertility than those who did not separate by 0.10 and 0.15 children, respectively. These authors found evidence of "catching-up" among those who repartnered, in such a way that the negative effect was present only for those who remained separated: the global impact of the increase in union dissolution on global fertility was estimated to be low (Beaujouan, 2010; Beaujouan & Solaz, 2008). van Bavel, Jansen, and Wijckmans (2012) found that, in 2006, cumulative fertility was lower among current divorcees, particularly among women, in 23 European countries. In some of the countries, however, men currently repartnered achieved similar fertility as those who never separated. In this sense, repartnering seemed to mitigate the depressing effect of union dissolution on fertility among men, a finding linked to their greater likelihood to have three or more children (van Bavel et al., 2012).

Meggiolaro and Ongaro (2010) examined the impact of union dissolution among ever partnered Italian women in 2003 and found that cumulative fertility was highest among those in their first union, followed by those who repartnered; fertility was lowest among women who separated without repartnering. The overall effect of union instability on fertility in the Italian society was estimated to be negative, since childbearing in higher order unions was not enough to compensate for lost fertility due to separation (Meggiolaro & Ongaro, 2010).

Evidence for Latin America and the Caribbean is scarce; however, some studies from the 1960s and 1970s found a positive relationship between union dissolution and fertility; for instance, a positive relationship between the number of spouses and the number of children born alive in Barbados - after controls- (Ebanks, George, & Nobbe, 1974); and higher cumulative fertility among women in higher order unions in five Latin American cities in the 1970s (Downing & Yaukey, 1979). Studies for the early 2000s in Brazil also found that women with more than one union reported higher cumulative fertility, which was due to the contribution of births in second or higher union (Leone, 2002; Leone & Hinde, 2007). Some of the evidence for Latin-American countries, nonetheless, suggests a negative effect, due to the lost time of exposure to childbearing: in the 1970s, in Latin American cities where first births were being postponed, the lost exposure due to union dissolution could not be made up for in subsequent unions (Downing & Yaukey, 1979). When examining fertility rates by marital status instead of cumulative fertility, Rosero-Bixby (1978) also concluded that, in Latin America, there was a 0.8 reduction in fertility rates that could be explained by "lost" time between unions (Rosero-Bixby, 1978). More recently, Fernández

Soto (2018) estimated the overall loss in fertility due to union instability in Uruguay in 2008, and suggested that while union dissolution implied a loss of fertility among older women, this was no longer the case in younger generations (Fernández Soto, 2018).

Since 2010, some articles have estimated simulated total fertility rates using complex micro-simulation techniques. These articles have estimated a negative net effect of union instability on fertility. Simulated fertility for Canadian women in 2001 and 2006 was higher when they had only one union which is a marriage than when they had two unions, especially when the two unions were cohabiting unions. Quebec's women lower estimated fertility stemmed from their more complex and unstable union histories (Bélanger, Morency, & Spielauer, 2010).

Among women in France in 1999, it was estimated that a population with no union dissolution would have smaller family sizes than a population in which all unions remained intact, by between one third and one child per woman. Although repartnering tended to make these gaps smaller by encouraging higher parity progressions, the positive effect of repartnering was not sufficient to offset the dissolution rates and the reduced time in unions in scenarios of high instability (Thomson, Winkler-Dworak, Spielauer, & Prskawetz, 2012). In Italy and Great Britain, it was estimated that a reduction of 0.5 children in Italy (in 2003 and 2009) and a reduction between 0.2 and 0.4 children in Great Britain (in 2009) could be attributed to union instability. Although repartnering helped mitigate this reduction, it did not entirely compensate for union instability at the global level (Winkler-Dworak, Beaujouan, DiGiulio, & Spielauer, 2017).

2.2. Mechanisms Linking Union Instability and Fertility

The literature about the effect of union dissolution and repartnering on fertility has highlighted some important mechanisms through which these relationships are observed. Below, we discuss some of these mechanisms.

a) Conflict or perceived instability

One of the mechanisms by which union dissolution affects fertility is by the perceived risk of union disruption: fertility may be reduced while still in a union when the partnership is plagued by conflict or otherwise perceived to be unstable (Lillard & Waite, 1993; Wineberg, 1988). Using joint models for the hazard of dissolution and the hazard of births, it was found that perceived instability negatively affected birth risks, in 1985 in the United States (Lillard & Waite, 1993) as

well as in Italy and Spain in the 1990s (Coppola & Di Cesare, 2008). Hence, the effect of childbearing during repartnering depends on whether its intensity can offset the below average fertility observed in the period preceding the separation until the formation of the second union (Wineberg, 1988).

b) Exposure to childbearing

The presence of a suitable partner is a precondition to childbearing for most individuals (Hohmann-Marriott, 2016), and thus any period of the reproductive life that is spent outside of a union is potentially detrimental for fertility: the longer the periods of singlehood during childbearing years, the more fertility is reduced (Thomson et al., 2012).

By examining childbearing trajectories of ever-separated individuals, several studies have indeed found that births are postponed or forgone when the exposure to childbearing during fecund years is diminished through reduced time in relationships. One of the ways in which this happens is when the first union is postponed or forgone when a suitable partner for a coresidential union is not found. Delayed union formation has been linked with trajectories of childlessness in countries such as Italy, Poland (Mynarska, Matysiak, Rybińska, Tocchioni, & Vignoli, 2015), Finland (Jalovaara & Fasang, 2017) and Australia (McDonald & Reimondos, 2013). Pinnelli et al. (2002) found that any postponement in union formation implied a reduction in the quantum and tempo of fertility for first, second and third births in the cases of Italy, the United States and Hungary, and for second or higher order births in the cases of Sweden and France (Pinnelli et al., 2002).

Experiencing a separation or divorce during reproductive years, has also been linked with childlessness among men and women in several European countries (Tanturri et al., 2016; van Bavel et al., 2012). Divorcees aged 20 to 50 in 23 European countries were also more likely to have just one child than never divorced men and women (van Bavel et al., 2012).

