

## Ethnic Minority–Majority Unions in Estonia

### Unions entre membres d’ethnies minoritaires et majoritaires en Estonie

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**Abstract** Ethnic minority–majority unions—also referred to as mixed ethnic unions—are often seen as the ultimate evidence of the integration of ethnic minorities into their host societies. We investigated minority–majority unions in Estonia, where ethnic minorities account for one-third of the total population (Russians 26%, followed by Ukrainians, Byelorussians, Finns and other smaller groups). Using data from the 2000 Estonian census and regression models, we found that Slavic women are less likely to be in minority–majority unions than are members of other minority groups, with Russians being the least likely. Finns, who are culturally most similar to the Estonian majority population, are the most likely to form a union with an Estonian. For ethnic minority women, the likelihood of being in minority–majority unions is highest in rural areas and increases over generations, with third-generation immigrants being the most likely. Estonian women are most likely to have a minority partner when they or their parents were born abroad and when they live in urban areas. Our findings suggest that both the opportunity to meet potential partners and openness to other ethnic groups are important factors for understanding the dynamics of minority–majority unions.

**Keywords** Ethnicity · Country of birth · Generation · Minority–majority unions · Mixed ethnic unions · Estonia

**Résumé** Les unions entre membres d’une minorité ethnique et membres de la population majoritaire – également dénommées unions mixtes – sont souvent

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considérées comme la preuve évidente de l'intégration des minorités ethniques dans leur société d'accueil. Cette recherche s'intéresse aux unions mixtes en Estonie, pays où les minorités ethniques représentent un tiers de la population totale (dont 26% de Russes, suivis des Ukrainiens, des Biélorusses, des Finlandais et enfin d'autres groupes numériquement plus faibles). Les analyses réalisées à partir des données du recensement estonien de 2000 et de modèles de régression montrent que la probabilité d'union mixte est moins importante chez les femmes slaves que chez celles appartenant à d'autres minorités ethniques, les russes ayant les probabilités les plus faibles. Les Finlandais, culturellement plus proches de la population estonienne majoritaire, ont les probabilités les plus élevées de contracter une union avec un(e) Estonien(ne). Chez les femmes des minorités ethniques, la probabilité d'union mixte est plus élevée dans les régions rurales et augmente parmi les générations les plus jeunes, les petits-enfants d'immigrés ayant les probabilités les plus élevées. Les femmes estoniennes, pour leur part, ont plus de chances d'avoir un partenaire appartenant à une minorité quand elles-mêmes, ou leurs parents, sont né(e)s à l'étranger ou lorsqu'elles vivent dans des zones urbaines. Nos résultats semblent indiquer que les opportunités de rencontres avec des partenaires potentiels et l'ouverture aux autres groupes ethniques sont des facteurs importants pour la compréhension des dynamiques des unions mixtes.

**Mots-clés** Ethnie · Pays de naissance · Génération · Unions minorité-majorité · Unions mixtes · Données de recensement · Estonie

## 1 Introduction

The international literature on the segregation and integration of immigrants has, over recent decades, shown an increasing interest in mixed ethnic unions between minority and majority ethnic groups.<sup>1</sup> The occurrence of such unions is seen as evidence of the integration of ethnic minorities into their host societies (Alba and Nee 2003; Peach 1980; Kalmijn 1993; Wong 1999; Wright et al. 2003; Holloway et al. 2005; Fu 2006; Feng et al. 2010). Mixed ethnic unions are important markers of integration because the ethnic minority groups that are most integrated into their host societies are also those most likely to form a union with a native. In general, people choose a partner from their own groups (endogamy) or someone that is similar in social status (homogamy) (Kalmijn 1998). As a result, partners are often similar in terms of age, level of education, ethnic background, religion and social status (Smits 1996). Mixed ethnic partnering overcomes ethnic barriers, which indicates that ethnic differences in society are becoming less important. However, in most western countries that have a substantial immigrant population, the percentage

<sup>1</sup> The international literature often uses the term “mixed ethnic union” to denote unions between minority and majority group members. However, minority–minority unions can also be ethnically mixed; hence, we use the term minority–majority union in the empirical part of the paper. We herein use the terms “union”, “marriage”, and “couple” as synonyms. In the empirical part of the paper, we study both married and cohabiting couples and treat them as one category.

of mixed ethnic unions has remained modest (Kalmijn 1998; Feng et al. 2010). For example, it has been estimated that in 2001 in England and Wales, approximately 2.5% of all unions were mixed ethnic.<sup>2</sup>

In Estonia, according to the 2000 census, approximately 9% of all unions are between members of the minority and majority populations. Despite this relatively high percentage of minority–majority unions, little is known about the unions' characteristics. This is the first study to examine minority–majority unions in Estonia, which has one of the highest shares of ethnic minorities in Europe. The ethnic landscape in Estonia is dominated by two large ethnic groups, namely Estonians (68%) and Russians (26%). Other groups with more than 10,000 people are Ukrainians (2%), Byelorussians (1%) and Finns (1%). In addition, there are many smaller ethnic groups who together comprise less than 2% of the population (Statistics Estonia 2010). According to returns to the 2000 census, approximately 40% of the ethnic minorities in the country have Estonian citizenship, 19% are Russian citizens and as many as 38%<sup>3</sup> have no citizenship at all (Van Elsuwege 2004; Tammaru and Kontuly 2010).

There are many barriers for people from different ethnic groups to overcome in order to form unions, because Estonian society is segregated according to ethnicity across a number of dimensions: language, work and geography. Only 41% of ethnic minorities speak Estonian at an elementary level or higher, according to the 2000 census; most ethnic minorities, including the non-Russian groups, speak Russian. Language is an important obstacle to interethnic communication and thus the formation of unions. Moreover, the Estonian labour market is segregated along ethnic lines (Tammaru and Kulu 2003), the causes of which are rooted in the Soviet occupation of Estonia from 1940 to 1991. Estonia is also segregated spatially along ethnic lines, with ethnic minorities being concentrated in cities (Tammaru and Kulu 2003). During the Soviet period, there were separate Estonian and Russian language schools, a system that reinforced ethnic separation. Nowadays, language difference is less of a barrier to integration. For one thing, Russian secondary schools in Estonia are bilingual and a share of ethnic minority parents now opt to send their children to Estonian language schools. For another, university courses are now taught mainly in Estonian. These developments all increase the likelihood that members of younger age cohorts will form minority–majority unions.

