Do children and order of the union matter for union stability?

Cross-national comparison.

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Abstract

Motivated by the lack of official statistics and the lack of systematic estimates in European countries, the aim of this paper is to map the dissolutions of cohabitations across European countries. The paper studies more recent cohabitations (formed after 1990) in greater depth, which is achieved by distinguishing different types of cohabitations – with children; without children; first; and higher order –, and compares them to marriage. The sample of unions is drawn from retrospective data from the Generations and Gender Survey for 14 European countries and is studied by means of survival analysis. The results confirm that, in all countries, cohabitations are always less stable unions than marriages, regardless of the observed subgroup. Further, the results show that cohabitations with a child present are more stable than childless cohabitations in ten out of fourteen countries and in five countries the effect of child presence is even stronger than for marriage. First cohabitations are more stable than second and higher order cohabitations; however, controlling for selectivity markedly reduces the effect and in most of the countries, the order of cohabitation no longer has a significant effect on cohabitation stability.

Keywords: cohabitation; marriage; dissolution; union stability; separation; child presence; cohabitation order; cross-national

Introduction

"The substantial rise in unmarried cohabitation ... constitutes a hallmark of the ongoing changes in family life in most developed countries " (Sobotka and Toulemon, 2008, p. 97). Indeed, the spread of unmarried cohabitation in western countries is well documented by recent research (Manning, 2013). Cohabitation has become a normative start to a union in many countries and is increasingly becoming an acceptable context for childbearing (Musick, 2007 ; Sobotka and Toulemon, 2008). This is underlined by the fact that in recent decades we have witnessed a steep rise in childbearing within cohabiting unions (Kennedy and Bumpass, 2008 ; Sobotka and Toulemon, 2008).

Although recent research deals extensively with the topic of cohabitation and its implications for different areas of life, there are still many unanswered questions. One of the understudied topics is cohabitation dissolution (Amato, 2000, 2010 ; Graefe and Lichter, 1999 ; Kalmijn, Loeve and Manting, 2007 ; Smock, 2000), which is, however, crucial, in as far as we know that cohabitations are highly unstable and the number of dissolutions is rising (Clarke and Jensen, 2004 ; Lichter, Qian and Mellott, 2006). Moreover, the question of cohabitation dissolution is becoming more pressing as more and more of these unions and their dissolutions involve children who are especially vulnerable to the relationship transitions of their parents, in as far as family stability is a key aspect that influences the positive development of a child (Hao and Xie, 2002 ; Hill, Yeung and Duncan, 2001).

Although there are studies that at least partly investigate the dissolution of cohabitation, they do not account sufficiently for the heterogeneity of cohabitations. I particularly focus on two characteristics that have an important impact on union dissolution, but also tend to be variable between countries. The first is the presence of a child or children in the household. The dissolution of a couple with a child qualitatively differs from the dissolution of a childless couple in its course and consequences (Koo, Suchindran and Griffith, 1984). I also distinguish between first and higher order cohabitations, in so far as the latter might be (at least in some contexts) more unstable (Ermisch and Francesconi, 1996 ; Poortman

and Lyngstad, 2007). Thus, to recapitulate, the aim of this paper is to study cohabitations (formed after 1990) in greater depth, which is achieved by distinguishing different types of cohabitations – first, higher order, childless, and with a child –, and compare them to marriage. These questions are addressed using Generations and Gender Survey data for 14 European countries.

Theoretical background

Cohabitation dissolution - what do we know?

As was already outlined, cohabitations are, in general, unstable and short-lived (Booth, Crouter and Landale, 2002 ; Bumpass and Lu, 2000 ; Lichter, Qian and Mellott, 2006). There are several estimates of dissolution rates for cohabiters, but they vary depending on the definition of cohabitation and country. In Canada, Wu and Balakrishman (1995) estimate that two thirds of premarital cohabitations dissolve by the fifth year. Similar results are also provided by Kamp Dush (2011) in the United States for parents cohabiting at the birth of a child: 64 per cent of cohabitations dissolved by the fifth year; however, of these, only 76 per cent of the respective relationships broke up completely, with the rest continuing in a romantic context. Slightly lower estimates for all cohabitations are presented by Lichter, Qian and Mellott (2006), who observed 46 per cent of cohabitations to dissolve within five years.

From research in a cross-national context, it seems that dissolution rates for cohabitations are generally higher in the United States than in European countries (Andersson, 2003, 2004 ; Andersson and Philipov, 2002). According to the analysis by Andersson and Philipov (2002), the proportion of cohabiting unions (censoring at marriage formation) that end in dissolution by the fifth year is much higher in the United States (69%) than in Europe, where it varies between 7% in Poland and 56% in Latvia. Findings are similar concerning the instability of cohabitations into which a child is born. The share of unions (regardless of subsequent transition to marriage) dissolving by the time a child is 6 years old varies between 7% in Poland and 51% in Latvia. In the United States, the figure is 56% of unions.

The importance of studying cohabitation dissolution is therefore pronounced in studies of instability in families which include children. Indeed, omitting transitions to and from cohabitation when studying family instability in the United States leads to the omission of 23 per cent of overall instability affecting white children and 53 per cent affecting Black children (Raley and Wildsmith, 2004).

Existing research

Existing country-specific research that primarily focuses on cohabitation dissolution is scarce and to be found outside the European context. Moreover, the sample is often selective for a certain type of cohabitation (Kamp Dush, 2011 ; Wu and Balakrishman, 1995), or the different types of cohabitations are not distinguished (Lichter, Qian and Mellott, 2006). Cross-national studies do not focus primarily on the dissolution of cohabitation; it is mostly presented as part of a different or broader topic. There are two distinct approaches to the dissolution of cohabitation. The first focuses on relationship status - cohabiting, married with prior cohabitation, married without cohabitation at the moment of dissolution (Kiernan, 2002 ; Liefbroer and Dourleijn, 2006), but works only with first partnerships. The second approach investigates relationship status at the beginning of a relationship or at the moment of childbirth, regardless of the situation at the moment of dissolution (Andersson, 2003, 2004). Only Andersson and Philipov (2002) used a mixture of these two approaches and investigated the stability of cohabitations after childbirth censoring at marriage formation. However, again, they did not cover all cohabitation types, especially higher order cohabitations and childless cohabitations. Therefore, this paper aims to provide more systematic cross-national exploration of the stability of cohabitating unions.

Childbearing within cohabitation

An increasing number of children are born to cohabiting unions or experience the cohabitation of their parents at some point in their lives (Hiekel, 2014 ; Kennedy and Bumpass, 2008 ; Perelli-Harris et al.,

2010). Childbearing in cohabiting unions in the European context varies greatly across countries. In northern and western European countries, cohabitation with childbearing is more common than in southern, central and eastern Europe. In some countries (e.g. Norway and France) the proportion of first births within cohabitations has even exceeded the proportion of births within marriages (Hiekel, 2014 ; Perelli-Harris et al., 2010). In other Western European countries, childbearing within cohabitation is also widespread (27-42%), although marriage is still a more common context for childbearing (Hiekel, 2014). Births within cohabitations in CEE are generally lower, but the variation is great. For example, Hiekel (2014) observed that the percentage of children born to cohabiting couples ranged from 10 per cent in Lithuania to 50 per cent in Estonia.

