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Family dynamics among immigrants and their descendants in Estonia

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Abstract

Growing heterogeneity has become an important characteristic of European societies since the second half of the 20th century. This development has stimulated considerable interest in demographic patterns among the populations with immigrant background. This study investigates partnership formation and dissolution among immigrants and their descendants in Estonia born in 1924–1983, against the background of native population. It complements the existing literature by providing a case study of an East European country with a relatively long history of large-scale immigration that stretches back to the late 1940s. The processes covered in the analysis include the formation and dissolution of first and second unions. In addition, we distinguish between the entry into union via direct marriage and cohabitation, and the outcomes of consensual union (conversion into registered marriage and separation).

Based on earlier studies, we formulate three hypotheses. According to first hypothesis, we expect that the new family patterns, in particular the shift from direct marriage to non-marital cohabitation, emerged somewhat later among the foreign-origin population. Considering the relatively slow integration of immigrants, we further hypothesise that differences between immigrants and their second generation are relatively small in Estonia. Finally, we are interested in the extent to which intergroup differences are manifested in different processes. We expect in family initiation that differences are more pronounced in first unions since the entry into second union is selective for the acceptance on non-traditional family behaviour (union dissolution) in the previous stages of the life course.

The data for the analysis come from two nationally representative surveys: the Estonian Generations and Gender Survey conducted in 2004/2005, and the Estonian Family and Fertility survey conducted in 1994/1997. To analyse family dynamics, we use proportional hazard event history models. Besides single decrement models, we employ competing risk models that allow for direct comparison between different processes.

Keywords: Foreign-origin population, partnership formation and dissolution, cohabitation, competing risks, the Second Demographic Transition, Estonia

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Extended abstract

1. Background

Growing ethnic and demographic heterogeneity has become an important characteristic of many European societies which have experienced noticeable immigration flows since the second half of the 20th century. This development has led to increasing interest in analyses that address demographic patterns and their correlates among the population with immigrant background in receiving countries (Haug et al 2002; Kulu and González-Ferrer 2013). In the family domain, European societies have witnessed a transformation of partnership and fertility patterns that first began in Scandinavia during the mid-1960s and then gradually spread to other regions. The break with preceding patterns was so radical that two decades later, Lesthaeghe and van de Kaa (1986) introduced a concept of a Second Demographic Transition (SDT) which gradually evolved into an overarching conceptual framework for describing and analysing contemporary family dynamics.

Most studies comparing family dynamics among immigrant and native population report that immigrants tend to exhibit somewhat more traditional practices compared to their native counterparts (Milewski and Hamel 2010; Chen 2007; de Valk et al 2004; Landale 1994). In the dynamic perspective, the observed differences are not fixed over time. For instance, it has been shown that in the Netherlands youth with immigrant background featured home-leaving patterns that were earlier characteristic of the native population (Zorlu and Mulder 2011) and expressed signs of change on union formation preferences (de Valk and Liefbroer 2007). In that view, the difference between foreign-origin and native population depends on the time during which immigrants and their descendants adopt family patterns prevailing in the host society. There is evidence that the period required for such convergence may extend over two immigrant generations and be modulated by institutional context of the host country (Andersson and Scott 2007).

Despite growing interest in family patterns among immigrants and their descendants, research in this area is in need of further development. First, the coverage of different processes and aspects of family dynamics among immigrants is far from comprehensive. Against the background of relatively large body of literature on childbearing (Milewski 2010; Kulu and Milewski 2007), the studies on other family transitions have started to appear relatively recently. Secondly, so far most of the studies have addressed only one or two transition at a time. To obtain a comprehensive account of family dynamics among immigrant population, the challenge is to extend the analysis from first partnership formation to family transitions over the life course, including partnership dissolution and re-partnering. Thirdly, it is important to pay attention to new modes of family behaviour, particularly those which constitute the hallmarks of the Second Demographic Transition. Finally, the geography of

studies in family dynamics of immigrant groups should also be extended, to include more countries with diverse socio-economic, institutional or cultural background.

