DISCUSSION PAPER SERIES

IZA DP No. 9602

# Types of Spatial Mobility and the Ethnic Context of Destination Neighbourhoods in Estonia

Kadi Mägi
Kadri Leetmaa
Tiit Tammaru
Maarten van Ham

December 2015

Forschungsinstitut
zur Zukunft der Arbeit
Institute for the Study
of Labor

# Types of Spatial Mobility and the Ethnic Context of Destination Neighbourhoods in Estonia

**Kadi Mägi**
*University of Tartu*

**Kadri Leetmaa**
*University of Tartu*

**Tiit Tammaru**
*University of Tartu*

**Maarten van Ham**
*Delft University of Technology and IZA*

Discussion Paper No. 9602
December 2015

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

IZA Discussion Paper No. 9602
December 2015

# ABSTRACT

## Types of Spatial Mobility and the Ethnic Context of Destination Neighbourhoods in Estonia

Most studies of the ethnic composition of destination neighbourhoods after residential moves do not take into account the types of moves people have made. However, from an individual perspective, different types of moves may result in neighbourhood environments that differ in terms of their ethnic composition from those in which individuals previously lived. We investigate how the ethnic residential context changes for individuals as a result of different types of mobility (immobility, intra-urban mobility, suburbanisation, and long-distance migration) for residents of the segregated post-Soviet city of Tallinn. We compare the extent to which Estonian- and Russian-speakers integrate in residential terms. Using unique longitudinal Census data (2000-2011) we tracked changes in the individual ethnic residential context of both groups. We found that the moving destinations of Estonian- and Russian-speakers diverge. When Estonians move, their new neighbourhood generally possesses a lower percentage of Russian-speakers compared with when Russian-speakers move, as well as compared with their previous neighbourhoods. For Russian-speakers, the percentage of other Russian-speakers in their residential surroundings decreases only for those who move to the surburbs or who move over longer distances to rural villages. By applying a novel approach of tracking the changes in the ethnic residential context of individuals for all mobility types, we were able to demonstrate that the two largest ethnolinguistic groups in Estonia tend to behave as 'parallel populations' and that residential integration in Estonia is therefore slow.

JEL Classification: J15, J61, R20, R23

Keywords: residential mobility, migration, suburbanisation, ethnicity, longitudinal data, Estonia

Corresponding author:

Kadi Mägi
Centre for Migration and Urban Studies (CMUS)
Department of Geography
University of Tartu
Vanemuise 46
51014 Tartu
Estonia
E-mail: kadi.magi@ut.ee

# 1. Introduction

Today, Russian-speakers form almost one third of the 1.3 million people living in Estonia, giving Estonia one of the highest proportions of ethnic minorities in Europe. The Russian-speaking minority population in Estonia has its roots in the intensive immigration that took place from other Soviet republics in the period when the country was part of the Soviet Union (1940–1991). Culturally this minority is rather homogeneous, consisting mainly of Russians, but with large groups of Ukrainians and Belorussians. Even those who have been living in the country for two or three generations mostly use the Russian language in their daily communication. The Estonian case is very interesting for studying the processes of ethnic segregation because of the unique historical backdrop provided by its Soviet past. In essence, the residential patterns of Russian-speakers differed from those of the majority population during the Soviet period because central planners distributed migrants to major administrative, military, and industrial centres, such as the capital city of Tallinn, where they now form almost half of the city's population, and urban industrial areas in the North East of Estonia, where they are now a majority group. Within all these cities, Russian-speakers were accommodated mostly in large housing estates built during the Soviet era. The societal conditions of the Soviet years thus shaped the current ethnic landscape in Estonia in a unique way, because central planners exogenously created the residential pattern of the minority population.

There are both similarities and fundamental differences between Estonian cities and other ethnically segregated cities in Western Europe and North America. In the latter case, ethnic residential differentiation typically reflects the differences between the consumption capacity and preferences of the different ethnic groups as well as the discrimination practices in these societies (e.g., Massey and Denton 1985; Johnston, Forrest, and Poulsen 2002). Ethnic segregation in Soviet cities was not originally driven by such factors and it was, to a large degree, a function of housing allocation by central planning authorities. Thanks to industrialisation and militarisation, Soviet cities grew rapidly, fuelled by immigration, and new neighbourhoods were purpose-built for the growing urban population. Since 1991, under market conditions this inherited ethnic landscape in Estonia has allowed members of both the majority and minority populations to choose between minority-rich or majority-dominated destinations when they move.