The aim of the study described herein was to gain more insight into the patterns of minority–majority ethnic unions in Estonia. We investigated the determinants of being in a minority–majority union for both Estonian and ethnic minority women using unique data from the 2000 Estonian census, which contains anonymised individual-level data for the whole population. We were especially interested in the interplay amongst immigrant generation, (self-reported) ethnicity, birth cohort, socio-economic status and place of residence.

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<sup>2</sup> This estimate is based on the authors' analysis of data from the 2001 census of England and Wales. The total percentage of non-white ethnic minorities was 8.8 in 2001.

<sup>3</sup> The period since the 2000 census has witnessed a noticeable decrease in the number of stateless persons in Estonia (Järve 2007).

## 2 Theoretical Background

People tend to choose partners who share similar demographic, social, economic, ethnic and cultural characteristics—so-called marital homogamy (Kalmijn 1998; Kalmijn and van Tubergen 2006). In general, most people prefer a partner with the same background (positive assortative mating). Immigrants often display cultural and socio-economic characteristics that differ from those of members of the host society. These differences can hinder the formation of ethnic minority–majority unions. The members of minority groups who have integrated well into the host society are the most likely to form a union with members of the majority group because their ethnicity is no longer a marker of their distinctiveness (Gordon 1964). The observation that the minority partner in many minority–majority couples has a high level of education, and the observation that second- and later-generation members of ethnic minorities have higher rates of forming mixed ethnic unions with a member of the majority group than foreign-born immigrants seem to support integration theories (Hwang et al. 1997; Mutarak 2003).

However, a willingness to interact with other ethnic groups is not a sufficient condition for mixed ethnic unions to form; there must also be opportunities for such interactions to take place (Blau 1977). Geographic proximity between members of the minority and majority groups increases the frequency of interactions and thus improves the chances for the type of regular contact that can lead to a long-term relationship (Bossard 1932; Clark 1952; Coleman and Haskey 1986; Kalmijn and Flap 2001). People spend most of their time in a limited number of highly segregated spaces, such as schools, neighbourhoods and workplaces. As a result, they tend to choose partners that have similar characteristics (Houston et al. 2005). In most western societies, a large proportion of ethnic minorities live spatially segregated from the majority group and are often concentrated in major cities (Bolt and Van Kempen 2010; Tammaru and Kontuly 2010). A number of explanations have been put forward for this segregation, including the following: a preference for ethnic groups to live together in order to socialise; the improvement in ethnic infrastructure that may arise from living in ethnic clusters; the structures of the labour and housing markets; discrimination by the majority population; and the socio-economic characteristics of ethnic minority groups, which cause them to end up in similar residential environments (Harris 1999). Living outside a concentration area of one's own ethnic group can be expected to increase the likelihood that one will form a mixed ethnic union (Feng et al. 2010; Houston et al. 2005).

The literature on marriage and partnering often uses the metaphor of the market to understand the processes by which people form partnerships (Blau 1977; Kalmijn and van Tubergen 2010). As with any other market, in the marriage market there is supply and demand. On the demand side, individual preferences with regard to the characteristics of the potential partner play a role. On the supply side, the opportunity structure of the market determines whether someone is able to realise his or her preferences (Niedomysl et al. 2010). The choice of partner is constrained strongly by the demographic composition of an individual's search area (Blossfeld and Meyer 1988; Kalmijn and Flap 2001; Monden and Smits 2005). In light of the foregoing, that people choose partners with similar characteristics can be explained,

at least in part, by the fact that a person's choice of partner is constrained by the opportunities available in the market. This opportunity structure is shaped by the places people visit, which tend to be places where they meet others who have characteristics similar to themselves (the supply-side argument, see Fischer et al. 1977; Flap 1999; Kalmijn and Flap 2001). While ethnic residential segregation is pervasive, opportunities to meet are greater at places of work because workplaces are less segregated than neighbourhoods, and differences between immigrant and native labour-market outcomes tend to decrease over time (Ellis et al. 2004; Houston et al. 2005; Rendall et al. 2010; Rebhun 2010; Tammaru et al. 2010a, b).

Endogamous relationships are the most common, which may suggest that such relationships offer the greatest benefit to those involved. However, gainsaying this, exogamous (mixed) relationships do offer benefits to those involved (Feng et al. 2010). Preferring a partner from a different background (negative assortative mating; see Becker 1973) is often explained using social exchange theories (Merton 1941; Schoen and Wooldredge 1989). Social exchange theories postulate that partners exchange resources through partnering in order to improve their social status. Thus, a majority group member that has a lower status is more likely to form a union with a minority group member if the latter has a higher socio-economic status than the people with whom the member of the majority group normally associates (White and Sessler 2000; Nedomysl et al. 2010). In such a union, both parties benefit: the member of the minority group gains contacts in the majority group, and the member of the majority group improves his or her socio-economic status. This postulate of social exchange theories is supported by studies of mixed marriages between black and white people in the US (Kalmijn 1993; Schoen and Wooldredge 1989). However, no support was found in studies of mixed marriages between Asians and whites (Schoen and Thomas 1989, Fu 2006).

### 3 Migration and Ethnicity in Estonia

In 1934, ethnic minorities comprised 11.9% of the population of Estonia, according to the last prewar census (Katus et al. 1997). The main minority groups were Russians (8.2%), Germans (1.5%), Swedes (0.7%), Latvians (0.5%) and Jews (0.4%) (Statistics Estonia 1937). In 1940, Estonia was occupied by the Soviet Union and during the period 1941–1944, Nazi Germany occupied briefly. At the end of this period, Estonia had lost much of its minority population and the share of ethnic minorities had dropped to approximately 3% (Katus 1996; Katus et al. 1997, 2002).