This study addresses the patterns of partnership formation and dissolution among foreign-origin women and men in Estonia born in 1924–1983. It complements the existing literature by providing a case study of an East European country with relatively long history of large-scale immigration, stretching back to the late 1940s. The study also contributes to literature by addressing a broader array of family transitions, including formation and dissolution of first unions as well as the entry into second union.

2. The Estonian context

Over long run, the demographic development in Estonia shared several commonalities with the countries of Northern and Western Europe. In terms of nuptiality, the country historically formed the limit of so-called European marriage pattern in North-Eastern Europe (Hajnal 1965). Evidence of the Princeton European Fertility Study suggests that the emergence of modern fertility patterns was synchronous with the forerunners of demographic modernisation in Europe (Coale, Anderson & Härm 1979; Coale and Watkins 1986). Consequently, fertility fell under replacement level in the late 1920s, and the country experienced a first peacetime spell of negative natural increase in the 1930s.

In the aftermath of the Second World War, Estonia was incorporated into the Soviet Union. The earlier similarity of nuptiality and fertility trends to Northern and Western Europe weakened, although some features of new family patterns, particularly the shift from direct marriage to cohabitation began to emerge in the 1970s among the native population (Katus, Puur and Sakkeus 2008). Following the societal transition of the 1990s, Estonia has experienced a rapid transformation of family patterns and has, to a large extent, caught up with the forerunners of the Second Demographic Transition (Puur et al 2012).

Unlike most countries in Eastern Europe, in the aftermath of the WWII Estonia became exposed to very intensive immigration from different parts of the former Soviet Union, mainly from the Russian Federation. The high level of immigration persisted until the late 1980s and left the country with large stock of immigrant population (Katus, Puur and Sakkeus 2002). Following the restoration of Estonian independence in 1991, one quarter of the immigrants left; according to recent census (2011), the foreign-origin population constitutes 24.3% of the total population, of which immigrants 12.7% and their descendants 11.6% (SE 2013).

A characteristic feature of the foreign-origin population in Estonia is its relatively limited integration to host society. This feature dates back to the period when Russian was the official and main language in inter-ethnic communication in the former Soviet Union (Laitin 1998; Pavlenko 2007). As a result, only 15% of non-Estonians in the country reported the knowledge of Estonian language in the late 1980s. Although the situation has changed considerably since then, 54% of foreign-origin population reported no knwledge of Estonian language in the 2011 census. Besides the large number of immigrants and their descendants, the factors slowing down the intergation include high concentration of foreign-origin

population in certain regions of the country, and the school system that is still divided by language.

The evidence based on earlier studies suggests that family patterns between the native and immigrant population have not converged in Estonia (Katus, Puur and Sakkeus 2000; Katus, Puur and Põldma 2002). However, in-depth analyses of the issue, encompassing different family transitions on the one hand, and the generations of immigrant population on the other hand, are yet lacking.

3. Research aims and hypotheses

The goal of this study is to analyse the patterns of family dynamics of immigrants and their descendants in Estonia, against the background of native population. The processes covered in the analysis include the formation and dissolution of first and second unions. In addition, we distinguish between the entry into union via direct marriage and cohabitation; with regard to the latter, we also investigate the outcomes of consensual union (conversion into registered marriage and separation).

Based on studies of family dynamics among immigrant population in other settings and the characteristics of empirical context, we formulate three hypotheses. According to first hypothesis (H1), we expect that the new family patterns, in particular the shift from direct marriage to non-marital cohabitation, emerged somewhat later among the foreign-origin population. Considering the slow integration of immigrants in Estonia, we further hypothesise (H2) that differences between immigrants and their second generation are relatively small in Estonia. Finally, we expect that differences in family initiation are more pronounced in first unions (H3) since the entry into second union is selective for the acceptance on non-traditional family behaviour (union dissolution) in the previous stages of the life course.

4. Data and methods

The data for the analysis come from two nationally representative surveys: the Estonian Generations and Gender Survey conducted in 2004/2005, and the Estonian Family and Fertility survey conducted in 1994 (men in 1997). Both surveys provide detailed and comparable histories of partnership formation and dissolution, including the beginning and end dates of co-residential unions and marriages (UNECE 2005; EKDK 2008). For this abstract, the preliminary analysis, based on female part of the sample, is used. After merging the two datasets, the sample size amounts to 10 055 women born in 1924–1983.