Most striking, however, is the fact that the vast majority of children in cohabitations will experience family transition at some point of their lives (Graefe and Lichter, 1999). Recent evidence shows that cohabiting unions involving children are highly unstable relative to married families and these findings are constant across a wide range of countries (Andersson, 2004 ; Andersson and Philipov, 2002 ; Clarke and Jensen, 2004 ; Graefe and Lichter, 1999 ; Heuveline, Timberlake and Furstenberg, 2003 ; Jensen and Clausen, 2003 ; Manning, Smock and Majumdar, 2004 ; Raley and Wildsmith, 2004 ; Wu and Musick, 2008). Moreover, some studies have found that children of cohabiting mothers experience greater instability than children in single-mother families in which the mother does not cohabit (Raley and Wildsmith, 2004). There is also mixed evidence on the stabilizing effect of a child in cohabiting unions. Some researchers have found that childbirth within cohabitation, in contrast to that within marriage, does not stabilize the union in the United States (Manning, 2004) and Great Britain (Boheim and Ermisch, 2001), or at least for British women (Berrington, 2001). However, childbirth was found to have a stabilizing effect on cohabitations in Norway (Poortman and Lyngstad, 2007), The Netherlands (Manting, 1994), as well as in more recent research from the United States (Guzzo, 2014). These contradictory results suggest that there is considerable variation in the effect of child presence in cohabitation

between countries, which might be related to the degree of the spread of childbearing to cohabiting unions.

The other, less pronounced, line of research suggests that the difference in the risk of dissolution between married childless women and married mothers diminishes over time (Andersson, 1997). Lyngstad and Jalovaara (2010) suggest that this could be caused by two trends. The first is the increased selection for marriage in the case of childless couples; the second is the weakening norm against divorce for couples with a child.

First and higher order cohabitations

In recent decades, we have observed a rise in multiple partnerships, i.e. more women and men are likely to experience more than one course of cohabitation or marriage in their lives (Lichter, Turner and Sassler, 2010). It has also been observed that second and higher order unions are more likely to be, or at least to start as cohabitations (Bramlett and Mosher, 2002 ; Poortman and Lyngstad, 2007 ; Teachman, 2008 ; Wu and Schimmele, 2005) and that second unions are more rapidly formed among former cohabiters (Wu and Schimmele, 2005).

The proportion of individuals entering second and higher unions is not equally distributed throughout Europe. Most individuals entering second unions are in northern Europe, the least number in southern European countries (Fürnkranz-Prskawetz et al., 2003 ; Kiernan, 2002), and, therefore, individuals in northern Europe have on average the highest number of unions (Kiernan, 2002). In CEE, the proportion of higher order unions is lower than in northern Europe, but when they occur, they are more likely to include children (Fürnkranz-Prskawetz et al., 2003).

Higher order unions are less stable than first unions (Guzzo, 2014 ; Poortman and Lyngstad, 2007). It is likely, however, that this is caused by both the measured and unmeasured characteristics of individuals

who dissolve their first unions, as the effect in the Norwegian study disappears when selectivity is taken into account (Poortman and Lyngstad, 2007).

Research questions and hypotheses

The aim of this research is to map the dissolutions of cohabitations across European countries. The research question is motivated by the lack of official statistics on cohabitation dissolution, as well as the lack of systematic estimates for European countries. The paper studies more recent cohabitations (formed after 1990) in greater depth, which is achieved by distinguishing different types of cohabitations: first versus higher order, and childless cohabitations versus those with a child present. I estimate and compare the risk of dissolution across Europe for each type of cohabitation, and compare it to marriage, in order to provide a broader perspective on the rates of dissolution.

I hypothesize that

H1: Cohabitations which involve a child are less stable than marriages with a child, but more stable than childless cohabitations.

H2: Child presence stabilizes cohabitation, but the effect is, nevertheless, weaker than for marriage.

H3: The stabilizing effect of child presence in cohabitation is stronger in countries where cohabitation often serves as an alternative to marriage and an acceptable context for childbearing (especially in Sweden, but also in other western European countries).

H4: First cohabitations are more stable than second and higher order cohabitations, and there is no reason to expect a variation in this effect across countries.

Data and sample

This paper uses data from the first wave of GGS (Generations and Gender Survey) conducted in 19 mostly European countries. Respondents were 18-79 years old and approximately 10 000 individuals

were interviewed in each country in each wave. Data from the first wave, which were used for the analysis, were collected from the following European countries: Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Georgia, Germany, Hungary, Lithuania, Poland, Romania, Russia and Sweden.[1]

The information about unions was drawn from the retrospective partnership histories of the respondents. In all countries, a maximum of 5 unions per each respondent were recorded, even if some respondents in some countries reported more than five. The dataset provided limited information on the respondent´s past, which was included in all national questionnaires. However, there was detailed information on the biological children of each respondent, as well as educational history, which could be used as proxies for socio-economic status. Controlling for a number of other characteristics of each respondent and his/her past partners was not possible without severely reducing the sample size and the number of countries, which would contradict the objective of this paper.

The sample consisted of women who were at least 18 years old. The sample was also limited to unions that began after 1990. There were two reasons for this restriction. First, this research was more interested in the mapping of more recent trends rather than historical development; second, this limitation deals, at least partially, with the issue of reliability with respect to the reporting of less recent life events.

The sample consisted of 22 442 individuals which had been involved in 25 458 unions altogether; this translates to 414 150 union-periods. Almost 62 per cent of these unions began as cohabitations, of which 45 per cent became marriages. 38.2 per cent of unions started as direct marriages. Further, the majority of unions included at least one child at some point in their duration (71.7 %) and 75.2 per cent of unions were first unions.

Methods and measurements

[1] Italy and The Netherlands had to be excluded due to variations in their national questionaires.

Event history analysis was employed to estimate a set of discrete-time logistic models. For this purpose, the original data file was transformed to the long format, where one line constituted one union with the same partner. The measurement of time was reduced from months to half-years, considering the long average duration of the unions. The mean duration of all unions was 11.5 years. The half-years were then used to expand the dataset in order to create a union-period format.

The main dependent variable was event of union dissolution. The partnership was observed from the beginning of co-resident partnership to dissolution/breakup (or until the death of a partner or the interview) as defined by the respondent. The breakup of a union was classified as the occurrence of an event. All other events, i.e. the death of a partner or the occurrence of the interview before dissolution are censored.

The main independent variables were child presence and order of union. The presence of a child was a time-varying variable that indicated whether there was at least one biological child living in the household at the given time point. The information on children was restricted to the biological children of a respondent. I omitted respondents with adopted and foster children, as parents with these children constituted a specific group. Unfortunately, there were no full reports of past partners' children in the GGS data, and, therefore, the analysis does not account for step children. However, in as far as we tracked only women, it was much more likely that they were the ones that brought the child to their new partnership (Bernhardt and Goldscheider, 2002 ; Goldscheider and Sassler, 2006).