The loss of exposure to childbearing comes to an end when individuals repartner during reproductive years; couples may actually accelerate childbearing in higher order unions if they anticipate age-induced sterility. Beaujouan and Solaz (2008) found such an effect among childless women in France in 1999 (Beaujouan & Solaz, 2008). Kalmijn and Gelissen (2007) also found evidence of a "catching-up" effect among women in the Netherlands, where repartnered women without previous children were more likely to have a child in the new union than childless women in their first union. The authors point out that if divorced women did not realize their fertility

intentions in their first union, they will try to achieve their desired family size in the new union (Kalmijn & Gelissen, 2007).

c) Timing of life course transitions

An important caveat of the possibility that individuals may accelerate childbearing in order to "catch-up" in a higher order union is that it depends on the timing of separation and repartnering: fecund time ("the biological clock") may run out before individuals can "catch-up" on their desired fertility intentions.

Age at union formation, separation and repartnering are indeed linked to fertility through reductions in fecundity with increasing age. In societies in which first union formation and first births are postponed, individuals who go through the dissolution of a union might simply not have enough time to find a suitable new partner with whom to start a new union and resume childbearing before they become limited by infecundity, which increases with age. Thus, not only age at repartnering, but age at first union formation, age at first birth and age at separation all have a potential effect on fertility after the demise of a union: a later age at first union is associated with delayed childbearing and may increase the negative effect of union dissolution on fertility, whereas an earlier age at repartnering might mitigate the negative effect (Beaujouan & Solaz, 2008; Thomson et al., 2012).

Spijker, Simó, and Solsona (2012) documented that individuals who were younger than 25 when their first union ended were twice more likely to become parents afterwards than those whose union dissolved after age 25, in Austria, Belgium, Estonia, Finland, France, Germany, Hungary, Norway, Slovenia and Spain in the 1990s. More than half of the younger group became parents again, compared with less than one third for the older one. Moreover, individuals whose first union had lasted less than 5 years were twice more likely to have children in the new union than those in longer-lasting first unions (Spijker, Simó, & Solsona, 2012).

Beaujouan (2011) as well as Beaujouan and Solaz (2013) examined whether repartnered men and women aged up to 45 years old in France in 1999 had enough time to have children in a second or higher union before they became limited by fecundity. They concluded that women are particularly limited by fecundity constraints, and thus women's age at repartnering is a key determinant of fertility in second unions in France (Beaujouan, 2011; Beaujouan & Solaz, 2013). Thus, the proportion of fertile second unions decreases when they are formed after age 32 for women and

35 for men (Beaujouan, 2011). Beaujouan (2010) also found that cumulative fertility was higher among the ever separated than the never separated when repartnering happened by age 30. Other findings for France suggest that a population with early dissolution and repartnering patterns would have greater fertility than one with delayed dissolution and repartnering (Thomson et al., 2012).

The time spent between the dissolution of a union and the formation of a new partnership is also a key element in the link between union instability and fertility, since it usually happens during the "prime reproductive years" (Wineberg, 1988). As a result, the shorter the interval of time between separation and repartnering, the greater the odds that higher order unions might be fertile. Beaujouan (2010) found that there is a higher risk of a birth in the second union when repartnering happens between two and five years after a separation (Beaujouan, 2010, 2011).

d) Presence, number and age of children

The presence, number and age of children from previous unions are crucial elements in the relationship between union instability and fertility, since these variables are key predictors of whether, when, and how many births individuals go on to have in second or higher order unions (Beaujouan & Solaz, 2008; Griffith, Koo, & Suchindran, 1985).

The effect of the number of children on the odds of having a birth in a new union is not straightforward and different results are found depending on the national context and on the way pre-union children are measured (whose partner's, whether they are co-resident or not). Some of the early studies on fertility in second or higher order unions suggested that the number of previous children actually did not matter: shared children for newly formed couples may signal their commitment to their new partnership; hence, individuals would have at least a new birth in the higher order union regardless of the number of previous children each partner had (Griffith et al., 1985). Evidence for the "commitment value" of children was found for women in the United States in the 1970s (Griffith et al., 1985) and for British women in the 1990s (Jefferies, Berrington, & Diamond, 2000). Micro-simulations for France also showed that women who separated and repartnered had higher birth rates, at all parities, than those who stayed in the first union, especially when the newly formed couple had no common children (Thomson et al., 2012). Childbearing in higher order unions was found to be of particular importance for third and fourth birth rates.

However, other findings suggest that parity at the time of repartnering does have an effect on fertility in higher order unions, and particularly, that it is more likely that individuals will have children in the new union when at least one of the partners is childless when entering the union.

This is often referred to as "the parenthood" value of children (Griffith et al., 1985) and evidence for such a mechanism was found among women in the United States in the 1980s (Wineberg, 1990), and for men and women in Austria, Estonia, Finland, France, Hungary, Norway and Slovenia in the 1990s (Spijker et al., 2012). Later findings for Austria and France confirmed that fertility in the new union was not independent of previous parity: in Austria, individuals with fewer than two children from previous unions living in the household were more likely to have children in the new partnership (Buber & Prskawetz, 2000), while in the France, the least fertile second unions were those in which both partners were already parents at the beginning of the union (Beaujouan, 2011), whereas childless individuals at the beginning of a second union seemed to have children faster than their counterparts in first unions (Beaujouan & Solaz, 2013). Whether parity at union dissolution has a significant effect on childbearing after repartnering seems to be not only context dependent, but also varies depending on whether women or men are analysed (Beaujouan & Solaz, 2013; Heintz-Martin, Le Bourdais, & Hamplová, 2014; Ivanova, Kalmijn, & Uunk, 2014; Kalmijn & Gelissen, 2007).

Another key element regarding the influence of past children in the likelihood that second or higher order unions will be fertile is the age of the youngest child at the moment of repartnering. In general, studies have found a negative relationship between age of the youngest child and fertility in the new union: both in the United Kingdom and in Austria in the 1990s, the odds of a first conception in the second union increased when the youngest child is 5 years old or younger (Buber & Prskawetz, 2000; Jefferies et al., 2000); similar results were found for France in 1999, where the odds of a subsequent birth were higher when the youngest child is under 6 years old (Beaujouan & Solaz, 2008); in the Netherlands, the odds were higher when the previous child was younger than 12 years old (Kalmijn & Gelissen, 2007).