Large-scale immigration began immediately after Estonia was reincorporated into the Soviet Union in late 1944 and immigration remained high throughout the 1980s (Kulu 2004). In 1959, when the first postwar census was carried out, the share of ethnic minorities reached 25% and peaked at 39% in 1989 when the final pre-independence census was performed (Tammaru and Kulu 2003). Immigration was part of a deliberate political and ideological agenda to disperse Russians to member states of the Soviet Union. This political agenda brought to Estonia a wave of communist party members, Soviet military personnel and a large industrial Russian workforce (Katus and Sakkeus 1993). Most Russian immigrants that arrived in

Estonia were employed in all-union enterprises, which were companies established by Moscow (Lindemann 2009). A large share of the immigrants were skilled blue-collar workers, although specialists and managers were also imported from Russia (Pavelson and Luuk 2002; Pettai and Hallik 2002). After Estonia regained its independence in 1991, the share of ethnic minorities decreased as a result of return migration (although it should be said that most ethnic minorities stayed in Estonia). By the time of the 2000 census, ethnic minorities accounted for 32% of the total Estonian population, down 7% from 1989. Since 1991 immigration in Estonia was limited by the introduction of an annual immigration quota (see below).

Russians were the dominant ethnic group in the former Soviet Union, where they comprised approximately half of the population, according to the final Soviet census carried out in 1989. Approximately 25 million Russians lived in the 14 non-Russian republics (Poppe and Hagendoorn 2003). Furthermore, Russian was the official (and main) language used for interethnic communication in the former Soviet Union (Laitin 1998; Pavlenko 2007). However, the positions of ethnic minorities, and especially the positions of Russians, in Estonia changed following independence (Lindemann 2009; Vihalemm and Kalmus 2009; Vihalemm and Masso 2003). When Estonia and other former Soviet republics became independent, the status of ethnic Russians suddenly shifted from being the dominant ethnic group in the Soviet Union to being a minority group in a number of the former Soviet republics (Poppe and Hagendoorn 2003). After independence, non-Estonians had to accept their new minority status against a backdrop of political and public discourse that increasingly emphasised the importance of Estonian identity in society (Lindemann 2009). Nation building became an important objective in the newly independent Estonia (Hallik 2002). Language and citizenship were two important elements of this nation-building process (Rannut 2008). In 1989, 2 years before the demise of the Soviet Union, the Language Law was passed, which replaced Russian with Estonian as the official language of Estonia (ENSV ÜN ja Valitsuse Teataja 1989). This law aimed to defend the Estonian language from russification. This change not only affected Russians but also other ethnic minority groups, such as Ukrainians and Byelorussians, who were more proficient in Russian than they were in Estonian (Rannut 2008).

In 1992, the Estonian parliament reapplied the 1938 Citizenship Law. This law provided rights of Estonian citizenship to all pre-1940 citizens and their descendants (Everly 1997). Most historical ethnic minorities had Estonian citizenship before 1940 (Statistics Estonia 1937). Members of these groups received Estonian citizenship automatically in 1992. All other Estonian residents (mainly post-1944 immigrants and their children) could obtain Estonian citizenship through naturalisation or apply for citizenship in other countries, such as Russia (Pettai and Hallik 2002). Those that were not eligible to acquire Estonian or another citizenship remained stateless. Between 1992 and 2010, the share of people classified as having undetermined citizenship decreased from 32 to 7.2% of the population (Statistics Estonia 2010). In addition to providing rights of citizenship, the Citizenship Law also set an annual immigration quota of 0.1% of the permanent population. Later revisions in the Citizenship Law tightened the quota (to 0.05%), but widened the categories of people eligible to enter Estonia outside the quota (such as family

reunification and the migration of EU citizens and citizens of other developed countries). These revisions also made it easier to obtain Estonian citizenship.

The decisive precondition for gaining Estonian citizenship is still proficiency in the Estonian language (Lindemann 2009). This language requirement is far reaching because a number of members of minority groups who have lived in Estonia for a long time, and some that were even born in the country, do not qualify for Estonian citizenship because of a lack of proficiency in Estonian (Hallik 2002). That these people should lack such proficiency is primarily because Russian was the official language during the Soviet period. The 2000 census reported that 41% of members of ethnic minority groups speak Estonian, but the census question only asked whether people had an elementary knowledge of the language. Sample surveys carried out between 1989 and 2008 showed that the share of ethnic minorities who speak Estonian to a more advanced level only increased from 13 to 15% at the beginning of the 1990s to 18–21% in 2008 (Vihalemm 2010). Proficiency in Estonian is highest amongst the younger generations of ethnic minorities who attended school post-independence, but approximately one in four 15–29 year-old members of ethnic minorities still do not speak Estonian well (Vihalemm 2007).

This lack of proficiency in Estonian amongst members of ethnic minorities limits access to the labour market, because such proficiency is required by law in all public-sector and some private-sector jobs (Lindemann 2009). As a result, members of ethnic minorities who do not speak Estonian, especially stateless persons, have limited access to labour-market opportunities. As a result of this and Soviet labour-market policies, members of ethnic minorities often work in blue-collar skilled occupations, while Estonians are over-represented in public administration (Tamaru and Kulu 2003). This occupational segregation along ethnic lines further limits opportunities to form minority–majority unions.

In addition, the school system is still segregated by language (Asser et al. 2002; Kalmus and Pavelson 2002; Saar 2010), which reinforces the segregation of the labour market. During the Soviet period there were separate Estonian and Russian language schools in Estonia. Since the end of this period, a number of factors have combined to reduce the amount of language segregation in education. All Russian secondary schools have become bilingual and now also teach partly in Estonian. An increasing number of ethnic minority parents are also sending their children to Estonian schools. The share of children of school age attending Russian schools dropped from 41% in 1993 to 27% in 2000 (Kalmus and Pavelson 2002). University courses are now mainly taught in Estonian, too. As a consequence of these changes in the education system, proficiency in Estonian is higher amongst younger generations of ethnic minorities schooled in Estonia since 1991 than in older generations (Vihalemm 2007), which has had the overall effect of improving interethnic relations amongst younger generations. However, ethnic minorities are still over-represented in vocational education and Estonians in general education.

