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Chapter 3

Parental socio-economic status and the timing of first marriage: What is the role of unmarried cohabitation? Results from a cross-national comparison*

* This chapter is currently under review at an international scientific journal. This chapter is co-authored by A.C. Liefbroer and H.B.G. Ganzeboom. Brons wrote the main part of the manuscript and conducted the analyses. Liefbroer and Ganzeboom substantially contributed to the manuscript. The authors jointly developed the idea and design of the study. Earlier versions of this chapter were presented at the ECSR (Tallinn, 2015/ Milan, 2017), VID Conference: Education and reproduction in low-fertility settings (Vienna, 2015), Dutch Demography Day (Utrecht, 2016), Day of Sociology (Brussel, 2017), and GGP User Conference (Berlin, 2017).

Abstract

Previous research has shown that individuals from high-status families enter marriage later than those from low-status families. However, in many Western societies, it has become common to cohabit prior to marriage. Does this change the link between parental SES and marriage timing? This study examines to what extent the impact of parental SES on the timing of first marriage weakens after young adults start to cohabit. It also examines cross-national variation in the link between parental SES and marriage timing before and after young adults cohabit and whether this variation depends on countries' position in the cohabitation transition. We apply discrete-time hazard models and meta-analytical tools using data from 18 European and two North-American countries. To examine whether the dominant meaning of cohabitation in a country explains country differences, we construct a four-stage cohabitation typology. In most countries, higher parental SES results in later entry into marriage. The impact of parental SES on marriage timing significantly weakens after young adults start to cohabit. Significant cross-national variation is found in the strength of the link between parental SES and marriage timing. However, this variation cannot be explained by the cohabitation stage countries are in. First, this study provides fresh evidence of the influence of parental SES on family formation in Western countries. Second, it shows the importance of a life-course perspective, as parental SES matters less after young adults start to cohabit. Third, it presents a theory-based and empirically-tested typology of stages in the cohabitation transition.

3.1 Introduction

Previous research has conclusively shown that young adults from higher socio-economic backgrounds enter their first marriage later than those growing up in lower status families (e.g. Axinn & Thornton, 1992; South, 2001). The intergenerational transmission of education is generally seen as an important mechanism to account for this pattern, but previous studies also indicate that even after controlling for individuals' own educational level a substantive impact of parental socio-economic status (SES) on marriage timing remains (e.g. Brons, Liefbroer, & Ganzeboom, 2017; Mooyaart & Liefbroer, 2016; South, 2001). Thus, next to young adults' achieved status, also their ascribed status impacts their marriage formation process.

From the 1970s onwards, in many European and North-American societies it has become increasingly common to cohabit with a partner before one marries, and a growing number of people do not even marry at all (Thornton, Axinn, & Xie, 2007; Sobotka & Toulemon, 2008). This increasing popularity of unmarried cohabitation, predicted by the Second Demographic Transition (SDT) theory (Lesthaeghe, 2010; Van de Kaa, 2001), has made the marriage process more complex. On both sides of the Atlantic, cohabitation has become a popular step towards marriage, or even an acceptable alternative to marriage (Heuveline & Timberlake, 2004). Due to this 'additional' step in the marriage formation process, we can expect that the impact of parental SES on the timing of marriage might be shifting. After young adults start to cohabit, the influence of parents on their children's marriage timing might become weaker. Young adults will become less dependent on their parents' guidance and parental resources after they decide to live together with their partner. However, given the high costs of marriage, parental financial support may still be important for the decision to marry, even for cohabiting young adults. Moreover, since marriage is less easily reversible and more consequential than cohabitation, it could be that parents still want to be involved in their children's marriage timing (Wiik, 2009). Recently, Brons, Liefbroer, and Ganzeboom (2017) indeed showed that the impact of parental SES on first union formation is stronger for marriage than for cohabitation. However, like most existing studies on the link between parental SES and marriage timing, Brons et al. (2017) did not analyze whether parental SES still affects the timing of marriage after young adults have entered a cohabiting relationship.

Therefore, the first question of this study is *to what extent the effect of parental socio-economic status on the timing of first marriage weakens after young adults start to cohabit?*

Most studies on the link between parental SES and the timing of first marriage have been conducted in single countries (e.g. Axinn & Thornton, 1992; South, 2001). There are, however, reasons to expect that country variation exists in the degree to which parental SES influences marriage timing both when young adults do not live together and when they live together with their partner. Brons et al. (2017) have found substantive cross-national variation in the link between parental SES and the timing of entry into a first co-residential union, which they explain against the background of the SDT. The current study examines cross-national variation in the link between parental SES and the timing of marriage after young adults have entered a cohabiting relationship, against the background of diversity in the prevalence and meaning of cohabitation across countries. Several scholars have argued that the spread of cohabitation in European and North-American societies can be viewed as a diffusion process with different countries being at different stages of this 'cohabitation transition' (Hiekel, Liefbroer, & Poortman, 2014; Kiernan, 2001). Countries where cohabitation has a lower status than marriage and is often seen as *a prelude to marriage* are at the start of the diffusion process. Later on in the diffusion process, when cohabitation is more accepted and adopted by people from all social strata, cohabitation is mainly seen as *a trial marriage*. The majority of people still marry, but they tend to postpone it (Heuveline & Timberlake, 2004; Hiekel, 2014). Some Western European countries in which cohabitation is seen as an *alternative to marriage* are already a step further advanced in the diffusion process. The last stage of the cohabitation transition is when cohabitation is really seen as a long-lasting alternative to marriage (cohabitation as *the norm*), as in some Northern European countries seems to be the case (Heuveline & Timberlake, 2004; Hiekel, 2014; Kiernan, 2001). We expect that the strength of the link between parental status and marriage timing after young adults start to cohabit depends on the dominant meaning of cohabitation within a country. Therefore, we examine whether the impact of parental SES on marriage timing after young adults start to cohabit weakens further in countries that are in more advanced stages of this cohabitation transition. To our knowledge, there is no study that analyzed cross-national variability in the impact of parental SES on marriage timing before and after young adults start to cohabit. Therefore, the second question of this study is *to what extent cross-national variation exists in the link between parental SES and the timing of marriage before*

and after young adults start to cohabit and whether this variation is related to a countries' position in the cohabitation transition?

We use data of 18 European and two North-American countries from the first wave of the multi-national Generation and Gender Programme and the UK-US Harmonized Histories to answer these research questions. In this study, we construct a four-stage cohabitation typology to examine whether the dominant meaning of cohabitation in a country can explain the cross-national variation in the link between parental SES and marriage timing.

3.2 Theoretical Background

Parental SES and marriage formation

The well-known and persistent strong positive association between parental SES and offspring's educational achievements (Shavit & Blossfeld, 1993) is an important explanation for the link between parental SES and the timing of marriage of young adults. Compared to lower status parents, parents with high SES are likely to have and transmit higher educational aspirations to their children. These children will attend school longer than children from lower status families, and focus more on their educational and occupational career, thereby postponing the transition into marriage (Blossfeld & Huinink, 1991; South, 2001; Thornton et al., 2007; Wiik, 2009).