3. Objectives

Our main objective is to gain insight into the relationship between union instability and fertility by exploring a series of mechanisms that connect the experience of transitions in and out of co-residential unions (either marriage or cohabiting union) and achieved fertility.

We intend to explore these relationships at the micro level by modelling the number of children ever born as an outcome of several characteristics of the partnership history, but also at the macro level, where we will try to connect the prevalence of union dissolution and re-partnering with

cross-country differences in fertility indicators at the population level. By estimating our models first at the country level and then for each category of our instability and fertility classification, we seek to determine whether the effect of several indicators of conjugal instability varies across different contexts. In this way, we expect to produce new insights into the relationship between union instability and fertility by exploring variation in a wide range of contexts, characterized by significantly different partnership dynamics.

4. Data, Methods and Hypotheses

4.1 Data

We use the Harmonized Histories dataset produced by the Generations and Gender Program datasets for the following countries and years: Austria (GGS 2008-09), Belarus (GGS 2017), Belgium (GGS 2008-09), Bulgaria (GGS 2004), Czech Republic (GGS 2005), Estonia (GGS 2004-05), France (GGS 2005), Georgia (GGS 2006), Germany (Pairfam 2008-09), Hungary (GGS 2004-05), Italy (GGS 2003), Lithuania (GGS 2006), Netherlands (FFS 2003), Norway (GGS 2007-08), Poland (GGS 2010-11), Romania (GGS 2005), Russia (GGS 2004), Sweden (GGS 2012-13), the United Kingdom (BHPS 2005-06) and the United States (NSFG 2007). Microdata files for the Harmonized Histories are open access and available to researchers.

In order to take advantage of retrospective union and fertility survey data that allows for the inclusion of some Latin-American and other countries, the team harmonized data for the following countries and surveys: Uruguay –Encuesta de Situaciones Familiares (Family Situations Survey) 2008; Colombia –Demographic and Health Survey- 2015; Canada- General Social Survey 2006 (harmonization by Statistics Canada); and Mexico –Encuesta Demográfica Retrospectiva 2017 (currently in the process of harmonization).

We selected a sample of women aged 25 to 49 years old who were ever in a conjugal union (cohabiting union or marriage), who experienced their first union before or at age 45 and whose union either did not end or ended by age 45 trough separation or divorce (widows were excluded from the analysis).

Table 1 shows significant variation in the partnership and family indicators across the countries in our sample. The minimum average number of children, 1.3, is found in Germany, and the maximum in Colombia, where women have on average 2.3 children. Women in Colombia also

start their reproductive trajectory earlier, on average, than women in the rest of the countries analysed, with an average age for the first child of 21.6, followed by Bulgaria (22.4), and Russia (22.4). The countries with the latest start of childbearing are Sweden and the Netherlands with a mean age of first birth of 27.4. The distance between age at first union and age at birth of the first child also exhibits different patterns among countries. In Colombia, there is a shorter mean period between these two events (0.3 years), while in Sweden and Belgium the difference is of 5 years.
The prevalence of first unions that are marriages also exhibits a wide range. In Italy, 98% of women were married to their first conjugal partner, and this figure is also high in Romania (93%) and Belarus (92%). In contrast, Colombia and Sweden report lower levels: there, 36% and 38% of women, respectively, were married in their first union.

Important differences are also observed in the timing of first union formation and dissolution. Regarding the duration of the first union, the values range from 8.4 years in the United States to 14.8 years in Georgia. These differences in the stability of the first union affect the intensity and timing of subsequent unions. Thus, we observe that countries with greater stability and later ages at start of the first union, such as Italy and Spain, also exhibit more advanced ages at the beginning of second union.

Table 1. Descriptive statistics for selected indicators by country. Women aged 25 to 49 years old at the time of survey.

Country	Survey year	Number of obs.	Children born by 45		Age at first birth		Age at first union		Married in first union (%)	Time spent in first union (years)	
			Mean	*sd*	*Mean*	*sd*	*Mean*	*sd*		*Mean*	*sd*
Austria	2008-09	2,157	1.4	1.1	25.2	4.8	22.2	4.0	62.4	10.6	7.4
Belgium	2008-10	1,551	1.6	1.2	26.5	4.4	21.5	4.8	55.2	10.1	7.9
Bulgaria	2004	3,254	1.7	0.8	22.1	3.8	20.8	3.6	90.5	14.7	7.4
Belarus	2017	1,954	1.6	0.9	23.4	4.1	22.2	4.0	92.0	12.4	7.8
Canada	2006	4,630	1.6	1.2	26.1	5.1	23.5	4.6	72.7	10.8	7.5
Colombia	2015	19,111	2.3	1.5	21.6	4.6	21.3	5.0	35.8	10.9	7.7
Czech Republic	2005	1,849	1.6	1.0	23.0	3.7	21.9	3.7	87.2	12.2	7.6
Estonia	2004-05	1,893	1.8	1.1	22.8	3.6	21.2	3.4	72.9	11.9	7.6
France	2005	2,172	1.7	1.2	25.7	4.4	22.4	3.9	62.8	12.0	7.8
Georgia	2006	2,045	2.1	1.0	22.9	4.3	21.7	4.3	84.2	14.8	7.3
Germany	2008-10	4,241	1.3	1.2	26.7	5.2	23.3	4.3	72.6	9.0	6.4
Hungary	2004-05	2,729	1.7	1.1	22.7	4.1	21.1	3.6	83.1	12.8	8.3
Italy	2003	1,903	1.5	0.9	26.7	4.8	24.8	4.3	97.7	12.5	7.2
Lithuania	2006	1,671	1.6	0.9	23.4	3.6	22.3	3.6	90.1	11.9	6.7
Netherlands	2003	2,281	1.4	1.2	27.4	4.5	22.8	3.7	69.5	11.7	8.1
Norway	2007-08	3,139	1.8	1.2	25.6	4.6	22.2	3.8	56.1	10.7	7.9
Poland	2010-11	3,515	1.8	1.2	23.9	4.1	22.6	3.6	90.2	12.4	7.5
Romania	2005	2,147	1.6	1.1	22.9	3.9	21.3	3.6	93.4	13.3	7.2
Russia	2004	2,572	1.6	0.9	22.4	3.6	21.2	3.5	89.2	13.2	8.1
Spain	2006	3,474	1.5	1.0	26.1	5.1	24.0	4.5	80.3	12.5	7.8
Sweden	2012-13	1,863	1.6	1.2	27.4	4.7	22.3	4.2	38.5	8.9	7.6
Un. Kingdom	2005-06	2,980	1.7	1.2	26.1	5.2	23.0	4.3	69.1	10.1	7.5
Un. States	2006-08	4,059	1.9	1.4	24.1	5.3	22.2	4.3	73.2	8.4	6.6
Uruguay	2008	641	2.0	1.5	23.9	5.1	22.6	4.9	81.1	12.5	7.8

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (Statistics Canada 2006).