The second main independent variable was order of union. I distinguished two categories: first union and second or higher order union. A union was classified as first if it was not preceded by cohabitation or marriage with a different partner. All other unions were considered as second or higher order unions. Marriage that followed cohabitation with the same partner was considered to be a first union; however,

marriage that was preceded by cohabitation or marriage with a different partner was considered to be a second union.

Further, in all models I controlled for age at the start of the union, age at the start of the union squared, cohort, and country. Further, to account for the respondent´s child or children born before the particular union formation, I controlled for parental status before the union. This might refer either to a child with a current partner that was born outside of the co-resident partnership, or to a child with a previous partner. Two time-varying covariates were also included: union type and education. Union type was dummy variable indicating whether a couple was married (1) or cohabiting (0). Education was measured in years up to the completion of its highest level (for more information see Dourleijn, Liefbroer and Beets (2002)). Unions with missing information on the dependent and independent variables were dropped from the analysis.

I began with estimating a baseline model. The best fit for the dissolution hazard was achieved by a step function that included a combination of linear and categorical specifications of time (with five categories). This time specification was included in all the presented models. Altogether, I estimated seven models. M1 included all independent variables as presented above; M2 further included a new variable, generated as the combination of child presence and union type; and M3 added the interaction between this newly generated variable and the country. M4 and M6 included another generated variable, created as the combination of union order and union type; and M5 and M7 included the interaction between the new variable and the country. Similarly to Poortman and Lyngstad (2007), I included random effects for the person identifier in the analysis to account for unobserved personal characteristics that might have been a reason for the elevated number of dissolutions of the unions of certain individuals. Only models M4 and M5, which analysed the effect of cohabitation order, did not employ random effects in order to present changes before and after controlling for unobserved

characteristics. However, it is important to note that not all individuals that were in second or higher order unions were also observed in their first unions. Therefore, controlling for unobserved characteristics would not cover all higher order unions, and the possible reduction in the positive effect of higher order unions on union dissolution would be underestimated.

The results section is organized as follows. First, I present dissolution rates by country, union types and presence of a child or union order. These descriptive results are based on a slightly different number of unions (19 260), as I take into account only unions that were formed at least five years before the interview. Second, I present results from the discrete-time logistic models, M1-M7.

Results

I first begin with a basic description of union dissolution across European countries with a focus on different types of unions. Table 1 presents the percentages of dissolved unions among cohabitations, marriages and direct marriages which included or did not included a child, at the moment of dissolution or at the end of the five years. Across all countries, we observe a similar trend – cohabitations are less stable than marriages, and childless unions are less stable than unions with a child. Dissolution is then most likely to occur for childless cohabitation and varies between 20 per cent in Georgia to 54.2 per cent in Belgium. We observe generally high dissolution rates in all western European countries and Sweden, but quite diverse patterns in central and eastern European countries. The dissolution rates are as high as 50 per cent in Russia and Hungary, and in others, such as Georgia and Romania, lower than 30 per cent. Cohabiting unions with a child present are markedly more stable in all countries, but especially in Sweden, Georgia, and Belgium. However, interestingly, in the vast majority of countries, cohabiting unions with a child are less stable than childless cohabitations that turned into marriages. Marriages (i.e.

direct marriages or those preceded by cohabitation) that include a child are nevertheless the most stable.

Table 2 presents the percentages of dissolved unions by the fifth year among first and second or higher order cohabitations, marriages, and direct marriages. Again, higher dissolution rates can be observed among cohabiting women than among married women. Surprisingly, in all countries (except Austria) first cohabitations were more likely to dissolve than second cohabitations. This pattern was not observed among marriages, as those marriages that were preceded by another union were, in most countries, more likely to dissolve. Among direct marriages, the evidence is mixed; however, in some countries direct marriages that are preceded by a union with a different partner are quite rare, and some of these estimates presented in Table 2 are distorted.

Random effects discrete time model

I started by estimating the basic model (M1, presented in Table 3), i.e. one without any interaction terms, in order to observe the main effects of the key independent variables and controls. The presence of a child in cohabitation reduced the odds of dissolution by 40 per cent and an even stronger reduction (68%) was observed for marriages. On the other hand, being in a second union slightly increased the chances of dissolution. More years spent in education increased the odds of dissolution, and more recent cohorts were also more likely to dissolve. From the time specification, it is clear that the lowest odds of dissolution are in the first half-year of union duration. The odds then dramatically increase for the first five years and decrease for the following periods. Having a child prior to union entrance is also associated with a higher risk of union dissolution. The effect of age at the start of cohabitation is non-linear as both linear and quadratic specifications are significant. The linear effect reveals that with increasing age at entrance into co-resident partnership, the stability of the union also increases. The

quadratic effect, however, indicates that the oldest individuals entering into co-resident partnership face an increased risk of partnership dissolution.

The effects of individual countries show that the highest risk of dissolution is in Russia and Hungary. The lowest risk of dissolution is found in Georgia, Bulgaria and Romania. The risk of dissolution is also relatively high in western European countries and Sweden, and the country effect is similar also in other central and eastern European countries, with the exception of Poland.

Random effects discrete time models exploring the effect of a child

The second estimated model M2 (Table 3) includes a variable that is generated as a combination of two time-varying variables: type of union (marriage/cohabitation) and presence of a child (not present/present), resulting in a new variable with four categories: childless cohabitation, cohabitation with a child present, childless marriage, and marriage with a child present. Model 2 then shows that childless cohabitation carries the highest risk of dissolution, followed by cohabitation that includes a child, childless marriage, and marriage that includes a child. The next model M3 (Table 3) adds the interaction between the newly generated variable in M2 and country identifier. Table 3 shows only interactions that were significant; however, I present all results in graphical form in Graph 1 and Graph 2. Graph 1 presents the odds of dissolution for different types of unions distinguished by the presence of a child. Sweden and childless cohabitation were selected as reference categories. From the graph, it is clear that the pattern of stability is more or less the same across all countries, with childless cohabitations being the least stable unions and marriages with children the most stable. Child presence had a negative effect on cohabitation dissolution in ten out of fourteen countries (the exceptions were the Czech Republic, Lithuania, Georgia and Romania, where the effects were not significant). Children in marriage had a significantly negative effect on dissolution in only six countries (Belgium, Austria,

Hungary, Russia, Bulgaria and Romania) and a marginally significant effect in two other countries (France and the Czech Republic). Graph 2 explores the effect of child presence, and thus enabled me to assess the size of the effect and to compare cohabitation with marriage. This type of graphical display also provides better comparison between countries. The effect of a child was most pronounced for cohabitations in Sweden (0.291). A strong negative effect of child presence on cohabitation dissolution is also observed in Belgium (0.439), Bulgaria (0.460) and Austria (0.553). For all other countries (with significant results), the presence of a child in cohabitation reduced the odds of dissolution by between 35 and 25 per cent. Moreover, in some countries, the presence of a child meant a greater reduction in the odds of dissolution for cohabitation than for marriage. In this respect, the biggest difference between cohabitation and marriage was observed in Sweden, but there were also similar differences in Belgium, Germany, Poland and Lithuania. By contrast, in Georgia and Romania the effect was reversed, as child presence reduced the odds of dissolution for marriage to a greater extent than for cohabitation.