We analyse partnership transitions (formation of first union, second union, and first marriage; dissolution of first union, second union and first marriage) among foreign-origin population in Estonia, against the background of native population. The former consists of first generation immigrants, who were born outside Estonia, and their descendants in the second generation, who were born in Estonia, but whose parents were born outside the country. A small number of ethnic Estonians who themselves or whose parents were born outside the country are regarded return migrants and included among the native population. Table 1 presents the distribution of respondents by immigrant generation/nativity status and birth cohort.

We use proportional hazard event history models to analyse the transitions. Besides single decrement models, in which competing transitions are analysed separately, the entry into marital and non-marital unions are studied jointly, in a way that allowed for direct comparison of the two modes of partnership formation, controlling for other factors that are known to influence that process (Hoem et al 2008). To account for compositional effects, we include controls for birth cohort, process-specific indicators like pregnancy-parity status, educational attainment and labour market status in the models. To examine changes in the patterns, our main independent variable (immigrant generation/nativity status) is interacted with birth cohorts and decrement type.

5. Results

Foreign-origin and native population

The results show that several differences in family transitions between foreign-origin and native women persist in the final model, following the control for compositional effects and the period before arrival in the country (Model M4b in part I, Table 2).

In single-decrement models, foreign-origin women exhibit a systematically higher intensity of forming first unions than their native counterparts. This reflects the combination of somewhat earlier entry into union as well as slightly lower proportion of never-partnered among immigrants and their descendants. The contrast between the two population groups appears more pronounced for the entry into first marriage than for all first unions suggesting a further difference associated with type of union.

The latter observation receives support from competing risk models. Foreign-origin women show significantly higher propensity of starting their first partnership via direct marriage while native women demonstrate higher hazard ratios for cohabitation. The estimates for second union formation, based on competing risk models, follow a largely similar pattern, although the inter-group difference for direct marriage does not reach the level of statistical significance.

A more salient role of marriage among foreign-origin population is also revealed by results on cohabitation outcomes. Foreign-origin women who start their first or second union in a form of cohabitation convert it into marriage in a significantly higher rate compared to native women. Since they also break-up consensual unions more often, their overall chances of staying in a state of cohabitation are lower than for native women.

In contrast to union formation, the risk to separate from first- or second union in general does not reveal any significant difference between the groups. Also, this finding holds true for the dissolution of first marriage (the latter is not necessarily first partnership).

Finally, in single-decrement models we observe a reversal in the pattern for second union formation. Unlike for first unions, foreign-origin women demonstrate somewhat lower propensity of second union formation than their native counterparts. It seems that foreign-origin women have a somewhat stronger barrier to start new partnership after they dissolved the first one.

First generation and second generation

To compare family dynamics among first and second generation immigrants, we run a similar set of event history models (Part II, Table 2). To allow for better comparability across the two generations, we have included an additional model (M4c) that limits the working sample to birth cohorts 1940-1979.

The results based on the final models (M4c) show that the differences between the first and second generation are generally smaller than those observed for the foreign-origin and native population. No statistically significant difference is found in competing risk models for the pathways to first or second union formation, and for the conversion of first- and second cohabitation into marriage.

At the same time, some statistically significant differences in stability of unions between the first and second generation were observed. However, interestingly, these differences do not follow the same pattern in first and second partnership. In first unions (also in first marriage), higher dissolution risks are characteristic of second-generation women. In second unions, no excess risk is associated with the second generation. The break-up of consensual unions does not reveal any noticeable difference between the immigrant generations in first partnerships, but due to high risks of separation, second consensual unions appear to be very unstable among the first-generation women.

Changes across birth cohorts

To obtain a dynamic view of the inter-group differences, immigrant generation/nativity status was interacted with birth cohort and decrement type.