Table 1 (cont.). Descriptive statistics for selected indicators by country. Women aged 25 to 49 years old at the time of survey.

Country	Age at first separation		Age at first repartnering		Age		Higher education (%)	Religious (%)
	Mean	*sd*	*Mean*	*sd*	*Mean*	*sd*		
Austria	26.8	5.4	27.7	5.2	36.6	5.8	20	86
Belgium	25.2	7.0	26.5	6.1	37.9	7.0	49	51
Bulgaria	27.3	5.9	28.0	5.3	36.9	6.2	29	94
Belarus	27.9	6.1	29.1	5.3	36.9	6.8	43	94
Canada	28.0	6.1	29.6	6.1	38.1	6.7	55	78
Colombia	26.2	6.5	27.3	6.2	36.6	6.9	17	na
Czech R.	28.8	5.9	29.4	5.8	37.0	6.7	14	30
Estonia	27.2	5.9	28.2	5.5	37.6	6.9	40	na
France	28.5	6.1	29.5	5.9	37.7	6.8	38	82
Georgia	27.2	6.4	27.5	4.7	37.6	6.6	30	99
Germany	26.6	5.1	28.3	4.9	35.5	5.4	34	77
Hungary	27.4	6.3	27.4	5.6	37.2	6.9	22	81
Italy	32.5	5.9	30.8	5.3	38.0	6.1	12	na
Lithuania	29.3	5.7	30.5	5.6	36.6	6.5	31	94
Netherlands	27.6	6.0	28.9	5.1	37.7	6.6	25	56
Norway	26.9	5.9	28.5	5.7	37.9	6.5	40	90
Poland	29.0	6.0	29.0	5.6	36.7	6.6	32	98
Romania	27.1	5.8	26.8	5.4	36.0	6.5	12	100
Russia	27.1	6.2	28.4	5.9	38.1	7.1	47	84
Spain	30.0	6.5	30.4	6.1	37.7	6.5	22	88
Sweden	25.5	5.6	27.4	5.8	38.1	6.9	48	53
Un.Kingdom	26.5	5.9	28.0	5.7	37.8	6.3	56	52
Un. States	25.7	5.5	26.8	5.3	35.4	5.7	33	84
Uruguay	27.9	6.2	23.7	6.1	37.6	6.7	28	na

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (Statistics Canada 2006).

4.2 Methods and Hypotheses

We start by analysing cumulative fertility among women aged 25 to 49 in each country according to the state in the conjugal trajectory they were in at the moment of survey. In order to do this, we used biographical information on number of unions, age at union formation and age at separation and reconstructed conjugal trajectories up to the time of survey. We classed women according to whether they were: in their first union; separated from a first union; in a second or higher order union; separated from a second or higher order union.

We then use Poisson regression in order to estimate the effect of several characteristics of the conjugal trajectories and their timing on the number of children ever born up to age 45 or at the time of the survey, our dependent variable, controlled by exposure time (time between age at the time of survey and age at the start of the first union). Models are estimated for women aged 35 to 49 years old at the time of survey in each country.

Firstly, we focus on two of the mechanisms that link union instability and fertility: loss of exposure to childbearing, and timing of life course transitions. Our first set of models thus includes the following variables:

- The key independent variable of interest is the respondent's conjugal situation by age 35. This variable is used to test two mechanisms that link union instability with fertility: exposure to childbearing and timing of life course transitions. The variable's categories are: never-partnered, which is expected to have a negative effect on the dependent variable because of delayed exposure to childbearing; in a first union (reference category); separated without repartnering, which is expected to have a negative effect on the dependent variable because of lost exposure to childbearing; in a second or higher order union, which is expected to have a positive effect because of resuming exposure to childbearing and the "catching-up" effect.
- Whether the respondent had a first birth by age 25. This variable tests whether births are delayed and is expected to positively influence the dependent variable; the earlier the start of childbearing, the longer the time-span for further births.
- The amount of time spent in the first union by the time of survey or up to age 45. This variable tests the mechanism of exposure to childbearing during prime reproductive years and is thus expected to have a positive effect on the dependent variable: the longer the exposure, the greater the odds of childbearing.

- Whether the first union was a marriage, a control variable that is expected to have a positive effect on the dependent variable in more traditional settings and no effect in countries where cohabiting unions are extended.
- Whether the respondent has higher education (ISCED levels 5 or 6) at the time of survey, birth cohort and year of survey as control variables.

In a next step, we will test another mechanism that links union instability to fertility: the presence, number and age of children at the time of dissolution. We will create a time-varying variable that simultaneously takes into account the union status and the reproductive history of the respondent, at each point in the life course.

All models (with and without the time-varying covariate) will be estimated first for each country, and then in a pooled dataset, in order to estimate models for each category of our typology while controlling by country.

