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Research Article

Partnership dynamics among migrants and their descendants in Estonia

Leen Rahnu

Luule Sakkeus

Allan Puur

Martin Klesment

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Table of Contents

1	Introduction	1520
2	Theoretical perspectives and previous findings	1522
3	The Estonian context	1525
3.1	Migration and migrant population in Estonia	1525
3.2	Family-related context in Estonia and the countries of origin	1527
4	Research aim and hypotheses	1529
5	Data and methods	1530
6	Results	1533
6.1	Formation of first partnership	1533
6.2	Pathways to first partnership formation	1535
6.3	Cohabitation outcomes in first partnership	1537
6.4	Dissolution of first partnership	1538
6.5	Formation of second partnership	1540
6.6	Pathways to second partnership formation	1542
6.7	Cohabitation outcomes in second partnership	1543
6.8	Interactions with birth cohort	1544
7	Conclusion	1546
8	Acknowledgements	1551
	References	1552
	Appendix: Description of control variables	1564

Partnership dynamics among migrants and their descendants in Estonia

Leen Rahnu¹

Allan Puur²

Luule Sakkeus³

Martin Klesment⁴

Abstract

BACKGROUND

Extensive scholarly literature documents the decline in marriage and increase in non-marital cohabitation and divorce across regions and countries of Europe, but we know less about the extent to which these new family behaviours that have emerged in host societies are adopted by migrants.

OBJECTIVE

The aim of this study is to examine partnership transitions among the migrants and their descendants in Estonia, who mainly originate from the European part of Russia. By investigating an East European context, the study contributes to a more comprehensive account of migrant populations in different socio-economic and cultural settings.

METHODS

The study is based on the Estonian Generations and Gender Survey (2004/2005) and the Estonian Family and Fertility Survey (1994/1997), and employs proportional hazards models.

RESULTS

The results show that new family formation patterns, associated with the Second Demographic Transition, are less prevalent among migrants. The difference between migrants and native Estonians is most pronounced in the mode of partnership formation and outcomes of cohabiting unions, whereas the results pertaining to union dissolution reveal a less systematic difference between population groups. Reflecting the relatively slow integration, the second-generation migrants exhibit partnership behaviour that

¹ Estonian Institute for Population Studies, Tallinn University. E-Mail: leen.rahnu@tlu.ee.

² Estonian Institute for Population Studies, Tallinn University. E-Mail: allan.puur@tlu.ee.

³ Estonian Institute for Population Studies, Tallinn University. E-Mail: luule.sakkeus@tlu.ee.

⁴ Estonian Institute for Population Studies, Tallinn University. E-Mail: klesment@tlu.ee.

differs from that of the native population. The observed differences between migrants and the native population appear largely similar for both men and women.

CONCLUSIONS

The results lend support to socialisation, cultural maintenance, and adaptation hypotheses, and underscore the importance of contextual factors. The analysis reveals disruption effects of migration on partnership processes.

1. Introduction

Since the late 1960s European societies have experienced profound transformations in partnership and childbearing patterns. Family dynamics have become increasingly complex, characterised by decline in marriage, increase in non-marital cohabitation and divorce, postponement of parenthood, and reordering of events in the family life course. The contrast with earlier patterns was so large that a new concept – the Second Demographic Transition (SDT) – was introduced by Lesthaeghe and Van de Kaa (1986), and further developed by both authors (Van de Kaa 1987, 1994; Lesthaeghe 1995, 2010, 2014). Although subjected to criticism on different grounds (Cliquet 1991; Coleman 2004; Perelli-Harris et al. 2010), the SDT has proven a useful conceptual framework for the description and analysis of contemporary family and fertility trends in Europe.

The premise of the transition implies that demographic development is a gradual multi-stage process, with leaders and laggards among countries and sub-groups of the population. An extensive literature documents the spread of the SDT across regions and countries of Europe (Andersson and Philipov 2002; Kiernan 2002; Kohler, Billari, and Ortega 2002; Sobotka 2008a; Neyer, Andersson, and Kulu 2013). However, most of the evidence describing the progress of the SDT pertains to total/majority populations of the countries. In parallel with the SDT, European societies have experienced large-scale migration flows and witnessed the growing ethnic and cultural heterogeneity of their populations (Coleman 2006; Castles and Miller 2009). In many countries, particularly in Northern and Western Europe, both with a longer history of immigration, children of former labour migrants currently form an increasingly important share of young adults (Sobotka 2008b). In the younger age groups the second generation dominates among populations of migrant origin (Hernandez, Macartney, and Blanchard 2009).

An important part of research into partnership transitions among migrants has focused on the formation of ethnically mixed marriages (Kalmijn 1998; González-Ferrer 2006; Kalmijn and Van Tubergen 2006; Muttarak and Heath 2010; Sánchez-Dominguez, de Valk, and Reher 2011) and the stability of mixed marriages between

natives and migrants (Kalmijn, de Graaf, and Janssen 2005; Dribe and Lundh 2012; Feng et al. 2012; Smith, Maas, and van Tubergen 2012; Milewski and Kulu 2014). Although there has been an interest in other aspects of partnership dynamics among migrants and their descendants (Landale 1994; Berrington 1996; De Valk and Liefbroer 2007a, 2007b; Bernhardt et al. 2007; De Valk and Billari 2007; Huschek, Liefbroer, and de Valk 2010; Milewski and Hamel 2010; Zorlu and Mulder 2011) the evidence is still relatively limited. Among other things, we lack a comprehensive account of the extent to which the new partnership behaviours that have emerged in host societies are adopted by migrants and whether the cross-national diversity in the spread of the SDT applies to migrant populations.

This study complements the existing literature by analysing partnership transitions among the migrant population in Estonia.⁵ Its contribution is important for several reasons. First, European research on partnership transitions among migrant populations has focused almost exclusively on Western countries. By adding an East European context, this study contributes to a more comprehensive account of migrant populations in different socio-economic and cultural settings: to the best of our knowledge this is the first study of union formation and dissolution among migrants from Russia, the largest country in Europe, which systematically compares their partnership transitions to those of the host country population. Second, the early onset of large-scale immigration to Estonia gave the country a relatively large migrant-origin population that today stretches across several generations; this allows us to investigate children of immigrants and obtain results that can be compared to findings pertaining to the second generation in Northern and Western Europe. Third, the data we use (the pooled data of the Estonian Family and Fertility Survey and Estonian Generations and Gender Survey) provide detailed life history information that offers an opportunity to observe partnership trajectories of migrants and their descendants over the life course, including partnership dissolution and re-partnering. The cohort range of the surveys (generations born in 1924–1983) enables coverage of an extended period beginning in the middle of the 20th century that includes the decades of large-scale migration and changing societal regimes. Finally, we investigate the patterns for women as well as men, which permit us to explore gendered patterns of integration.

The case study consists of five sections. In the next section we briefly discuss the theoretical approaches to family dynamics among migrants and the empirical findings to date. We then proceed to a description of the Estonian context, which provides a basis for our hypotheses. The subsequent sections explain data sources and methods employed in the study, and present our results on partnership transitions. The final section includes a summary and a discussion of the findings.

⁵ For convenience, migrant-origin population is denoted migrant population even though the descendants of immigrants have not migrated from one country to another.

2. Theoretical perspectives and previous findings

Several complementary mechanisms have been proposed to describe and explain how migration interacts with family dynamics when individuals move from one country to another (for recent overviews see Wilson 2013; Kulu and González-Ferrer 2014). Most of the literature on these mechanisms focuses on childbearing among migrants, but it seems plausible that similar mechanisms are also applicable to partnership transitions.

The *socialisation* hypothesis (Andersson 2004; Kulu and Milewski 2007) suggests that the family behaviour of migrants is shaped by values, norms, and behavioural patterns to which they have been exposed during childhood. It is assumed that these influences have a lasting impact that is relatively stable during the life course. As a result, international migrants tend to follow family behaviour that is characteristic of their country of origin and not converge to patterns prevailing in the host society. In literature, the latter phenomenon, which may extend beyond the first generation, is termed *cultural maintenance* (Abbasi-Shavazi and McDonald 2000, 2002).⁶

The family life choices of the descendants of migrants are shaped by the society in which they grow up, but at the same time they are exposed to their parents' behaviour, values, and norms. Portes and Zhou (1993:75), the proponents of the *segmented assimilation theory*, describe the situation faced by children of migrants as follows: "Growing up in an immigrant family has always been difficult, as individuals are torn by conflicting social and cultural demands, while they face the challenge of entry into an unfamiliar and often hostile world." With reference to the United States, the theory distinguishes several possible pathways of integration into the host society. As alternatives to the classic straight-line assimilation of migrants and their descendants, the theory posits assimilation into the urban underclass, leading to downward mobility, and the deliberate preservation of the immigrant community's culture and values, accompanied by successful economic integration (Zhou 1997; Portes, Fernández-Kelly, and Haller 2005; Haller, Portes, and Lynch 2011).

The *adaptation* hypothesis (Hervitz 1985; Andersson 2004; Andersson and Scott 2005) posits that, with the lengthening duration of residence, the family behaviour of immigrants will converge toward that of the native population of the host society. In contrast to the socialisation hypothesis, the convergence is expected to occur in a medium rather than long-term perspective. The *selectivity* hypothesis (Macisco, Bouvier, and Weller 1970; Hoem 1975) explains the migrants' family behaviour by the

⁶ The cultural maintenance hypothesis bears resemblance to the *sub-culture* hypothesis, which was originally developed in order to explain the higher fertility of ethnic minority groups residing in the United States (Goldscheider and Uhlenberg 1969; Roberts and Lee 1974; Bien and Tienda 1990). According to this view, members of minority groups may preserve norms, values, and behaviours concerning family and fertility that are distinct from the majority population.

fact that people who move from one social environment to another may have particular characteristics that distinguish them from the population at origin. The selectivity hypothesis calls for attention to controlling the compositional differences between migrants on the one hand and the sending and receiving populations on the other.

Finally, short-term influences of migration have been described by the *disruption* hypothesis (Carlson 1985; Kulu 2006) and the hypothesis of *interrelation of life events* (Andersson 2004; Kulu 2005, 2006). The underlying assumption of the first hypothesis is that migration is a stressful event that entails significant economic costs, disconnection of social networks, and psychological pressure that may discourage family formation. By contrast, the second hypothesis draws attention to the fact that migration often occurs in close proximity to other life events. For example, some migrants may move for the purpose of family formation or re-unification and such migrations lead to elevated transition rates to partnership and parenthood after the move. The 'arrival effect' may also be driven by other mechanisms such as uncertainty reduction and legitimization (Milewski 2010).

Although empirical evidence on partnership dynamics among migrants is somewhat less extensive than that on childbearing, it supports the view that most of the mechanisms described above apply to partnership transitions. Earlier studies on the United States have demonstrated strong effects of selectivity on first union formation. For instance, Landale (1994) showed that the migration of Puerto Rican women to the United States was a selective process, with migrants originating from lower socio-economic strata. The author concluded that the selectivity encouraged early and informal union formation among Puerto Rican immigrants.

Support for the selectivity hypothesis also comes from a more recent study of union formation among migrants to Spain (Trilla, Esteve, and Domingo 2008). The authors found that a major part of differences in partnership patterns between migrants and natives can be explained away by individual and couple characteristics. At the same time, however, the variation across migrant groups did not wholly disappear after controlling for differences in these characteristics. The arrivals from Latin America were significantly more likely to opt for cohabitation than native-born Spaniards, while the Moroccan immigrants exhibited a lower likelihood. In line with the socialisation hypothesis, the authors attributed these differences to norms and practices that prevail in the countries of origin. Among migrants arriving from outside Europe, this usually entails more conservative partnership patterns with marriage holding a stronger position and the transition to first union occurring at a younger age than is common among natives. This has been reported for migrant groups in different countries (Wanner 2002; Østby 2002; De Valk et al. 2004; Zorlu and Mulder 2011).

Evidence for the disruption hypothesis has been found in both contemporary and historical studies. In a variety of 19th century settings, the age of marriage for

immigrants has been reported to be higher than that of natives (Alter 1988; Lynch 1991; Oris 2000; Moreels and Matthijs 2011; Schumacher, Matthijs, and Moreels 2013). Carlson (1985) showed elevated marriage ages for single immigrants who moved to Australia before the 1970s. For post-socialist Kyrgyzstan, Nedoluzhko and Agadjanian (2010) demonstrated that recent internal migration is associated with a low propensity to get married; the marriage risks of migrants gradually approached the level of non-migrants as the duration of stay increased. Likewise, in accord with the disruption hypothesis, repeated migration is found to increase the risk of union dissolution (Muszynska and Kulu 2007; Boyle *et al.* 2008). Interestingly enough, empirical analyses also provide evidence for the competing hypothesis (interrelation of life events), which predicts elevated risks of union formation and childbearing in the first years after the move (Singley and Landale 1998; Andersson 2004; Lindstrom and Giorguli Saucedo 2007; Milewski 2010). At first glance, the evidence for the disruption and interrelation of events may seem contradictory. However, the former and the latter can be interpreted as two sides of the same coin – elevated transition rates shortly after migration can be seen as a catch-up behaviour for postponed family formation in the period immediately preceding and during the migration (Goldstein and Goldstein 1981; Toulemon and Mazuy 2004; Wilson 2013). It is also possible that we have two different population sub-groups here: marriage migrants with elevated union formation risks shortly before or after the migration and labour migrants with lower risk.