Next to this intergenerational transmission of education, there are several other arguments about why higher parental SES leads to postponement of first marriage. First, young adults from advantaged backgrounds may be socialized differently than young adults from disadvantaged backgrounds. Parents with high SES often have more liberal attitudes and values with regard to cohabitation before marriage and the ideal age of marriage than lower SES parents (Thornton et al., 2007; Wiik, 2009). Second, high-SES parents might stress the importance of finding a suitable marriage partner, which results in a longer searching process and postponement of marriage (Oppenheimer, 1988). Third, young adults from high-SES families might also want to emulate the living standards in their parental home and thus postpone steps in the family formation process until they can afford to live up to these standards (Axinn & Thornton, 1992; Easterlin, 1980). Young adults from advantaged backgrounds often have higher consumption aspirations than their less-fortunate peers, since they form their consumption aspirations in their wealthy parental home (Axinn & Thornton,

1992; Blossfeld & Huinink, 1991; Easterlin, 1980). These high-consumption aspirations often result in more investment in consumer goods and leisure, and this may go at the expense of saving money for a wedding. At the same time, the financial resources of high-SES parents could also be used to speed up their offspring's marriage, since parents could assist their children financially with the big wedding (Axinn & Thornton, 1992; Mulder, Clark, & Wagner, 2006). Finally, young adults from high-status families may, eventually, attach more value to marriage as a formal contract between two partners than young adults from low-status families.

Accounting for cohabitation

According to the SDT theory, improved living standards, weakened normative regulations, and increased female autonomy have resulted in an increasing demand for self-development, autonomy, and individualism in Western societies (Lesthaeghe, 2010; Sobotka, 2008; Van de Kaa, 2001). Amongst other demographic changes (e.g. below-replacement fertility and rising divorce rates), these value changes manifested themselves in an increased acceptance of cohabitation as an additional step before marriage or even as an alternative to marriage (Hiekel, 2014). From the 1970s onwards, more people started to cohabit before they married and, especially in some Western and Northern European countries, cohabitation has become more and more seen as an acceptable alternative to marriage (Thornton et al., 2007; Heuveline & Timberlake, 2004; Kiernan, 2001; Sobotka & Toulemon, 2008). Hiekel (2014) shows for example that in Norway and France, unmarried cohabitation has become the type of first union for around 90 percent of the respondents born after 1971. Also in many Eastern European countries (e.g. Bulgaria, Hungary, and Russia), more than half of all first unions of this birth cohort started as unmarried cohabitation. Marriage, which was once part of the natural transition into adulthood and parenthood, has lost some of its importance in structuring young adults' lives and has been replaced by cohabitation, at least as the initial first stage of family formation (Bumpass, Sweet, & Cherlin, 1991; Cherlin, 2004). In many countries, cohabitation has also developed into a legally accepted alternative to marriage (Perelli-Harris & Gassen, 2012). Cohabitation has acquired more legal recognition, and, in some countries, cohabiters have acquired virtually the same rights as married couples. The increasing popularity of cohabitation has made the marriage formation process more complex. Due to this additional step in the marriage formation process, it becomes important

to also include the cohabitation history of young adults into the analysis of determinants of marriage formation.

The rising popularity of cohabitation may have changed the impact of parental socio-economic background on the marriage process. In particular, it can be expected that the impact of parental SES on marriage timing becomes weaker after young adults cohabit. On their path to adulthood, young adults' own life-course events and preferences become more important relative to the features of family background (South, 2001). Life events, such as obtaining a job, leaving the parental home, and establishing independent living arrangements, often change the relationship between parents and their offspring. When young adults live together with their partner and form their own household, they become usually less dependent on parental resources and the relative importance of their parents' preferences compared to those of their partner, resulting in a weaker (or even no) impact of parental SES on marriage timing (Axinn & Thornton, 1992; Mooyaart & Liefbroer, 2016; South, 2001). Moreover, with the rising popularity of cohabitation it may become more important for parents to affect the timing of entry into cohabitation, as they do not know whether their child will eventually get married. Thus, overall, *we expect that young adults from high-SES families enter their first marriage later than young adults from low-SES families (H1)*. However, *if young adults start to cohabit, we expect that the impact of parental SES on marriage timing becomes weaker (H2).*

Country differences in the meaning of cohabitation

The relationship between parental SES and marriage timing may not be the same across all societies, but may depend on the prevalence and meaning of cohabitation in a country. Earlier research already indicated that both the prevalence and meaning of cohabitation vary significantly across countries (Heuveline & Timberlake, 2004; Hiekel, 2014).

The SDT theory has often been used to describe and explain the rise in cohabitation and the cross-national diversity in the family and living arrangements (Lesthaeghe, 2010; Sobotka, 2008; Van de Kaa, 2001, but see Zaidi and Morgan (2017) for a critical appraisal). According to the SDT theory, all societies will experience the consequences of growing individualization, secularization, and weakening of family ties, albeit with a different starting time and speed of diffusion. Thus, country differences with regard to trends and patterns of

cohabitation result from countries being at different stages of this demographic transition. Sweden and Norway are often seen as forerunners in the SDT, followed by Western, Eastern, and Southern European countries. Following this SDT argument of different stages, we propose that four main stages can be distinguished in the cohabitation transition, as also proposed by Kiernan (2001). This cross-national diversity with regard to the meaning of cohabitation could also result in a different impact of parental SES on marriage timing across countries.

In the first stage, cohabitation is rare, has a lower status, and is less socially accepted than marriage. Marriage is still the norm and cohabitation is often seen as a "poor man's marriage" (Heuveline & Timberlake, 2004; Hiekel et al., 2014; Kalmijn, 2011). Few couples have their first child within cohabitation (Heuveline & Timberlake, 2004). If young adults start to cohabit, it is often a *prelude to marriage.* Given that these young adults often already have a strong intention to get married, the majority marries within a relatively short period of time. We expect that in countries that are in this first stage of the cohabitation transition, especially parents with a higher status stimulate their cohabiting children to get married quickly. Low-status parents will not be as insistent, because they often cannot make a large financial contribution to a marriage or do not value its importance (Heuveline & Timberlake, 2004; Kalmijn, 2011). Thus, the higher the status of parents, the sooner young adults enter into their marriage after they start to cohabit.

With regard to the second stage of the cohabitation transition, marriage remains a popular and valued institution and cohabitation just becomes an intermediate step or *trial marriage*. Although cohabitation is becoming more accepted and adopted by people from all social strata, it is seen as an intermediate step towards marriage, and marriage retains its dominant status. The majority of couples still marry, but they tend to postpone it (Heuveline & Timberlake, 2004; Hiekel et al., 2014; Kiernan, 2001). However, compared to the first stage, cohabitation is often seen as a testing ground: young adults do not intend to get married quickly after they started to live together. Due to this testing phase, the percentage of cohabiting relationships that break down swiftly should be relatively high. Moreover, the duration as well as the prevalence of cohabitation should be higher in countries in this stage compared to countries that are in the first stage. In these situations, high-status parents might socialize their children to delay their first marriage as these parents might see cohabitation as a good test whether their children have found the 'right' match. In countries that are in

this second stage of the cohabitation transition, it can be expected that the delaying impact of parental SES becomes weaker, but still influences the timing of first marriage after young adults start to cohabit. Young adults are less dependent upon their parents once they cohabit, but parents still want to have a say in the marriage process of their children.