The results show that over the cohorts covered by the study, all sub-groups display shifts away from traditional family patterns (rise in cohabitation, growing instability of partnerships). In addition to that, the results also show that the timing of these changes varies between the groups, in particular for the switch from direct marriage to non-registered cohabitation as a dominant pathway to family initiation. Among foreign-origin women, this change was introduced in cohorts born in the 1970s while native women experienced the same shift two decades earlier (Figure 1). In second unions, cohabitation became the dominant pathway to union formation in earlier generations for all groups, but interestingly, we can observe a similar time-lag in the expansion of cohabitation in second unions between the foreign-origin and native population (Figure 2).

In contrast, the first- and second-generation foreign-origin women exhibit largely similar cohort trends in the mode of union formation.

6. Summary and conclusions

In this study, we investigated family dynamics among immigrants and their descendants in Estonia, against the background of native population in Estonia.

We found that new family patterns characteristic of the Second Demographic Transition have become widely manifested among the foreign-origin women in Estonia. In line with our first hypothesis (H1), the evidence based on cohort trends reveals a lag in the expansion of these patterns among immigrants and their descendants, compared to native

population. In particular, this pattern is revealed in shifts from direct marriage to cohabitation. The observed time-lag accounts for much of the inter-group difference in general models.

The findings also support our second hypothesis (H2) according to which we expected relatively small difference in family dynamics between the first- and second-generation immigrants in Estonia. This holds particularly for the transitions which exhibited strong contrasts between the foreign-origin and native population (pathways to first or second union formation, the conversion of cohabitation into marriage).

Our third hypothesis (H3) received partial support from the results. Although systematic differences were indeed found in first union formation, several differences also persisted in second unions. In some cases, for instance the union formation in single-decrement models, the inter-group difference even reversed in second unions.

As a next step in the study, we will extend the analysis to men. We will also elaborate on the ways how to tackle some methodological issues, such as the interaction between immigration and family events. Although our goal here was not to investigate the mechanisms that have produced the observed intergroup differences and the time-lag in the shifts in family patterns, these issues are certainly among the challenges for the future.

7. Acknowledgement

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Table 1. Combined dataset: Estonian GGS, wave 2 (2004/2005) and Estonian FFS (1994/1997). Birth cohort range for women by nativity status.

Cohort	native	2G	1G	Total
until 1929	618	3	335	956
1930-34	605	2	277	884
1935-39	646	0	335	981
1940-44	665	4	229	898
1945-49	572	71	257	900
1950-54	607	114	263	984
1955-59	629	96	217	942
1960-64	633	141	210	984
1965-69	659	120	116	895
1970-74	630	165	54	849
1975-79	345	73	16	434
1980+	253	84	11	348
Total	6 862	873	2 320	10 055

Table 2. Output of piecewise-constant regressions for transitions of first and second union formation and dissolution. Estonian native and foreign-origin women, birth cohorts 1924-83. Results presented only for main independent variable (native vs foreign-origin; native vs 2G vs 1G).

Control variables:	M0	M1	M2	M3	M4a	M4b	M4c
Birth cohort (10 years)		+	+	+	+	+	+
Process-specific controls[i]			+	+	+	+	+
SES[ii]				+	+	+	+
Time before arrival to Estonia controlled					+		
Time before arrival to Estonia censored						+	+
Sample selction:							
Birth cohort	1924-83	1924-83	1924-83	1924-83	1924-83	1924-83	**1940-79**

PART I FOREIGN-ORIGIN versus NATIVE

a) FIRST UNION FORMATION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
Marriage (cohabitation as a competing risk)	Native	0.552***	0.563***	0.503***	0.515***	0.491***	0.484***	R: age 15 onwards
	Foreign-origin	1	1	1	1	1	1	
Cohabitation (marriage as a competing risk)	Native	1.398***	1.333***	1.307***	1.374***	1.239***	1.227***	C: age 45 or at interview
	Foreign-origin	1	1	1	1	1	1	
First union (single decrement)	Native	0.848***	0.837***	0.790***	0.820***	0.777***	0.780***	
	Foreign-origin	1	1	1	1	1	1	
	Person months	*985 026*	*985 026*	*985 026*	*985 026*	*985 026*	*830 871*	