Soviet housing policies (which were linked strongly to labour-market policies) contributed to the spatial segregation of ethnic minorities in Estonia. Most Russian immigrants to Estonia during the Soviet period were housed in the larger cities and industrial areas. At the time of the 2000 census, 42% of ethnic minorities lived in Tallinn and another 31% lived in the industrial cities in the north-east of Estonia. As

a result, ethnic minorities formed 46% of the population of Tallinn and 86% of the population of the north-eastern cities (Tammaru and Kontuly 2010). Both labour-market and spatial segregation caused immigrant workers and their families to have limited contact with mainstream Estonian society (Pavelson and Luuk 2002; Vöörmann and Helemäe 2003).

Interestingly, a significant proportion of the majority Estonian population also has an immigrant background. A considerable Estonian diaspora developed as a result of two waves of emigration. Between the 1850s and 1915, approximately 200,000 ethnic Estonians left Estonia, mainly to live in the Russian Empire. As a result, as many as 19% of ethnic Estonians lived outside Estonia (Kulu 2000; Tammaru et al. 2010a, b). During World War II, there was a second wave of migration when at least 70,000 Estonians fled to western countries as political refugees (Tammaru et al. 2010a, b). Between 1920 and 1923, almost 38,000 ethnic Estonians returned from Russia (Kulu 2000). In the 1940s, more than 50,000 descendants of nineteenth century Estonian emigrants migrated from the Soviet Union back to Estonia (Kulu 2000). Because of this complex history of migration and return migration, a considerable proportion of ethnic Estonians in Estonia were born abroad. The older generations in the return diaspora are of single Estonian origin and have Estonian as their first language. In contrast, the younger generations are often of mixed ethnic origin and do not always have Estonian as their first language (Kulu 2000).

#### 4 Hypotheses

On the basis of the above review of the literature on mixed ethnic unions between minority and majority groups and the specific Estonian ethnic landscape, we formulated a set of hypotheses about the characteristics of those people in minority–majority unions in Estonia. Firstly, it can be hypothesised that ethnic minority women that have the closest ties to Estonian society and culture are most likely to form a union with an ethnic Estonian. In addition, it can be hypothesised that Estonian women who were brought up outside Estonia, or who have parents who were brought up in the Estonian diaspora, are more likely to be in a minority–majority union.

Secondly, supply-side theory leads to the formulation of the hypothesis that members of ethnic minorities who work in white-collar occupations (where they have most opportunities to meet ethnic Estonians) are the most likely to be in minority–majority unions. Although ethnic minorities are relatively highly educated, many work in blue-collar skilled occupations, which provide them with limited opportunities to come into contact with the majority group of Estonians. For Estonian women, we hypothesise that those in blue-collar occupations are most likely to be in minority–majority unions because these occupations bring them into contact with ethnic minorities.

Thirdly, although the present study is not focused on where minority–majority partnerships are formed, we expect to find that ethnic minority women living outside the major cities are most likely to be in mixed ethnic unions because they



are more likely to meet potential Estonian partners. It can thus be hypothesised that Estonian women living in cities are more likely than others to be in minority–majority unions because ethnic minorities are concentrated in cities, increasing the likelihood of meeting a suitable partner.

## 5 Methodology

### 5.1 Data

The study used data from the 2000 Estonian census, which includes individual-level, anonymised records for the entire population<sup>4</sup> of Estonia (1.37 million). The size of the data set allows researchers to analyse relatively small groups in society in great detail. The census included questions on self-reported ethnicity as well as the respondent's country of birth and the country of birth of both parents (Statistics Estonia 2001). By special request, Statistics Estonia provided us with the self-reported ethnicity of both partners for those living in a union, either cohabiting or married. We used the self-reported ethnicity of both partners in order to define three main types of couple (including both cohabiting and married couples), namely (i) majority–majority or Estonian–Estonian couples (both partners consider themselves to be Estonians,  $n = 171,821$ ), (ii) minority–majority couples (one partner considers her/himself to be Estonian and the other partner considers her/himself to be a member of an ethnic minority,  $n = 23,089$ ) and (iii) minority–minority couples (both partners consider themselves to be members of an ethnic minority,  $n = 79,776$ ). These three categories were further refined by taking into account country of birth.

### 5.2 Method

We modelled the probability of being in a minority–majority union for ethnic minority women and for Estonian women aged 20 years or older and living with a male partner (either cohabiting or married). Since the data include both partners in a couple, and because these individuals are dependents, we only analysed the probability of being in a minority–majority union for women. However, we ran similar models for men and found no major differences in the results. The full logistic regression model can be written as follows:

$$\log \frac{p(Y_i = 1)}{1 - p(Y_i = 1)} = \alpha + \sum_{k=1}^k \beta_k X_{ik}$$

where  $p(Y_i = 1)$  is an individual's  $i = 1, \dots, I$  probability of having a partner from another ethnic group and  $1 - p(Y_i = 1)$  is an individual's  $i = 1, \dots, I$  probability of

<sup>4</sup> A limited number of cases were excluded from the analysis due to missing data: data were missing on ethnicity (0.6%); country of birth/origin (1.2%); labour market status (0.6%); occupation (1.3%); and place of residence in 1989 (0.8%). Level of education was missing for 2% of the population. We created a separate dummy for this category, but this is not shown in the tables.

having a partner from the same ethnic group;  $\alpha$  is a constant,  $X_{ik}$  is the value of the variable for an individual and  $\beta_k$  is the parameter that describes the effect of this variable, with  $K$  variables. In the models including ethnic minority women only (Table 2), we estimated the probability of having an Estonian partner; the reference category was having an ethnic minority partner. In the models including Estonian women only (Table 3), we estimated the probability of having an ethnic minority partner; the reference category was having an Estonian partner.