In the third stage of the cohabitation transition, cohabitation is seen as *an alternative to marriage* (Heuveline & Timberlake, 2004; Kiernan, 2001). In this stage, marriage is losing its dominant status and might not be needed anymore once young adults live together. Especially in Western and Northern European countries, cohabitation has replaced marriage as first union and many young adults do not see the need to get married (Heuveline & Timberlake, 2004; Hiekel, 2014; Hiekel et al., 2014). The average cohabitation duration and the prevalence of cohabitation are high in these countries. However, still many people decide to get married once they become parents, thus many young adults still marry eventually. In this third stage, the dependence of cohabiting young adults on their parents and resources becomes even weaker and marriage becomes less popular compared to countries that are in the second stage. Therefore, we expect that after young adults start to cohabit, there is a minor or even no effect of parental status on marriage timing anymore, since marriage is even further postponed and more often does not even happen anymore.

Some Nordic countries (Norway and Sweden) are in the fourth and final stage of the cohabitation transition in which cohabitation is seen as *the norm* or as a permanent alternative to marriage (Heuveline & Timberlake, 2004). In these countries, the percentage of people who get their first child within cohabitation, as well as the prevalence and the duration of cohabitation, is higher than in all other countries. Cohabitation is not only seen as an alternative to marriage as union type (a union without children), but the majority of people even start their own family within a cohabiting relationship. Thus, cohabitation is also an alternative to marriage as family type. In this fourth stage, we expect no impact of parental SES on marriage timing anymore once young adults cohabit, since marriage is often foregone completely. Parents and their status will only affect the timing of first union formation, thus cohabitation, but no longer the timing of first marriage once young adults cohabit since marriage often does not take place.

Table 3.1 summarizes the four stages of the cohabitation transition as identified above and four indicators (prevalence of cohabitation, percentage of people that get their first child within cohabitation, and the percentage of people that married or separated shortly after the

start of cohabitation). For each cohabitation stage, we list the predictions of the relative magnitudes of these four indicators.

In summary, we expect that the impact of parental SES on marriage timing after young adults start to cohabit varies across countries that are in different stages of the cohabitation transition. However, when young adults are not (yet) cohabiting, we do not expect a difference between the cohabitation stages in the link between parental SES and marriage timing. Thus, for all the different stages of cohabitation we expect that *young adults from high-status families enter their first marriage later than those from low-status families when they are not cohabiting (H3).* However, once young adults cohabit, we expect cross-national variation in the impact of parental SES on marriage timing due to the different stages of the cohabitation transition. *In countries where cohabitation is seen as a prelude to marriage (first stage), we expect that after young adults start to cohabit, young adults from high-SES families enter their marriage earlier than adults from low-SES families (H4a).* With regard to the other stages of the cohabitation transition, *we expect that the further cohabitation is diffused, the weaker the impact of parental SES on marriage timing after young adults start to cohabit (H4b).*

Table 3.1. Four different stages in the cohabitation transition, including empirical indicators and theoretical predictions.

Cohabitation as…	% cohabited as first union	% first child within cohabitation	% married shortly after cohabitation	% separated shortly after cohabitation
Prelude to marriage	low	low	high	low
Trial marriage	high	low	low	high
Alternative to marriage	high	high	low	low
The norm	highest	highest	low	low

3.3 Data & Methods

Data

To test our hypotheses, we used data from 18 European and two North-American countries. Data for 16 countries come from the first wave of the Generations and Gender Study (GGS). The data were collected between 2002 and 2013, depending on the country (Fokkema et al., 2016). We only selected the GGS countries for which sufficiently detailed information is available on the cohabitation and marital history and on parental and individual's own educational attainment (Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Georgia, Germany, Hungary, Italy, Lithuania, Norway, Poland, Romania, Russia, and Sweden). For the United States and the United Kingdom, we used the Harmonized Histories (HH) dataset created by the Non-Marital Childbearing Network (Perelli-Harris, Kreyenfeld, & Kubisch, 2010). This HH dataset consists of data from the British Household Panel Survey, collected in 2005 and 2006 and US data from the National Survey of Family Growth (NSFG), collected in 2006-2008. For the two remaining countries, Canada and the Netherlands, we used the original datasets, respectively, the General Social Survey cycle 20—GSS (Béchard & Marchand, 2008) and the *Onderzoek Gezinsvorming* (English translation: 'Survey on Family Formation') - OG 2008 (CBS, 2012).

We focus on relative recent birth cohorts (born from 1960 onwards) because unmarried cohabitation occurred only rarely among the older cohorts (Billari & Liefbroer, 2010). After excluding respondents with missing information on at least one of the independent variables (6.5 percent missing for women and 7.3 percent missing for men), our analytical sample consists of 62,064 women and 52,353 men in 20 countries.

Dependent variable

Our dependent variable is the annual rate of entry into a first marriage. The year in which respondents had their first marriage was used to calculate the age of entry into first marriage in years. To construct the annual rate of entry into a first marriage, we converted the data into a person-year file for discrete-time even-history analyses (Allison, 1984), which we chose because of the ease of handling time-varying covariates (cohabitation history, educational attainment, and enrolment). We restricted our analysis to ages 15 to 40, because entering first marriage after age 40 is rare (Billari & Liefbroer, 2010). Respondents who did not enter

their first marriage before the age of 40 or were not married at the time of the interview were right-censored, either at age 40 or the age at the time of the interview, depending on which occurred first.

Independent variables

Parental education is used as indicator of the socio-economic status of parents. The highest level of educational attainment of both parents was available for all 20 countries, which we converted into a continuous and comparative measure of educational level, the International Standard Level of Education [ISLED], which ranges from 0 to 100 (Schröder & Ganzeboom, 2014). We used the average ISLED score of father's and mother's education, because we are interested in the overall effect of parental education and not whether fathers or mothers are more influential. The parental education measure was centered around its country-specific mean and divided by 10.

From the detailed information on the cohabitation history of the respondent, we created a time-varying binary variable whether young adults were cohabiting (1) or not (0) at a given age. Because we use annual information, the percentage of people that cohabited might be slightly underestimated since people that cohabited and married in the same year are not classified as cohabiters.

Country-specific information on the highest level of education completed was also available for the respondents and converted into the ISLED scale. We constructed a time-varying variable for respondents' educational level based on the year in which this highest level was reached, thereby assuming that respondents remained enrolled in school continuously after finishing primary school. The educational level is assumed to increase linearly from age 15 until the age at which respondents attained their highest educational level, after which it remains constant.

If information was missing with regard to the year of reaching the highest level of education, the median age of reaching a certain ISLED level in that country was used to impute the missing value. This time-varying variable of education was also centered around the country-specific mean and divided by 10. Next to the educational attainment of respondents, we also included a time-varying binary variable for educational enrolment, indicating whether respondents were enrolled in the educational system at a given age.

Table 3.2. Descriptive statistics for the dependent and main independent variables at the individual level.

	Median age of marriage		Average parental ISLED	Average ISLED	N (women)	N (men)
	Women	Men				
Austria	25	27	53.65	65.09	2978	1993
Belgium	25	27	46.93	58.71	1834	1647
Bulgaria	21	24	40.74	47.30	4072	3079
Canada	25	26	48.64	58.43	5706	4575
Czech Republic	22	25	50.57	51.44	2411	2335
Estonia	23	25	47.10	54.01	2039	1268
France	25	27	38.34	54.70	2471	1836
Georgia	22	25	49.05	53.89	2705	2346
Germany	25	27	54.35	56.11	2380	1840
Hungary	23	25	44.70	51.12	3016	2777
Italy	26	28	29.51	49.72	2312	2144
Lithuania	22	23	47.75	54.67	2240	2286
Netherlands	26	29	45.55	63.70	2165	1873
Norway	27	28	41.27	56.86	3633	3541
Poland	23	25	46.40	60.47	5102	4073
Romania	21	24	35.14	45.26	2257	2526
Russia	21	23	50.22	60.44	2468	1764
Sweden	28	30	50.46	58.19	2641	2404
United Kingdom	25	27	48.25	61.21	2423	1980
United States	23	24	49.47	49.73	7211	6066

The time-varying variable age was expressed as the number of years since age 15 and centered around its country-specific mean. The birth year of respondents was included as a continuous variable (ranging between 1960 – 1994[1]) and centered around its country-specific mean. The squared term of both of these variables was also included. Gender of the respondent was also included. Descriptive statistics of the dependent and main independent variables can be found in Table 3.2.