Fixed effects and random effects discrete time models exploring the effect of union order

Models 4 to 7 explore the effect of the second main independent variable – order of union. I estimated two sets of models. Models 4 and 5, in contrast to Models 6 and 7, do not include random effects for individuals that might be represented in the sample by more than one union. Therefore, I expected a reduction in the effect of union order on dissolution rate after including random effects. Indeed, comparing M4 and M6 shows that, at least for cohabiting unions, the negative effect of second and higher order unions in M4 (1.210) decreases and no longer reaches significance in M6 (1.051). For marriages, we also observe that the gap between first and higher order unions diminishes, but it still persists. When exchanging reference categories, the calculated effect for higher order marriage is 1.567

in Model 4 and 1.399 in Model 6. From these models, it is also clear that the destabilizing effect of being in a higher order union is much more pronounced for marriage than for cohabitation.

Models 5 and 7 include the interaction between union type and order and individual countries. We see that the effects are generally less positive and in some cases even negative when random effects are included. However, the interaction effects are fairly similar in their strength and direction and, therefore, I interpreted only the effects from Model 7. For this purpose, I again present a graphical display of the effects in M7 in Graph 3 and Graph 4. Graph 3 presents different dissolution risks for different types and orders of unions. In almost all countries (with the exception of the Czech Republic, Estonia and Romania), first marriages are the most stable unions, and also second marriages are more stable than cohabitations of any order (although the trend is reversed in Georgia).

Graph 4 presents the effects of order of cohabitation for cohabitations and marriages relative to the risk of dissolution. From the graph, it is clear that the variation in the effect of order is greater between countries for marriages rather than cohabitations. While the effect of order of cohabitation varies from 0.64 in Romania to 1.57 in Austria, the effect of the order for marriage varies between 0.55 in the Czech Republic and 4.7 in Georgia. The graph also shows that in all countries, higher order cohabitations have no effect on dissolution rate, with the exception of Austria and France, where the effect on dissolution is positive. For higher order marriages, the effect is more likely to be positive, as was found in five countries (Sweden, Germany, Austria, Hungary and Georgia).

Conclusion

This paper aimed to map dissolution rates across Europe, with a focus on different types of cohabitations: first, higher order, childless, and with a child present. I compared the dissolution rates of

these different cohabitation types across countries and contrasted them to marriage in order to obtain a broader picture. Indeed, the results show that the stability of unions varies across countries, with Russia and Hungary having the highest dissolution rate and Georgia, Bulgaria and Romania the lowest. Dissolution rates in all other European countries are roughly similar. Moreover, the results from all countries confirm that cohabitations are less stable unions than marriages, regardless of cohabitation subgroups.

The main findings, however, arise from a closer examination of the effect of child presence and cohabitation order. The comparison of different types of unions with or without child presence confirms the results from previous studies, i.e. that in all countries cohabitations with a child present are less stable than marriages with a child present (Andersson, 2004 ; Andersson and Philipov, 2002 ; Clarke and Jensen, 2004 ; Graefe and Lichter, 1999 ; Heuveline, Timberlake and Furstenberg, 2003 ; Jensen and Clausen, 2003 ; Manning, Smock and Majumdar, 2004 ; Raley and Wildsmith, 2004 ; Wu and Musick, 2008), but also less stable than childless marriages. Nevertheless, the negative effect of child presence on cohabitation dissolution was found in ten out of fourteen of the studied countries, which is in line with the more recent studies by Poortman and Lyngstad (2007) and Guzzo (2014), rather than with studies that found no effect of child presence (Berrington, 2001 ; Boheim and Ermisch, 2001 ; Manning, 2004). The results confirm that in the majority of countries children are a source of stability for cohabitations (H1).

Comparing the effect of child presence on union stability between cohabitations and marriages showed that in five countries (Sweden, Belgium, Germany, Lithuania and Poland) the negative effect of child presence on union dissolution is stronger for cohabitations than for marriage, and only in two countries (Georgia and Romania) is the effect reversed. These findings, therefore, provide limited evidence for the second hypothesis (H2), which suggested that child presence has a greater stabilizing effect on marriage.

In contrast, the results incline to support the findings of Andersson (1997), suggesting that the difference between childless women and mothers in marriage is getting smaller and consequently greater for cohabiters, as cohabitations are becoming more diverse.

Further, I expected that the stabilizing effect of child presence in cohabitation would be stronger in countries where cohabitation often serves as an alternative to marriage and an acceptable context for childbearing (H3). Although I found a strong negative effect of child presence on dissolution in Sweden, and also in Belgium and Austria, the effect was considerably weaker in France, which is also a country with a strong history of cohabitation and a wide acceptance of childbearing within these unions (Heuveline and Timberlake, 2004).

Analysis of the order of a union confirmed that, in general, second and higher order unions carry a higher dissolution risk when not accounting for unobserved characteristics of individuals. This effect was found for both cohabitations and marriages that were preceded by union with a different partner, and the effect of union order was stronger for marriage than for cohabitation. Three important findings, however, extend this knowledge. First, following the example of Poortman and Lyngstad (2007) and controlling for unobserved characteristics, the effect of higher order cohabitation was weakened in such a way that on the pulled sample it was no longer significantly different from the effect of first cohabitation. For marriage the effect was markedly reduced, but still remained. Second, breaking down the effect for individual countries, I found significant variations between the countries. After controlling for unobserved characteristics, higher order cohabitations were, in Sweden, found to have protective effect with respect to union dissolution. On the other hand, only in Austria and France was the effect on cohabitation dissolution positive. In all other countries, no effect was found. These findings are surprising, as a greater contrast can be observed between Sweden and the other western European countries, than between Sweden and central and eastern European countries. As there is little literature

that would help to explain these differences, further examination is needed to shed more light on these findings.

Finally, although I observed cross-national differences for the order of cohabitation, these differences were much more pronounced for higher order marriages, suggesting that the trend of dissolution for higher order cohabitations is more similar between countries than that for higher order marriages.

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References

AMATO Paul R., 2000, "The Consequences of Divorce for Adults and Children", *Journal of Marriage and Family*, 62(4), pp. 1269–1287.

AMATO Paul R., 2010, "Research on Divorce: Continuing Trends and New Developments", *Journal of Marriage and Family*, 72(3), pp. 650–666.

ANDERSSON Gunnar, 1997, "The Impact of Children on Divorce Risks of Swedish Women", *European Journal of Population / Revue européenne de Démographie*, 13(2), pp. 109–145.

ANDERSSON Gunnar, 2003, "Dissolution of unions in Europe: A comparative overview", *Max Planck Institute for Demographic Research Working Paper*.

ANDERSSON Gunnar, 2004, "Children's Experience of Family Disruption and Family Formation: Evidence from 16 FFS Countries", *Vienna Yearbook of Population Research*, 2, pp. 313–332.

ANDERSSON Gunnar, **PHILIPOV** Dimiter, 2002, "Life-table representations of family dynamics in Sweden, Hungary, and 14 other FFS countries: A project of descriptions of demographic behavior", *Demographic Research*, 7(4), pp. 67–144.