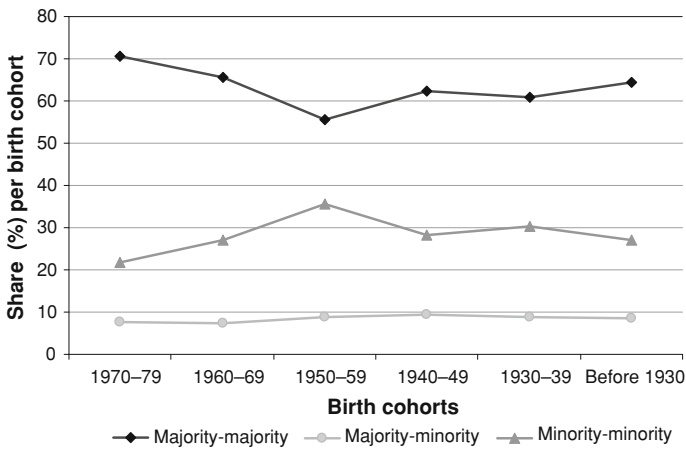
The models in Tables 2 and 3 include a range of explanatory variables that can be expected to affect the probability of being in a minority–majority union. The country of birth/origin variable consists of three categories: (i) first generation/foreign-born immigrant, (ii) second-generation immigrant and (iii) third-generation immigrant or native. We used the same coding for both ethnic Estonians and ethnic minorities in order to investigate whether Estonians that have an immigrant background (including return migrants) are more likely to have a minority partner than do native-born Estonians. The birth cohort variable consists of six categories. Type of education is measured by using two categories (general or vocational education) and level of education is measured by using four categories (primary or low, secondary or middle, university or high and those that are still in education). Occupation is measured by using nine categories, including a category for those not in paid employment. Place of residence is measured from the answers given to both the 1989 census (asked retrospectively in the 2000 census) and the 2000 census. This resulted in four categories: (i) urban dweller (lived in urban areas in both 1989 and 2000), (ii) rural dweller (lived in rural areas in both 1989 and 2000), (iii) rural-to-urban migrant (lived in a rural area in 1989 and in an urban area in 2000) and (iv) urban-to-rural migrant (lived in an urban area in 1989 and in a rural area in 2000). The models including ethnic minority women only (Table 2) also include ethnicity in five categories (Russian, Ukrainian, Byelorussian, Finnish and Other).

We applied a stepwise modelling strategy for women who are members of an ethnic minority (Models 1–4) and an ethnic majority (Models 5–8). Models 1 and 5 only include the country of birth/origin variable to gain more insight into the role that intergenerational variation plays in the occurrence of minority–majority unions. In Models 2 and 6, birth cohort, ethnicity (only for ethnic minority women in Model 2) and the type and level of education are added. In Models 3 and 7, occupation is added. Finally, in Models 4 and 8 place of residence in 1989 and 2000 is added to gain more insight into the role of location and migration on minority–majority unions.

## 6 Results

### 6.1 Descriptive Statistics

Figure 1 provides an overview of the frequency of different types of couple by birth cohort at the time of the 2000 census. However, the data do not necessarily paint an accurate picture of the likelihood of members of different birth cohorts engaging in different types of union because, as is suggested by the literature, divorce and separation levels may be higher for mixed unions. Figure 1 only shows the



**Fig. 1** Couple types (cohabiting and married) by birth cohort (%). *Source:* Calculations by the authors using data from the 2000 Estonian census

surviving unions by couple type in 2000. Majority–majority couples comprise 63% of the total population, with a higher share than average amongst both younger and older birth cohorts. Minority–minority unions account for 29% of all unions, with a lower share for younger cohorts. Minority–majority unions comprise approximately 9% of all couple types, with small variations across all birth cohorts.

Table 1 provides an overview of the characteristics of women aged 20 and over who are in a union, by union type. Interestingly, the country of birth variable (including the country of birth of the parents) highlights some of the complexities of the Estonian ethnic landscape. Of the women in majority–majority couples, 87% have no immigrant background. Moreover, 12% were born in Estonia but are classified as second-generation immigrants because one of their parents was born abroad. These women could have Estonian parents who are return migrants or they could have been born within a mixed ethnic union, but they still identify themselves as Estonians. One per cent of women in Estonian–Estonian couples are classified as foreign born. Of those in minority–minority couples, 64% of women are foreign born, 31% are second-generation immigrants, and 5% are third-generation immigrants or natives. Information on minority–majority couples is presented in two columns: one for couples in which there is an Estonian woman and one for couples in which there is an ethnic minority woman. The majority of Estonian women in minority–majority couples do not have an immigrant background, but as many as 34% come from families where one or both parents are foreign born, and 8% are foreign born themselves. This is an interesting finding; Estonian women who have an immigrant background are much more likely to be in a mixed ethnic union than are Estonian women who do not have such a background. The fact that they or their parents were foreign born makes them more inclined to form a union with a member of an ethnic minority. Women from an ethnic minority in minority–majority couples are mostly foreign born (57%). Over one-third (35%) are second-generation immigrants and 8% are third-generation immigrants or natives.

**Table 1** Characteristics of partnered women aged 20 and over by union type (%)

	Majority–majority	Minority–minority	Minority–Majority	
			Estonian female	Minority female
<b>Country of birth/origin</b>				
Third generation or native	87	5	58	8
Second-generation immigrant	12	31	34	35
Foreign born	1	64	8	57
<b>Birth cohort</b>				
1970–79	17	11	13	15
1960–69	23	21	18	20
1950–59	21	28	26	23
1940–49	18	17	20	20
1930–39	14	15	16	15
Before 1930	7	7	7	7
	100	100	100	100
<b>Type of education</b>				
General	67	61	68	66
Vocational	33	39	32	34
	100	100	100	100
<b>Level of education</b>				
In education	6	3	4	3
Low	22	18	24	24
Middle	52	60	56	55
High	20	19	16	18
	100	100	100	100
<b>Labour-market status</b>				
Employed	58	52	49	55
Non-employed	42	48	51	45
	100	100	100	100
<b>Occupation<sup>a</sup></b>				
Manager	11	6	7	10
Senior specialist	20	14	16	16
Specialist	20	17	17	19
Clerk	10	8	9	11
Service worker	18	17	18	20
Skilled worker	5	11	10	7
Operator	3	9	8	6
Unskilled worker	8	17	16	12
	100	100	100	100
<b>Moved within Estonia between 1989–2000</b>				
No	78	94	86	85
Yes	22	6	14	15