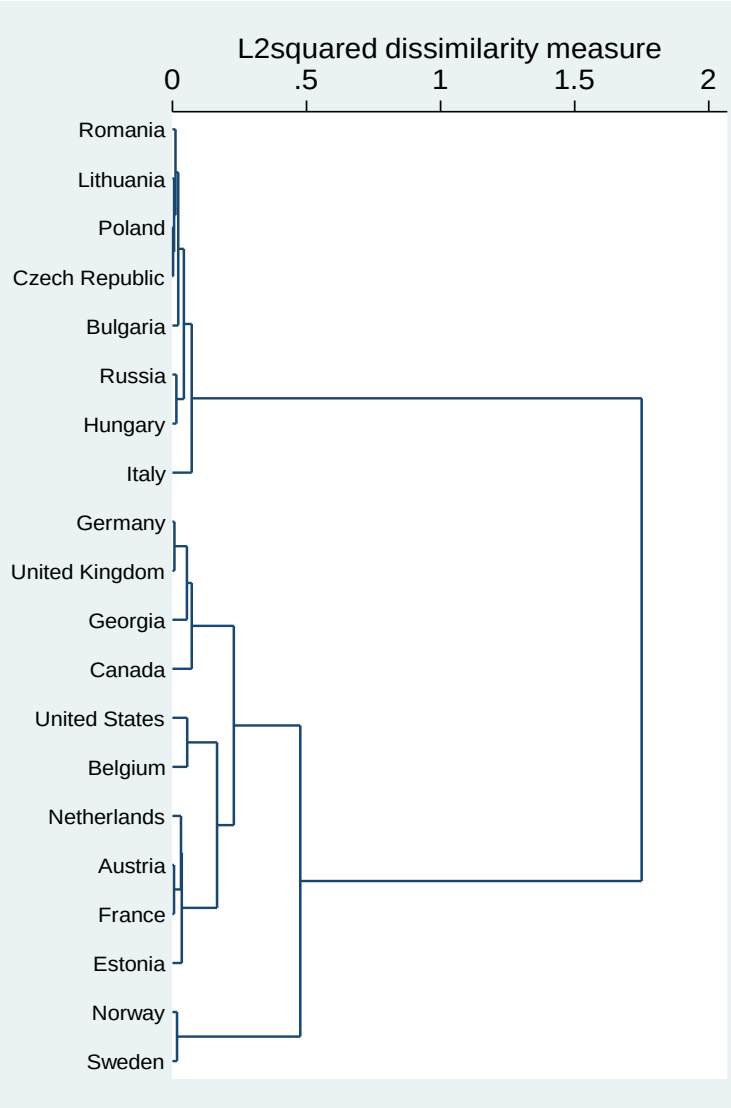
Country-level indicators

We used four country-level indicators to analyze how far countries have been developed with regard to the cohabitation transition process. One of the indicators is the prevalence of cohabitation, calculated by the percentage of respondents who cohabited as their first union. Next to this, we calculated the percentage of respondents who got their first child within cohabitation. Lastly, we calculated both the percentage of people who married within two years after they started to cohabit and the percentage of people who separated within two years after they started to cohabit. All country-level indicators were aggregated from the country-specific datasets.

Based on these four cohabitation indicators, a cluster analysis, using Ward's method, was performed to empirically examine which countries can be grouped together and whether the resulting classification is in line with our hypothesized cohabitation typology (Everitt, Landau, & Leese, 2001). Figure 3.1 shows the dendrogram of the cluster analysis. The dendrogram indeed indicates that four different clusters or stages can be identified. The first cluster consists of mainly Eastern European countries and Italy. The second cluster consists of Canada, Georgia, Germany and United Kingdom and the third cluster includes mainly West-European countries (together with Estonia and United States). The last cluster includes Norway and Sweden.

[1] For the Netherlands, birth year ranges from 1960 – 1984. We had to delete the youngest cohorts (born from 1985 onwards), since information about parental education is only asked when children do not live at the parental home anymore.

Figure 3.1. Dendrogram of a cluster analysis using four cohabitation indicators[1] for 18 European and two North-American countries.



[1] *Prevalence of cohabitation, percentage of people who got their first child within cohabitation, and the percentage of people who married or break down their relationship within 2 years after the start of cohabitation*

Table 3.3 summarizes the four indicators with regard to the meaning of cohabitation for each country, which were included in the cluster analysis. We grouped the countries according to the results of the cluster analysis. First, we found a set of countries where cohabitation is relatively rare. In Italy, Romania, Lithuania, Poland, Czech Republic, Bulgaria, Russia, and Hungary, fewer than 30 percent of the respondents ever cohabited.

Table 3.3. The meaning of cohabitation for 18 European and two North-American countries, based on the prevalence of cohabitation, percentage of people who got their first child within cohabitation, and the percentage of people who married or break down their relationship within 2 years after the start of cohabitation.

Cohabitation as…	% cohabited as first union	% first birth within cohabitation	% married within 2 yrs after cohabitation	% break down within 2 yrs after cohabitation
Prelude to marriage				
Italy	0.079	0.040	0.450	0.181
Romania	0.157	0.098	0.548	0.068
Lithuania	0.209	0.075	0.576	0.127
Poland	0.210	0.097	0.531	0.126
Czech Republic	0.249	0.109	0.506	0.118
Bulgaria	0.264	0.154	0.596	0.050
Hungary	0.274	0.122	0.443	0.202
Russia	0.292	0.133	0.558	0.169
Trial marriage				
Georgia	0.309	0.282	0.492	0.024
Canada	0.353	0.216	0.258	0.168
Germany	0.448	0.183	0.446	0.124
United Kingdom	0.456	0.261	0.441	0.160
Alternative to marriage				
United States	0.401	0.231	0.416	0.359
Estonia	0.550	0.352	0.408	0.089
Netherlands	0.579	0.230	0.270	0.136
Austria	0.606	0.339	0.290	0.164
Belgium	0.610	0.249	0.313	0.333
France	0.633	0.412	0.291	0.159
The norm				
Norway	0.651	0.512	0.228	0.197
Sweden	0.718	0.603	0.179	0.240

Moreover, in many of these countries around 50 percent or more married within two years after they started to cohabit[2] and the percentage of respondents who had their first child within cohabitation is around 10 percent or lower. These countries are in the prelude-to-marriage stage.

[2] The number of observations for Italy for these two indicators (percentage of people married within two years and separated within two years after cohabitation) is relatively small, since the prevalence of cohabitation is low.

At the other end of the distribution, we found Sweden and Norway, in which around 70 percent of all respondents ever cohabited, and where only around 20 percent of the people married within two years after cohabitation. In these countries, where cohabitation is seen as the norm, more than 50 percent of the respondents had their first child within a cohabiting relationship.