5. Descriptive findings

5.1. Typology

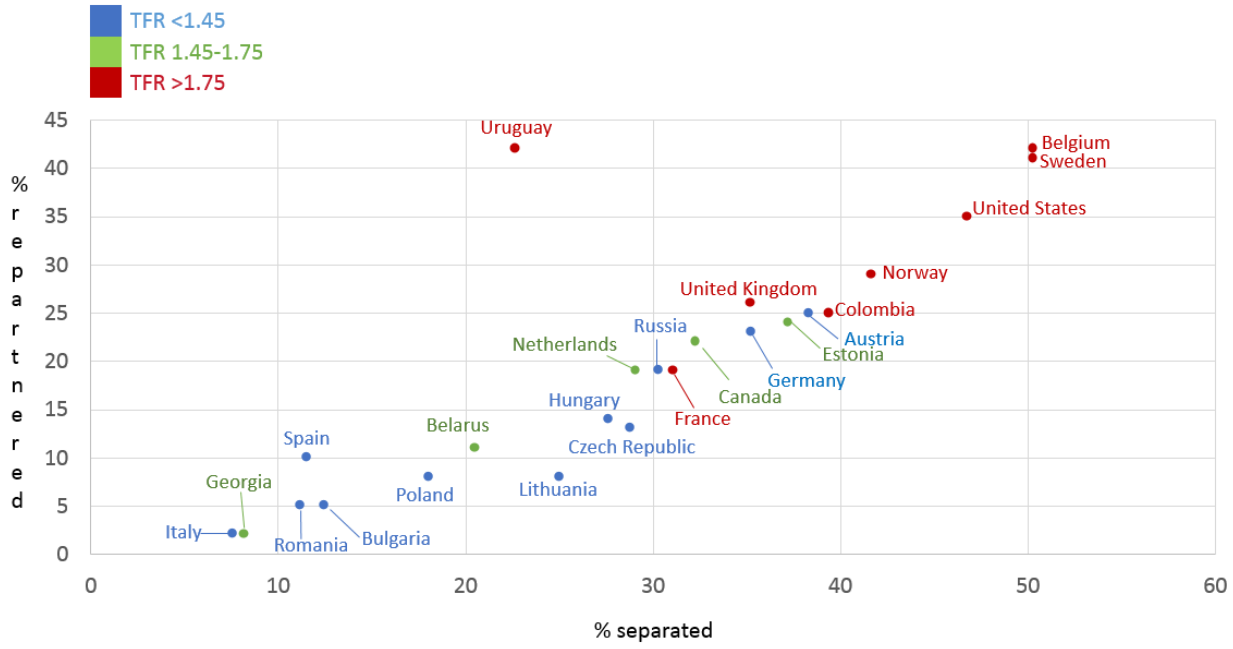
Figure 1 shows the distribution of countries in our study according to their level of fertility (TFR) at the time of survey, their level of conjugal instability (percentage of ever partnered women who separated from the first union before age 40, and percentage of ever partnered women who repartnered before age 40).

TFR values in our sample range from 1.28 (Hungary 2004) to 2.32 (Mexico 2011). Given this distribution, we classify countries with a TFR under 1.45 as having *low fertility*, those with a value between 1.46 and 1.75 are classified as having *moderate fertility*, whereas those with a TFR higher than 1.76 are considered to have *higher fertility*.

We split countries in three categories depending on the empirical distribution of the prevalence of union dissolution before age 40 in the sample: low when the percentage of women who experienced a separation or divorce was under 20% at the time of survey, moderate when this percentage was between 20% and 40%, and high when it was over 40%. With respect to the prevalence of repartnering before age 40, we classify a country as having a high level when more than 35% of women have repartnered, low when fewer than 15 % have experienced a second union and moderate when the figure is between these two extremes. Table 2 shows the distribution of

countries according to their fertility levels at time of survey, the percentage of ever separated and ever repartnered women and the resulting classification of the country.

Figure 1. Distribution of countries according to their Total Fertility Rate at the time of survey, the percentage ever separated before age 40 and the percentage ever repartnered before age 40 among ever partnered women aged 25-49 years-old.



Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (Statistics Canada 2006), and World Bank Data on Total Fertility Rates.

Five countries with *low fertility* are classed as *low-low* union instability (low share both of ever separated and ever repartnered women by age 40): Italy, Bulgaria, Spain, Romania, and Poland have TFRs at time of survey ranging from 1.29 to 1.41, and percentages of ever-separated women by age 40 from 7.7% to 18%. These five countries all also exhibit a low prevalence of repartnering, ranging between 2% in Italy and 10% in Spain. These *low-low* union instability countries are joined by Georgia, with low levels of dissolution and repartnering but with a moderate level of fertility (1.71). Georgia is the only country to have moderate fertility and a low proportion ever separated, only 8.3%, the second-lowest value after Italy (7.7%). Georgia also exhibits the lowest share of repartnered women (tied with Italy); only 2%.

Six countries have low fertility, but moderate levels of union instability as defined by prevalence of union dissolution, and either low or moderate levels of repartnering. In the *moderate-low* union

instability category we find the Czech Republic, Hungary and Lithuania which exhibit TFRs in the range of 1.28 to 1.33, and percentages of women who experienced union dissolution with values between 25% and 28.8%. The level of repartnering oscillates between 8 and 14% in these countries. The other three countries, Russia, Germany and Austria have moderate levels of repartnering (at 19%, 23% and 25% respectively) and can thus be classed as *moderate-moderate* instability with low fertility.

Belarus, Estonia, Canada and the Netherlands have moderate TFRs ranging from 1.47 to 1.75, while exhibiting a moderate union dissolution, ranging from 20.5% to 37.2%. With the exception of Belarus, where only 11% of women repartnered by age 40 (thus classed as moderate-low union instability), these countries can be classed as *moderate-moderate* union instability, since they also exhibit a moderate level of repartnering ranging between 19% in the Netherlands and 24% in Estonia. Six out of eight countries with higher levels of fertility (TFR above 1.75) are classed as either *moderate-moderate* or *high-high* union instability. The United Kingdom, Colombia and France whose TFRs range from 1.8 to 1.96, belong to the former group. In these three countries, the percentage of women who separated or divorced at least once ranges between 31.1% and 35.2%, while the level of repartnering ranges between 19% and 25%. Sweden, Belgium and the United States belong to the latter group, with very high levels of ever-separated women, from 46.8% in the United States to around 50% in Belgium and Sweden. These countries also exhibit large proportions of ever-repartnered women by age 40, from 35% in the United States to 41%-42% in Belgium and Sweden, respectively.