Results for the second generation lend support to both adaptation and socialisation hypotheses. Family behaviour among the descendants of immigrants usually differs from that observed in the first generation but has rarely completely converged with the native population. For instance, the in-between situation of the second generation is portrayed in a study of first partnership formation amongst second-generation Turkish immigrants in France (Milewski and Hamel 2010). The authors concluded that the union formation of the descendants of immigrants represents an amalgamation of two cultures, different from that prevailing in both the country of origin and the mainstream host society. In the authors' interpretation, the observed results fit neither the classical assimilation theory (Gordon 1964) nor the segmented assimilation theory (Portes and Zhou 1993) because “the values and behaviours are directed to specifically Turkish roots and not to a French or an immigrant “mainstream”.”⁷ A comparative study on union formation among the descendants of Turkish immigrants by Huschek, Liefbroer, and de Valk (2010) suggested that the described situation may not be unique to France; Milewski (2011) has shown that throughout Europe, women of the Turkish second generation enter parenthood at much earlier ages than their native counterparts. Researchers tend to attribute these more traditional patterns to parental influence and

⁷ Although the authors reject the theory of segmented assimilation, the results support the notion of multiple pathways to integration among the descendants of immigrants predicted by the theory.

cultural factors (De Valk and Liefbroer 2007a, 2007b; Huschek, Liefbroer, and de Valk 2010), in line with the cultural maintenance and sub-culture argument. In addition, these patterns may be reinforced by poorer educational outcomes and labour market prospects among the second generation (Crul and Vermeulen 2006; Heath, Rohton, and Kilpi 2008). Convergence to patterns prevailing in host societies may also be hindered by intermarriage rates in the second generation that have been proven lower than initially thought (González-Ferrer 2006; Milewski and Hamel 2010).

Research on the descendants of immigrants has also revealed that different groups at the same destination do not necessarily exhibit uniform partnership patterns. For instance, Bernhardt et al. (2007) reported that the descendants of Polish immigrants to Sweden closely resembled their native counterparts with regard to the levels of cohabitation and timing of union formation; however, young adults of Turkish origin showed much less similarity with native Swedes in their partnership transitions. Significant variation in family patterns across migrant groups of different origin is also observed in other settings (De Valk et al. 2004; Zeng et al. 2012). On the other hand, comparative studies on migrants with the same background suggest that the context of receiving countries shapes family behaviour as migrants adapt to the patterns predominant in host societies (Huschek, Liefbroer, and de Valk 2010; Milewski 2011).

This study, using evidence from Estonia, offers additions to the theoretical perspectives described above. We mainly focus on the socialisation mechanism, which applies to migrants as well as to their descendants and appears more relevant in analysing the integration of migrant population over the long run.⁸ To facilitate the formulation of specific hypotheses, the following section briefly outlines the characteristic features of the Estonian context.

3. The Estonian context

3.1 Migration and migrant population in Estonia

Estonia was transformed into an immigration country in the 1940s. Large-scale immigration began shortly after the country was incorporated into the former Soviet Union and remained high until the late 1980s (Sakkeus 1994). In the Soviet context, central authorities that brought administrators, military personnel, and a large industrial workforce to Estonia directed migration. This was facilitated by employment and

⁸ Integration, in some contexts known as assimilation or incorporation, is regarded as the process by which the characteristics of immigrant groups and host society populations come to resemble one another (Alba and Nee 1997). Most researchers agree that integration of migrants is a long-term process stretching over three to four generations (Vermeulen 2010; Stepick and Dutton Stepick 2010).

housing policies that provided the administration and enterprises with the means to attract labour migrants from other regions of the USSR (Kulu 2003; Kährik 2006). The persistent immigration entailed a major transformation in the population composition. The proportion of the majority population decreased from an estimated 97% in 1945 to 75% in 1959 (the first post-war census), and further to 62% in 1989 (the last Soviet census).⁹ At the end of the 1980s foreign-borns comprised 26% of the total population and the second generation was estimated at nearly 10% (Katus, Puur, and Sakkeus 2002). This gave Estonia one of the highest shares of migrant population in Europe.

The restoration of Estonia's independence in 1991 brought the large-scale immigration to an end and resulted in a wave of return migration in the early 1990s (Tammaru and Kulu 2003). The intercensal balance reveals that in 1989–2000 almost 25% of migrants left the country. In the 2000s the negative net migration continued but the resulting population decrease (–6% among the migrant population) appeared smaller than in the previous decade (Puur, Sakkeus, and Tammaru 2013).¹⁰ The negative net migration in the 1990s and 2000s implies that immigration to Estonia has been relatively limited over the last two decades. Overall, the 2011 census enumerated 22,148 new residents who had settled in the country since 1990 (2% of the census population). In 2011 migrants and their descendants constituted 26% of the total population, of which the first generation comprised 15% and subsequent generations 12% (ESA 2013). With regard to ethnic composition, the proportion of the majority population (Estonians) was 70%.

The origin of the first-generation migrants mirrors the geography of post-war migration to Estonia. More than 86% of migrants stem from three Slavic republics of the former Soviet Union, with 70% born in Russia, 11% in Ukraine, and 6% in Belorussia. Among the remaining countries, Latvia (2%), Kazakhstan (2%), and Finland (1%) have somewhat larger shares. Among the post-1990 arrivals the origin has become more diverse but as yet the latter group is too small to shape the general pattern.¹¹ The predominance of Slavic origin is even more pronounced when it comes to ethnic and linguistic characteristics. In 2011, Russians comprised 80%, Ukrainians 7%, and Belorussians 4% of the migrant population in Estonia: 92% of the non-majority population reported Russian as mother tongue.

A characteristic feature of the migrant population in Estonia is its relatively limited integration into the host society. This is most clearly visible in the limited skills in the

⁹ According to 1934 census, the proportion of ethnic Estonians was 88% and minorities (mainly Russians, Germans, Swedes, Latvians, and Jews) comprised 12% of the total population in Estonia. In 1939–1944, under varying circumstances, the country lost 3/4 of its minority population (Katus, Puur, and Sakkeus 2000).

¹⁰ The native population also experienced negative net migration in the 1990s and 2000s. The cumulative reduction of the population due to migration was -1% in 1989–2000 and -2% in 2000–2011.

¹¹ Among the 2000–11 arrivals enumerated in the 2011 census, the proportion of Russians had decreased to 37% (ESA 2013).

Estonian language, which to a large extent is the legacy of the period when Estonia was under Soviet rule.¹² In the late 1980s only 15% of the migrant population residing in the country was fluent in Estonian (Pavlenko 2008). In 2011, 54% of migrants and their descendants still reported that they could not speak Estonian (ESA 2013). Integration is hindered by a very high concentration of migrants in certain regions of the country and linguistic division in the educational system (Rannut 2008; Tammaru and Kontuly 2011). There is also evidence of persistently low rates of intermarriage between migrants and the native population (Van Ham and Tammaru 2011) and considerable occupational and sectoral segregation in the labour market (Luuk 2009)¹³. In some areas (e.g., the capital region), the nearly similar size of the migrant and native groups has supported the emergence of a dual, ethnically segmented labour market (Lindemann 2013). However, the situation is not static but gradually changing. Programmes of language immersion have become more widespread in Russian-language schools and 60% of subjects are taught in Estonian at the upper secondary level. As a consequence, Estonian language proficiency among young adult age groups of the migrant origin population exceeded 70% at the 2011 census.

3.2 Family-related context in Estonia and the countries of origin

In this section we describe the family-related contexts of Estonia and Russia. As the demographic profiles of Belorussia and Ukraine are very similar to that of Russia, the description applies to an overwhelming majority of the migrant population in Estonia.

Historically, Estonia and Russia had distinct marriage patterns, identified by Hajnal (1965). Estonia was characterised by the late and low prevalence marriage, while in Russia marriage was more universal and occurred at younger ages (Coale, Anderson, and Härm 1979; Coale and Treadway 1986). In the post-war decades, however, the family-formation context in Estonia and in the countries of origin became more similar. In that period Estonia witnessed a shift towards earlier marriage and lower proportions of never-married (Vikat 1994; Katus, Puur, and Sakkeus 2008). Unlike in most countries that experienced the disappearance of the West European marriage pattern in the middle of the 20th century, in Estonia the trend towards earlier marriage did not stop and reverse in the late 1960s or 1970s but persisted until the 1980s. In Russia, the conservative pattern of early and almost universal marriage did not markedly change in the post-war decades (Avdeev and Monnier 2000; Vishnevskii

¹² In the former Soviet Union, Russian was promoted as the main language of inter-ethnic communication.

¹³ In 2000–2012 the difference in employment and unemployment rates between native and migrant populations (age groups 15–74) ranged between 2–5 percentage points and 3–10 percentage points respectively (ESA 2013).

2006). In both countries early marriage was associated with childbearing at a relatively young age (Katus 2000; Zakharov 2008). In the latter decades of state socialism a similar pattern was characteristic of most Eastern European countries, maintaining the East-West divide in family behaviour (Monnier and Rychtarchikova 1992; Ní Brolcháin 1993).

In both Estonia and Russia a major break in family formation trends occurred in the 1990s, when marriage rates began to rapidly decline and the mean age at first marriage started to increase. This was associated with the rapid spread of non-marital cohabitation, which has effectively replaced direct marriage as a pathway to partnership formation. Recent studies have demonstrated that these new trends emerged somewhat earlier in Estonia (Katus *et al.* 2007; Gerber and Berman 2011). Cohabitation became the dominant pathway to partnership formation among native Estonians in the generations that formed their families in the 1970s. Although in Russia evidence of cohabitation can be traced back to even earlier generations (Zakharov 2008), the turn from direct marriage to cohabitation was completed two decades later than in Estonia, in the late 1990s. The time-lag in the spread of new family practices is also revealed in the proportion of non-marital births. In Estonia this measure has reached a level close to 60%, which is comparable to the Northern European forerunners of the Second Demographic Transition. In Russia in the late 2000s the proportion of non-marital births had not exceeded 30% (Eurostat 2013).

With regard to the dynamics of partnership dissolution, both countries have exhibited considerable similarity. After the middle of the 1960s, when divorce legislation was liberalised in the former Soviet Union, divorce rates in Estonia and Russia increased rapidly and reached top-ranking positions in international comparisons (Council of Europe 2006). Likewise, for both countries the cohort data suggest that the proportion of men and women who have experienced divorce increased sharply in generations born since the early 20th century (Katus, Puur, and Sakkeus 2002; Scherbov and Van Vianen 2004). The divergence of post-1990 trends – Russia has maintained high divorce rates while Estonia witnessed a decrease – reflects a more rapid spread of consensual unions in Estonia, as the break-up of the latter is not captured in divorce statistics.

4. Research aim and hypotheses

The main aim of this case study is to analyse the patterns of partnership dynamics among migrants and their descendants in Estonia, against the background of the native population. The discussion of the mechanisms that shape family transitions among migrants and the review of previous empirical findings and the context lead us to three hypotheses.

Our first hypothesis (H1) is that new family patterns associated with the Second Demographic Transition tend to be less prevalent among the migrant population in Estonia. The hypothesis draws mainly on the socialisation argument, according to which the behaviour of migrants mirrors the patterns that are characteristic of their countries of origin. In testing this hypothesis we do not distinguish between the first generation migrants and their descendants, since we assume that the influence of the country of origin extends beyond the first generation.

Our second hypothesis (H2) posits that the difference between the native and migrant populations varies across partnership transitions. More specifically, based on the evidence pertaining to family development in Estonia and the countries of origin, we do expect significant differences to be associated with the pathways of union formation and outcomes of non-marital cohabitation. In the overall transition to partnership we are expecting more moderate differences. By contrast, we expect to observe no or limited difference in union dissolution. We assume that the hypothesised patterns are, at least in part, also characteristic of higher-order unions.

In order to gain insight into the long-term effects of international migration, the outcomes for second- and first-generation immigrants are compared to those of the host population. Although some theoretical models suggest that the second generation grows up under the influence of the host society and adapts to the values, norms, and behaviours of the host population, the second generation may also socialise into the immigrant/minority sub-culture and follow the behaviour of their parents. Considering the relatively slow integration of migrants in Estonia, our third hypothesis (H3) posits that the family behaviour of the descendants of immigrants more closely resembles that of the first generation and is less similar to that of native Estonians, in line with predictions of the segmented assimilation theory and cultural maintenance argument. The relatively large size, spatial concentration, and limited integration into the host society make this plausible. Competing with this assertion is the hypothesis that partnership dynamics of the second generation may be more similar to that of the native population, as children of immigrants have experienced the demographic context of the host country much longer than their parents.