**Table 1** continued

	Majority–majority	Minority–minority	Minority–Majority	
			Estonian female	Minority female
	100	100	100	100
Place of residence in 2000				
Urban	48	85	62	64
Rural	52	15	38	36
	100	100	100	100
<i>N</i>	171,821	79,776	10,531	12,558

<sup>a</sup> The occupation percentages apply only to those in employment

*Source:* Calculations by the authors using data from the 2000 Estonian census

It is interesting that as many as 42% of Estonian women in minority–majority unions are either foreign born or have foreign-born parents. Unfortunately, the census only included information on the country of birth of parents and not on their self-reported ethnicity. Therefore, we cannot ascertain how many of the Estonian women living in mixed ethnic unions have mixed ethnic parents and how many are the children of former diaspora Estonians. A number of these Estonian emigrants or their children who moved to Russia during the demographic transition at the end of the nineteenth and the beginning of the twentieth century have returned to Estonia (Kulu 2003; Tammaru et al. 2010a, b). The children of these emigrants who returned to Estonia and who were born abroad are classified as foreign born, but mostly self-report their ethnicity as Estonian. This explains why 13% of women in Estonian–Estonian couples are foreign born or have foreign-born parents.

Table 1 also shows that minority women from the most recent birth cohort born in the 1970s are over-represented in minority–majority unions. The women in this cohort mainly formed unions in independent Estonia after 1991, during the time when almost no new immigration occurred. Estonian women in the same birth cohort are under-represented in minority–majority unions. Both Estonian and ethnic minority women in minority–majority unions are over-represented in the category with only a low level of education. Estonian women in minority–majority unions are over-represented in the non-employed category and have relatively low-skilled jobs when in employment. Ethnic minority women in minority–majority unions are over-represented in the employed category and have relatively high-skilled jobs when in employment. The multivariate models presented in the next section shed more light on the effects of these individual characteristics.

## 6.2 Modelling Minority–Majority Unions for Ethnic Minority Women

Table 2 shows the results from the logistic regression models of the probability of ethnic minority women having an Estonian partner. The reference category consists of those in minority–minority unions. Model 1 shows that third-generation immigrants have 1.3 (1/0.75) times higher odds to be in minority–majority unions

**Table 2** Logistic regression of the probability of being in a minority–majority union (reference is minority–minority couple). Minority women in unions only, odds ratios,  $N = 92,334$ 

	Model 1	Model 2	Model 3	Model 4
Country of birth/origin (Ref: third generation)				
Second generation	0.75***	0.75***	0.75***	0.88***
First generation/foreign born	0.63***	0.58***	0.58***	0.69***
Birth cohort (Ref: 1970–1979)				
1960–1969		0.94*	0.95	0.92**
1950–1959		1.00	1.02	1.00
1940–1949		1.22***	1.23***	1.24***
1930–1939		0.99	0.98	1.01
Before 1930		1.29*	1.26*	1.38**
Ethnicity (Ref: Russian)				
Ukrainian		1.34***	1.33***	1.24***
Byelorussian		0.88**	0.89**	0.89**
Finn		8.39***	8.26***	7.24***
Other		2.53***	2.52***	2.39***
Type of education (Ref: General)				
Vocational		0.82***	0.81***	0.87***
Level of education (Ref: Low)				
In education		1.03	1.01	1.01
Middle		0.82***	0.83***	0.90***
High		0.78***	0.74***	0.87***
Occupation (Ref: Unskilled worker)				
Manager			1.25***	1.24***
Senior specialist			1.34***	1.31***
Specialist			1.20***	1.20***
Clerk			1.23***	1.24***
Service worker			1.17***	1.15***
Skilled worker			0.96	0.96
Operator			0.96	0.97
Non-employed			1.21***	1.14***
Residence in 1989 and 2000 (Ref: Urban)				
Rural-to-urban				1.18***
Urban-to-rural				3.12***
Rural				4.65***
Constant	0.23***	0.25***	0.21***	0.15***
–2 LL	73246.2	69774.6	69560.9	67408.6

Source: Calculations by the authors using data from the 2000 Estonian census

\*  $P < 0.10$ ; \*\*  $P < 0.05$ ; \*\*\*  $P < 0.01$

than are second-generation immigrants and 1.6 (1/0.63) times higher odds than are foreign-born ethnic minorities. The findings show that the weaker the intergenerational ties with Estonia, the less likely ethnic minority women are to have an

Estonian partner. The generation effect hardly changes when we add other explanatory variables into Models 2–4. The year of birth effect shows that the 1940–1949 cohort and those born before 1930 are most likely to have an Estonian partner, whereas those born between 1960 and 1969 are least likely to be in minority–majority unions. There is no simple explanation for these differences, and they most likely result from a combination of supply-side and cultural effects. For example, the reduced probability of a member of the 1960–1969 birth cohort having a partner from the majority population might reflect the fact that their union was formed during the transition period in the country in the late 1980s and early 1990s, when the process of nation building began and Estonians were more focused on their own ethnic group and national identity (Hallik 2002). According to the increased ethnic consciousness hypothesis, mixed ethnic union formation could reduce or be postponed at times of major societal transformations. For example, a study by Monden and Smits (2005) carried out in Latvia, a country which went through similar societal changes as Estonia after 1991, showed that postponement of union formation between members of the minority and majority populations took place at the time of highest ethnic tensions, but this was compensated later. Also in Estonia, we can observe an elevated probability to form mixed ethnic unions in the 1970s birth cohort compared to the 1960s birth cohort.<sup>5</sup>

Model 2 also highlights the interesting ethnic differences in the probability of a member of the minority population having an Estonian partner. The presented results show that non-Slavic ethnic minorities are most likely to be in minority–majority unions, whereas Byelorussian women are least likely to have an Estonian partner, followed by Russians and Ukrainians. Those belonging to other (smaller) ethnic groups, especially Finns, are the most likely to be in minority–majority unions. The finding that Slavic women are least likely to form a union with Estonian men is the result of a number of factors. The size of the Slavic minority group in Estonia, the low proficiency in the Estonian language of Slavic groups and segregated school systems and labour markets all increase the likelihood of intragroup marriages. There might also be reluctance amongst native Estonians to form unions with Russians because they were the dominant ethnic group in the former Soviet Union. Further research is needed to test this hypothesis.