With regard to the middle two stages, the pattern is less clear. The cluster analysis distinguished between a cluster that includes France, Austria, the Netherlands, Estonia, Belgium, and the United States, and another cluster, including Canada, Germany, United Kingdom, and Georgia. With regard to the first of these two clusters, the results indicate that the percentage of cohabiters is above 50 percent in most of the countries (except United States), while this percentage is below 50 percent for the other group of countries. Also with regard to the percentage of people who had their first child within cohabitation we see a clear difference between these two groups: in general, more people had their first child within cohabitation in the first cluster than in the second cluster. Moreover, in general, fewer people married within two years after cohabitation in countries belonging to the first of these two clusters compared to the second cluster. These cohabitation indicators suggest that the countries belonging to the first cluster are further advanced in the cohabitation transition than the countries from the second cluster. Therefore, we labelled the first cluster the 'cohabitation as alternative to marriage' group and the second cluster the 'cohabitation as trial marriage' group.

The last indicator, the percentage of people who separated within two years after cohabitation, did not show a clear pattern with regard to the different stages. In Georgia, Bulgaria, Estonia, and Romania, this percentage is lower than 10 percent, while in Belgium and the United States the percentage of people who separated within two years after cohabitation is around one third.

Analytical strategy

For each country separately, we estimated discrete-time logistic hazard regression models to obtain the estimate and the standard error (SE) of the total and net effect of parental education on the timing of first marriage (Blossfeld, Hamerle, & Mayer, 2014). To estimate the net effect of parental education, respondents' educational level and enrolment were included. To analyze whether the effect of parental education on marriage timing weakens

after young adults start to cohabit, we included an interaction between parental education and the time-varying cohabitation variable. The country-specific estimates and SE's of the effects of parental education were obtained for both groups (not cohabiting and cohabiting). In all models, we included as controls age and age-squared, as well as birth year and its squared term. Moreover, we included in all models the interaction between parental education and age, since it is known that the impact of parental background diminishes across the life course (e.g. Axinn & Thornton, 1992; South, 2001; Wiik, 2009). Because women generally enter their first marriage at an earlier age than men (Coppola, 2004; Uecker & Stokes, 2008), we also included in all models an interaction between gender and age, and age squared, birth year and birth year squared. We also tested whether the impact of parental education was significantly different for men and women with an interaction between gender and parental education.

To examine cross-national variation in the link between parental SES and marriage timing, we used meta-analytic tools, as suggested by Bryan and Jenkins (2016). Due to the small number of countries (N<30), we prefer this approach to multilevel analysis. If the number of countries is small, the SE of the country-level effects is underestimated in standard multi-level models. By using meta-analytical tools, the small number of countries in this study will not result in too many incorrect rejections of a true null hypothesis, since these tools provide more conservative tests of our hypotheses than multilevel analysis.

We analyzed whether an association exists between parental education and first marriage and whether this association varies across countries by performing a meta-analysis in which the country-specific estimates and SEs of the discrete-time logistic regression models were included. In meta-analysis, between-country heterogeneity in the estimate of the effect of parental education is measured by I^2, the percentage of observed total variation across countries that is due to real heterogeneity rather than chance. I^2 can vary between 0 and 100 percent, and is calculated as 100*(Q-df)/Q, where Q is Cochran's heterogeneity statistic and df is the degrees of freedom (Harris et al., 2008). If I^2 is above 50 percent, substantial heterogeneity across countries exists, and an I^2 above 75 percent indicates considerable heterogeneity (Higgins, Thompson, Deeks, & Altman, 2003). Meta-analyses were performed for the total and net effect of parental education (controlling for respondents' education) on the timing of first marriage. Next to that, we also analyzed the effect of parental education when young adults are not cohabiting and when they start to cohabit.

To test whether the link between parental education and marriage timing differs by the stages of the cohabitation transition process, we estimated a meta-regression (Harbord & Higgins, 2008) in which we regressed the effect of parental education on marriage timing on the four stages of cohabitation (thus, three dummy variables). All models were fitted in STATA 15, using the **metan** command for meta-analyses and **metareg** for meta-regressions. Countries constitute the units of these meta-analytical tools. Countries with more respondents have more influence on the relationship, because in meta-analysis units are inversely weighted to the precision of their effect estimate as indicated by their SE squared.

In the result section, we will first show the overall effect of parental education on marriage timing for all the countries pooled, as obtained from the meta-analysis. Step by step we show what, in general, happens with the impact of parental education after including (1) individuals' own educational level and enrolment, and (2) the interaction between parental education and cohabitation. Moreover, we test whether there is significant between-country heterogeneity in these models. If so, the country-specific results are shown. To present the country-specific effects, we classified the 20 countries according to the four cohabitation stages constructed in the cluster analysis, namely (1) cohabitation as prelude to marriage, (2) cohabitation as trial marriage, (3) cohabitation as an alternative to marriage, and (4) cohabitation as the norm.

3.4 Results

Pooled model

Table 3.4 shows the overall mean of all the country-specific estimates and SE's, to test whether there is, in general, an impact of parental education on the marriage timing. The coefficients are shown as log-odds (B). The first model of Table 3.4 shows an overall significant delaying effect of parental education on the timing of first marriage (B = -.127, p<.01). The annual rate of entering first marriage decreases with 11.9 percent (=exp (-.127)) if the ISLED of parents increases with 10 points, thus the higher the education of parents, the later young adults enter into their first marriage. This result is in line with hypothesis 1. The second model of Table 3.4 shows that after controlling for young adults' own educational attainment and enrolment, the net effect of parental education on the marriage timing of young adults remains statistically significant (B = -.096, p<.01). Thus, every 10 additional ISLED points of

Table 3.4. Overall pooled model for all the 20 countries for respondents born between 1960 and 1994: Effect of parental education on timing of first marriage. Results from meta-analysis based on discrete-time logistic models.

	Model 1 B (SE)	Model 2 B (SE)	Model 3a B (SE)	Model 3b B (SE)
			Not cohabiting	Cohabiting
Effect parental education	-.127 ** (.014)	-.096 ** (.010)	-.121 ** (.014)	-.025 (.016)
Cross-national variation (I^2)	92.3%	83.5%	88.6%	83.5%

Note: In all models controlled for age and squared term, birth year and squared term, gender and the interactions between parental education and age (and squared term), gender and age (and squared term), and gender and birth year (and squared term).
*= p<.05, ** = p<.01 (two-tailed)