While the inherited ethnic context was created by different means in Soviet Estonia compared with Western Europe and Northern America, the mechanisms of ethnic segregation in place today are very similar. As elsewhere, for example, prejudice between ethnic groups may be fuelled by their living in separate areas and not having many opportunities to meet members of other ethnic groups (Harrison, Law, and Phillips 2005), which can in turn prevent the creation of cross-cultural contacts between ethnic groups. Consequently, reducing ethnic segregation is often rather difficult, and segregation can persist over generations (Heckmann 2005, 17). Although many authors have challenged the notion of a straightforward link between spatial and social integration (Bolt, Özüekren, and Phillpis 2010; Musterd 2003), there is evidence that people with immigrant backgrounds living in minority-rich neighbourhoods are indeed hampered in their attempts at integration and that ethnically diverse neighbourhoods offer better opportunities for contact and social integration between different ethnic groups (Gijsberts and Dagevos 2007; Martinovic, Tubergen, and Maas 2009). Thus, the neighbourhood context and how it changes for those people who move, or also who do not move, is very important for understanding the process of ethnic integration.

Most studies investigating the ethnic composition of destination neighbourhoods after residential moves fail to take into account the types of moves people have made. In the present paper, we address the need to investigate the effects of intra-urban moves, suburbanisation, long-distance migration, and immobility on changes in the ethnic context of where people live. We argue that from the perspective of each individual, different types of moves may lead to different environment (destination neighbourhood) in terms of the ethnic composition compared to the place the person lived before (origin neighbourhood). We wish to learn which types of moves contribute more to residential integration. We also investigate the ethnic contexts of non-movers (stayers), which may change as a result of others moving and contributing to residential segregation and integration. Taking these considerations into account, we aim to answer the following research question: *How does the individual ethnic residential context change as a result of different types of mobility (immobility, intra-urban mobility, suburbanisation, and long-distance migration) for Estonian- and Russian-speakers living in the post-Soviet segregated capital city Tallinn; in other words, to what extent does residential integration occur as a result of different types of mobility?*

Using a unique database with linked individual-level data from the 2000 and 2011 Estonian censuses we track the ethnic residential environments of individuals living in the capital city of Tallinn (with 400.000 inhabitants) in 2000, who by 2011 were either still living in their original neighbourhoods, or had moved within the city or within the Tallinn metropolitan area, or had moved from Tallinn to other regions of Estonia. We begin, however, by explaining the conceptual framework used in the study.

## 2. Different forms of spatial mobility and neighbourhood outcomes

Typically, studies of segregation focus on intra-urban or intra-metropolitan residential mobility, where most residential moves are made within a functional housing and labour market area. In this study we add the consideration of destination neighbourhoods that result following long-distance migration to conceptual frameworks that aim to understand the residential outcomes of spatial mobility, and we focus on residential integration as a result of moving. Major cities are attractive destinations because they offer a concentration of jobs, services, and educational institutions; these cities typically contain diverse residential environments that fuel intra-urban mobility. Suburbanisation is traditionally triggered by a preference for safer and more family-friendly neighbourhoods, which do not involve the need to change the daily activity space of the moving household very much. Remote rural areas and smaller towns offer residential environments that are spacious, quiet, green, and perceived to offer a more traditional lifestyle. When interpreting the neighbourhood outcomes of various types of mobility, we must be aware of the factors that motivate intra-urban, suburban, and long-distance moves.

There are several determinants that enable, constrain, or structure residential moves, but often these operate differently for different ethnic groups. Most typically, the economic make-up of a household determines whether or not it is possible for that household to move and what kind of housing and neighbourhood is affordable (van Kempen 2005:198; Clark, van Ham and Coulter 2014). Discrepancies between the choices of members of different ethnic groups often result from differences in terms of labour market success and availability of financial resources. We also know that individuals differ in their residential aspirations at different moments in their life-course (Kulu and Milewski 2007; Kley and Mulder 2010; Lundholm 2012). In some cases ethnic differences also occur in moves induced by life-course events, for example, minority and majority groups may have different family traditions, and transnational living may have an

effect on their residential choices in their new homeland. Social networks and connections with potential destinations also determine where people move to. Previous experiences such as living in, visiting, or spending holidays in certain regions and in certain types of neighbourhood also shape residential decisions (Feijten, Hooimeijer, and Mulder 2008). Personal networks and their geographical dispersion, as well as the extent to which individual experiences of different regions of the country tend to be different for minority and majority groups, may affect the choice of destination neighbourhood. Due to such differences, neighbourhood destinations often vary between ethnic groups.