Two other countries with *higher fertility* exhibit high or moderate levels of separation and repartnering, in other combinations. Uruguay has a moderate share of separated women (22%), but the highest share repartnered (tied with Sweden at 42%). It is thus classed as *moderate-high* instability. Norway, on the other hand, is classed as *high-moderate* instability, with almost 42% of ever separated women but only 29% ever repartnered.

Table 2. Total Fertility Rate and percentage of ever partnered women aged 25-49 years-old who experienced union dissolution and who repartnered at least once by age 45

Country	TFR around survey, year	Separated before 40 (%)	Level of separation	Repartnered before 40 (%)	Level of repartnering	Overall classification (fertility-sep-repartnering)
Countries with low fertility at time of survey (TFR under 1.45)						
Italy	1.29 (2004)	7.7	Low	2	Low	Low-low-low
Bulgaria	1.33 (2004)	12.5	Low	5	Low	Low-low-low
Spain	1.36 (2006)	11.5	Low	10	Low	Low-low-low
Romania	1.40 (2005)	11.2	Low	5	Low	Low-low-low
Poland	1.41 (2010)	18	Low	8	Low	Low-low-low
Cz. Republic	1.29 (2005)	28.8	Moderate	13	Low	Low-low-low
Hungary	1.28 (2004)	27.6	Moderate	14	Low	Low-low-low
Lithuania	1.33 (2006)	25	Moderate	8	Low	Low-low-low
Russia	1.34 (2004)	30.3	Moderate	19	Moderate	Low-moderate-moderate
Germany	1.38 (2008)	35.2	Moderate	23	Moderate	Low-moderate-moderate
Austria	1.42 (2008)	38.3	Moderate	25	Moderate	Low-moderate-moderate
Countries with moderate fertility at time of survey (TFR between1.45 and 1.75)						
Georgia	1.71 (2006)	8.3	Low	2	Low	Moderate-low-low
Belarus	1.73 (2016)	20.5	Moderate	11	Low	Moderate-moderate-low
Estonia	1.47 (2004)	37.2	Moderate	24	Moderate	Moderate-moderate-moderate
Canada	1.59 (2006)	32.3	Moderate	22	Moderate	Moderate-moderate-moderate
Netherlands	1.75 (2003)	29.1	Moderate	19	Moderate	Moderate-moderate-moderate
Countries with higher fertility at time of survey (TFR greater than 1.75)						
Un.Kingdom	1.76 (2005)	35.2	Moderate	26	Moderate	High-moderate-moderate
Colombia	1.87 (2015)	39.4	Moderate	25	Moderate	High-moderate-moderate
France	1.94 (2005)	31.1	Moderate	19	Moderate	High-moderate-moderate
Norway	1.90 (2007)	41.7	High	29	Moderate	High-high-moderate
Uruguay	2.11 (2008)	22.7	Moderate	42	High	High-moderate-high
Sweden	1.91 (2012)	50.3	High	42	High	High-high-high
Belgium	1.85 (2008)	50.4	High	41	High	High-high-high
Un. States	2.07(2008)	46.8	High	35	High	High-high-high
Mexico	2.32 (2011)		---		---	---

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (Statistics Canada 2006), and World Bank Data on Total Fertility Rates.

Summing up the result of our typology effort, we observe that *low fertility* countries in our sample are characterised by low or moderate levels of separation, and also low levels of repartnering (*low-low-low* countries), with the exception of Russia, Germany and Austria which have moderate

levels of repartnering (*low-low-moderate*). Countries with moderate levels of fertility mostly have moderate levels of union dissolution, with the exception of Georgia, which exhibits a low prevalence of separations (*moderate-low-low*). These countries also exhibit either low levels of repartnering, such as Georgia and Belarus (*low-moderate-low*) or moderate levels of repartnering (Estonia, Canada, and Netherlands, all of which are classed as *moderate-moderate-moderate* countries). Countries with the highest levels of fertility in our sample tend to have moderate or high levels of union dissolution. In the United Kingdom, France, Colombia and Uruguay, levels of separation are moderate. These countries also tend to have high (Uruguay, Belgium, Sweden, the United States) or moderate levels of repartnering (United Kingdom, France, Colombia and Norway). We thus find combinations of moderate and high union instability depending on the criteria (dissolution o repartnering) and higher fertility (high-moderate-moderate, high-moderate-high, high-high-moderate and high-high-high countries).

Although our classification is not clear-cut, we observe that none of the countries with low fertility exhibit high levels of union instability, whether measured as the proportion of dissolutions or of repartnering. The contrary is also true: none of the countries where fertility is the highest among the countries in our sample have low levels of union instability, whichever way we measure the phenomenon.

5.2. Cumulative fertility by conjugal trajectory at the time of survey

In this section, following the literature on the effect of union instability and cumulative fertility reviewed at the beginning of this article, we analyse cumulative fertility up to the time of survey or age 45 among women aged 25 to 49 years old (Table 3) by conjugal trajectory at the time of survey. We focus on four statuses of the conjugal trajectory, as reconstructed using biographical information: in first union; separated from the first union; in second or higher order union; or separated from a second or higher order union.

Table 3 shows that, in most countries, the lowest level of cumulative fertility can be found among those currently separated from their first union, with values ranging from 0.9 children in Austria to 1.8 children in Uruguay. In two countries, Belgium and the Netherlands, fertility is lowest (1.0) among those currently separated from a second or higher order union, whereas in Belarus cumulative fertility is equally low among those currently separated from a first or from a second or higher order union (1.3).

In some countries, fertility is highest among women currently in their first union. This is the case for countries with *low* fertility and *low-moderate* instability such as Austria, Germany and Russia, but also true for one country with moderate levels of both fertility and instability - the Netherlands- and of countries with higher fertility and moderate to high instability, such as Uruguay, Belgium and Norway.

Women of several countries have similar levels of cumulative fertility irrespective of whether they are in their first or in a higher order union. This is the case of women in Hungary, Italy and Poland among the countries with low fertility and *low-low* instability; Georgia with moderate fertility and *low-low* instability; Canada and Estonia among the countries with moderate fertility and *moderate-moderate* instability; and Sweden, United Kingdom and the United States among those we classed as having moderate to high instability and higher fertility.