Possessing a vocational education reduces the probability of being in a minority–majority union. As the level of education increases, the probability of being in a minority–majority union decreases. This is in line with the findings in the descriptive analyses in Table 1. Ethnic minority women that have a low level of education have 1.3 times higher odds to have an Estonian partner than are ethnic minority women who are university educated. However, there is no evidence of an interaction effect between level of education and birth cohort; thus, the hypothesis that the transformation of university education in Estonia has increased minority–majority unions in the youngest birth cohorts is not supported.

Model 3 shows that ethnic minority women in higher level white-collar occupations are more likely to be in minority–majority unions than are ethnic

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<sup>5</sup> However, it is important to keep in mind that we are only able to observe the surviving unions, which are affected by a differential divorce rate across birth cohorts.

minority women in blue-collar occupations. For example, senior specialists have 1.3 times higher odds to be in minority–majority unions than are unskilled workers. This finding is in line with the supply-side argument, such that ethnic minority women working in white-collar occupations are more likely to meet an Estonian partner than are ethnic minority women working in blue-collar occupations. An alternative explanation can be derived from social exchange theory, such that members of majority group that have a lower status are more likely to form a union with a member of a minority group if the latter has a higher socio-economic status compared with his or her group members. Unfortunately, we cannot test this hypothesis because the data do not provide the socio-economic status of partners. It should also be acknowledged that the effect of a high occupational status could partly be the result of omitted variable bias.

The final variable included in Model 4 is place of residence. The results show that ethnic minority women living in rural areas in both census years have 4.6 times higher odds to be in minority–majority unions than are ethnic minority women who were living in cities in both years. In addition, migrants from urban-to-rural areas are more likely to have an Estonian partner than are those who stay in cities. Since ethnic minorities in Estonia are concentrated in cities, living outside cities is likely to increase the probability of finding an Estonian partner. Unfortunately, our data only allow us to investigate where couples live, not where unions were formed.

### 6.3 Modelling Minority–Majority Unions for Estonian Women

Table 3 shows the results from the logistic regression models of the probability of Estonian women being in minority–majority unions. The reference category consists of those in majority–majority unions. The results of Model 5 show that foreign-born Estonian women have 10.8 times higher odds to be in minority–majority unions than are native Estonian women. Estonian women that have foreign-born parents have 4.4 times higher odds to be in minority–majority unions than are native Estonian women. These findings are almost linear, namely the weaker the intergenerational ties with Estonia, the more likely Estonian women are to have ethnic minority partners. These results do not change after including other explanatory variables in Models 6 to 8. It must be acknowledged that the group of foreign-born Estonian women is very small (1%), but the group of Estonian women that has foreign-born parents is relatively large (12%). Both groups are open to mixed ethnic unions, probably because they were brought up abroad or by parents who were brought up abroad, or spend time abroad, mainly in Russia. Some of these parents are likely to be in mixed ethnic unions themselves, causing their children to be more open to such unions.

Model 6 shows that members of older birth cohorts are more likely to be in minority–majority unions than are members of the youngest two cohorts, although those born before 1930 are an exception to this. These results might reflect opportunity structure effects. Members of the oldest cohort of Estonian women formed unions when large-scale immigration had only just begun and the share of immigrants was small. This cohort might also have been reluctant to form unions with Russians so soon after World War II. The reduced probability of those in the 1960–1969 birth cohort having a minority partner might again reflect the fact that



**Table 3** Logistic regression of the probability of being in a minority–majority union (reference is majority–majority couple). Estonian women in unions only, odds ratios,  $N = 182,352$ 

	Model 5	Model 6	Model 7	Model 8
Country of birth/origin (Ref: Third generation)				
Second generation	4.43***	4.43***	4.41***	4.33***
First generation/foreign born	10.75***	10.34***	10.17***	9.95***
Birth cohort (Ref: 1970–1979)				
1960–1969		0.91***	0.94*	0.96
1950–1959		1.07**	1.11***	1.10***
1940–1949		1.10***	1.13***	1.08**
1930–1939		1.12***	1.11***	1.01
Before 1930		0.98	0.97	0.86
Type of education (Ref: General)				
Vocational		0.88***	0.92***	0.91***
Level of education (Ref: Low)				
In education		0.73***	0.77***	0.78***
Middle		1.20***	1.23***	1.13***
High		0.86***	1.06	0.93*
Occupation (Ref: Unskilled worker)				
Manager			0.67***	0.65***
Senior specialist			0.59***	0.59***
Specialist			0.70***	0.67***
Clerk			0.74***	0.72***
Service worker			0.79***	0.78***
Skilled worker			0.99	0.95
Operator			1.11	1.08
Non-employed			0.85***	0.88***
Residence in 1989 and 2000 (Ref: Urban)				
Rural-to-urban				1.03
Urban-to-rural				0.53***
Rural				0.45***
Constant	0.04***	0.04***	0.05***	0.06***
2LL	74908.1	74665.3	74498.5	73529.7

Source: Calculations by the authors using data from the Estonian census 2000

\*  $P < 0.10$ ; \*\*  $P < 0.05$ ; \*\*\*  $P < 0.01$

members of this cohort formed unions during the transition period in the late 1980s and early 1990s.

Estonian women who have a vocational education are less likely to be in minority–majority unions than are those who have a general education (Model 6). Estonian women who have a middle-level education are more likely to be in minority–majority unions than are those that have a low- or a high-level education. The effect of having a high-level education is not stable between models. Once occupation is included in the model, the difference between having a low- and a

high-level education disappears (Model 7), but shows up again after introducing place of residence (Model 8). Estonian women that have lower level jobs or are not in employment are more likely to be in minority–majority unions than are Estonian women that have higher level white-collar jobs. For example, unskilled workers have 1.7 times higher odds to be in minority–majority unions than are senior specialists. This is an interesting finding, because the effects for ethnic minority women were reversed; they were more likely to be in minority–majority unions when they were in higher level white-collar occupations. We explained this by arguing that ethnic minority women were more likely to meet Estonian men when they had white-collar jobs (supply-side argument). For Estonian women, it can be argued that they are more likely to meet ethnic minority men when they work in blue-collar occupations because ethnic minorities are traditionally over-represented in these occupations. Finally, Estonian women either living in cities both in 1989 and 2000 or moving to cities between 1989 and 2000 are more likely to have ethnic minority partners than are Estonian women either living or moving to rural areas during the same period. Again, this can be explained using the supply-side argument. Estonian women are more likely to meet ethnic minority partners in an urban environment than they are in a rural one. Here, it must also be acknowledged that selection bias might partly cause the urban–rural effect, because minority–majority couples might be more likely to move from urban-to-rural areas.