b) FIRST UNION DISSOLUTION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
End of first union (1st partner)	Native	1.039	1.005	0.966	0.970	1.035	1.016	R: beginning of 1st un.
	Foreign-origin	1	1	1	1	1	1	C: 25y since union; at interw.;
	Person months	*1 646 725*	*1 646 725*	*1 646 725*	*1 646 725*	*1 646 725*	*1 572 821*	death of P1

c) FIRST UNION, COHABITATION OUTCOMES		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
Marriage (separation as a competing risk)	Native	0.704***	0.718***	0.750***	0.743***	0.720***	0.717***	R: beginning of cohabitation
	Foreign-origin	1	1	1	1	1	1	
Separation (marriage as a competing risk)	Native	0.787**	0.759***	0.770**	0.766**	0.811*	0.735***	
	Foreign-origin	1	1	1	1	1	1	C: 10y since cohab; at
End of cohabitation (single decrement)	Native	0.715***	0.723***	0.754***	0.748***	0.735***	0.723***	interview; death of P1
	Foreign-origin	1	1	1	1	1	1	
	Person months	*142 874*	*142 874*	*142 874*	*142 874*	*142 874*	*137 211*	

d) MARRIAGE FORMATION AND DISSOLUTION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
Single -> First marriage (n partner)	Native	0.666***	0.681***	0.619***	0.628***	0.596***	0.596***	R: age 15 onwards
	Foreign-origin	1	1	1	1	1	1	C: age 45; at interview
	Person months	1 207 529	1 207 529	1 207 529	1 207 529	1 207 529	1 045 671	
First marriage (n partner) -> **Separation**	Native	0.960	0.962	1.013	1.017	1.072	1.061	R: beginning of 1st marr.
	Foreign-origin	1	1	1	1	1	1	C: 25y since 1st marr.; at
	Person months	*1 522 487*	*1 522 487*	*1 522 487*	*1 522 487*	*1 522 487*	*1 453 952*	interview; death of Pn

e) SECOND UNION FORMAITION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
Marriage (cohabitation as a competing risk)	Native	0.728***	0.740***	0.822*	0.829*	0.871	0.875	R: from first union dissolution
	Foreign-origin	1	1	1	1	1	1	or death of P1
Cohabitation (marriage as a competing risk)	Native	1.249***	1.231***	1.189***	1.189***	1.204***	1.219***	
	Foreign-origin	1	1	1	1	1	1	C: 16y since dissoluion of first
Second union (single decrement)	Native	1.129***	1.119**	1.111**	1.113**	1.137***	1.151***	union; death of P1; at
	Foreign-origin	1	1	1	1	1	1	interview
	Person months	*346 554*	*346 554*	*346 554*	*346 554*	*346 554*	*338 244*	

f) SECOND UNION DISSOLUTION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
End of 2nd union (2nd partner)	Native	1.119	1.107	1.042	1.020	1.035	1.058	R: beginnig of 2nd union
	Foreign-origin	1	1	1	1	1	1	C: 20y since 2nd un.; at
	Person months	*277 758*	*277 758*	*277 758*	*277 758*	*277 758*	*271 813*	interview.; death of P2

g) SECOND UNION, COHABITATION OUTCOMES		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*Riskset/Censoring*
Marriage (separation as a competing risk)	Native	0.552***	0.560***	0.566***	0.559***	0.575***	0.581***	R: beginning of cohabitation
	Foreign-origin	1	1	1	1	1	1	(2nd partner)
Separation (marriage as a competing risk)	Native	1.181	1.101	1.018	1.021	1.030	1.039	
	foreign-origin	1	1	1	1	1	1	C: 10y since cohabitation; at
End of cohabitation (single decrement)	Native	0.651***	0.649***	0.643***	0.636***	0.653***	0.659***	interview; death of P2
	Foreign-origin	1	1	1	1	1	1	
	Person months	*93 993*	*93 993*	*93 993*	*93 993*	*93 993*	*92 337*	