In a handful of countries, women who are in a second or higher order union at the time of survey exhibit the highest levels of cumulative fertility. This is the case for residents of Bulgaria and Lithuania (low fertility and *low-low* instability); Belarus (moderate fertility and *moderate-low* instability); and Colombia (*moderate-moderate* instability and higher fertility). In Spain, a low fertility and *low-low* instability country, women who are separated from a second or higher order union have the highest cumulative fertility.

Table 3. Cumulative fertility up to age 45 by marital status at time of survey and country among ever partnered women aged 25-49 years-old.

	In first union		Separated from first union		In second+ union		Separated second+ union	
Country	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd
Uruguay	2.1	1.3	1.8	1.1	1.9	1.5	2.0	2.2
Austria	1.7	1.1	0.9	1.1	1.3	1.1	1.0	1.1
Belgium	1.8	1.2	1.2	1.2	1.6	1.1	1.0	1.2
Bulgaria	1.7	0.8	1.3	0.8	1.8	1.1	1.6	1.0
Belarus	1.6	1.0	1.3	0.8	1.8	1.0	1.3	0.8
Canada	1.6	1.1	1.4	1.2	1.6	1.2	1.6	1.2
Colombia	2.2	1.4	1.9	1.2	2.8	1.6	2.8	1.6
Czech Republic	1.6	1.0	1.4	1.0	1.8	1.1	1.8	1.4
Estonia	1.9	1.1	1.5	1.1	1.9	1.3	1.9	1.1
France	1.8	1.1	1.3	1.3	1.6	1.2	1.5	1.3
Georgia	2.1	1.0	1.3	0.9	2.1	1.3	1.9	1.1
Germany	1.5	1.2	0.9	1.1	1.3	1.2	1.1	1.3
Hungary	1.8	1.1	1.3	1.1	1.8	1.2	1.5	1.1
Italy	1.5	0.9	1.3	1.0	1.4	0.9	1.5	0.6
Lithuania	1.6	0.9	1.4	0.8	1.7	1.4	1.6	1.0
Netherlands	1.6	1.2	1.1	1.1	1.2	1.1	1.0	1.5
Norway	1.9	1.1	1.2	1.2	1.7	1.2	1.6	1.2
Poland	1.8	1.1	1.6	1.2	1.8	1.3	1.7	1.4
Romania	1.6	1.1	1.3	1.2	1.9	1.2	1.9	1.8
Russia	1.7	0.9	1.3	0.9	1.6	0.9	1.6	0.9
Spain	1.5	1.0	1.2	1.1	1.5	1.1	1.7	1.7
Sweden	1.7	1.1	1.1	1.3	1.7	1.1	1.4	1.2
United Kingdom	1.8	1.1	1.4	1.2	1.8	1.3	1.7	1.3
United States	1.9	1.3	1.6	1.5	1.9	1.4	1.9	1.4

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (Statistics Canada 2006).

5.3. Multivariate analysis

In this section, we use Poison regression models for the number of children ever-born among women aged 35 to 49 at the time of survey (Table 4), and we try to disentangle which of the mechanisms that link fertility and union instability dominates in each of the countries analysed and whether there is an association between the dominance of each mechanism and the characteristics of each context.

First, the results of the key independent variable, conjugal situation by age 35, show the strength of the reduction of exposure on achieved parity. While not being partnered by age 35 either has a

negative or no effect on cumulative fertility –except in Germany-, the experience of having had a dissolution before the age of 35 has a clearly negative effect in almost all countries analysed. The magnitude of the effect for being separated and not repartnered by age 35 oscillates between around 0.6 and around 0.90.

The countries where the strongest negative effect for being separated by age 35 is observed are Georgia, Austria, Belgium, Colombia, Germany, Netherlands, Norway, Sweden, the United Kingdom, the United States and Uruguay, all with coefficients below 0.8. Moreover, in all these countries, the effect of repartnering by age 35 is negative or not statistically significant. Therefore, having experienced the dissolution of the first union by age 35 would have a net negative effect in these countries.

A moderate negative effect of union dissolution by age 35 (coefficients higher than 0.8 and below 1) is observed in Bulgaria, Belarus, Canada, Czech Republic, Estonia, France, Hungary, Italy, Lithuania, Russia and Spain. In these cases, the effect of repartnering is not significant in some countries such as Belarus, France and Hungary, while it is positive in others such as Bulgaria, Canada, Czech Republic, Estonia, Lithuania, Russia and Spain. The effect of repartnering is negative in Italy.

The countries where the effect of having experienced separation by age 35 is the weakest are Poland and Romania, where the coefficient is negative but not statistically significant. In these countries, the effect of repartnering by age 35 is positive.

Hence, repartnering before the age of 35 has a positive and significant effect in nine of the countries analyzed: Bulgaria, Canada, Czech Republic, Estonia, Poland, Romania, Russia and Spain. In seven of the countries, experiencing the dissolution of a union and then repartnering by age 35 has a negative effect on the number of children ever born. This is the case for Austria, Belgium, Colombia, Germany, Italy, the Netherlands and the United States. In Belarus, France, Georgia, Hungary, Norway, Sweden, the United Kingdom and Uruguay, the effect is neutral, very close to one without a significant effect.

Having a first birth by age 25 has the expected positive effect in all countries, whereas the time spent in a first union by age 45, measuring time of exposure to childbearing in the first union, has little impact in all countries.