We now turn more specifically to what is known from previous empirical research about the destinations of minority and majority group members that arise from different types of mobility, and how this affects residential integration. Many studies show that households tend to move to neighbourhoods where the characteristics of the population are similar to their own, and this applies to both minority group and to the majority population (Schelling 1971; Hedman, van Ham, and Manley 2011). In the case of intra-urban and intra-metropolitan mobility, the classical theory of spatial assimilation assumes that residential integration begins once the members of the minority population start to move up the socio-economic ladder (e.g., Massey and Denton 1985; van Kempen and Özuekren 1998). Although this phenomenon is common, higher socio-economic status does not always lead to spatial integration (Quillian 2003). Instead, minorities can end up in so-called ethnic neighbourhoods (Clark 1992; van Ham and Feijten 2008). This might result from their preferences (they may wish to preserve their culture and rely on the support of others from their ethnic group (Özuekren and Ergoz-Karahan 2010: 364)) or they may have no alternative, for example because of restrictions related to direct or indirect discrimination.

When the native population moves out of a neighbourhood with a high concentration of ethnic minorities, this has been termed "white flight" (see e.g., Thompson 1999; Crowder 2000). There are indications that if the percentage of ethnic minorities rises above a certain threshold then the native population may start to self-segregate themselves by looking for non-minority neighbourhoods elsewhere in the urban region (Goering 1978; cf. van Ham and Clark 2009). This "avoidance" type of migration behaviour (Bråmå 2006) can also be found in the choice of new neighbourhood, e.g., while moving anyway due to the changes in one's life-course, the members of the majority population tend to move to the districts with a low proportion of minorities. Thus the forces of homophily (McPherson, Smith-Lovin, and Cook 2001), or the tendency to have a preference for similar people, characterise the moves of both the minority and majority population, and work against residential integration. Often, this is in turn amplified by the different opportunity structures of ethnic groups.

Traditionally the majority population is the first to move to the suburbs, which at the early stages of the suburbanisation process usually contain low percentages of minorities. Many studies have shown that suburbs become ethnically more heterogeneous over time (Timberlake, Howell, and Staight 2011; Alba et al. 1999; Farrell 2014), facilitating residential integration. However, it cannot be claimed that suburbanisation marks the end of segregation—over time the suburbanisation of minority groups can also have an increasingly segregative effect within the suburb itself (Li 1998; Farrell 2014; Tammaru et al. 2013). Alba et al. (1999) argued that when the proportion of ethnic minorities in a suburb increases, it becomes easier for other members of that ethnic group to settle there, because the networks and social infrastructure that exist in those suburbs is now more likely to meet their expectations.

Very little is known about the ethnic dimension of neighbourhood outcomes for those who move over longer distances. This is understandable because ethnic minorities tend to settle in large urban areas in all major destination countries (van Kempen 2005). Even when refugee dispersal policies have been applied in some countries (channelling refugees to smaller cities and rural areas) (cf. in Denmark: Damm 2004), the preferred choices of all immigrants on arrival tend to be major urban centres. There are few studies on the long-distance migration of ethnic minority groups (but see Finney and Simpson 2008; Simpson and Finney 2009; Silvestre and Reher 2014; Tammaru and Kontuly 2011), but these studies do show that when an ethnic group lives in a country for a long period of time, the members of this group develop contacts with the majority population and other ethnic groups, and some of them then start to move to other parts of that country. Because the destinations, e.g., cities and towns in less urban and more rural areas usually have less minorities it has been suggested that moving away from major cities thus increases ethnic residential integration (Simpson and Finney 2009). Although there is no direct empirical evidence on neighbourhood choice in more distant destinations, we expect that the principles of how minority and majority groups choose their destination neighbourhoods in the case of long-distance moves may follow the logic of intra-metropolitan moves: a preference to live with similar people, economic and institutional restrictions leading to the choice of certain districts, more settling in those neighbourhoods that are known through personal networks and experiences, and/or the need for specific housing/neighbourhood qualities, etc.

Finally, the phenomenon of staying rather than moving should be considered in any understanding of residential integration (cf. Cooke 2011; Coulter and van Ham 2013; Coulter, van Ham, and Findlay 2015). Hanson (2005) argued that mobility and residential stability should be conceptualised and measured together. Mobility is an act of those able and willing to pursue change, for example, when they are not satisfied with their current neighbourhood, or their dwelling no longer meets the needs of the family group. A number of people, often called "unsatisfied trapped" residents (see e.g., Musterd and van Kempen 2007), however, are not able to move according to their preferences (e.g., van Ham and Clark 2009). At the same time, others may constitute a "satisfied trapped" category, and do not wish to move even if they can afford to. This may be a result of the local social ties and community attachment that they have developed locally (schools, jobs, social life, connections to population groups of their own ethnicity, etc.).