Aside from testing our main hypotheses, the control for migration history is expected to provide some insight into the effect of migration on partnership formation

among the first-generation immigrants. Given the elevated transition rates after the move, observed in a number of studies, we remain undecided whether the disruption effect will actually be detected. Further, controlling for the effects of demographic and socio-economic characteristics allows us to ascertain the extent to which compositional differences may cause differentials in partnership dynamics between migrants, their descendants, and native Estonians. Finally, the inclusion of both women and men in the analysis provides evidence for gender-specificity in the patterns.

5. Data and methods

The data for this study come from the Estonian Generations and Gender Survey (2004/2005) and the Estonian Family and Fertility Survey (1994/1997).¹⁴ Both surveys collected detailed histories of partnership formation and dissolution. The surveys were based on nationally representative probability samples of the resident population, with reduced sampling rate for men. The selection of cases was performed using a single-stage random procedure; the response rates were respectively 70% (GGS) and 85% (FFS). After merging the two datasets the combined sample includes 10,031 women and 5,327 men born in 1924–1983. Further information on the surveys is available from methodological reports and other publications (EKDK 1995,1999; Katus, Puur, and Põldma 2008).

In this study we analyse partnership transitions among the migrant population in Estonia. As the overwhelming majority of migrants to Estonia originated from the Slavic republics of the former Soviet Union, predominantly Russia, we do not distinguish between different subgroups of migrants. Our study population comprises first generation migrants who were born abroad and their descendants in the second generation who were themselves born in Estonia but both of whose parents were born outside the country. A small number of ethnic Estonians, who themselves or both of whose parents were born outside the country, are considered return migrants and included in the native population.

¹⁴ Due to budget constraints, the male survey of the Estonian FFS was carried out three years after the female survey. The survey methodology, including the range of birth cohorts of the target population, was similar in the male and female surveys. In the Estonian GGS, data for women and men were collected simultaneously.

Table 1: Number of respondents and partnership events, Estonia, birth cohorts 1924–1983

	Women			Men		
	Respon- dents	Events	Events	Respon- dents	Events	Events
First partnership						
<i>Entry into partnership</i>		Marriage	Cohabit.		Marriage	Cohabit.
1 st generation	2314	1561	674	1016	696	289
2 nd generation	870	376	377	601	236	246
Native	6847	2661	3562	3710	1283	1976
<i>Cohabitation outcomes</i>		Marriage	Separation		Marriage	Separation
1 st generation	674	554	80	289	245	24
2 nd generation	377	277	50	246	153	30
Native	3562	2438	530	1976	1319	256
<i>Dissolution</i>		Dissolut.			Dissolut.	
1 st generation	2229	704		985	227	
2 nd generation	748	264		482	155	
Native	6215	2008		3259	970	
First marriage						
<i>Marriage</i>		Marriage			Marriage	
1 st generation	2318	2168		1016	952	
2 nd generation	873	669		601	392	
Native	6857	5261		3713	2659	
<i>Divorce</i>		Divorce			Divorce	
1 st generation	2162	642		952	206	
2 nd generation	663	220		392	126	
Native	5250	1519		2655	727	
Second partnership						
<i>Entry into partnership</i>		Marriage	Cohabit.		Marriage	Cohabit.
1 st generation	1145	135	396	285	57	133
2 nd generation	301	30	138	157	17	76
Native	2877	225	1281	1096	108	611
<i>Cohabitation outcomes</i>		Marriage	Separation		Marriage	Separation
1 st generation	396	255	53	133	82	14
2 nd generation	138	75	13	76	41	12
Native	1281	512	251	611	247	108

Source: Estonian FFS and GGS, authors' calculations.

The partnership transitions analysed in the study include the entry into first union and first marriage, dissolution of first union, and the entry into second union. We distinguish between the entry into union via direct marriage and cohabitation and the outcomes of unions begun as non-marital cohabitations. To analyse the abovementioned transitions we use proportional hazards models. Depending on the family transition in question, the models are specified as single decrement (union formation and dissolution) or competing risk models (pathways to union formation, cohabitation outcomes). Table 1 presents the number of respondents and partnership transitions in our study by migrant generation/nativity status.

Our modelling strategy is as follows. For each transition investigated in the study we estimate a series of main effects models and monitor the change in the effects of the independent variable. The first model M1 includes independent variable (migrants status/generation), process time, and birth cohort. In the following steps we add controls using a stepwise procedure. In model M2, pregnancy-parity status (childless, pregnant, parent) and various process-specific controls (age of respondent at union formation and type of union in the models of union dissolution, age of respondent at the end of first union in the models of second union formation) are added. In model M3 we add controls on educational attainment (low, secondary, vocational, tertiary) and labour market status (in education, employed, non-employed). Model M4 (the final model) includes an additional control for time before and after arrival to Estonia.¹⁵ A brief description of control variables is included in the appendix.

To account for time trends in the inter-group differences we also estimate interactions between our main independent variable (migrant status/generation) and birth cohort. The interaction models are fitted to partnership transitions which exhibit the largest contrasts in the main effects models. The results, produced as maximum likelihood estimates of parameter effects, are presented in the form of hazard ratios. To save space, systematic presentation of the results is limited to the main independent variables. The discussion of findings for control variables is skipped in the paper; model estimates for control variables are available in appendix table A1, separately for women and men.

¹⁵ In the preliminary stage of analysis we run several alternative sets of models in order to check the robustness of the findings. In some of these models, first-generation migrants were left censored to the date on which they arrived in Estonia. The results suggest that the specification of control for migration history (adding a covariate or censoring) is relatively harmless to our results (Rahnu *et al.* 2014).

6. Results

6.1 Formation of first partnership

Table 2 presents the model estimates for the transition to first conjugal union among never-partnered women and men which were obtained from event history models. The dependent variable in the models is the rate of entry into first partnership. The exposure was measured in months, starting at the age of 15 for the respondent and continued until the entry into first union or until censoring at the interview or the respondent's 45th birthday, whichever event came first.

The comparison between migrants and the native population reveals a systematic difference between the two groups: in all models migrants feature a higher propensity to start partnership than native Estonians. The difference is statistically significant and it does not markedly change following the inclusion of demographic and socio-economic controls in the models. Migrant women and men exhibit a similar pattern with elevated risks of partnership formation relative to their native counterparts.

The descriptive measures (available from the authors) suggest that the higher rate of partnership formation characteristic of migrants results from the combination of two features. First, the migrant population in Estonia has remarkably low proportions of never-partnered women and men. In the cohorts born before the mid-1960s, which had largely completed their union formation by the time of the data collection, the proportion of never-partnered does not exceed 2%–3%. Among the native population the corresponding percentages are somewhat higher (up to 6%). Second, migrants used to start partnerships at younger ages than the native population. A closer look at the data shows that earlier union formation was more evident in the cohorts born in the 1930s and 1940s. In the following generations the difference in the timing of first partnership almost disappeared.¹⁶

A distinction between the first generation of migrants and their descendants shows that the difference from the native population is larger in the first generation. The descendants of migrants, women and men alike, exhibit a hazard ratio of partnership formation that falls in between the native population and the first generation. Among women, the difference between second-generation migrants and native Estonians remains statistically significant. For men, the difference from natives is smaller (+8%)

¹⁶ Two successive developments have driven the convergence in the timing of partnership formation. First, reflecting the disappearance of the Western European marriage pattern, cohorts born in Estonia in the 1910s–1930s experienced a marked decrease in the age of marriage and in the proportions of never-married. Second, in the cohorts born after 1940 the shift from direct marriage to cohabitation contributed to a further decrease in the age of union formation among the native Estonians (Katus, Puur, and Sakkeus 2008).

and fails to reach statistical significance in the final model. The contrast between second- and first-generation migrants is statistically significant for both sexes.¹⁷

Table 2: Transition to first partnership and first marriage, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	First partnership — women				First partnership — men			
Migrant	1.19***	1.26***	1.22***	1.29***	1.17***	1.22***	1.19***	1.26***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	1.22***	1.30***	1.25***	1.38***	1.24***	1.28***	1.26***	1.38***
2 nd generation	1.13***	1.18***	1.14***	1.15***	1.05	1.11**	1.07	1.08
Native (ref)	1	1	1	1	1	1	1	1
	First marriage — women				First marriage — men			
Migrant	1.46***	1.61***	1.59***	1.68***	1.47***	1.63***	1.57***	1.66***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	1.42***	1.57***	1.55***	1.65***	1.49***	1.63***	1.57***	1.68***
2 nd generation	1.59***	1.76***	1.74***	1.75***	1.43***	1.62***	1.58***	1.59***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk starts at 15th birthday; censoring occurs at interview date or age 45.

Model 1: controlled for process time and birth cohort.

Model 2: M1 additionally controlled for process-specific variation (parity-pregnancy status, age at union formation/dissolution, partnership status etc.).

Model 3: M2 additionally controlled for educational attainment and activity status.

Model 4: M3 additionally controlled for time before arrival to host country. Estimates for control variables are presented in the Appendix (Table A1).

Source: Estonian FFS and GGS, authors' calculations.

Table 2 also presents estimates for the entry into first marriage. To obtain these estimates the respondents were followed from age 15 to first marriage (which may not be the first partnership for a given respondent), interview, or until censoring at age 45. The models for first marriage provide a basically similar account of the difference between migrant and native respondents. This is, of course, not surprising, since for the majority of respondents in our surveys, first partnership and first marriage coincide. However, the difference in the transition rate to first marriage between migrants and the native population is about twice as large as that of first partnership. This suggests that the rate of partnership formation interacts with the type of union, reinforcing the contrast between the migrant and native populations. Similar to first partnership, the

¹⁷ To test the difference between migrant generations, we run a set of models with the second generation as the reference category. The results based on this specification are available in Rahnu et al. (2014).

inclusion of demographic and socio-economic controls in the models does not markedly alter the results.

The transition to first marriage reveals a systematic and relatively large difference between the descendants of migrants and the native population. In the final models (M4) the contrast in the hazard ratio amounts to 75% among women and 59% among men. Against that background, the difference between the first- and the second-generation migrants is only 6%, failing to reach statistical significance (for details see Rahnu et al. 2014). The similarity of estimates across migrant generations, observed both among women and men, suggests that the retreat from marriage is not significantly more advanced among the descendants of immigrants born in the host country than in the first generation.

The comparison of estimates from models M3 and M4 shows that for first-generation migrants the inclusion of control for migration history increases the hazard ratio by 9–13 percentage points; the upward shift can be observed both among men and women. This change means that moving to the host country entails a moderate disruption effect on partnership and marriage formation.

6.2 Pathways to first partnership formation

A characteristic feature of modern family initiation is the disconnection of partnership formation from marriage. Competing risk models that distinguish between the entry into first partnership by direct marriage and cohabitation reveal the spread of this behaviour. In competing risk models the respondents were followed starting from age 15 until the event of interest occurs, or until censoring at the competing event, interview, or the 45th birthday of the respondent.

The results presented in Table 3 indicate that migrants differ markedly from the native population with regard to pathways to union formation. Migrants exhibit a more conservative pattern than native Estonians with about twice as high a propensity to marry directly. Conversely, migrants are less prone to start living together with a partner without being married. The described pattern shows only limited variation across gender; similarly, the hazard ratio for migrants features only marginal change following the inclusion of demographic and socio-economic controls in the model. The scale of migrant-native difference observed in competing risk models is considerably larger than that revealed by single-decrement models, discussed in the previous subsection. It implies that the migrant origin matters more for the type of partnership than for the decision to start a conjugal union.

Table 3: Pathways to first partnership, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	Direct marriage — women				Direct marriage — men			
Migrant	1.77***	1.98***	1.94***	2.03***	1.94***	2.10***	2.03***	2.15***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	1.72***	1.93***	1.89***	1.99***	1.91***	2.04***	1.97***	2.11***
2 nd generation	2.04***	2.21***	2.16***	2.17***	2.03	2.29***	2.20***	2.42***
Native (ref)	1	1	1	1	1	1	1	1
	Cohabitation — women				Cohabitation — men			
Migrant	0.75***	0.76***	0.73***	0.81***	0.69***	0.70***	0.69***	0.73***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	0.75***	0.77***	0.74***	0.89**	0.69***	0.70***	0.70***	0.79***
2 nd generation	0.75***	0.76***	0.72***	0.73***	0.69***	0.70***	0.68***	0.69***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk starts at 15th birthday; censoring occurs at interview date or age 45. Model specification is described after Table 2.

Estimates for control variables are presented in the Appendix (Table A1).

Source: Estonian FFS and GGS, authors' calculations.

In the competing risk models presented in Table 3, the difference between second-generation migrants and native Estonians is large and statistically significant. Descendants of immigrants are more than twice as likely to marry directly than their native peers; by contrast, children of immigrants are less inclined to enter cohabitation. Against the backdrop of the contrast between the second generation and natives, the difference between migrant generations appears relatively small. In most of the final competing risk models, the hazard ratios for migrants and their descendants do not differ significantly from each other (Rahnu et al. 2014).