BERNHARDT Eva, **GOLDSCHEIDER** Frances, 2002, "Children and Union Formation in Sweden", *European Sociological Review*, 18(3), pp. 289–299.

BERRINGTON Ann, 2001, "Entry into Parenthood and the Outcome of Cohabiting Partnerships in Britain", *Journal of Marriage and Family*, 63(1), pp. 80–96.

BOHEIM Rene, **ERMISCH** John, 2001, "Partnership Dissolution in the UK – the Role of Economic Circumstances", *Oxford Bulletin of Economics and Statistics*, 63(2), pp. 197–208.

BOOTH Alan, **CROUTER** Ann C., **LANDALE** Nancy S., 2002, *Just Living Together: Implications of Cohabitation on Families, Children, and Social Policy*, Routledge, 282 p.

BRAMLETT Matthew D., **MOSHER** William D., 2002, "Cohabitation, marriage, divorce, and remarriage in the United States", *National Center for Health Statistics. Vital Health Stat*, 23(22), pp. 1–32.

BUMPASS Larry, **LU** Hsien-Hen, 2000, "Trends in Cohabitation and Implications for Children's Family Contexts in the United States", *Population Studies*, 54(1), pp. 29–41.

CLARKE Lynda, **JENSEN** An-Magritt, 2004, "Children's Risk of Parental Break-up Norway and England/Wales Compared", *Acta Sociologica*, 47(1), pp. 51–69.

DOURLEIJN Edith, **LIEFBROER** Aat C., **BEETS** Gijs CN, 2002, "Comparing the 1988 International Standard Classification of Education (ISCED) with retrospective information from educational histories", *Dynamics of fertility and partnership in Europe: insights and lessons from comparative research*, 2, pp. 157–172.

ERMISCH John, **FRANCESCONI** Marco, 1996, "Partnership formation and dissolution in Great Britain.",.

FÜRNKRANZ-PRSKAWETZ Alexia, **VIKAT** Andres, **PHILIPOV** Dimiter, **ENGELHARDT** Henriette, 2003, "Pathways to stepfamily formation in Europe: Results from the FFS", *Demographic Research*, 8(5), pp. 107–150.

GOLDSCHEIDER Frances, **SASSLER** Sharon, 2006, "Creating Stepfamilies: Integrating Children Into the Study of Union Formation", *Journal of Marriage and Family*, 68(2), pp. 275–291.

GRAEFE Deborah Roempke, **LICHTER** Daniel T., 1999, "Life Course Transitions of American Children: Parental Cohabitation, Marriage, and Single Motherhood", *Demography*, 36(2), pp. 205–217.

GUZZO Karen Benjamin, 2014, "Trends in Cohabitation Outcomes: Compositional Changes and Engagement Among Never-Married Young Adults", *Journal of Marriage and Family*, 76(4), pp. 826–842.

HAO Lingxin, **XIE** Guihua, 2002, "The Complexity and Endogeneity of Family Structure in Explaining Children's Misbehavior", *Social Science Research*, 31(1), pp. 1–28.

HEUVELINE Patrick, **TIMBERLAKE** Jeffrey M., 2004, "The role of cohabitation in family formation: The United States in comparative perspective", *Journal of Marriage and Family*, 66(5), pp. 1214–1230.

HEUVELINE Patrick, **TIMBERLAKE** Jeffrey M., **FURSTENBERG** Frank F., 2003, "Shifting Childrearing to Single Mothers: Results from 17 Western Countries", *Population and development review*, 29(1), pp. 47–71.

HIEKEL N., 2014, "The different meanings of cohabitation across Europe: How cohabiters view their unions and differ in their plans and behaviors",.

HILL Martha S., **YEUNG** Wei-Jun J., **DUNCAN** Greg J., 2001, "Childhood family structure and young adult behaviors", *Journal of Population Economics*, 14(2), pp. 271–299.

JENSEN An-Magritt, **CLAUSEN** Sten-Erik, 2003, "Children and Family Dissolution in Norway The Impact of Consensual Unions", *Childhood*, 10(1), pp. 65–81.

KALMIJN Matthijs, **LOEVE** Anneke, **MANTING** Dorien, 2007, "Income dynamics in couples and the dissolution of marriage and cohabitation", *Demography*, 44(1), pp. 159–179.

KAMP DUSH Claire M., 2011, "Relationship-Specific Investments, Family Chaos, and Cohabitation Dissolution Following a Nonmarital Birth", *Family Relations*, 60(5), pp. 586–601.

KENNEDY Sheela, **BUMPASS** Larry, 2008, "Cohabitation and children's living arrangements: New estimates from the United States", *Demographic research*, 19, pp. 1663–1692.

KIERNAN Kathleen, 2002, "The state of European Unions: an analysis of partnership formation and dissolution", *in* **Macura** Miroslav, **Beets** Gijs (eds.), *Dynamics of Fertility and Partnership in Europe: Insights and Lessons From Comparative Research*, New York and Geneva, United Nations, pp. 57–76.

KOO Helen P., **SUCHINDRAN** C. M., **GRIFFITH** Janet D., 1984, "The Effects of Children on Divorce and Re-marriage: A Multivariate Analysis of Life Table Probabilities", *Population Studies*, 38(3), pp. 451–471.

LICHTER Daniel T., **QIAN** Zhenchao, **MELLOTT** Leanna M., 2006, "Marriage or dissolution? Union transitions among poor cohabiting women", *Demography*, 43(2), pp. 223–240.

LICHTER Daniel T., **TURNER** Richard N., **SASSLER** Sharon, 2010, "National estimates of the rise in serial cohabitation", *Social Science Research*, 39(5), pp. 754–765.

LIEFBROER Aart C., **DOURLEIJN** Edith, 2006, "Unmarried cohabitation and union stability: Testing the role of diffusion using data from 16 European countries", *Demography*, 43(2), pp. 203–221.

LYNGSTAD Torkild, **JALOVAARA** Marika, 2010, "A review of the antecedents of union dissolution", *Demographic Research*, 23, pp. 257–292.

MANNING Wendy D., 2004, "Children and the Stability of Cohabiting Couples", *Journal of Marriage and Family*, 66(3), pp. 674–689.

MANNING Wendy D., 2013, "Trends in Cohabitation: Over Twenty Years of Change, 1987-2010", *Studies*, 54, pp. 29–41.

MANNING Wendy D., **SMOCK** Pamela J., **MAJUMDAR** Debarun, 2004, "The relative stability of cohabiting and marital unions for children", *Population Research and Policy Review*, 23(2), pp. 135–159.

MANTING Dorien, 1994, *Dynamics in Marriage and Cohabitation: An Inter-temporal, Life Course Analysis of First Union Formation and Dissolution*, Thesis Publishers, 223 p.

MUSICK Kelly, 2007, "Cohabitation, nonmarital childbearing, and the marriage process", *Demographic Research*, 16(9), pp. 249–286.

PERELLI-HARRIS Brienna, **SIGLE-RUSHTON** Wendy, **KREYENFELD** Michaela, **LAPPEGÅRD** Trude, **KEIZER** Renske, **BERGHAMMER** Caroline, 2010, "The Educational Gradient of Childbearing within Cohabitation in Europe", *Population and Development Review*, 36(4), pp. 775–801.