In our empirical analysis we will investigate the extent to which all these forms of spatial mobility (incl. immobility) shape the residential ethnic context (residential integration) for the majority as well as the minority population. We now introduce the ethnic residential landscapes of Tallinn, the Tallinn urban region, and the rest of Estonia, in order to provide an overview of the kinds of potential destination neighbourhoods that exist in various parts of the country.

## 3. Ethnic residential landscapes in Estonia

Large-scale immigration to Estonia from other Soviet republics, mainly from Russia, ceased following the collapse of the Soviet Union in 1991. In parallel with the withdrawal of Soviet troops from Estonia in the early 1990s, return migration took place among many former immigrants. For example, Tallinn lost almost 60,000 inhabitants due to emigration during the 1990s (12 percent of the population of Tallinn in 1989; Leetmaa, Tammaru, and Anniste 2009: 441). Nevertheless, the majority of the Russian-speaking population remained in Estonia. Since the 1990s there has been very little immigration, which makes Estonia an interesting case study

of ethnic segregation. We are able to investigate the residential integration of a relatively homogeneous and stable minority population, with a high proportion of second- and third-generation immigrants who have gradually developed ties with their country of residence.

From the perspective of spatial integration it is worth noting that the Estonian settlement system offers an extensive continuum of different residential destinations (Figure 1). 86 percent of all, mainly Russian-speaking, minorities reside in only two counties—54 percent in Harju county (which largely overlaps with the Tallinn metropolitan area) and 32 percent in Ida-Viru county (industrial Northeast Estonia). This pattern is inherited from the Soviet policies of industrial location: industrial enterprises were established mainly in the major cities as well as in smaller towns in areas rich in natural resources. Other large cities, Tartu and Pärnu, received industrial investment, and experienced growth of their immigrant population. Similarly, cities with military presence (e.g., Tartu, and some smaller towns in strategic locations) and cities with a significant railway infrastructure (e.g., Valga) attracted immigrants. As a result, in Tallinn, Russian-speakers today form 42 percent of the city's population; in Ida-Viru county this proportion is as high as 78 percent. In regional cities (Tartu and Pärnu) and in smaller county seats, the proportion of the minority population remains lower and the rural areas are mainly Estonian-dominated.