## 7 Conclusions and Discussion

The study reported herein investigated the characteristics of women in ethnic minority–majority unions in Estonia. The occurrence of minority–majority unions is generally seen as an important indicator of the integration of ethnic minorities into their host societies. Estonian society is segregated, both socially and spatially. Estonians and ethnic minorities work in different sectors of the economy, attend different schools, and live in different residential environments. As a result, the opportunities to meet a partner from another ethnic group are limited. According to the 2000 Estonian census, approximately 9% of all unions in Estonia are between members of minority and majority populations.

One of the main findings of the study was that the weaker the intergenerational ties with Estonia, the less likely ethnic minority women are to be in a minority–majority union. This is in line with the results of previous research that has found that mixed ethnic unions are more common amongst second-generation immigrants compared to the first generation immigrants (Kalmijn and van Tubergen 2006; Qian et al. 2001). For Estonian women, we found the opposite, namely that the weaker the intergenerational ties with Estonia, the more likely they are to be in a minority–majority union. The finding that Estonian women that have an immigrant background (i.e. they or their parents were born abroad) are more likely to be in a mixed ethnic union is new and of particular interest. To our knowledge, it has not yet been reported in the literature. However, this finding is related closely to the broader socialization hypothesis in population studies, which emphasizes the role of individual-level socialization processes by focusing on the impact of the prevailing

values, norms and behaviour during childhood on demographic outcomes in later life (Kulu 2002; Milewski 2010). While previous studies on mixed ethnic unions demonstrated the importance of socialization for ethnic minority groups in their host countries (Kalmijn and van Tubergen 2006; Qian et al. 2001), our study contributes that socialization is also important factor in the formation of mixed ethnic unions for members of the majority group.

The finding that the weaker the intergenerational ties with their homelands, the more likely native women are to be in a minority–majority union might have a number of interlinked causes. Firstly, their immigrant backgrounds might have exposed them to other ethnic groups, thereby rendering them more open to unions with other ethnic groups. Secondly, Estonian women that have an immigrant background are mainly return migrants from Russia. First- or second-hand experience of Russian society might make them more likely to be open to a union with ethnic Russians. Alternatively, having experience of living abroad could make it more difficult to resocialize in their homelands, thereby increasing the probability of entering into mixed ethnic unions. Thirdly, there might be an intergenerational transmission of openness to being in a mixed ethnic union because some parents of native women that experience living abroad might also have been in mixed ethnic unions. Although the patterns found in the study described herein might be specific to the Estonian diaspora and the subsequent return migration of ethnic Estonians to Estonia, they might also occur in other countries. With increasing international migration, the share of people that have international mobility and thereby experience living in different cultures is growing, which might make them more open to mixed ethnic unions.

The findings also showed some interesting differences between ethnic groups regarding the probability of being in a minority–majority union. Members of Slavic ethnic groups were found to be the least likely to be in minority–majority unions, whereas Finns were found to be the most likely. The results indicate that both cultural and supply-side effects are important for the formation of minority–majority unions (see also Kalmijn and van Tubergen 2006; Lucassen and Laarman 2009). Finns are culturally the closest ethnic group to Estonians, and the Estonian and Finnish languages belong to the same language group. A more detailed look at the 2000 census data shows that mixed ethnic unions between Estonians and Finns are common in all birth cohorts. The fact that members of other smaller minority groups are also more likely to be in minority–majority unions than are Slavic groups implies that being part of a small ethnic group reduces the probability of forming a co-ethnic union. The sheer size of the Slavic group, by contrast, facilitates the formation of co-ethnic unions.

The findings on how level of education affects the formation of unions were not always as expected. Women from both majority and minority groups who have a vocational education are less likely than are women in general education to be in minority–majority unions. Ethnic minority women who have a high level of education are less likely than are members of other educational groups to be in minority–majority unions. Social exchange theory might lead us to expect the opposite, but our findings suggest that the members of ethnic minority groups who are better educated seem to prefer to find a partner from their own ethnic group. This

indicates strong cultural and social ties within ethnic groups, which may occur to the detriment of integration.

In terms of occupation, working in white-collar jobs increases the probability of being in minority–majority unions amongst minority women, but has the opposite effect amongst majority women. This finding most likely reflects the occupational segregation of the Estonian labour market, where ethnic minorities mainly work in blue-collar occupations and Estonians in white-collar occupations. Finally, the probability of being in a minority–majority union is related to place of residence across the 1989 and 2000 censuses. Members of ethnic minorities are most likely to be in minority–majority unions when they either lived in or moved to rural areas. Estonian women are most likely to be in minority–majority unions when they either lived in or moved to urban areas. Although the census data used do not allow us to further investigate where these minority–majority unions were formed, the presented results imply that being exposed to another ethnic group in the residential environment increases the probability of forming a mixed ethnic union (see also Feng et al. 2010 for the UK).

The study described herein has provided unique insights into the characteristics of people in minority–majority unions in a society that has a high share of ethnic minorities and that is segregated along ethnic lines. The presented findings confirm that the opportunity structure of available partners is important for understanding how minority–majority unions are formed. People who are exposed to ethnic groups other than their own are most likely to form mixed ethnic unions. Given the strong effect of ethnicity, the barriers to mixed ethnic unions seem structural. However, the fact that second- and especially third-generation immigrants are more likely than are foreign-born people to form mixed ethnic unions suggests that the share of mixed ethnic unions is likely to rise in the future.

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