POORTMAN Anne-Rigt, **LYNGSTAD** Torkild Hovde, 2007, "Dissolution risks in first and higher order marital and cohabiting unions", *Social Science Research*, 36(4), pp. 1431–1446.

RALEY R. Kelly, **WILDSMITH** Elizabeth, 2004, "Cohabitation and Children's Family Instability", *Journal of Marriage and Family*, 66(1), pp. 210–219.

SMOCK Pamela J., 2000, "Cohabitation in the United States: An Appraisal of Research Themes, Findings, and Implications", *Annual Review of Sociology*, 26, pp. 1–20.

SOBOTKA Tomáš, **TOULEMON** Laurent, 2008, "Overview Chapter 4: Changing family and partnership behaviour: Common trends and persistent diversity across Europe", *Demographic Research*, 19(6), pp. 85–138.

TEACHMAN Jay, 2008, "Complex life course patterns and the risk of divorce in second marriages", *Journal of Marriage and Family*, 70(2), pp. 294–305.

WU Lawrence L., **MUSICK** Kelly, 2008, "Stability of marital and cohabiting unions following a first birth", *Population Research and Policy Review*, 27(6), pp. 713–727.

WU Zheng, **BALAKRISHMAN** T. R., 1995, "Dissolution of Premarital Cohabitation in Canada", *Demography*, 32(4), pp. 521–532.

WU Zheng, **SCHIMMELE** Christoph M., 2005, “Repartnering after First Union Disruption”, *Journal of Marriage and Family*, 67(1), pp. 27–36.

Table1. Percentage of unions by type and child presence that dissolved by the fifth year.

Country	Childless cohabitation	Cohabitation with a child	Childless marriage	Marriage with a child	Childless direct marriage	Direct marriage with a child
Austria	40.4	17.6	8.6	4.1	28.9	6.1
Belgium	54.2	17	7.4	4.3	12	3.3
Bulgaria	29.1	10.1	10.3	2	19.2	3.4
Czech Republic	38.5	24.1	10.9	3	22.4	7
Estonia	33.2	17.2	16.4	7.2	16.3	13.8
France	41	18.3	5.3	2.5	19.2	4.8
Georgia	20	5.6	14.3*	2.2	8.3	3.3
Germany	37.6	23.8	3.2	6.8	8	3.8
Hungary	49.5	32.9	13.4	7.4	20	6.2
Lithuania	36.5	19.7	4.2	3.4	15.8	6.2
Poland	34	17.6	6.5	4.2	7.3	3.5
Romania	27.6	13.5	4.6	4.2	10.6	2.7
Russia	51.7	28.9	27.7	9.4	28.1	13.1
Sweden	51.2	12.1	7.8	2.4	17.4	4
Total	44	17.9	8.5	4.4	15.2	5.3

*Note: * denotes categories with less than 20 observations. N=19 260 unions.*

Table2. Percentage of unions by type and order that dissolved by the fifth year.

Country	First cohabitation	Second or higher order cohabitation	First marriage	Second or higher order marriage	First direct marriage	Second or higher order direct marriage
Austria	32.3	37	4.6	9.9	7.6	38.9*
Belgium	45.2	35.9	2.9	9.8	5.2	6
Bulgaria	17.3	12.1	2.6	3.9	4.8	0*
Czech Republic	37.2	22.4	6.7	0	9.9	2.7
Estonia	27.2	16.9	9.3	6.8	14.5	13.7
France	30.9	30.6	3.1	4.6	7.8	7.1*
Georgia	8.2	7.1*	2.6	0*	3.4	20*
Germany	35.6	24	4.7	8.3	3.3	17.4
Hungary	48.6	34.9	7.4	13.2	7.9	13.6
Lithuania	31.3	21.6	4.1	0	7.5	4.2
Poland	26.1	20.8	5	3.2	3.9	5.9
Romania	25.3	11.8	4.4	3.3	4.3	1.8
Russia	46.5	29.4	16.7	2.9	14.1	5.4
Sweden	40.3	25	2.8	4.6	4.8	10.5
Total	34.1	26.9	5.2	6	6.4	10.9

*Note: * denotes categories with less than 20 observations. N=19 260 unions.*

Table 3. Odds ratios of union dissolution estimated from discrete-time random effects models of different types of unions with and without a child present.

	M1	M2	M3
Child present (no child present is reference)	0.596***		
Marriage (cohabitation is reference)	0.320***		
Education (in years)	1.017***	1.016***	1.018***
Cohort 1951-60 (1921-50)	2.165***	2.159***	2.216***
1961-70	2.025***	2.036***	2.150***
1971-80	2.165***	2.183***	2.329***
1981-90	3.596***	3.595***	3.798***
Linear time specification	1.021***	1.020***	1.023***
Categorical time specification 2-10 (1 is reference)	5.093***	5.104***	5.024***
11-20	4.720***	4.721***	4.646***
21-35	3.441***	3.426***	3.392***
35-48	2.031**	2.039**	2.092**
Parental status before union entrance	1.385***	1.422***	1.393***
Age at start of the union in years	0.887***	0.890***	0.890***
Age at start of the union in years squared	1.001***	1.001***	1.001***
Second and higher order union (first is reference)	1.135**	1.151**	1.122*
Belgium (Sweden is reference)	1.388***	1.383***	1.284***
France	1.197**	1.193**	0.925
Germany	0.861*	0.860*	0.633***
Austria	0.942	0.936	0.760***
Czech Republic	1.224**	1.220**	0.750*
Poland	0.729***	0.729***	0.595***
Hungary	1.543***	1.538***	1.349***
Lithuania	1.054	1.05	0.735†
Estonia	0.967	0.972	0.594***
Russia	1.757***	1.754***	1.147
Georgia	0.307***	0.311***	0.152***
Bulgaria	0.458***	0.460***	0.384***
Romania	0.459***	0.464***	0.363***
Cohabitation with child present (childless cohabitation is reference)		0.539***	0.291***
Childless marriage		0.271***	0.174***
Marriage with child present		0.195***	0.154***
Belgium*Cohabitation with a child			1.507**
France*Cohabitation with a child			2.568***
Germany*Cohabitation with a child			2.383***
Germany*Marriage with a child			1.599*
Austria*Cohabitation with a child			1.901***
Austria*Childless marriage			2.122**
Czech Republic*Cohabitation with a child			2.644***
Czech Republic*Childless marriage			2.448**
Czech Republic*Marriage with a child			1.918***