Also, the results obtained from competing risk models allow us to shed some additional light on the findings reported in the previous sub-section. As noted above, the competing risk models did not indicate convergence of the partnership patterns of the second generation with those of native Estonians. With regard to cohabitation, second-generation women exhibit even a significantly larger difference from the natives than their counterparts in the first generation. These findings suggest that the convergence in partnership formation between second-generation migrants and the host population, which was noted in the previous section (Table 2), is likely driven by the changing proportions of direct marriage and cohabitation across migrant generations. Considering the varying direction of the migrant-native gradient in competing risk models – elevated hazard ratios for direct marriage and reduced ratios for cohabitation – it seems plausible that the higher incidence of consensual unions in the second

generation has brought about reduction in the hazard ratio in single-decrement analysis (Table 2).¹⁸

6.3 Cohabitation outcomes in first partnership

The spread of non-marital cohabitation often begins with a shift in the pathways of union formation as pre-marital cohabitation gradually replaces direct marriage. When living in a partnership without being married becomes increasingly accepted, cohabiting unions drift away from being a short pre-marital arrangement to becoming more a lasting substitute for marriage that frequently involves non-marital childbearing. To investigate this shift, we followed cohabiting partnerships from their formation until the conversion to marriage or dissolution; the observations were censored at the interview, partner's death, or after 10 years since the beginning of cohabitation. We estimated single-decrement and competing risk models; the latter models make a distinction between the two alternative exits from cohabiting unions.

The results based on single-decrement models reveal a systematic difference in the duration of cohabitation between migrants and the native population (Table 4). A significantly elevated exit rate from cohabiting unions among migrants, women and men alike, implies a shorter duration and the more transitory nature of this partnership arrangement relative to their native counterparts. The comparison of estimates based on different models shows that the observed pattern is fairly independent of other demographic and socio-economic characteristics, and the control for arrival in the host country.

The evidence pertaining to migrant generations reveals no convergence between the exit rate of the second-generation migrants and that of native Estonians. In all models presented in Table 4, the descendants of migrants exit from cohabiting partnerships at a much higher rate than their native counterparts. By contrast, none of the models with alternative specification of the reference category reveal a significant difference in the exit rate between the first- and second-generation migrants (Rahnu et al. 2014). The similarity of estimates between migrants and their descendants is observed for both women and men.

¹⁸ In our data, the proportion of first partnerships started as cohabitation stood at 30% among the first-generation immigrants, 50% among the second generation, and 58% among native Estonians.

Table 4: Exit from cohabitation in first partnership, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	Exit from cohabitation — women				Exit from cohabitation — men			
Migrant	1.38***	1.33***	1.34***	1.36***	1.27***	1.29***	1.26***	1.29***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	1.35***	1.29***	1.30***	1.33***	1.31***	1.30***	1.24***	1.28***
2 nd generation	1.46***	1.42***	1.42***	1.42***	1.21**	1.28***	1.29***	1.29***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk begins at start date of cohabitation in first partnership; censoring occurs at interview date, death of partner or after 10 years of cohabitation. Model specification is described after Table 2. Estimates for control variables are presented in the Appendix (Table A1).

Source: Estonian FFS and GGS, authors' calculations.

The results based on competing risk models corroborate the above-described pattern. According to these models (available from the authors), migrant women and men demonstrate a significantly higher propensity to convert cohabitation to marriage than native Estonians. Among migrant women the same pattern extends to dissolution of cohabiting unions, while migrant men fail to exhibit a statistically significant difference from their native counterparts. In line with the results reported earlier in this section, competing risk models show no significant difference in cohabitation outcomes between migrant generations.

6.4 Dissolution of first partnership

Table 5 presents the estimates for the break-up of first partnership. To obtain these results, respondents were followed from the start-date until the break-up of first union; the observations were censored at the interview, partner's death, or after 25 years had elapsed since the formation of partnership.

Unlike for partnership formation, the estimates for union dissolution do not reveal a systematic and large difference between migrants and the native population. As regards women, the difference in dissolution risks is negligible in all models. Among men there are signs of a somewhat lower likelihood of partnership dissolution for migrants: although the contrast to native men is rather small (-12%), it reaches statistical significance in the final model (M4). An explanation for the observed gender difference can be sought from the proportion of ethnically mixed partnerships, which are known for their elevated dissolution risks (Kalmijn, de Graaf, and Janssen 2005;

Milewski and Kulu 2014). Among women with migrant background it amounted to 32%, among men the proportion of mixed partnerships was somewhat lower (28%).

Table 5: Dissolution of first partnership and first marriage, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	First partnership — women				First partnership — men			
Migrant	1.00	1.03	1.03	0.97	0.83***	0.90	0.91	0.88*
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	0.96	1.00	1.00	0.92*	0.69***	0.76***	0.76***	0.73***
2 nd generation	1.10	1.11	1.10	1.09	1.13	1.22**	1.21**	1.21**
Native (ref)	1	1	1	1	1	1	1	1
	First marriage — women				First marriage — men			
Migrant	1.04	0.99	0.99	0.94	0.85**	0.83***	0.85**	0.82***
Native (ref)	1	1	1	1	1	1	1	–
1 st generation	1.00	0.96	0.96	0.89**	0.70***	0.69***	0.71***	0.67***
2 nd generation	1.18**	1.09	1.08	1.07	1.25***	1.22*	1.22**	1.21*
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk starting at start date of partnership/marriage; censoring occurs at interview date, death of partner or after 25 years of partnership/marriage. Model specification is described after Table 2. Estimates for control variables are presented in the Appendix (Table A1).

Source: Estonian FFS and GGS, authors' calculations.

The distinction between migrants and their descendants reveals the difference from the native population as more systematic among the former. For both migrant men and women the final models reveal a lower risk of partnership dissolution relative to that of their native peers; the contrast appears larger among men. We think that the observed pattern relates to post-war divorce levels in Estonia and Russia. Although in international comparisons both countries stood out for their remarkably high divorce rates during several decades, until the mid-1960s divorce rates were somewhat higher in Estonia (Council of Europe 2006).

By contrast, the descendants of migrants feature a higher risk of partnership dissolution than native Estonians. As in the first generation, the difference from the host population is more pronounced among men: among women it fails to reach statistical significance. It is interesting to note that the inclusion of an additional control for ethnic homogamy almost halved the hazard ratio for the second generation and rendered the difference from the native population statistically insignificant (the model with additional control is available from the authors). From the methodological point of

view, this suggests that the failure to account for the incidence of mixed partnerships may lead to biased results on migrants' union dissolution. The estimates for the break-up of marriage, presented in Table 5, demonstrate very similar patterns.

The comparison of results based on models M3 and M4 shows that the control for migration history slightly reduces the hazard ratios of partnership dissolution/divorce for first-generation migrants. This means that migration to the host country exerts a moderate disruptive effect on the endurance of partnerships. Among first-generation women the adjustment for migration history increases the difference in dissolution risk from the native peers and renders it statistically significant (final model). Among men, the same applies to the difference between migrants (both generations combined) and the host population. This finding underscores the salience of considering migration history in the analyses of both partnership formation and dissolution that involve migrants.

6.5 Formation of second partnership

With the rise in separations and divorces that occur at an increasingly young age, a growing number of people have the chance to enter more than one partnership during their lifetime. In this study we investigated the formation of second partnership among the respondents who had experienced a break-up or partner's death in their first union. We followed this group of respondents from the end of their first partnership; observations were censored at the interview or after 15 years had elapsed since the end of first union.

The results presented in Table 6 show that migrants to Estonia feature somewhat lower chances of re-partnering than the native population. This finding is the opposite to that reported for first partnerships in the previous sections. The lower propensity of migrants to enter second partnership does not vary across gender, but the model fails to reveal a statistically significant difference for men, possibly due to the smaller size of our male sample. The stability of the pattern across different models suggests that lower chances of re-partnering are independent of demographic and socio-economic characteristics and the control for residence in the host country.

The evidence pertaining to migrant generations shows that immigrants to Estonia have entered second partnerships at rates which resemble those of the native population; the difference between the two groups is insignificant in all models. Unfortunately, the lack of internationally comparable statistics prevents us from exploring whether this result stems from the similarity of re-partnering levels in Estonia and Russia. Somewhat surprisingly, the descendants of migrants are not more prone to start a second union than the first generation. Instead of continued similarity with native Estonians,

descendants of migrants exhibit a lower likelihood of re-partnering than their peers in the first generation. As a result, the contrast between migrants and native Estonians grows larger and attains statistical significance in the second generation. One can speculate that perhaps a less rapid shift towards the acceptance of cohabitation – the majority of second partnerships start as consensual unions – might have restrained the descendants of migrants from re-partnering at the very high rates characteristic of native Estonians.¹⁹ The evidence pertaining to pathways to second union formation, presented in the next sub-section, offers some support to this assertion, as the described pattern is primarily shaped by the transition to cohabitation.

Table 6: Transition to second partnership, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	Second partnership — women				Second partnership — men			
Migrant	0.89**	0.90**	0.90**	0.89**	0.94	0.93	0.91	0.92
Native (ref)	1	1	1	1	1	1	1	–
1 st generation	0.92	0.93	0.93	0.93	1.07	1.08	1.04	1.07
2 nd generation	0.82**	0.82**	0.81**	0.81**	0.76**	0.72***	0.72***	0.72***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk starts at end date of first partnership; censoring occurs at interview date or after 16 years since the end of first partnership. Model specification is described after Table 2. Estimates for control variables are presented in the Appendix (Table A1).

Source: Estonian FFS and GGS, authors' calculations.

Unlike for first partnerships, the results for second partnership formation show no evidence of disruption effect. The obvious reason for the absence of disruption effect is the fact that even among first-generation migrants an overwhelming majority (88%) of second partnerships began after settling in Estonia. This proportion is much higher in comparison with first partnerships, of which only three-fifths started after arrival in the host country.

¹⁹ Based on the Family and Fertility Surveys, Prskawetz et al. (2003) reported that among 19 European countries, Estonia (the native population) ranked second after Sweden in the percentage of women who had experienced a second union by age 35.

6.6 Pathways to second partnership formation

The evidence concerning the pathways to second partnership formation corroborates the general pattern reported above for first partnerships. As shown in Table 7, migrants are more likely than the native population to also marry directly in their second unions. Conversely, migrants are less prone to start living together with a partner without being married. The differences between migrants and native Estonians are statistically significant among both women and men. As in the case of first partnerships, the observed pattern is robust and exhibits only limited variation across models.

The evidence pertaining to migrant generations reveals a more complex picture. As regards cohabitation, which constitutes the main pathway to second partnerships, descendants of migrants feature no convergence with native Estonians. On the contrary, the contrast with the native population exhibits a noticeable increase from the first to second generation. This holds particularly true for men, amongst whom the relatively small difference from natives in the first generation more than triples and attains statistical significance in the second generation.

Table 7: Pathways to second partnership, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	Direct marriage — women				Direct marriage — men			
Migrant	1.35***	1.27**	1.26**	1.24*	1.77***	1.59***	1.62***	1.64***
Native (ref)	1	1	1	1	1	1	1	1
1 st generation	1.33**	1.26**	1.25*	1.23*	1.81***	1.65***	1.70***	1.72***
2 nd generation	1.43*	1.31	1.31	1.31	1.63*	1.40	1.40	1.39
Native (ref)	1	1	1	1	1	1	1	1
	Cohabitation — women				Cohabitation — men			
Migrant	0.81***	0.84***	0.84***	0.84***	0.81***	0.82**	0.80***	0.82**
Native (ref)	1	1	1	1	1	1	1	–
1 st generation	0.84***	0.87**	0.87**	0.87**	0.91	0.94	0.91	0.93
2 nd generation	0.74***	0.76***	0.76***	0.76***	0.68***	0.67***	0.66***	0.67***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk starting at end date of first partnership; censoring occurs at interview date, death of partner or after 16 years since the end of first partnership. Model specification is described after Table 2.

Source: Estonian FFS and GGS, authors' calculations.

Unlike cohabitation, the model estimates for direct marriage show no statistically significant difference in transition rates between the second-generation migrants and native Estonians. In interpreting these estimates it is necessary to keep in mind that the

entry into second partnership via direct marriage appears rather uncommon in Estonia. In our surveys, only one in five migrant-origin respondents who entered a second partnership did so by marrying directly; in the second generation, the proportion of direct marriage falls to 14%. This leads to a small number of observations and helps to explain why numerically substantial hazard ratios for direct marriage among the second generation (31% for women and 39% for men) end up being statistically insignificant. Against that background it seems reasonable to refrain from drawing far-reaching conclusions based on the estimates for direct marriage in second partnership.

6.7 Cohabitation outcomes in second partnership

Just as in the choice between direct marriage and cohabitation, the difference in exit from cohabiting unions extends to higher-order partnerships. As reported for first partnerships in previous sections, migrants demonstrate a markedly higher exit rate from cohabiting unions (Table 8). This finding holds true for both women and men. The limited variation across models indicates that the observed pattern is relatively independent of other characteristics considered in the analysis.

Table 8: Exit from cohabitation in second partnership, Estonia, birth cohorts 1924–1983

Population group	M1	M2	M3	M4	M1	M2	M3	M4
	Exit from cohabitation — women				Exit from cohabitation — men			
Migrant	1.54***	1.53***	1.54***	1.52***	1.57***	1.59***	1.51***	1.51***
Native (ref)	1	1	1	1	1	1	1	–
1 st generation	1.64***	1.64***	1.66***	1.63***	1.49***	1.54***	1.45***	1.44***
2 nd generation	1.30**	1.27**	1.25*	1.25*	1.71***	1.68***	1.63***	1.63***
Native (ref)	1	1	1	1	1	1	1	1

Note: ***p<0.01; ** p<0.05; * p<0.1.