... table continues

PART II SECOND GENERATION versus FIRST GENERATION FOREIGN-ORIGIN

a) FIRST UNION FORMATION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
Marriage (cohabitation as a competing risk)	Native	0.638***	0.487***	0.447***	0.459***	0.456***	0.436***	0.427***	R: age 15 onwards
	G2	1	1	1	1	1	1	1	
	G1	1.202***	0.836***	0.865**	0.868**	0.903	0.866**	0.970	
Cohabitation (marriage as a competing risk)	Native	0.906*	1.334***	1.314***	1.392***	1.374***	1.383***	1.389***	C: age 45 or at interview
	G2	1	1	1	1	1	1	1	
	G1	0.542***	1.000	1.009	1.020	1.211***	1.258***	1.118	
First union (single decrement)	Native	0.769***	0.880***	0.843***	0.877***	0.869***	0.873***	0.865***	
	G2	1	1	1	1	1	1	1	
	G1	0.879***	1.070	1.091**	1.097**	1.190***	1.198***	1.128**	
	Person months	*985 026*	*985 026*	*985 026*	*985 026*	*985 026*	*830 871*	*558 205*	

b) FIRST UNION DISSOLUTION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
End of first union (1st partner)	Native	0.688***	0.915	0.906	0.913	0.925	0.915	0.891	R: beginning of 1st union
	2G	1	1	1	1	1	1	1	C: 25y since union; at
	1G	0.586***	0.878*	0.914	0.918	0.851**	0.859*	0.861*	interview; death of P1
	Person months	*1 646 725*	*1 646 725*	*1 646 725*	*1 646 725*	*1 646 725*	*1 572 821*	*970 658*	

c) FIRST UNION, COHABITATION OUTCOMES		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
Marriage (separation as a competing risk)	Native	0.788***	0.663***	0.673***	0.673***	0.670***	0.663***	0.660***	R: beginning of cohabitation
	G2	1	1	1	1	1	1	1	
	G1	1.190**	0.888	0.850**	0.862*	0.890	0.878	0.988	
Separation (marriage as a competing risk)	Native	0.723**	0.798	0.812	0.803	0.806	0.804	0.755*	C: 10y since cohabitation or
	2G	1	1	1	1	1	1	1	at interview; death of P1
	1G	0.873	1.091	1.094	1.084	0.990	1.183	1.153	
End of cohabitation (single decrement)	Native	0.779***	0.686***	0.702***	0.702***	0.701***	0.695***	0.684***	
	G2	1	1	1	1	1	1	1	
	G1	1.141*	0.923	0.897	0.908	0.924	0.936	1.025	
	Person months	*142 874*	*142 874*	*142 874*	*142 874*	*142 874*	*137 211*	*106 899*	

d) MARRIAGE FORMATION AND DISSOLUTION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
Single -> First marriage (n partner)	Native	0.691***	0.623***	0.564***	0.572***	0.568***	0.561***	0.557***	R: age 15 onwards
	G2	1	1	1	1	1	1	1	
	G1	1.050	0.888**	0.885***	0.884***	0.933	0.915*	0.979	C: age 45 or at interview
	Person months	*1 207 529*	*1 207 529*	*1 207 529*	*1 207 529*	*1 207 529*	*1 045 671*	*724 015*	
First marriage (n partner) -> **Separation**	Native	0.653***	0.848**	0.926	0.937	0.947	0.937	0.938	R: beginning of 1st marr.
	G2	1	1	1	1	1	1	1	
	G1	0.612***	0.847**	0.889	0.897	0.845**	0.843**	0.835**	C: 25y since 1st marriage; at
	Person months	*1 522 487*	*1 522 487*	*1 522 487*	*1 522 487*	*1 522 487*	*1 453 952*	*869 759*	interview; death of partner

e) SECOND UNION FORMAITION		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
Marriage (cohabitation as a competing risk)	Native	0.622**	0.699*	0.775	0.774	0.775	0.756	0.741	R: from first union dissolution
	G2	1	1	1	1	1	1	1	or death of P1
	G1	0.826	0.932	0.931	0.920	0.865	0.831	0.935	
Cohabitation (marriage as a competing risk)	Native	0.813**	1.344***	1.295***	1.301***	1.301***	1.329***	1.302***	C: 16y since dissoluion of first
	G2	1	1	1	1	1	1	1	union; death of P1; at
	G1	0.580***	1.128	1.125	1.133	1.116	1.132	1.106	interview
Second union (single decrement)	Native	0.778***	1.220**	1.209**	1.216**	1.216**	1.235**	1.208**	
	G2	1	1	1	1	1	1	1	
	G1	0.626***	1.124	1.120	1.127	1.097	1.103	1.093	
	Person months	*346 554*	*346 554*	*346 554*	*346 554*	*346 554*	*338 244*	*163 518*	