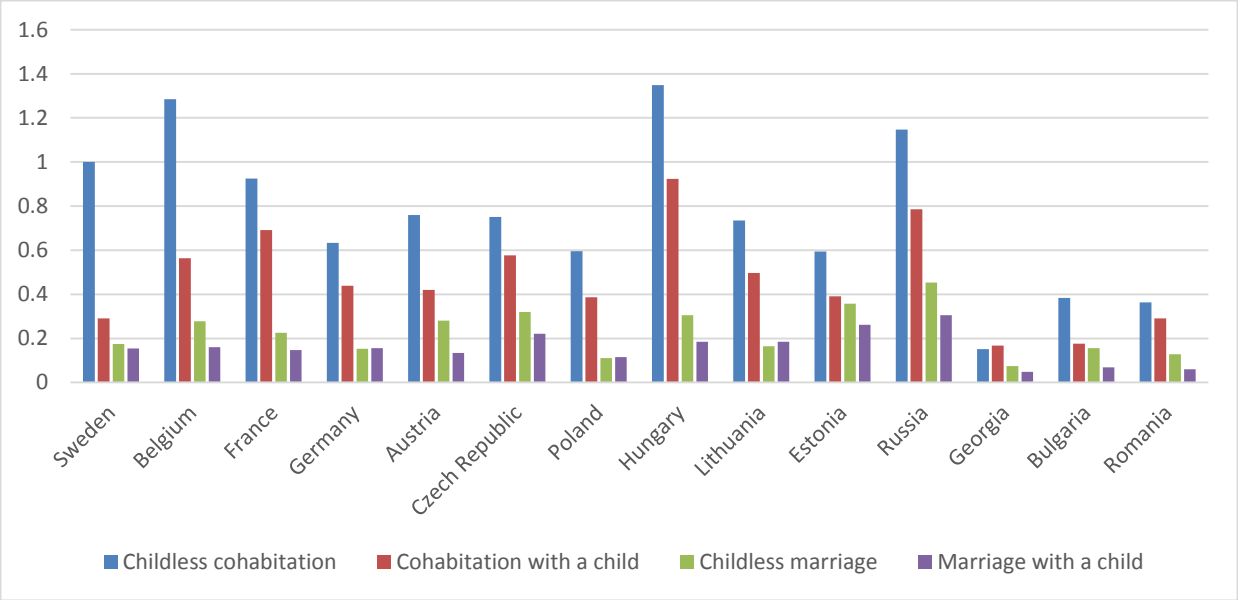
Poland*Cohabitation with a child			2.230***
Hungary*Cohabitation with a child			2.353***
Lithuania*Cohabitation with a child			2.325**
Lithuania*Marriage with a child			1.630*
Estonia*Cohabitation with a child			2.262***
Estonia*Childless marriage			3.455***
Estonia*Marriage with a child			2.869***
Russia*Cohabitation with a child			2.353***
Russia*Childless marriage			2.274**
Russia*Marriage with a child			1.729***
Georgia*Cohabitation with a child			3.800**
Georgia*Marriage with a child			2.08†
Bulgaria*Cohabitation with a child			1.581†
Bulgaria*Childless marriage			2.332*
Romania*Cohabitation with a child			2.753**
Romania*Childless marriage			2.028*
Constant	0.018***	0.017***	0.019***
N	414150	414150	414150
AIC	59508	59491	59363

Notes: Only significant interactions are presented.

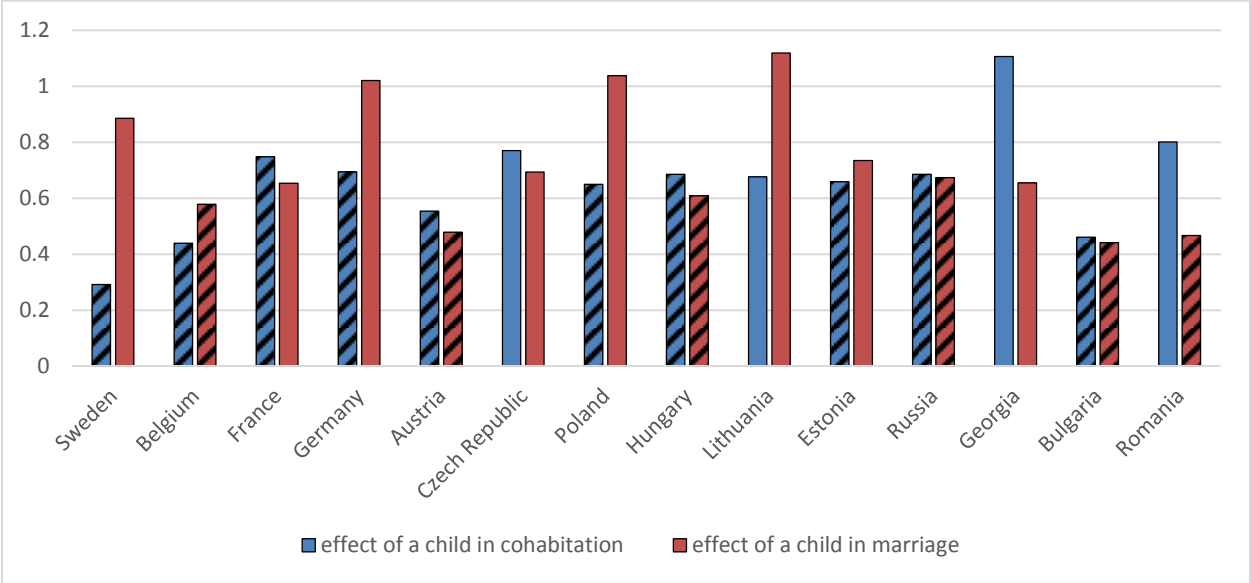
*Significance levels: †p < .10, *p< .05, **p< .01, ***p< .001.*

Number of individuals = 22 442, number of unions = 25 458, number of union-periods=414 150.

Graph 1. Odds ratio of union dissolution calculated from M3 including interaction between type of union, child presence, and country.



Graph 2. Effect of presence of a child on union dissolution for cohabitation and marriage calculated from M3 including interaction between type of union, child presence, and country.



Note: Significance, calculated by exchanging reference categories, is marked by hatching.

Table 4. Odds ratios of union dissolution estimated from discrete-time random effects models of different types of unions and order of union.

	M4	M5	M6	M7
Child present (no child present is reference)	0.619***	0.617***	0.606***	0.604***
Education (in years)	1.016***	1.015***	1.017***	1.016***
Cohort 1951-60 (1921-50)	2.075***	2.067***	2.178***	2.175***
1961-70	2.110***	2.080***	2.060***	2.043***
1971-80	2.315***	2.281***	2.200***	2.183***
1981-90	3.705***	3.654***	3.629***	3.602***
Linear time specification	1.011*	1.012*	1.021***	1.022***
Categorical time specification 2-10 (1 is reference)	4.966***	4.947***	5.096***	5.077***
11-20	4.599***	4.573***	4.728***	4.700***
21-35	3.553***	3.532***	3.456***	3.432***
35-48	2.268**	2.294**	2.036**	2.061**
Parental status before union entrance	1.312***	1.367***	1.366***	1.422***
Age at start of the union in years	0.897***	0.899***	0.887***	0.889***
Age at start of the union in years squared	1.001***	1.001***	1.001***	1.001***
Belgium (Sweden is reference)	1.382***	1.339***	1.396***	1.299**
France	1.197**	1.077	1.196**	1.041
Germany	0.876†	0.814*	0.864†	0.776*
Austria	0.955	0.785***	0.945	0.761***
Czech Republic	1.234**	1.004	1.238**	0.972
Poland	0.771***	0.710***	0.743***	0.670***
Hungary	1.528***	1.619***	1.562***	1.655***
Lithuania	1.093	0.857	1.075	0.811
Estonia	0.974	0.777**	0.969	0.741**
Russia	1.735***	1.509***	1.781***	1.487***
Georgia	0.327***	0.282***	0.308***	0.256***
Bulgaria	0.482***	0.426***	0.466***	0.395***
Romania	0.486***	0.579**	0.468***	0.541***
Second and higher order cohabitation (first cohabitation is reference)	1.210***	0.96	1.051	0.790*
First marriage	0.318***	0.241***	0.297***	0.216***
Second and higher order marriage	0.499***	0.482***	0.416***	0.384***
Belgium*Second and higher order cohabitation		1.288*		1.439**
Belgium*Second and higher order marriage		0.689†		0.746
France*Second and higher order cohabitation		1.557***		1.704***
Austria*Second and higher order cohabitation		1.918***		1.991***
Austria*First marriage		1.3		1.347†
Austria*Second and higher order marriage		2.198***		2.276***
Czech Republic*First marriage		1.897***		1.996***
Poland*Second and higher order cohabitation		1.397*		1.461*
Poland*First marriage		1.283		1.334†
Lithuania*Second and higher order cohabitation		1.497		1.613†