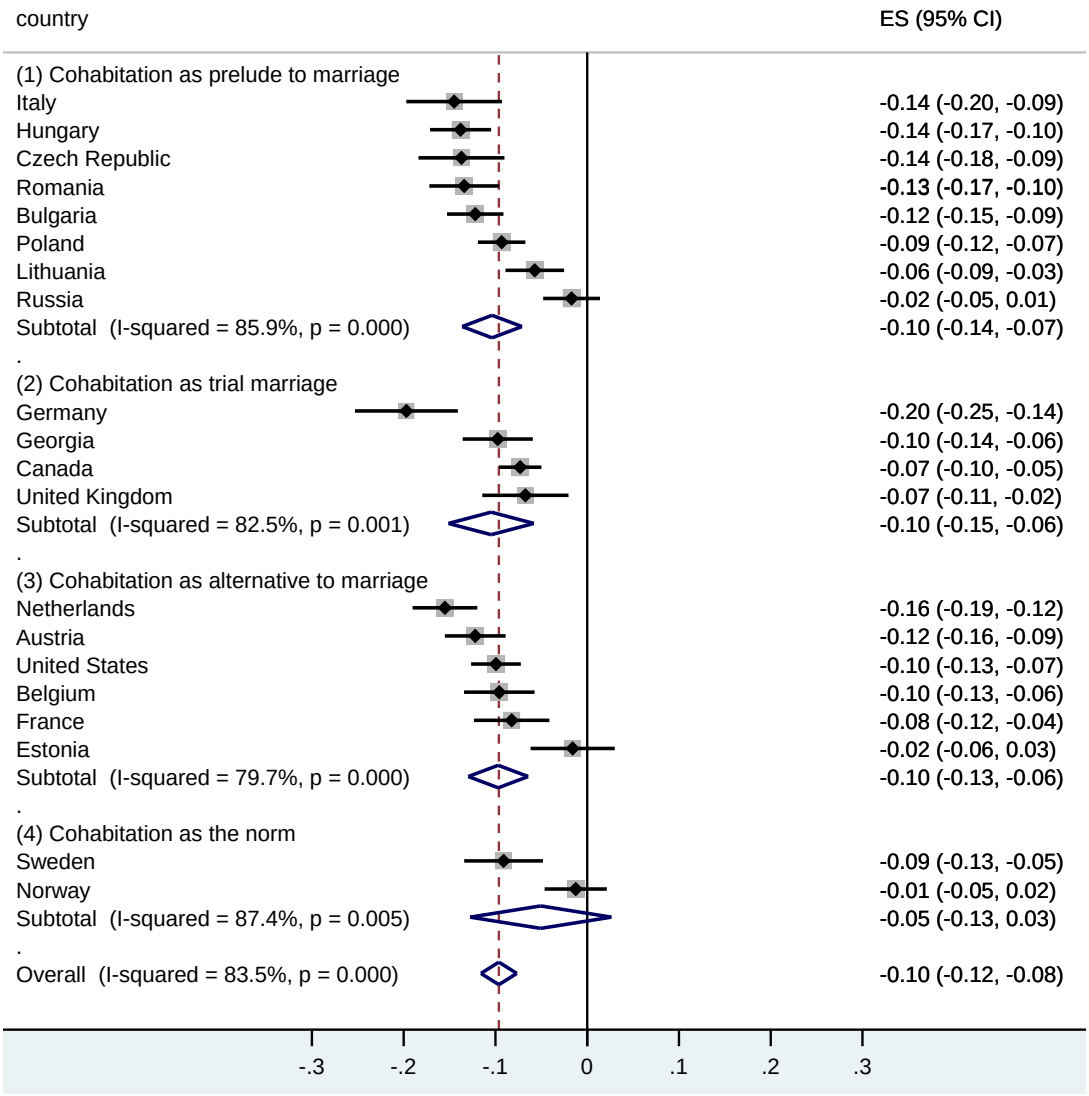
parental education decreases the rate of entering a first marriage by 9.2 percent (=exp (-.096)).

The third model of Table 3.4 shows the impact of parental education on the timing of first marriage when young adults do not (yet) cohabit (Model 3a) and once they cohabit (Model 3b). When young adults are not cohabiting, the impact of parental education on marriage is negative, so the higher the education of parents, the later they enter their marriage (B = -.121, p<.01). However, after young adults start to cohabit, there is overall no significant impact of parental education on the timing of first marriage anymore (B = -.025, p > .05). This result clearly confirms hypothesis 2, in which we stated that the impact of parental SES on marriage timing becomes weaker, after young adults start to cohabit.

Country-specific results

At the same time, the models in Table 3.4 show considerable cross-national variation in the link between parental education and first marriage (I^2 ranging from 83.5 – 92.3 percent), which makes it interesting to analyze the country-specific results. Figure 3.2 shows the results of a meta-analysis in which for each country the net effect of parental education on the timing of first marriage is analyzed, so after controlling for individuals' educational level and enrolment. The countries are grouped according to the stage of the cohabitation transition they belong to. In the majority of the countries, there is a delaying effect of parental education

Figure 3.2. Net effect of parental education on marriage for 18 European and two North-American countries (controlled for own education and enrollment). Meta-analysis of estimates from discrete-time logistic models.



Notes:
1) Significant gender differences found for US, DE, CA, IT, RO, and PL. See separate analyses for men and women in Appendix (Figure A3.1a and A3.1b).
2) In all models controlled for age and squared term, birth year and squared term, gender and the interactions between parental education and age (and squared term), gender and age (and squared term), and gender and birth year (and squared term).

on the timing of marriage. Only in Russia, Estonia, and Norway, there is no significant difference between young adults with high and low educated parents with regard to their marriage timing. The dotted line in Figure 3.2 represents the overall mean for all the countries pooled (which was reported in Table 3.4) and results show that more than half of the countries significantly deviate from this overall mean. We grouped the 20 countries into the four stages of cohabitation, but Figure 3.2 shows that also within each cohabitation stage

there is considerable cross-national variation in the link between parental education and marriage timing (I^2 ranging from 79.7 - 87.4 percent).

Results from the meta-regression thus show that the impact of parental education does not significantly vary between the four stages of cohabitation (results not shown). The subtotal means of the four stages in Figure 3.2 do not significantly differ from one another. Although the overall pattern is almost the same for men and women, a significant difference is found in the net impact of parental education on marriage timing between men and women for six countries (United States, Germany, Canada, Italy, Romania, and Poland). Figures A3.1a-A3.3b in the Appendix show the gender-specific analyses.

What happens with the impact of parental education on the timing of marriage after young adults start to cohabit? Figure 3.3a and 3.3b show the country-specific results of the link between parental education and marriage timing when young adults are not cohabiting (3a) and after young adults have entered a cohabiting relationship (3b), grouped by cohabitation stage. The results from Figure 3.3a indicate that, although the strength of the link between parental education and marriage varies across countries (two-third of the countries deviate from the overall mean), in the majority of countries there is a delaying effect of parental education on the rate of entry into marriage when young adults are not cohabiting (the exceptions are Russia, Estonia, and Norway). This result is in line with hypothesis 3. However, after young adults start to cohabit (see Figure 3.3b), we see that in almost all countries the effect of parental education changed, but in different directions.

Figure 3.3b shows that most cross-national variation is found between countries classified in the prelude-to-marriage stage. Four out of eight countries deviate from the overall mean. Moreover, for half of the countries, there is no significant impact of parental education on the timing of first marriage after cohabitation. For Italy, Poland, and Lithuania, there is a significant delaying effect, while in Bulgaria young adults with high-educated parents enter their marriage sooner than the ones with lower educated parents after they start to cohabit. We expected this push effect for all the countries that are classified in the prelude-to-marriage stage, but only for Bulgaria we found a positive effect of parental education on the timing of marriage, thus we cannot confirm hypothesis 4a.

In most countries in which cohabitation is primarily seen as a trial marriage, there is no impact of parental education on marriage timing once young adults cohabit. Thus, as expected, the effect of parental education weakens after young adults start to cohabit.

Figure 3.3a. The net effect of parental education on marriage for 18 European and two North-American countries when young adults are NOT living together. Meta-analysis of estimates from discrete-time logistic models.