f) SECOND UNION DISSOLUTION		M0	M1	M2	M3	M4a	M4b	M4c	*Riskset/Censoring*
End of 2nd union (2nd partner)	Native	1.000	1.285	1.171	1.157	1.163	1.184	1.201	R: beginnig of 2nd union
	G2	1	1	1	1	1	1	1	C: 20y since 2nd union or at
	G1	0.869	1.212	1.162	1.176	1.161	1.157	1.100	interview; death of P2
	Person months	*277 758*	*277 758*	*277 758*	*277 758*	*277 758*	*271 813*	*173 660*	

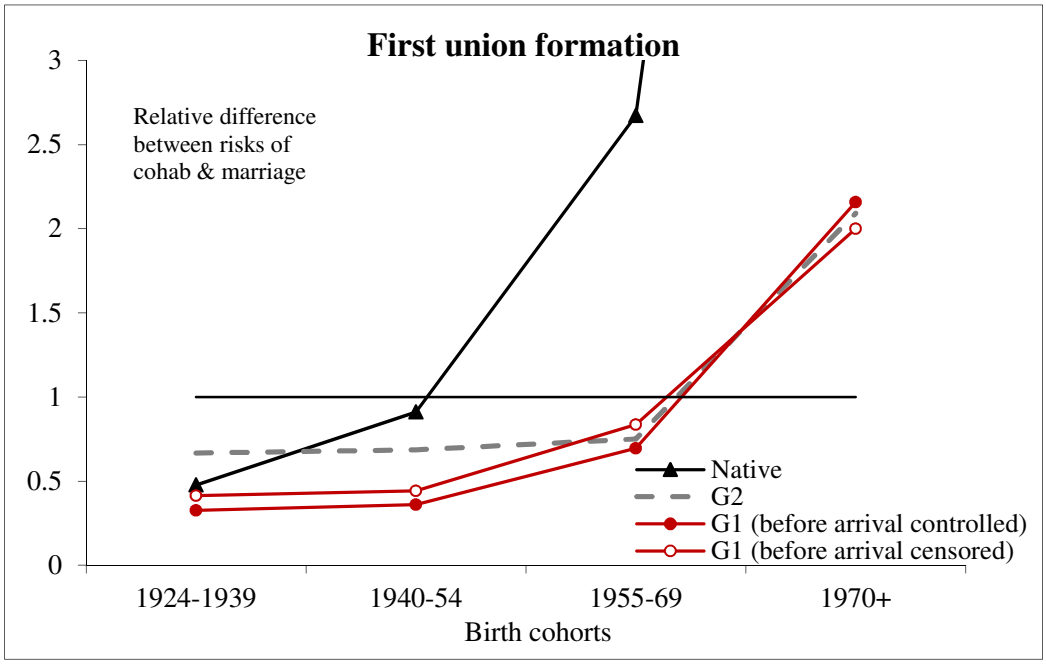
g) SECOND UNION, COHABITATION OUTCOMES		*M0*	*M1*	*M2*	*M3*	*M4a*	*M4b*	*M4c*	*Riskset/Censoring*
Marriage (separation as a competing risk)	Native	0.584***	0.613***	0.625***	0.626***	0.627***	0.653***	0.636***	R: beginning of cohabitation
	G2	1	1	1	1	1	1	1	(2nd partner)
	G1	1.077	1.128	1.143	1.163	1.125	1.171	1.193	
Separation (marriage as a competing risk)	Native	1.567	1.889*	1.738*	1.784*	1.786*	1.786*	1.737*	C: 10y since cohabitation; at
	G2	1	1	1	1	1	1	1	interview; death of P2
	G1	1.425	2.038**	2.022**	2.086**	2.073**	2.059**	2.079**	
End of cohabitation (single decrement)	Native	0.705***	0.769**	0.766**	0.768**	0.770**	0.796*	0.776**	
	G2	1	1	1	1	1	1	1	
	G1	1.111	1.257*	1.264*	1.288*	1.249*	1.292*	1.306*	
	Person months	*93 993*	*93 993*	*93 993*	*93 993*	*93 993*	*92 337*	*64 254*	

*** p<0.01, ** p<0.05, * p<0.1

Table 2 continues ...