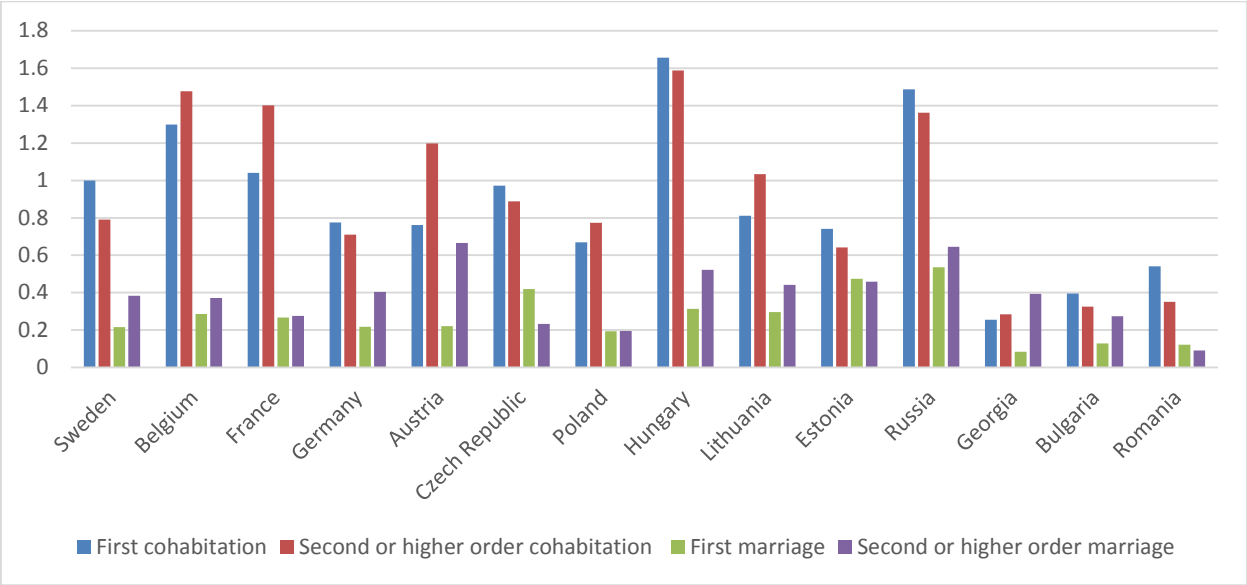
Lithuania*First marriage		1.603*		1.693*
Estonia*First marriage		2.737***		2.966***
Estonia*Second and higher order marriage		1.502†		1.614*
Russia*First marriage		1.582**		1.670**
Georgia*Second and higher order marriage		3.605†		4.009†
Bulgaria*First marriage		1.425†		1.518*
Romania*Second and higher order marriage		0.42†		0.436†
Constant	0.017***	0.018***	0.018***	0.019***
N	414150	414150	414150	414150
AIC	59521	59423	59494	59397

Notes: Only significant interactions are presented.

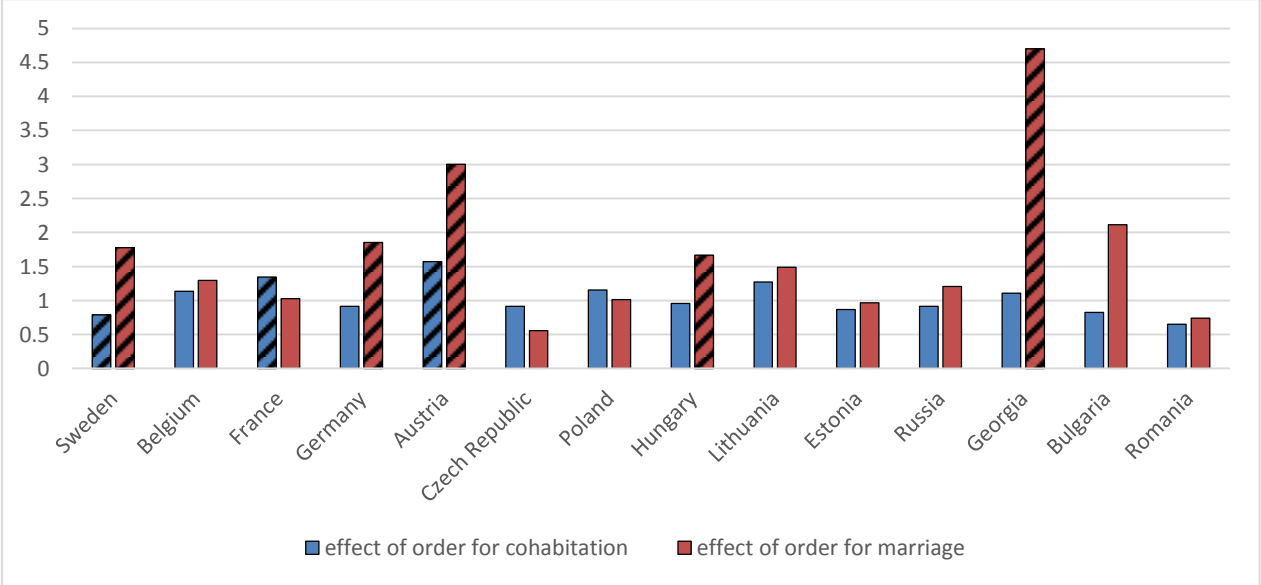
*Significance levels: †p < .10, *p< .05, **p< .01, ***p< .001.*

Number of individuals = 22 442, number of unions = 25 458, number of union-periods=414 150.

Graph 3. Odds ratio of dissolution calculated from M7 including interaction between type of union, union order, and country.



Graph 4. Effect of order on union dissolution for cohabitation and marriage calculated from M7 including interaction between type of union, union order, and country.



Note: Significance, calculated by exchanging reference categories, is marked by hatching.