Time at risk begins at start date of cohabitation in second partnership; censoring occurs at interview date or after 10 years of cohabitation. Model specification is described after Table 2.

Source: Estonian FFS and GGS, authors' calculations.

The evidence concerning first- and second-generation migrants does not reveal a uniform pattern. Women in the second generation exhibit a slower exit from cohabitation than those in the first generation, with the difference being statistically significant (for details, Rahnu et al. 2014). Although the difference between second-generation women and their native counterparts amounts to 25% in the final model, the

results indicate a shift towards convergence with the host population. By contrast, among men the difference from the host population has not decreased across migrant generations.

The results drawn from competing risk models for the exit from second partnership (available from the authors) to a large extent corroborate the findings reported above. As in the case of first partnerships, both male and female migrants are more prone to convert their cohabitation to marriage than the native population.

6.8 Interactions with birth cohort

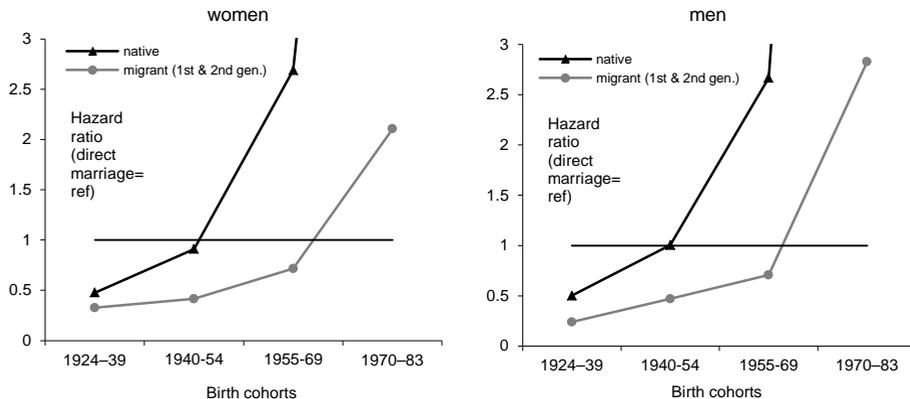
The results presented in the previous sections were obtained from the main effects models. To add to these findings and gain an insight into the dynamics of the inter-group differences, we employ interactions between migrant status and birth cohort. In particular, we focus on pathways to partnership formation that exhibited systematic and large contrasts between migrants and the native population in the main effects models. We estimated competing risks models, but, unlike in the previous sections, we modelled the entry into marriage and non-marital cohabitation jointly (Hoem et al. 2008). This analytical approach allows for direct comparison between the alternative pathways to partnership formation, controlling for factors that may influence the process.

Figure 1 presents an account of trends in first partnership formation for women and men born in 1924–1939, 1940–1954, 1955–1969, and 1970–1983, standardised for the effects of control variables. For each birth cohort the propensity to enter first union by cohabitation is shown relative to the corresponding propensity of direct marriage. This presentation indicates a progressive shift in the pathways to first partnership formation, independent of changes in the intensity of union formation over time and variation across sub-groups of the population.

The findings are in accord with the notion of universality of transformations in family patterns that belong to the core of the Second Demographic Transition. The results show that lower propensity to start cohabitation and higher propensity to enter direct marriage among migrants, observed in the main effects models, reflects a somewhat later transformation in partnership patterns among the latter group. In the cohorts born before 1940 the standardised rate of direct marriage exceeded that of cohabitation among migrants as well as among the native population. In the following generations the pattern transformed more rapidly among the latter. Native Estonians completed the turn away from the conservative model of family initiation in generations born in the late 1950s and 1960s. Among migrants, the shift from marriage to

cohabitation occurred in the cohorts born in the 1970s. A time-lag relative to native Estonians can be observed among both migrant women and men.²⁰

Figure 1: Interaction of birth cohort and pathway to first partnership, Estonia, birth cohorts 1924–1983



Note: Entry into first partnership via direct marriage and cohabitation are modelled jointly.

Time at risk starts at 15th birthday; censoring occurs at interview date or at age 45. Control variables include process time, parity-pregnancy status, educational attainment, activity status and arrival in Estonia.

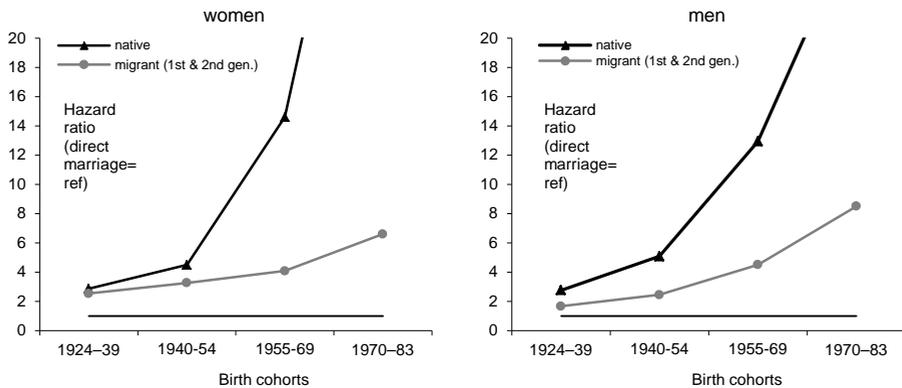
Source: Estonian FFS and GGS, authors' calculations.

Due to relatively small number of observations in the second generation, the interaction presented in Figure 1 does not distinguish between migrants and their descendants, but the proportion of migrants belonging to the first and second generation changes markedly from one birth cohort to the next. This allows us to draw some additional conclusions on migrant generations. In accord with the results based on the main effects models, the evidence drawn from interactions supports the view that family formation behaviour of the second-generation migrants born in the 1960s and 1970s has not converged with that of the native Estonians. Judging from young adults of migrant origin who overwhelmingly belong to the second generation, the descendants of migrants have continued to exhibit a somewhat more conservative pattern of family building.

²⁰ In Figures 1 and 2, hazard ratios for native Estonians born after 1970 go beyond the scale of the figure. This reflects the fact that direct marriage has become exceptional as a pathway to partnership formation among the latter group.

The interaction between birth cohort and the mode of second partnership formation yields largely similar results (Figure 2). Although in second unions the risk of entry into cohabitation exceeded the propensity to enter direct marriage in all cohorts included in the analysis, migrants tend to exhibit a later and more gradual shift to non-marital cohabitation. The contrast in the pathways to second partnership between migrants and the native population peaks among younger birth cohorts included in the analysis. With regard to migrant generations, this corroborates the notion that the difference in partnership patterns does not fade away in the second generation.

Figure 2: Interaction of birth cohort and pathway to second partnership, Estonia, birth cohorts 1924–1983



Note: Entry into second partnership via direct marriage and cohabitation are modelled jointly.

Time at risk starts at end date of first partnership; censoring occurs at interview date or after 16 years since the end of first partnership. Control variables include process time, parity-pregnancy status, educational attainment, activity status, age at first union dissolution, pathway to first partnership, reason of ending first partnership, and arrival in Estonia.

Source: Estonian FFS and GGS, authors' calculations.

7. Summary and discussion of the findings

In this study we investigated partnership dynamics among migrants and their descendants in Estonia, against the background of the native population. Migration to Estonia started in the late 1940s and persisted at high levels until the late 1980s; the majority of immigrants originated from the European part of Russia and other Slavic republics of the Soviet Union. With regard to the period during which the large-scale migration occurred and the difference in the timeframe of demographic modernisation

between receiving and sending countries, migration to Estonia bears a certain resemblance to post-war population movements from Southern Europe to the countries in Northern and Western Europe. However, compared to the latter, migration to Estonia occurred in different economic, social, and political circumstances. The combination of these similarities and peculiarities renders Estonia a potentially interesting setting for the study of partnership dynamics among migrants and demographic integration. Aside from investigating the previously unexplored context, the contribution of this study stems from a variety of family transitions which provides us with a comprehensive account of partnership dynamics over the life course.

The results generally support our main expectations concerning the partnership dynamics among the migrant population. In accord with the first hypothesis, we found that new family formation patterns associated with the Second Demographic Transition tend to be less prevalent among migrants. The results also confirm our second hypothesis, according to which the difference between migrants and the native population varies across partnership transitions. The model estimates indicate that the difference between migrants and native Estonians is most pronounced in the mode of partnership formation and outcomes of cohabiting unions. Compared to the host population, migrants are less prone to start living together without being married; similarly, migrants are less likely to stay in cohabitation for longer periods. Moderate, though in most cases statistically significant differences were observed in the transition to first and second partnerships.²¹ In line with expectations, the results on union dissolution revealed a relatively small and, in many models, statistically insignificant difference between migrants and native Estonians.

Following our third hypothesis, we did not anticipate a far-reaching convergence in partnership patterns between the descendants of migrants and the host population. The results generally supported our assertion but at the same time the reality turned out to be more complex. For the majority of partnership transitions investigated in the study, a statistically significant difference between second-generation migrants and the host population persisted after controlling for various demographic and socio-economic characteristics. Out of eleven partnership processes addressed in the study, only three did not conform to this prevailing pattern.²² As regards the difference between the second- and first-generation migrants, the most frequent result was the absence of statistically significant contrast. Altogether this pattern was observed for seven

²¹ A single exception was the transition of migrant-origin men to second partnership, which did not exhibit a statistically significant difference from that of native Estonians.

²² The exceptions included transition to first partnership (men), dissolution of first partnership/marriage (women), and entry into second union via direct marriage (men and women). For union dissolution, the absence of contrast with the native population is in accord with our process-specificity hypothesis. The failure to exhibit a significant difference in re-partnering models boils down to the small number of observations discussed earlier in the article (very few respondents start a second union by directly marrying).

processes: first marriage, transition to first union via direct marriage, transition to first union via cohabitation (men), exit from cohabitation in first union, transition to second union (women), transition to second union via direct marriage, transition to second union via cohabitation (women), and exit from cohabitation in second union (men).²³

At the same time, it would be an overstatement to deny the signs of convergence altogether. The partnership transition which most clearly exemplifies this pattern – the estimates for second-generation migrants positioned between those of the first generation and the host population – is the entry to first union (single-decrement analysis). Among men, the convergence in transition rate to first union has reached the stage where a statistically significant difference between the host population and second-generation migrants has disappeared. A closer examination of the results revealed that the vehicle driving the convergence is likely the shift from direct marriage to cohabitation.²⁴ Another process in which the descendants of migrants have achieved complete parity with the host population is union dissolution in first partnership (the same applies to divorce). Unlike their peers in the first generation, second-generation migrants featured union dissolution rates which were equal (women) or even somewhat higher (men) than those of native Estonians.

Last but not least, one partnership transition exhibited a pattern which constitutes an opposite to convergence. This pattern – a widening difference from the host population across migrant generations – is exemplified by the entry into a second union. Research on re-partnering among immigrants is very scarce and does not offer many clues to explain our finding. Some speculation over the factors underlying this unexpected pattern was included in the previous sections.

The inclusion of both women and men gave this study a gender perspective which is not always present in the analyses of union formation and dissolution. According to the results, in most transitions the inter-group differences follow a similar pattern among women and men. Particularly in the first set of models, which did not distinguish between migrants and their descendants, only the estimates for partnership dissolution and divorce exhibited a moderate difference in the patterns for men and women. We suspect that this may have stemmed from the varying proportion of ethnically mixed unions (higher for migrant women). In the second set of models, which made a distinction between first- and second-generation migrants, the match was somewhat less perfect. However, with regard to gender differences, similarity clearly prevails over dissimilarity. Likewise, similarity prevails in the transitions related to first and second partnerships.

²³ The complete set of models testing the significance of the difference between migrant generations is available from Rahnu *et al.* (2014).

²⁴ The shift to cohabitation occurs between the first and second generations but it is not accounted for by controls in single-decrement models.

How do our findings fit with theoretical considerations outlined in the introductory section of the article? Overall, the evidence lends support to several theoretical perspectives. To begin with, the variation in results across different partnership transitions supports the socialisation hypothesis (Andersson 2004; Kulu and Milewski 2007). On the one hand, we observed a significant contrast between migrants and the native population in the mode of partnership formation; likewise, we reported a systematic difference in cohabitation outcomes. On the other hand, the results for partnership dissolution were relatively similar, particularly among women. The pattern of observed process-specific variation bears close resemblance to similarities and dissimilarities in family behaviour that exist between Estonia and Russia, from where the majority of migrants and their descendants originate (Scherbov and Van Vianen 2004; Gerber and Berman 2011; Puur et al. 2012).