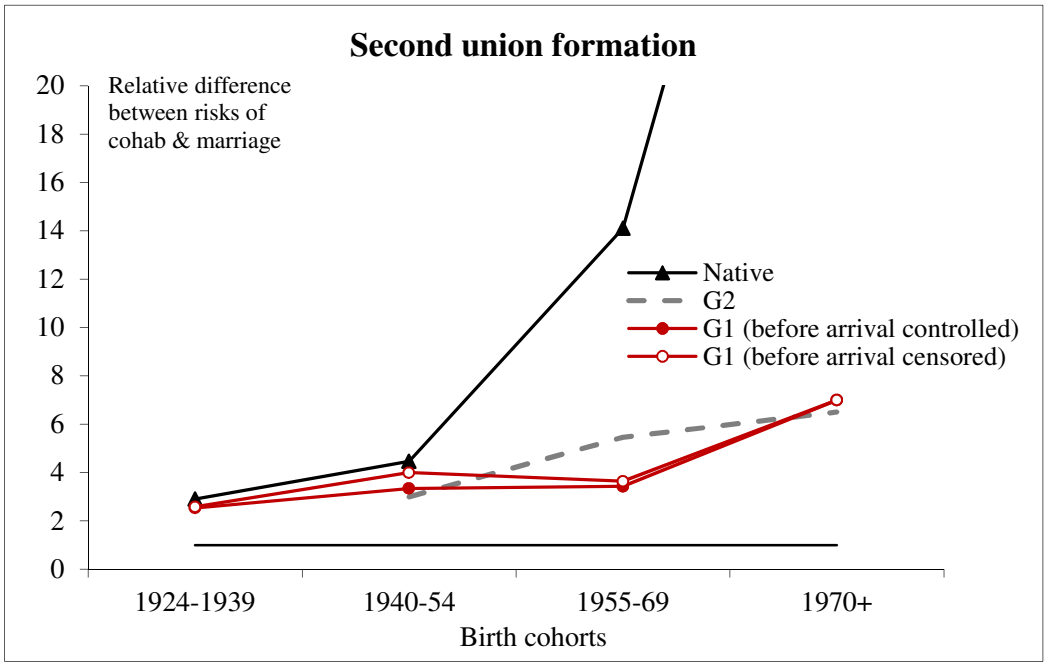
[i] Process-specific controls for different transitions are: (a) 1st union formation: parity-pregnancy status (childless/pregnant/ mother); (c) cohab. outcomes: parity-pregnancy status and age at union formation; (b) 1st union dissolution: same as previous + type of union (cohabitation/direct marriage); (d) 1st marriage formation (n partner approach): parity-pregnancy status, sequence of partner (1-3); marriage dissolution: same as previous + age at marriage, whether cohabited before marriage; e, (g) 2nd union formation and cohab. outcomes: parity-pregnancy status, age at 1st union dissolution, 1st union ended due to death of partner 1; (f) 2nd union dissolution: same as previous + type of 2nd union (cohabitation/ direct marriage).
[ii] Socioeconomic status related controls (time varying dummies): employment status (working/ not working/ studying (as main activity)); level of highest completed education (primary or lower/ secondary/ vocational/ tertiary).

Figure 1. Birth cohort trends in relative difference between risks of entering **first union** via cohabitation or direct marriage. Estonian native and foreign-origin women, birth cohorts 1924-83.



In the figure we present interaction between birth cohort, decrement type and immigrant generation.
Consult models M4a and M4b (Table 2) about the selection of control variables.

Figure 2. Birth cohort trends in relative difference between risks of entering **second union** via cohabitation or direct marriage. Estonian native and foreign-origin women, birth cohorts 1924-83.



In the figure we present interaction between birth cohort, decrement type and immigrant generation.
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