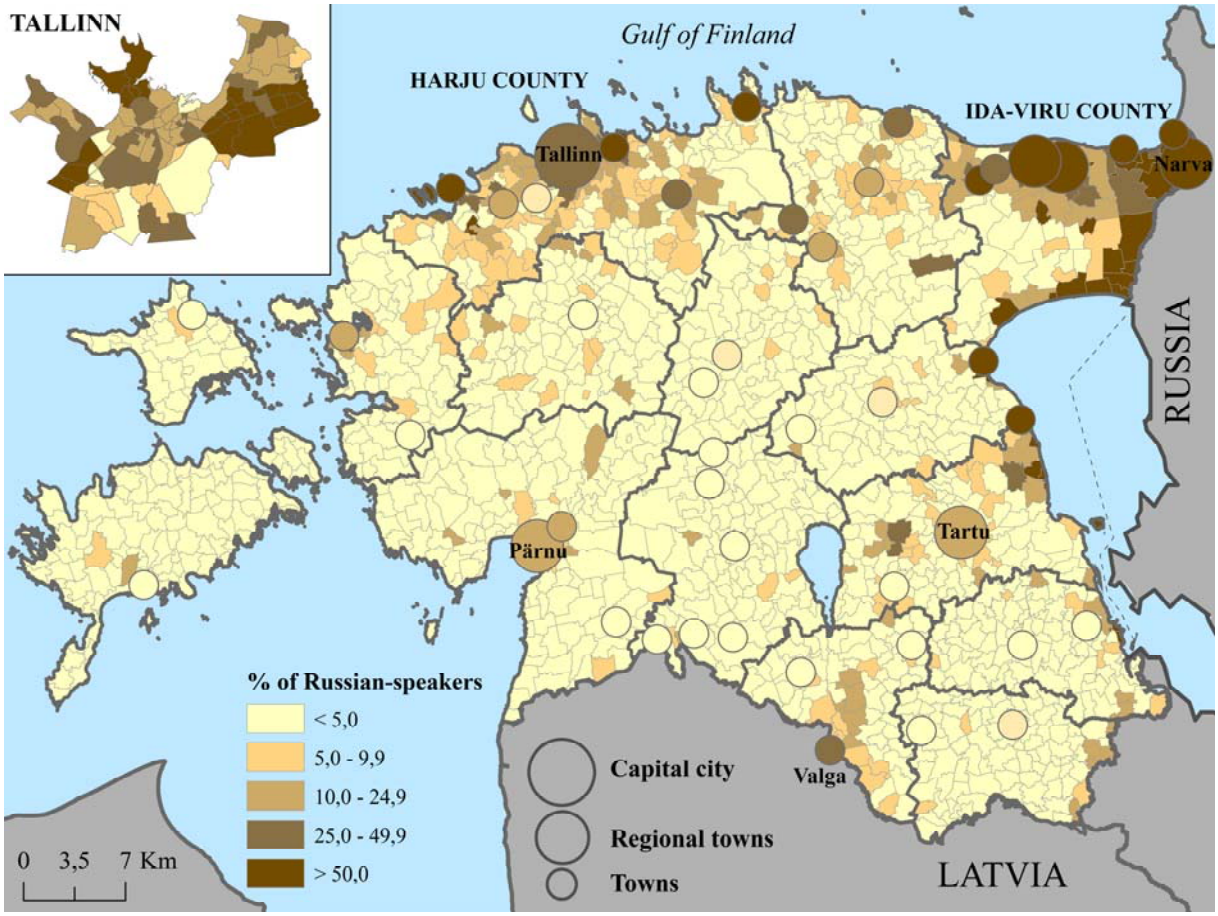



**Figure 1.** Percentage of Russian-speakers in Estonian rural and urban neighbourhoods (2011)

In addition, the proportion of Russian-speakers is high in some smaller settlements in the suburbs that surrounds the capital (even higher than in urban segregated neighbourhoods). This is related to Soviet industrial decentralisation policies that aimed to avoid the excessive growth of major cities and distributed industry to other areas of the urban agglomeration (Hausladen

1983; Bruns 1993). A belt of specialised satellite towns was built around Russian megacities (Moscow, St. Petersburg); the same phenomenon is observed on a smaller scale around the much smaller Baltic cities, including Tallinn. These Soviet-era "urban suburbs" hosted large Soviet enterprises or military facilities, and many migrants settled there (Tammaru 2001; Bruns 1993; Leetmaa and Tammaru 2007). Taken together, the potential destinations in the suburbs and other regions of Estonia vary in their minority populations, from rural suburbs and villages in peripheral regions of the country with very few minorities to the almost entirely Russian-speaking cities of northeast Estonia.

Tallinn falls between these extremes, with a minority population of 42%. Within the borders of the city, neighbourhoods are also very diverse in terms of their ethnic compositions. Under the Soviet industrialisation 'project', the urban population of Estonia grew rapidly. This fuelled Soviet housing construction programmes as seen in the large-scale construction of standardised high-rise housing estates (Hess, Tammaru, and Leetmaa 2012; Kährik and Tammaru 2010). Immigrants became a priority group in the central housing allocation system, while Estonians were more likely to occupy the older deteriorated pre-WWII housing stock in the inner city or to commute to urban jobs from socialist-era rural suburbs.

However, both immigrants and Estonians were more likely to receive new apartments in housing estates if they worked for those sectors (industry, military) that were prioritised by the Soviet economy and regime. Given that Russian-speakers were over-represented in these activities, they tended to have easier access to newly constructed apartments. This created a situation where in Soviet cities, with previously relatively low levels of socioeconomic segregation (Marcinczak *et al*. 2015), patterns of ethnic segregation became clearly visible (Leetmaa, Tammaru, and Hess 2015): Russians mostly lived in modern apartments on large housing estates, while Estonians lived in older housing stock in inner cities and in suburbs. The Estonian-dominated residential areas received almost no state investments at all during the Soviet period, in contrast to the new housing estates, which were heavily subsidised.