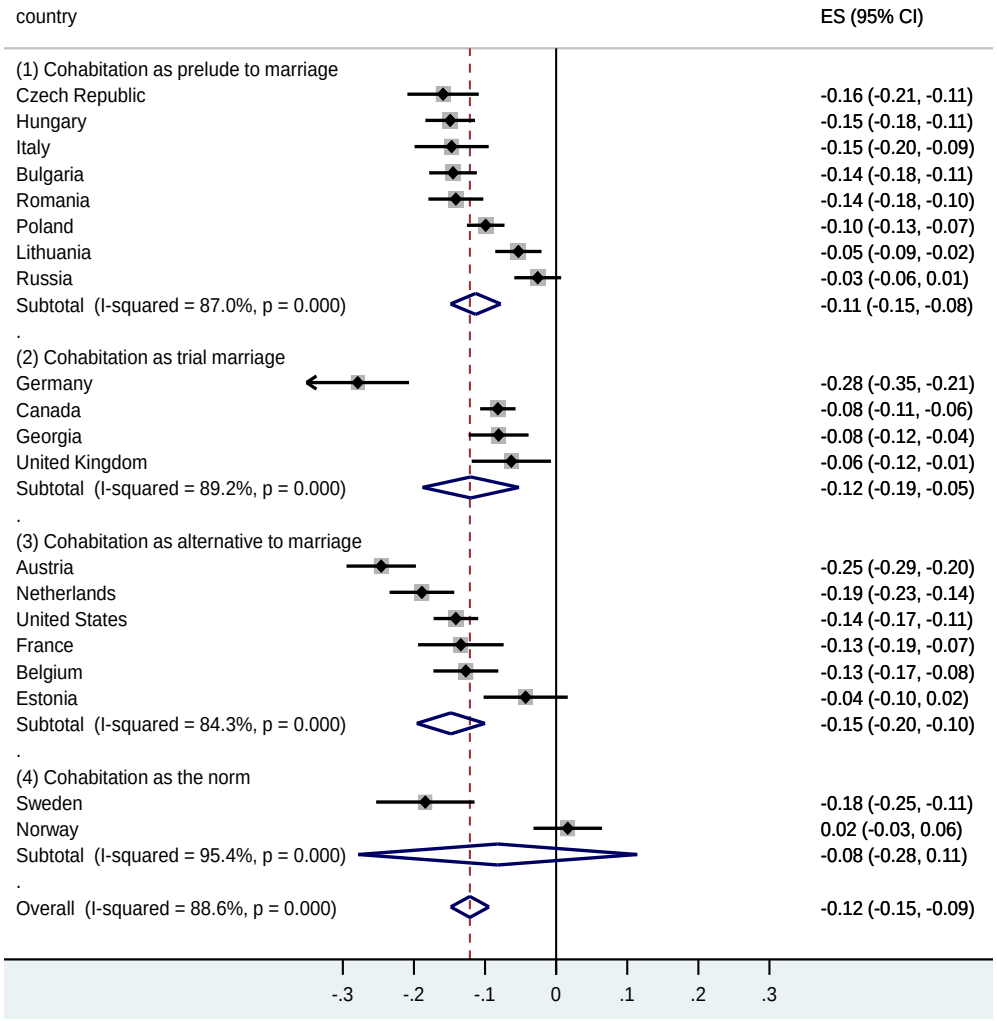
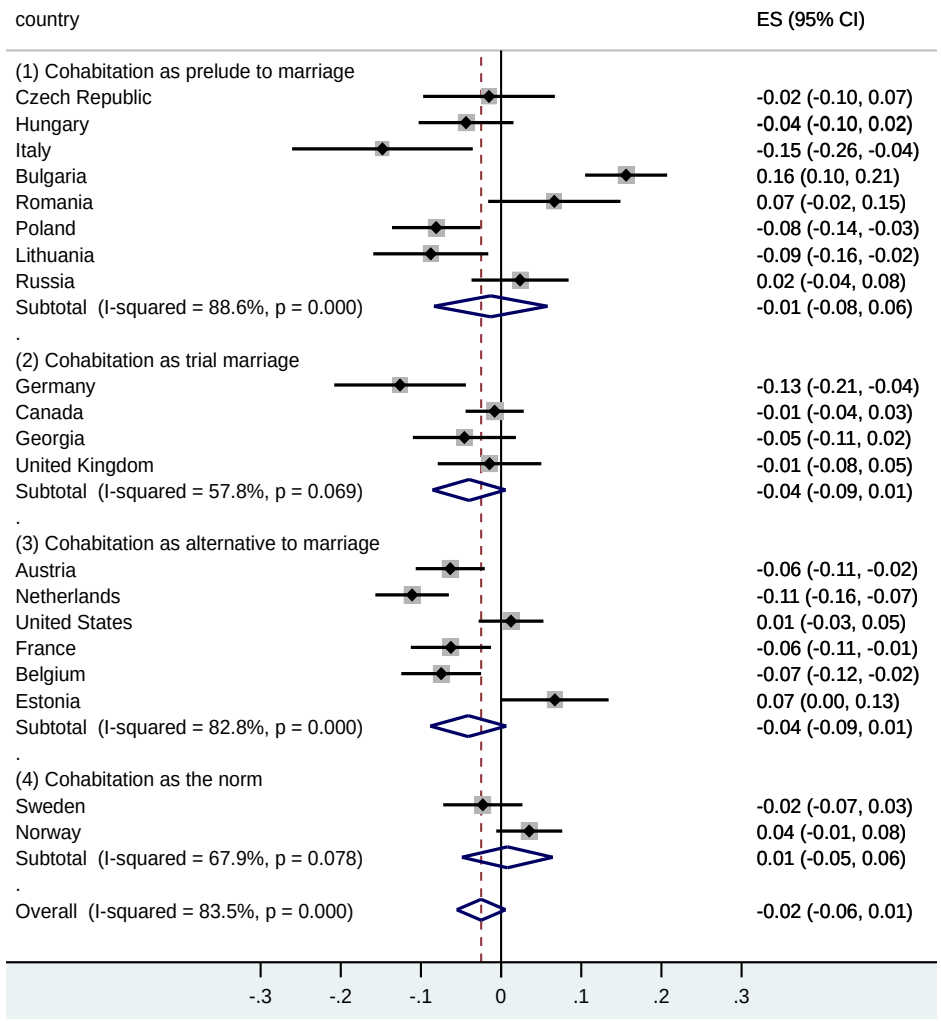


Figure 3.3b. The net effect of parental education on marriage for 18 European and two North-American countries when young adults are living together. Meta-analysis of estimates from discrete-time logistic models.



Notes: 1) Significant gender differences found for US. DE. CA. IT. and RO. See separate analyses for men and women in Appendix (Figure A3.2a-A3.3b).
2) All models controlled for age and squared term, birth year and squared term, gender and the interactions between parental education and age (and squared term), gender and age (and squared term), and gender and birth year (and squared term).

Only for Germany, we still find a significant delaying effect of parental education although this effect also diminished. Additionally, Germany is the only country within this cluster that deviate from the overall mean.

In many countries that are classified in the cohabitation-as-alternative-to-marriage stage, the effect of parental education indeed diminishes, as expected, after young adults start to cohabit. However, for many countries the effect of parental education on marriage timing remains significant. Only for the United States, we do not find a significantly delaying effect of parental education on marriage timing after young adults start to cohabit. In addition, three out of six countries deviate from the overall mean. Results from Figure 3.3b also shows that for Estonia the impact of parental education becomes positive, so young adults from high-status families marry sooner once they cohabit.