Table 4. Poisson regression on the number of children ever born among ever-partnered women aged 25 to 49 years old

Variable	Austria	Belgium	Bulgaria	Belarus	Canada	Colombia	Czech	Estonia	France	Georgia	Germany	Hungary	Italy
Conjugal situation by age 35 [In first union]													
Never partnered	0.60***	0.68***	0.57***	0.70***	0.89***	0.40***	0.64***	0.64***	0.64***	0.58***	1.41***	0.71*	0.71***
Separated - not repartnered	0.71***	0.74***	0.94*	0.80***	0.91***	0.75***	0.88***	0.90**	0.87***	0.61***	0.75***	0.85***	0.81***
Repartnered	0.82***	0.82***	1.08**	0.96	1.24***	0.92***	1.08*	1.15***	1.01	1.02	0.93**	1.06	0.88**
Had a first birth before age 25 [No]	1.61***	1.61***	1.38***	1.30***	1.65***	1.43***	1.58***	1.46***	1.41***	1.28***	1.62***	1.45***	1.31***
Type of first union [Marriage]													
Cohabiting union	0.75***	0.89***	1.30***	0.84***	1.14***	0.83***	0.87**	1.04*	0.77***	0.87***	0.55***	0.91*	0.48***
Civil union									0.72**				
Time spent in first union by age 45 or time of survey	0.99**	0.99***	1.01***	1.00	1.01***	1.00	1.00	1.01***	1.00	1.00	1.01***	1.01***	1.01***
Cohort [1960-1969]													
1950-1959													
1970-1979													
1980-1989													
Higher education [No]	0.90***	1.06**	0.85***	0.88***	0.77***	1.01	1.00	0.92***	1.01	0.87***	0.97	0.96**	1.02
Constant	0.05***	0.05***	0.03***	0.03***	0.04***	0.05***	0.04***	0.04***	0.05***	0.05***	0.04***	0.04***	0.04***
Number of observations	1,257	910	1,824	1,115	2,976	10,419	1,035	1,129	1,381	1,313	2,328	1,423	1,391

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (2006).

Table 4 (cont.). Poisson regression on the number of children ever born among ever-partnered women aged 25 to 49 years old

Variable	Lithuania	Netherlands	Norway	Poland	Romania	Russia	Spain	Sweden	Un.Kingdom	Un.States	Uruguay
Conjugal situation by age 35 [In first union]											
Never partnered	0.73***	0.71**	0.62***	0.79**	0.60***	0.83	0.48***	0.73***	0.76***	0.65***	1.16
Separated-not repartnered	0.82***	0.79***	0.77***	0.96	0.95	0.92**	0.90**	0.77***	0.78***	0.77***	0.78***
Repartnered	1.12**	0.89***	1.04	1.15***	1.33***	1.07**	1.20***	0.99	1.02	0.89***	1.01
Had a first birth before age 25 [No]	1.39***	1.42***	1.37***	1.45***	1.51***	1.51***	1.38***	1.38***	1.59***	1.71***	2.00***
Type of first union [Marriage]											
Cohabiting union	1.29***	0.70***	0.86***	0.90**	1.33***	0.86***	0.71***	0.87***	0.89***	0.93**	1.11*
Civil union											
Time spent in first union by age 45 or time of survey	1.00*	1.00	1.01***	1.01***	1.02***	1.01***	1.01***	1.00	1.00	1.01**	1.01*
Cohort [1960-1969]											
1950-1959											
1970-1979											
1980-1989											
Higher education [No]	0.95***	1.05*	1.12***	0.83***	0.82***	0.90***	1.03	1.06***	0.95***	0.97	0.93**
Constant	0.04***	0.05***	0.04***	0.04***	0.03***	0.03***	0.04***	0.05***	0.05***	0.04***	0.03***
Number of observations	1,049	1,464	2,050	2,003	1,363	1,600	2,207	1,196	1,305	1,889	449

Source: Harmonized Histories from GGP, Family Situations Survey- Uruguay (2008), Demographic and Health Survey, Colombia (2015) and General Social Survey, Canada (2006).

6. Discussion

In this article, we seek to examine whether the relationship between union instability and fertility is the same in context with varying levels of fertility and union instability at the aggregate levels. Our preliminary findings show that countries with the lowest levels of fertility in our sample also tend to have either low or moderate levels of union instability, as measured by the proportion separating and the proportion repartnering by age 40. On the other hand, countries with the highest levels of fertility among those in our sample tend to also have moderate or high levels of union instability.

The analysis of cumulative fertility by conjugal trajectory at the time of survey, as well as our preliminary set of models suggest that that the relationship between union instability and fertility is complex and does not exhibit the same pattern even among countries that fall within the same categories of our typology.

Our descriptive findings show that in some countries women with the highest cumulative fertility are those currently in their first union, while in other countries they have similar levels of cumulative fertility whether they are in their first union or separated from a first union, and yet in other countries fertility is highest among those who experienced a dissolution and then repartnered in a second or higher order union. We did not find a correspondence between the classification of countries in our typology and whether cumulative fertility was highest among those who repartnered or those in their first union.

When analysing the number of children ever born in multivariate analysis, we found that, although with varying levels of strength in the coefficients, the effect of union dissolution by age 40 on the number of children ever born is negative in all countries analysed, regardless of their position in our typology. That is, lost exposure to childbearing during prime reproductive years entails a detrimental effect to fertility in all countries in our sample.

Secondly, the effect of repartnering by age 40 on the number of children ever born varies between countries that fall in the same category of our classification. For instance, the effect of having repartnered by age 35 is positive in some low-low-low countries (low fertility, low separation and low repartnering) such as Bulgaria, Romania, Poland and Spain, while it is negative in another country of the same category, Italy. Among countries with moderate levels of fertility and union instability, on the other hand, the effect of having experienced a second or higher order union by

age 35 is positive in Canada and Estonia, while having no impact in others such as Belarus and Georgia, and a negative effect in the Netherlands. Finally, experiencing more than one union during reproductive years entails no effect on cumulative fertility in some of the countries that we classified as having higher fertility and either moderate or high levels of instability: France, Norway, Sweden, and United Kingdom. Nonetheless, in some other higher fertility countries, the effect of repartnering by age 35 is negative: this is the case of Belgium, Colombia and the United States. In other words, the "catch-up" effect suggested by the literature as one of the mechanisms that may help achieve desired family size after a union break-down is present in some countries yet not in others, and this throughout our classification.

Our literature review has suggested that the mechanisms linking union instability and fertility are complex. So far, we have focused on two of those mechanisms: exposure to childbearing and timing of life course events, while not taking into account another key element in this relationship: the number and age of children at the time of separation, and at the time of repartnering. Our next step consists of exploring the effects of these characteristics of the partnership and reproductive trajectories on the number of children ever born in each country. This will undoubtedly help us shed more light on the effect of union instability on fertility across contexts with varying levels of both.

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