Additional support for the socialisation hypothesis comes from the modest effect of adding controls for socio-economic variables. For an overwhelming majority of the partnership transitions addressed in the study, the inclusion of education and labour market status in the models did not result in a significant alteration in the effect of our main independent variable (migrant status/generation). Given the less secure economic position of migrants after the fall of state socialism, the stability of estimates is to some extent unexpected, particularly in view of the reasoning that relates the retreat of marriage and the increase in non-marital cohabitation to economic difficulty and uncertainty (Perelli-Harris et al. 2010; Perelli-Harris and Gerber 2011). Nonetheless, similar findings are reported in a recent study that compared the entry into parenthood among migrants and natives in Estonia (Billingsley, Puur, and Sakkeus 2014). Aside from socialisation, the failure to explain the observed differences away by demographic and socio-economic controls lends support to the cultural maintenance (sub-culture) hypothesis (Abbasi-Shavazi and McDonald 2000, 2002), according to which migrant groups may, for extended periods, preserve values, norms, and behaviours that are distinct from those prevailing in the host society.

From yet another perspective, the limited convergence in partnership patterns between the descendants of migrants and the host population can be considered in the context of segmented assimilation theory (Portes and Zhou 1993). Our results are at odds with the classical assimilation perspective (Gordon 1964; Alba and Nee 1997) that envisions incorporation into the host society as a rather uniform process in which descendants of migrants integrate more or less swiftly into the dominant mainstream. By contrast, a noticeable similarity between the second- and first-generation migrants suggests that the former may have socialised to the latter rather than to the host population. As described in the paper, historical legacy and contextual features such as high spatial concentration of migrants into specific regions and the linguistic division of the school system may have contributed this outcome (Rannut 2008; Lindemann 2013).

However, we doubt that descendants of migrants in Estonia exemplify full-fledged segmented assimilation. First, for some family transitions (entry into first partnership) our results clearly reveal a shift towards the native pattern in the second generation, in line with the adaptation hypothesis. Second, although socio-economic outcomes among second-generation migrants have not reached parity with the host population, it would be unrealistic to describe their situation as downward assimilation leading to the “urban nightmare of crime, drugs, imprisonment and early deaths” (Portes, Fernández-Kelly, and Haller 2009: 1102).²⁵ The (full) applicability of the segmented assimilation perspective to European societies has been questioned by several authors (Crul and Schneider 2010; Milewski 2010; Vermulen 2010).

Finally, the control for migration history allows our study to shed some light on the disruption hypothesis. The comparison of estimates based on models before and after adding the mentioned control suggests that migration to host country delays partnership formation. The scale of disruption looks similar among men and women but varies slightly according to the way in which unions are formed. Migration to the host country seems to exert a stronger postponing influence on cohabiting unions. This corroborates the notion that cohabiting partners are in a weaker position than married couples: for instance, when it comes to family re-unification. That said, the low proportion of never-partnered among migrants who have settled in Estonia suggests that the disruption effect is largely restricted to timing and has hardly exerted any lasting influence on the quantum of partnership formation. With regard to union dissolution, the control for migration history slightly reduced hazard ratios for first-generation immigrants, particularly women, indicating a mild disruptive effect on the endurance of partnership. For second unions such effects were not discerned, in line with the fact that an overwhelming majority of second partnerships were formed after arrival in the host country.

Our study was unable to draw any conclusions about the validity of the selection hypothesis and its potential impact on the partnership dynamics of immigrants and their descendants in Estonia. Overcoming this limitation would require a direct comparison with the country of origin. Another major limitation relates to the fact that we have not systematically examined the impact of factors which facilitate adaptation to the host society (duration since arrival for first-generation migrants, language proficiency, social networks, etc.). Also, the broad range of birth cohorts included in the study implies that the progress migrants and their descendants have made in integrating to the host society following the restoration of Estonia’s independence may not be fully discernible in our results. These are all topics that can be pursued in future research.

²⁵ Net salaries of migrant-origin employees were on average 10%–15% lower in 1995–2007 (Leping and Toomet 2008). In age group 25–39, the proportion of individuals with higher education among native Estonians exceeds that of the second-generation migrants by 1–2 percentage points (ESA 2013).

Notwithstanding these shortcomings, we trust that some important conclusions, beyond the contribution of a country case study, may be drawn from this analysis. First, it demonstrated that the theoretical perspectives developed largely in the context of research on migrant fertility are successfully applicable to the study of partnership formation and dissolution among migrants and their descendants. Second, considerable variation observed in the results for different partnership transitions cautions against making far-reaching generalisations based on just a few processes: the results underscore the salience of a more comprehensive approach. Third, from the methodological point of view our findings draw attention to the need for carefully controlling migration history, as the neglect of the latter may yield biased estimates for both formation and dissolution of partnerships. Similarly, the failure to take into consideration the elevated incidence of ethnically mixed partnerships among migrants and their descendants may affect conclusions pertaining to migrant-native differences.

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References

- Abbasi-Shavazi, M.J. and McDonald, P. (2000). Fertility and multiculturalism: Immigrant fertility in Australia, 1977–1991. *International Migration Review* 34 (1): 215–242. doi:[10.2307/2676018](https://doi.org/10.2307/2676018).
- Abbasi-Shavazi, M.J. and McDonald, P. (2002). A comparison of fertility patterns of European immigrants in Australia with those in the countries of origin. *Genus* 58(1): 53–76.
- Alba, R. and Nee, V. (1997). Rethinking assimilation theory for a new era of immigration. *International Migration Review* 31(4): 826–874. doi:[10.2307/2547416](https://doi.org/10.2307/2547416).
- Alter, G. (1988). *Family and the female life course. The women of Verviers, Belgium, 1849–1880*. Madison: University of Wisconsin Press.
- Andersson, G. and Philipov, D. (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): 67–144. doi:[10.4054/DemRes.2002.7.4](https://doi.org/10.4054/DemRes.2002.7.4).
- Andersson, G. (2004). Childbearing after migration: Fertility patterns of foreign-born women in Sweden. *International Migration Review* 38(2): 747–774. doi:[10.1111/j.1747-7379.2004.tb00216.x](https://doi.org/10.1111/j.1747-7379.2004.tb00216.x).
- Andersson, G. and Scott, K. (2005). Labour-market status and first-time parenthood: The experience of immigrant women in Sweden, 1981–97. *Population Studies* 59(1): 21–38. doi:[10.1080/0032472052000332683](https://doi.org/10.1080/0032472052000332683).
- Avdeev, A. and Monnier, A. (2000). Marriage in Russia. A complex phenomenon poorly understood. *Population* 12: 7–49.
- Bernhardt, E., Goldscheider, C., Goldscheider, F., and Bjerén, G. (2007). *Immigration, gender, and family transitions to adulthood in Sweden*. Lanham: University Press of America.
- Berrington, A. (1996). Marriage patterns and inter-ethnic unions. In: Coleman, D. and Salt, J. (eds.). *Ethnicity in 1991 census .Vol. 1.Demographic characteristics of the ethnic minority populations*. London: HMSO: 178–212.
- Bien, F.D. and Tienda, M. (1990). *The Hispanic population in the United States*. New York: Russell Sage Foundation.

- Billingsley, S., Puur, A., and Sakkeus, L. (2014). Jobs, careers, and becoming a parent under state socialist and market conditions: Evidence from Estonia 1971–2006. *Demographic Research* 30(64): 1733–1768. doi:10.4054/DemRes.2014.30.64.
- Boyle, P.J., Kulu, H., Cooke, T., Gayle, V., and Mulder, C.H. (2008). The effect of moving on union dissolution. *Demography* 45(1): 209–222. doi:10.1353/dem.2008.0000.
- Carlson, E.D. (1985). The impact of international migration upon the timing of marriage and childbearing. *Demography* 22(1): 61–72. doi:10.2307/2060986.
- Castles, S. and Miller, M.J. (2009). *The age of migration: International population movements in the modern world*. New York: Guilford Press.
- Cliquet, R. (1991). *The second demographic transition: Fact or fiction*. Strasbourg: Council of Europe Publishers.
- Coale A.J., Anderson, B.A., and Härm, E. (1979). *Human fertility in Russia since the nineteenth century*. Princeton (NJ): Princeton University Press.
- Coale, A.J. and Treadway, R. (1986). A summary of the changing distribution of overall fertility, marital fertility, and the proportion married in the provinces of Europe. In: Coale, A.J. and Watkins, S.C. (eds.). *The decline of fertility in Europe*. Princeton (NJ): Princeton University Press: 31–79.
- Coleman, D. (2004). Why we don't have to believe without doubting in the 'second demographic transition' - Some agnostic comments. *Vienna Yearbook of Population Research 2004*: 11–24. doi:10.1553/populationyearbook2004s11.
- Coleman, D. (2006). Immigration and ethnic change in low-fertility countries: A third demographic transition. *Population and Development Review* 32(3): 401–446. doi:10.1111/j.1728-4457.2006.00131.x.
- Council of Europe (2006). *Recent demographic developments in Europe 2005*. Strasbourg: Council of Europe Publishing.
- Crul, M. and Vermeulen, H. (2006). Immigration, education, and the Turkish second generation in five European nations. A comparative study. In: Parsons, C.A. and Smeeding, T.M. (eds.). *Immigration and the transformation of Europe*. Cambridge: Cambridge University Press: 236–250. doi:10.1017/CBO9780511493577.009.
- Crul, M. and Schneider, J. (2010). Comparative integration context theory: Participation and belonging in new diverse European cities. *Ethnic and Racial Studies* 33(7): 1249–1268. doi:10.1080/01419871003624068.

- De Valk, H.A.G., Liefbroer, A.C., Esvelde, I., and Henkens, K. (2004). Family formation and cultural integration among migrants in the Netherlands. *Genus* 60(3–4): 9–35.
- De Valk, H.A.G. and Billari, F.C. (2007). Living arrangements of migrant and Dutch young adults: The family influence disentangled. *Population Studies* 61(2): 201–217. doi:10.1080/00324720701340129.
- De Valk, H.A.G. and Liefbroer, A.C. (2007a). Parental influence on union formation preferences among Turkish, Moroccan, and Dutch adolescents in the Netherlands. *Journal of Cross-Cultural Psychology* 38(4): 487–505. doi:10.1177/0022022107302316.
- De Valk, H.A.G. and Liefbroer, A.C. (2007b). Timing preferences for women’s family-life transitions: Intergenerational transmission among migrants and Dutch. *Journal of Marriage and Family* 69(1): 190–206. doi:10.1111/j.1741-3737.2006.00353.x.
- Dribe, M. and Lundh, C. (2011). Cultural dissimilarity and intermarriage. A longitudinal study of immigrants in Sweden 1990–2005. *International Migration Review* 45(2): 297–324. doi:10.1111/j.1747-7379.2011.00849.x.
- EKDK (1995). Estonian family and fertility survey. Methodological report. Tallinn: Eesti Kõrgkoolidevaheline Demouuringute Keskus (RU Series A, 39).
- EKDK (1999). Estonian family and fertility survey. Methodological report of male survey. Tallinn: Eesti Kõrgkoolidevaheline Demouuringute Keskus (RU Series A, 409).
- ESA (2013). *Statistics Estonia statistical database* [electronic resource]. Tallinn: Statistics Estonia <http://pub.stat.ee/px-web.2001/dialog/statfile2.asp>.
- Eurostat (2013). *Statistical database* [electronic resource]. Luxembourg: European Commission. <http://ec.europa.eu/eurostat/data/browse-statistics-by-theme>.
- Feng, Z., Boyle, P., van Ham, M., and Raab, G.M. (2012). Are mixed-ethnic unions more likely to dissolve than co-ethnic unions? New evidence from Britain. *European Journal of Population* 28(2): 159–176. doi:10.1007/s10680-012-9259-0.
- Gerber, T.P. and Berman, D. (2011). Entry to marriage and cohabitation in Russia 1985–2000: Trends, correlates, and implications for the Second Demographic Transition. *European Journal of Population* 26(1): 3–31. doi:10.1007/s10680-009-9196-8.

- Goldscheider, C. and Uhlenberg, P.R. (1969). Minority group status and fertility. *American Journal of Sociology* 74(4): 361–372. doi:10.1086/224662.
- Goldstein, S. and Goldstein, A. (1981). The impact of migration on fertility: an ‘own children’ analysis for Thailand. *Population Studies* 35(2): 265–284. doi:10.2307/2174939.
- González-Ferrer, A. (2006). Who do immigrants marry? Partner choice among single immigrants in Germany. *European Sociological Review* 22(2): 171–185. doi:10.1093/esr/jci050.
- Gordon, M. (1964). *Assimilation in American Life*. New York: Oxford University Press.
- Hajnal, J. (1965). European marriage patterns in perspective. In: Glass, D.V. and Eversley, D.E. (eds.). *Population in history. Essays in historical demography*. London: Edward Arnold: 101–143.
- Haller W.J., Portes, A., and Lynch, S. (2011). Dreams fulfilled, dreams shattered: Determinants of segmented assimilation in the immigrant second generation. *Social Forces* 89(3): 733–762. doi:10.1353/sof.2011.0003:
- Heath, A.F., Rohton, C., and Kilpi, E. (2008). The second generation in Western Europe: Education, unemployment, and occupational attainment. *Annual Review of Sociology* 34(1): 211–235. doi:10.1146/annurev.soc.34.040507.134728:
- Hervitz, H.M. (1985). Selectivity, adaptation, or disruption? A comparison of alternative hypotheses on the effects of migration on fertility: The case of Brazil. *International Migration Review* 19(2): 293–317. doi:10.2307/2545774:
- Hernandez, D.J., Macartney, S., and Blanchard, V.L. (2009). *Children in immigrant families in eight affluent societies: Their family, national, and international context*. Florence, Italy: UNICEF Innocenti Research Centre.
- Hoem, J.M. (1975). Fertility and out-migration: reflections on research approaches in empirical investigations of the association between two demographic phenomena. Copenhagen: University of Copenhagen, Laboratory of Actuarial Mathematics (Working Paper 1).
- Hoem J.M., Kostova, D., Jasilioniene, A., and Mureşan, C. (2008). Traces of the second demographic transition in four selected countries Central and Eastern Europe: Union formation as a demographic manifestation. *European Journal of Population* 25(3): 239–255. doi:10.1007/s10680-009-9177-y.