However, according to hypothesis 4b, we expected that the impact of parental education would be somewhat weaker for countries in which cohabitation is seen as an alternative to marriage compared to countries in which cohabitation is mainly seen as a trial marriage. Based on the results of Figure 3.3b, we find no confirmation of this hypothesis (4b). Results from the meta-regression also show that the impact of parental education on marriage timing after young adults start to cohabit does not significantly vary across all four stages of cohabitation (results not shown).

For both Sweden and Norway as countries where cohabitation is seen as the norm, we see that there is no impact of parental education on marriage anymore once young adults cohabit, which is in line with hypothesis 4b. Cohabitation is diffused the most in these countries, and therefore, we expected no impact of parental education on marriage timing anymore after young adults start to cohabit. Sweden fits the picture best. Although the effect of parental education is insignificant for Norway, it clearly deviates from the overall mean.

3.5 Conclusions & Discussion

Previous research has conclusively shown that young adults from high-status families enter their first marriage later than young adults from low-status families (e.g. South, 2001). However, the majority of these studies did not take into account the cohabitation history of young adults, while nowadays many young adults first cohabit before they formally marry

their partner. The first research question of this paper was, therefore, to what extent the effect of parental SES on the timing of first marriage weakens after young adults start to cohabit? The results from the overall models in which we pooled all 20 countries, show first of all, that a higher parental education lowers the rate of entering first marriage, even after controlling for individuals' own level of education and educational enrolment. However, this study also shows that it is crucial to take into account the cohabitation history, because after young adults start to cohabit, the impact of parental education on the timing of marriage clearly diminishes and even disappears. Earlier research already showed that the impact of parental background on marriage timing becomes weaker once young adults become older (Axinn & Thornton, 1992; South, 2001). As young men and women age, their own life-course events and preferences become increasingly important which results in a weaker impact of parental resources and preferences. The current study shows that, next to the fact that young adults become older and therefore become less dependent on their parents, it is also the start of a cohabiting union that results in a weaker impact of parental background. In a recent study of Mooyaart and Liefbroer (2016) on the Netherlands, it was also found that the impact of parental education becomes weaker after young adults entered a cohabiting union. Children who have left the parental home, and particularly children who already live together with a partner are likely to be less influenced by their parents and their resources because they can rely on their own resources or the resources of their partner. Thus, the current study shows that the choice to cohabit weakens the link between parental SES and marriage timing. Parents and their resources mainly affect their offspring's marriage timing when their children are not (yet) cohabiting. Thus, for future research it is important to take the cohabitation history into account once analyzing the timing of marriage.

The second research question of this study was to what extent cross-national variation exists in the link between parental SES and the timing of marriage before and after young adults start to cohabit and whether this variation is related to a countries' position in the cohabitation transition. Results show considerable cross-national variation in the link between parental SES and marriage timing. Although the direction of the net effect of parental education on marriage is the same in almost all countries, the strength of this effect varies considerably across countries. This cross-national variation remains large even if we take into account whether young adults cohabited or not. In eight countries, mainly West-European ones, parental education still has a delaying effect on marriage timing after young

adults start to cohabit. By contrast, in two East-European countries (Estonia and Bulgaria), parental education has an accelerating effect on marriage timing and for the remaining countries no significant impact of parental education on marriage timing is found after young adults start to cohabit.

One explanation for this substantial cross-national variation found in this study could be that the meaning of cohabitation differs across countries. Based on the literature, we constructed an empirical typology in which we distinguished four groups of countries according to how far they were advanced with regard to the cohabitation transition. We constructed our typology by performing a cluster analysis. The analysis indicated four clusters of countries which correspond quite closely to the four stages in the cohabitation transition that we delineated theoretically; namely (1) cohabitation as prelude to marriage, (2) cohabitation as trial marriage, (3) cohabitation as alternative to marriage and (4) cohabitation as the norm. These clusters and the countries included in each cluster strongly align with the stages of the cohabitation transition as suggested by Kiernan (2001) and Heuveline and Timberlake (2004), although the latter suggested a more fine-grained typology. To our knowledge, this is the first cohabitation typology that is empirically tested and it leads to a clear, theoretically based and empirically validated classification of countries into four groups, depending on the dominant meaning of cohabitation in a country.

However, the substantive cross-national variation in the link between parental education and the timing of marriage could not be explained by our typology. Differences in the strength of the effect of parental SES on marriage timing are not in line with expectations based on the four cohabitation stages. Moreover, within all four specific clusters of countries, we still found considerable variation across countries.

One possible explanation of why cross-national variation in the strength of the effect of parental education on marriage behavior is not linked to our cohabitation typology could be that the importance of parental background not only depends on the cultural or normative context of a country, but also on the economic and institutional context. For instance, Mills and Blossfeld (2013) argue that the degree of economic uncertainty that young adults face when they make demographic choices is important. It can be expected that the lower the degree of uncertainty, the less young adults depend on their family of origin. This level of dependence on the family of origin and the uncertainty young adults face, are linked to the country-specific culture, but next to this also to economic possibilities and institutional

support from the state. In addition, differences in the institutional and legal framework of cohabitation may explain cross-national variation (Dominguez-Folgueras & Castro-Martin, 2013; Perelli-Harris & Gassen, 2012; Poortman & Mills, 2012). In some countries, cohabiters have essentially the same legal rights as married people (for example, in the Netherlands), but in other countries cohabiting couples still remain more vulnerable, legally and financially, than married couples (Perelli-Harris & Gassen, 2012). This could be a reason for people to eventually marry, especially when they buy a house or become parents.

It can be expected that legal rules concerning intimate relationships will keep on adjusting to the demands of new family forms, and that differences between cohabitation and marriage with regard to legal protection will continue to diminish once countries are further advanced in the cohabitation transition (Dominguez-Folgueras & Castro-Martin, 2013). This would imply that when cohabitation is still rare, there are no institutions for legal regulation of cohabitation (other than marriage), but that once cohabitation is more seen as a trial marriage, also more legal arrangements will be introduced. Once cohabitation is seen as an alternative to marriage or even becomes the norm, cohabiting couples also acquire more of the same rights as married couples. These examples suggest that differences in the effect of parental background on marriage timing are not only rooted in differences in cultural norms, but also depend on economic and institutional differences across countries. Although culture, economy, and institutions often move in the same direction, there are still significant differences between and within countries. Thus, the explanation for the cross-national variation in the link between parental SES and marriage timing is possibly more complex and path-dependent. SDT critiques have argued that the SDT has ignored this path-dependence so far (Mills & Blossfeld, 2013; Zaidi & Morgan, 2017) and our study also suggests that a more comprehensive theory is needed to understand cross-national variation in the link between parental SES and marriage timing. For future research, it would therefore be interesting to analyze the interplay between various cultural, economic, and institutional factors within countries.

To conclude, the marriage formation process is socially stratified. Our study has contributed to understanding this stratification by showing how parental SES predicts the timing of marriage in different countries. A key lesson is that differences in marriage timing by family background became weaker and in general disappeared after young adults start to cohabit. However, we have to keep in mind that this does not mean that we can see

unmarried cohabitation as a way to solve inequalities in the marriage formation process. Due to unmarried cohabitation, as an additional step in the marriage formation process, the social stratification only shifts to the moment of entering the first co-residential union instead of the moment of entry into first marriage.