- Huschek, D., Liefbroer, A.C., and de Valk, H.A.G. (2010). Timing of first union among second-generation Turks in Europe: The role of parents, peers and institutional context. *Demographic Research* 22(16): 473–504. doi:10.4054/DemRes.2010.22.16.
- Kährrik, A. (2006). Socio-spatial residential segregation in post-socialist cities: the case of Tallinn, Estonia. Tartu: Tartu University Press (Dissertationes Geographicae Universitatis Tartuensis 29).
- Kalmijn, M. (1998). Inter-marriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology* 24(1): 395–421. doi:10.1146/annurev.soc.24.1.395.
- Kalmijn, M., de Graaf, P.M., and Janssen, J.P.G. (2005). Inter-marriage and the risk of divorce in the Netherlands: The effects of differences in religion and in nationality, 1974–1994. *Population Studies* 59(1): 71–85. doi:10.1080/0032472052000332719.
- Kalmijn, M. and van Tubergen, F. (2006). Ethnic inter-marriage in the Netherlands: Confirmations and refutations of accepted insights. *European Journal of Population* 22(4): 371–397. doi:10.1007/s10680-006-9105-3.
- Katus, K. (2000). General patterns of post-transitional fertility in Estonia. *Trames* 4(3): 213–230.
- Katus, K., Puur, A., and Sakkeus, L. (2000). The demographic characteristics of national minorities in Estonia. In: Haug, W., Compton, P., and Courbage, Y. (eds.). *The demographic characteristics of national minorities in certain European states*. Strasbourg: Council of Europe Publishing: 29–92.
- Katus, K., Puur, A., and Sakkeus, L. (2002). Immigrant population in Estonia. In: Haug, W., Compton, P., and Courbage, Y. (eds.). *The demographic characteristics of immigrant population in Europe*. Strasbourg: Council of Europe Publishing: 131–192.
- Katus, K., Puur, A., Põldma, A., and Sakkeus, L. (2007). First union formation in Estonia, Latvia and Lithuania: Patterns across countries and gender. *Demographic Research* 17(10): 247–300. doi:10.4054/DemRes.2007.17.10.
- Katus, K., Puur, A., and Sakkeus, L. (2008). Family formation in the Baltic countries: A transformation in the legacy of state socialism. *Journal of Baltic Studies* 39(2): 123–156. doi:10.1080/01629770802031218.

- Katus, K., Puur, A., and Põldma, A. (2008). Estonian family and fertility survey. Second round. Standard tabulations. Tallinn: Eesti Kõrgkoolidevaheline Demouuringute Keskus (RU Series C, 26).
- Kiernan, K. (2002). The state of European unions: An analysis of partnership formation and dissolution. In: Macura, M. and Beets, G. (eds.). *Dynamics of fertility and partnership in Europe. Insights and lessons from comparative research*. New York and Geneva: United Nations: 17–26.
- Kohler, H., Billari, F., and Ortega, J. (2002). The emergence of lowest-low fertility in Europe during the 1990s. *Population and Development Review* 28(4): 641–680. doi:10.1111/j.1728-4457.2002.00641.x.
- Kulu, H. (2003). Housing differences in the late Soviet city: The case of Tartu, Estonia. *International Journal of Urban and Regional Research* 27(4): 897–911. doi:10.1111/j.0309-1317.2003.00490.x.
- Kulu, H. (2005). Migration and fertility: Competing hypotheses re-examined. *European Journal of Population* 21(1): 51–87. doi:10.1007/s10680-005-3581-8.
- Kulu, H. (2006). Fertility of internal migrants: Comparison between Austria and Poland. *Population Space and Place* 12(3): 147–170. doi:10.1002/psp.406.
- Kulu, H. and Milewski, N. (2007). Family change and migration in the life course: An introduction. *Demographic Research* 17(19): 567–590. doi:10.4054/DemRes.2007.17.19.
- Kulu, H. and González-Ferrer, A. (2014). Family dynamics among immigrants and their descendants in Europe: current research and opportunities. *European Journal of Population* 30(4): 411–435. doi:10.1007/s10680-014-9322-0.
- Landale, N.S. (1994). Migration and the Latino family: The union formation behaviour of Puerto Rican women. *Demography* 31(1): 133–157. doi:10.2307/2061912.
- Leping, K.O. and Toomet, O. (2008). Wage gap between Estonians and non-Estonians during the transitional period 1995–2007. In: Linnas, S. and Eamets, R. (eds.). *Pilk tööellu = A Glimpse into the Working Life*. Tallinn: Statistics Estonia: 88–107.
- Lesthaeghe, R. and Van de Kaa, D. (1986). Twee demografische transitities? In: Lesthaeghe, R. and van de Kaa, D. (eds.). *Bevolking: Groei en Krimp*. Deventer: Van Loghum-Slaterus: 9–24.

- Lesthaeghe, R. (1995). The second demographic transition in western countries: an interpretation. In: Mason, K. and Jensen, A.-M. (eds.). *Gender and Family Change in Industrialised Countries*. Oxford: Clarendon Press: 17–62.
- Lesthaeghe, R. (2010). The unfolding story of the Second Demographic Transition. *Population and Development Review* 36(2): 211–251. doi:10.1111/j.1728-4457.2010.00328.x.
- Lesthaeghe, R. (2014). The Second Demographic Transition: A concise overview of its development. *Proceedings of the National Academy of Sciences* 111(51): 18112–18115. doi:10.1073/pnas.1420441111.
- Lindstrom, D. and Giorguli Saucedo, S. (2007). The interrelationship of fertility, family maintenance and Mexico-U.S. migration. *Demographic Research* 17(28): 821–858. doi:10.4054/DemRes.2007.17.28.
- Lindemann, K. (2013). Structural integration of young Russian-speakers in post-Soviet contexts: Educational attainment and the transition to the labour market. Tallinn: Tallinn University (Dissertations in Social Sciences 68).
- Luuk, M. (2009). Labour market risks of immigrants. In: Saar, E. and Pöder, K. (eds.). *Immigrant population in Estonia*. Tallinn: Statistics Estonia: 92–111.
- Lynch, K.A. (1991). The European marriage pattern in the cities: Variations on a theme by Hajnal. *Journal of Family History* 16(1): 79–96. doi:10.1177/036319909101600106.
- Macisco, J.J., Bouvier, L.F., and Weller, R.H. (1970). Effect of labour force participation on relation between migration status and fertility in San-Juan, Puerto-Rico. *Milbank Memorial Fund Quarterly*. 48(1): 51–70. doi:10.2307/3349288.
- Milewski, N. (2010). *Fertility of immigrants. A two-generational approach in Germany*. Berlin, Heidelberg: Springer. doi:10.1007/978-3-642-03705-4.
- Milewski, N. and Hamel, C. (2010). Union formation and partner choice in a transnational context: The case of descendants of Turkish immigrants in France. *International Migration Review* 44(3): 615–658. doi:10.1111/j.1747-7379.2010.00820.x.
- Milewski, N. (2011). Transition to a first birth among Turkish second-generation migrants in Western Europe. *Advances in Life Course Research* 16(4): 178–189. doi:10.1016/j.alcr.2011.09.002.

- Milewski, N. and Kulu, H. (2014). Mixed marriages in Germany: a high risk of divorce for immigrant-native couples. *European Journal of Population* 30(1): 89–113. doi:10.1007/s10680-013-9298-1.
- Monnier, A. and Rychtarchikova, J. (1992). The division of Europe into East and West. *Population: An English Selection*4: 129–160.
- Moreels, S. and Matthijs, K. (2011). Marrying in the city in times of rapid urbanization. *Journal of Family History* 36(1): 72–92. doi:10.1177/0363199010390615.
- Muszynska, M. and Kulu, H. (2007). Migration and union dissolution in a changing socio-economic context: the case of Russia. *Demographic Research* 17(27): 803–820. doi:10.4054/DemRes.2007.17.27.
- Muttarak, R. and Heath, A. (2010). Who intermarries in Britain? Explaining ethnic diversity in intermarriage patterns. *British Journal of Sociology* 61(2): 275–305. doi:10.1111/j.1468-4446.2010.01313.x.
- Nedoluzhko, L. and Agadjanian, V. (2010). Marriage, childbearing and migration in Kyrgyzstan: Exploring interdependencies. *Demographic Research* 22(7): 159–188. doi:10.4054/DemRes.2010.22.7.
- Neyer, G., Andersson, G., and Kulu, H. (2013). The demography of Europe: An introduction. In: Neyer, G., Andersson, G., Kulu, H., Bernardi, L., and Bühler, C. (eds.). *The demography of Europe*. Dordrecht: Springer: 1–23. doi:10.1007/978-90-481-8978-6.
- Ní Brolcháin, M. (1993). East-West marriage contrasts, old and new. In: Blum, A. and Rallu, J. (eds.). *European population II. Demographic dynamics*. Paris: John Libbey Eurotext: 461–479.
- Oris, M. (2000). The age at marriage of migrants during the industrial revolution in the region of Liège. *History of the Family* 5(4): 391–413. doi:10.1016/S1081-602X(00)00052-X.
- Østby, L. (2002). The demographic characteristics of immigrant population in Norway. In: Haug, W., Compton, P., and Courbage, Y. (eds.). *The demographic characteristics of immigrant population in Europe*. Strasbourg: Council of Europe Publishing: 299–362.
- Pavlenko, A. (2008). Multilingualism in post-Soviet countries: Language revival, language removal, and socio-linguistic theory. *International Journal of Bilingual Education and Bilingualism* 11(3–4): 275–314. doi:10.1080/13670050802271517.

- Perelli-Harris, B., Sigle-Rushton, W., Kreyenfeld, M., Lappegård, T., Keizer, R., and Berghammer, C. (2010). The educational gradient within cohabitation in Europe. *Population and Development Review* 36(4): 775–801. doi:10.1111/j.1728-4457.2010.00357.x.
- Perelli-Harris, B. and Gerber, T.P. (2011). Non-marital childbearing in Russia: Second demographic transition or pattern of disadvantage. *Demography* 48(1): 317–342. doi:10.1007/s13524-010-0001-4.
- Portes, A. and Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *The Annals of the American Academy of Political and Social Science* 530(1): 74–96. doi:10.1177/0002716293530001006.
- Portes, A., Fernández-Kelly, P., and Haller, W. (2005). Segmented assimilation on the ground: the new second generation in early adulthood. *Ethnic and Racial Studies* 28(6): 1000–1040. doi:10.1080/01419870500224117.
- Portes, A., Fernández-Kelly, P., and Haller, W. (2009). The adaptation of the immigrant second generation on America: A theoretical overview and recent evidence. *Journal of Ethnic and Migration Studies* 35(7): 1077–1104. doi:10.1080/13691830903006127
- Prskawetz, A., Vikat, A., Philipov, D., and Engelhardt, H. (2003). Pathways to stepfamily formation in Europe: Results from the FFS. *Demographic Research* 8(5): 107–150. doi:10.4054/DemRes.2003.8.5.
- Puur, A., Rahnu, L., Maslasukaite, A., Stankuniene, V., and Zakharov, S. (2012). Transformation in partnership formation in Eastern Europe: Legacy of the past demographic divide. *Journal of Comparative Family Studies* 43(3): 389–418.
- Puur, A., Sakkeus, L., and Tammaru, T. (2013). Population. In: Heidmets, M. (ed.). *Estonian human development report 2012/2013. Estonia in the world*. Tallinn: Eesti Koostöö Kogu: 14–29.
- Rahnu, L., Puur, A., Sakkeus, L., and Klesment, M. (2014). Family dynamics of migrants and their descendants in Estonia. (FamiliesAndSocieties Working Paper Series 13-2014: 4–38).
- Rannut, M. (2008). Estonianisation efforts post-independence. *International Journal of Bilingual Education and Bilingualism* 11(3–4): 423–439. doi: 10.1080/13670050802148780.
- Roberts, R.E. and Lee, E.S. (1974). Minority group status and fertility revisited. *American Journal of Sociology* 80(2): 503–523. doi:10.1086/225810.

- Sakkeus, L. (1994). The Baltic states. In: Ardittis, S. (ed.). *The politics of East-West Migration*. New York: St. Martin's Press: 68–85.
- Sánchez-Dominguez, M., de Valk, H.A.G., and Reher, D. (2011). Marriage strategies among immigrants in Spain. *Revista Internacional de Sociología* 69(1): 139–166. doi:10.3989/ris.2011.iM1.389.
- Scherbov, S. and Van Vianen, H. (2004). Marriage in Russia. A reconstruction. *Demographic Research* 10(2): 27–60. doi:10.4054/DemRes.2004.10.2.
- Schumacher, R., Matthjis K., and Moreels, S. (2013). Migration and reproduction in an urbanizing context. Family life courses in 19th century Antwerp and Geneva. *Revue Quetelet/Quetelet Journal* 1(1): 19–40.
- Singley, S.G. and Landale, N.S. (1998). Incorporating origin and process in migration-fertility frameworks: The case of Puerto Rican women. *Social Forces* 76(4): 1437–1464. doi:10.1093/sf/76.4.1437.
- Smith, S., Maas, I., and van Tubergen, F. (2012). Irreconcilable differences? Ethnic intermarriage and divorce in the Netherlands, 1995–2008. *Social Science Research* 41(5): 1126–1137. doi:10.1016/j.ssresearch.2012.02.004.
- Sobotka, T. (2008a). The diverse faces of the Second Demographic Transition in Europe. *Demographic Research* 19(8): 171–224. doi:10.4054/DemRes.2008.19.8.
- Sobotka, T. (2008b). The rising importance of migrants for childbearing in Europe. *Demographic Research* 19(9): 225–248. doi:10.4054/DemRes.2008.19.9.
- Stepick, A. and Dutton Stepick, C. (2010). The complexities and confusions of segmented assimilation. *Ethnic and Racial Studies* 33(7): 1149–1167. doi:10.1080/01419871003599518.
- Tammaru, T. and Kulu, H. (2003). The ethnic minorities in Estonia: Changing size, composition and location. *Eurasian Geography and Economics* 44(2): 105–120. doi:10.2747/1538-7216.44.2.105.
- Tammaru, T. and Kontuly, T. (2011). Selectivity and destinations of ethnic minorities leaving the main gateway cities of Estonia. *Population, Space and Place* 17(5): 674–688.
- Toulemon, L. and Mazuy, M. (2004). Comment prendre en compte l'âge à l'arrivée et le durée de séjour en France dans la mesure de la fécondité des immigrants? Paris: INED (Documents de Travail 120).

- Trilla, C.C., Esteve, A., and Domingo, A. (2008). Marriage patterns of the foreign-born population in a new country of immigration: The case of Spain. *International Migration Review* 42(4): 877–902. doi:10.1111/j.1747-7379.2008.00151.x.
- Van de Kaa, D.J. (1987). Europe's second demographic transition. *Population Bulletin* 42(1): 1–59.
- Van de Kaa, D.J. (1994). The second demographic transition revisited: Theories and expectations. In: Beets, G., van den Brekel, H., Cliquet, R., Dooghe, G., and de Jong Gierveld, J. (eds.). *Population and the family in the Low countries 1993: Late fertility and other current issues*. Pennsylvania/Amsterdam: Zwets and Zeitlinger: 81–126.
- Van Ham, M. and Tammaru, T. (2011). Ethnic minority-majority unions in Estonia. *European Journal of Population* 27(3): 313–335. doi:10.1007/s10680-011-9236-z.
- Vermeulen, H. (2010). Segmented assimilation and cross-national comparative research on the integration of immigrants and their children. *Ethnic and Racial Studies* 33(7): 1214–1230. doi:10.1080/01419871003615306.
- Vikat, A. (1994). *Family formation in Estonia*. Helsinki: Finnish Demographic Society.
- Vishnevskii, A. (2006). *Demograficheskaya modernizaciya Rossii 1900–2000*. Moscow: Novoye izdatelstvo.
- Wanner, P. (2002). The demographic characteristics of immigrant populations in Switzerland. In: Haug, W., Compton, P., and Courbage, Y. (eds.). *The demographic characteristics of immigrant population in Europe*. Strasbourg: Council of Europe Publishing: 419–496.
- Wilson, B. (2013). *Disentangling the quantum and tempo of immigrant fertility*. Paper presented at IUSSP XXVII International Population Conference, Busan, South Korea, August 26–31 2013.
- Zakharov, S. (2008). Russian Federation: From the first to second demographic transition. *Demographic Research* 19(24): 907–972. doi:10.4054/DemRes.2008.19.24.
- Zeng, Y., Morgan, S.P., Wang, Z., Gu, D., and Yang, C. (2012). A multistate life table analysis of union regimes in the United States: Trends and racial differences, 1970–2002. *Population Research and Policy Review* 31(2): 207–234. doi:10.1007/s11113-011-9217-2.

- Zhou, M. (1997). Segmented assimilation: Issues, controversies, and recent research on the new second generation. *International Migration Review* 31(4): 975–1008. doi:[10.2307/2547421](https://doi.org/10.2307/2547421).
- Zorlu, A. and Mulder, C. (2011). Ethnic differences in leaving home: Timing and pathways. *Demography* 48(1): 49–72. doi:[10.1007/s13524-010-0012-1](https://doi.org/10.1007/s13524-010-0012-1).

Appendix

Description of control variables

Birth cohort distinguishes between respondents born in seven calendar periods (1924–1929, 1930–1939, 1940–1949, 1950–1959, 1960–1969, 1970–1979, 1980–1983).

Educational attainment is a time-varying variable that refers to the highest level of education attained at any month in the period of observation. The variable is constructed from complete educational histories collected in the Estonian FFS and GGS. We have classified the different educational qualifications that have existed in Estonia and Russia during the lifetimes of the birth cohorts covered by our data into four categories. “Basic” means compulsory general education at levels which are lower than upper secondary education. “Secondary” means general education at the upper secondary level (high school, gymnasium). “Vocational” means education that followed the graduation from lower levels of general education (primary or basic) or from upper secondary general education (high-school, gymnasium). “Tertiary” means academic education that followed upper secondary education.

Activity status is a time-varying variable that draws on detailed activity histories of the respondents collected in the Estonian FFS and GGS. The activity status variable distinguishes between three categories/statuses. “In education” refers to studying as the main activity of the respondent. “Employment” means gainful employment, which in more than 90% of cases means full-time employment. “Non-employment” combines all statuses of non-employment with the exception of educational enrolment; it includes unemployment, economic inactivity for family reasons, health reasons, retirement etc.

Parity-pregnancy status is operationalized as a time-varying variable. It distinguishes between three categories/statuses: “childless and non-pregnant” (for male respondents, partner non-pregnant); “pregnant and childless” (for male respondents, partner pregnant), and parent (mother/father). Pregnancy/parity status is inferred from childbearing/fatherhood histories available in the Estonian FFS and GGS (pregnancy is backdated seven months from the birth of a child).

Arrival in host country is a time-varying variable that distinguishes periods before and after arrival in Estonia. This variable is constructed from migration histories collected in the Estonian FFS and GGS.

Models for cohabitation outcomes, union dissolution/divorce and re-partnering include additional process-specific controls (see Table A1).

Table A1: Hazard ratios for control variables based on final model (M4), Estonia, birth cohorts 1924–1983

Variables	First union formation			First marriage	End of cohabit.	End of union	End of marriage	Second union
	Total	Cohabit.	Marriage					
WOMEN								
GENERAL CONTROLS								
<i>Birth cohort</i>								
1924–1929	0.78***	0.42***	1.29***	1.01	0.94	0.50***	0.44***	0.71***
1930–1939	0.81***	0.42***	1.37***	1.10***	1.02	0.65***	0.62***	0.86*
1940–1949	0.92**	0.62***	1.31***	1.10***	1.06	0.80***	0.78***	0.96
1950–1959	1	1	1	1	1	1	1	1
1960–1969	1.12***	1.40***	0.79***	0.86***	0.83***	1.20***	1.22***	1.18**
1970–1979	1.14***	1.75***	0.36***	0.46***	0.48***	1.34***	1.29**	1.32***
1980–1983	1.22***	2.04***	0.18***	0.24***	0.32***	1.65***	1.89*	1.66**
<i>Education</i>								
Basic	0.85***	0.97	0.74***	0.74***	0.83***	0.99	1.00	1.10
Secondary	1	1	1	1	1	1	1	1
Vocational	1.05*	1.00	1.12***	1.09***	1.09*	0.89**	0.89**	1.01
Tertiary	0.98	0.85*	1.13*	1.20***	1.26***	0.87**	0.87*	0.98
<i>Activity status</i>								
In education	0.49***	0.43***	0.53***	0.55***	0.97	0.64***	0.70**	0.83
Employed	1	1	1	1	1	1	1	1
Not-employed	0.93*	0.94	0.96	0.94	0.85***	0.64***	0.58***	0.87*
<i>Arrival in Estonia</i>								
Before arrival	0.80***	0.62***	0.90**	0.85***	0.94	1.68***	1.64***	1.03
After arrival	1	1	1	1	1	1	1	1
PROCESS-SPECIFIC CONTROLS								
<i>Parity-pregnancy status</i>								
Childless	1	1	1	1	1	1	1	1
Pregnant	10.95***	3.92***	20.53***	14.88***	3.88***	0.70***	0.47***	1.28
Mother	0.88**	1.01	0.66***	1.18***	1.09*	0.67***	0.62***	0.83***
<i>Age at first union formation</i>								
15–18					1.09*	1.37***	1.48***	
19–22					1	1	1	
23–26					0.78***	0.73***	0.67***	
27–30					0.56***	0.74***	0.67***	
31–45					0.42***	0.81*	0.59***	
<i>Age at first union dissolution</i>								
Under 25								1
25–29								0.70***
30–34								0.56***
35–39								0.37***
40–49								0.25***
50+								0.04***
<i>Start of first union</i>								
Marriage						1		1
Cohabitation						1.19***		0.90**
<i>End of first union</i>								
Partner's death								0.80***
Separation								1
Persons	10 031	10 031	10 031	10 048	4 613	9 192	8 075	4 323
Exposure months	985 026	985 026	985 026	1207529	142874	1646725	1522487	346554

Table A1: (Continued)

Variables	First union formation			First marriage	End of cohabit.	End of union	End of marriage	Second union
	All	Cohabit.	Marriage					
MEN								
GENERAL CONTROLS								
<i>Birth cohort</i>								
1924–1929	0.83***	0.38***	1.52***	1.31***	1.22	0.51***	0.44***	1.18
1930–1939	0.81***	0.44***	1.34***	1.18***	1.22**	0.61***	0.58***	0.96
1940–1949	0.88***	0.67***	1.15**	1.08*	1.13	0.84**	0.80**	0.97
1950–1959	1	1	1	1	1	1	1	1
1960–1969	1.05	1.29***	0.73***	0.73***	0.74***	0.98	0.92	1.01
1970–1979	0.77***	1.17**	0.20***	0.28***	0.38***	1.26**	1.11	0.93
1980–1983	0.85	1.28**	0.09***	0.20***	0.27***	1.38	2.01	1.54
<i>Education</i>								
Basic	0.89***	0.97	0.80***	0.75***	0.73***	0.92	0.96	0.92
Secondary	1	1	1	1	1	1	1	1
Vocational	1.10**	1.05	1.17***	1.07	0.94	0.83**	0.80***	1.19**
Tertiary	1.16**	1.14	1.23**	1.38***	1.43***	0.73***	0.69***	1.48***
<i>Activity status</i>								
In education	0.60***	0.52***	0.67***	0.62***	0.91	0.62**	0.62	0.56
Employed	1	1	1	1	1	1	1	1
Non-employed	0.39***	0.48***	0.29***	0.27***	0.61***	1.33**	1.47***	0.50***
<i>Arrival in Estonia</i>								
Before arrival	0.71***	0.61***	0.78***	0.74***	0.82*	1.60***	1.65***	0.74
After arrival	1	1	1	1	1	1	1	1
PROCESS-SPECIFIC CONTROLS								
<i>Parity-pregnancy status</i>								
Childless	1	1	1	1	1	1	1	1
Pregnant	18.24***	6.93***	31.96***	18.97***	3.95***	0.17***	0.11***	5.44***
Father	2.10***	1.89***	2.44***	1.77***	1.07	0.49***	0.47***	1.18**
<i>Age at first union formation</i>								
15–18					1.08	1.10	1.39**	
19–22					1	1	1	
23–26					0.75***	0.79***	0.73***	
27–30					0.56***	0.70***	0.70***	
31–45					0.43***	0.81	0.73**	
<i>Age at first union dissolution</i>								
Under 25								1
25–29								0.93
30–34								0.70***
35–39								0.64***
40–49								0.41***
50+								0.25***
<i>Start of first union</i>								
Marriage						1		1
Cohabitation						1.35***		0.92
<i>End of first union</i>								
Partner's death								0.97
Separation								1
Persons	5 327	5 327	5 327	5 330	2 511	4 726	3 999	1 538
Exposure months	632180	632180	632180	752769	84268	885791	800085	86598

Source: Estonian FFS and GGS, authors' calculations.