A high degree of rigidity also characterises ethnically differentiated activity spaces in domains of life other than housing. Since the Soviet period, a dual language educational system has existed in Estonia (Lindemann and Saar 2012). The system was originally created to enable mobility within the Soviet republics by offering Russian-language education unionwide. Although many Russian-speaking families opt for the Estonian-language educational system today, in most cities it is still possible to receive education in Russian from kindergarten until the end of high school. Schools are, however, important places of encounter, and school segregation may go on to structure personal networks over the course of lifetimes. For those who value own-language education, the availability of Russian-language educational facilities may be a critical factor when deciding on a region, settlement, or neighbourhood to move to. In addition to the educational infrastructure, the presence of others from the same ethnic group and the opportunity to communicate in a more familiar cultural environment may motivate individuals to choose destinations that are already home to many from their own ethnic group. Evidence for the existence of 'parallel societies' in Estonia can also be found in labour market and leisure studies. Kamenik, Tammaru, and Toomet (2014) and Silm and Ahas (2014) show evidence of segmentated leisure activities; Lindemann and Kogan (2013) highlight ethnic divisions in the labour market. Korts (2009) demonstrated that contacts between Estonian- and Russian-speakers tend to remain in the public sphere, e.g., communication as a result of random meetings in the service sector, on public transport, or elsewhere. These superficial contacts, however, typically have relatively little impact on personal networks.

In sum, the ethnic residential landscape in Estonia indeed offers a wide range of different types of destination neighbourhoods in different parts of the country. We expect changes in ethnic residential context to mirror well the ethnic integration process in Estonian society. If spatial mobility contributes to spatial integration for people living previously in segregated neighbourhoods, we may assume that the importance of cross-cultural contacts outweighs the importance of tight own-group networks, and the lifeworlds of Estonians and Russian-speakers will therefore also merge. However, if we find that Estonian- and Russian-speakers move to different types of destinations, this could indicate the persistence of "parallel lives" for these two ethnolinguistic groups.

## 4. Data and methods

Our empirical contribution is based on linked individual-level data from the 2000 and 2011 Censuses. For each individual we have information at two time-points: 2000 and 2011. This longitudinal design allows us to track the change in the place of residence for individuals over almost 12 years (critical moments of the censuses were 31.03.2000 and 31.12.2011). We do not have any information regarding multiple residential changes between these years, which means that the difference in place of residence between census moments serves as a proxy to represent a moving event. The database is geo-coded; the spatial units (see Figure 1) that we use for this study are urban (in major cities) and rural neighbourhoods; both units are used by municipalities and county governments in their planning activities; these neighbourhoods mostly have a unique local identity and are locally perceived as natural localities. On average, 694 inhabitants live in each of these spatial units. The city of Tallinn is divided into 105 neighbourhoods (average population size 3,041) and the rest of Estonia is divided into 1470 neighbourhoods (the average population in all urban and rural neighbourhoods outside Tallinn is 524 inhabitants; see Figure 1).

The research population (aged 18 years and over in 2000) consists of people who lived in Tallinn in 2000 and who where either immobile (did not leave their neighbourhood) or mobile (moved to another urban neighbourhood, to suburbs of Tallinn, or to a more remote place in Estonia) within the observed period (2000–2011). We focus on a comparison between two major ethnolinguistic groups in Estonia—Estonian- and Russian-speakers, therefore we excluded all other ethnic groups from the analysis (3.6% of the population of Tallinn in 2000). In Estonia, ethnicity is a self-reported characteristic in the census. Those who define themselves as Russian, Ukrainian, or Byelorussian largely overlap with those who use Russian as their main language of communication (e.g., according to the 2011 census, the majority of Ukrainians (64 percent) and Byelorussians (86 percent) in Estonia considered Russian as their mother tongue). Based on the above selection criteria, the total research population consists of 238,217 individuals who lived in the capital city in 2000, of whom 132,404 are Estonian-speakers and 105,813 are Russian-speakers.

The suburban area of Tallinn is defined here as the area around the capital city from where at least 30 percent of the working population commuted daily to Tallinn in 2011. Because both the suburbs and the more remote regions include neighbourhoods with very different qualities (in terms of urbanity or rurality, and also ethnic composition as mentioned above), we distinguish between two types of residential contexts outside Tallinn (both of which are present in suburbia and in more remote regions), namely urban and rural destinations.

We start our analysis with descriptive information regarding the intensity of moving among the two ethnolinguistic groups, measured as the percentage of those moving to different destinations, as well as a comparison of individual residential exposures to Russian-speakers before and after the move. This is followed by an application of a binary regression model to investigate whether there are significant differences in the probabilities that population subgroups stay or move. We continue with linear regression modelling using movers only to model changes in personal ethnic residential contexts as a result of moves (the absolute percentage change—decreasing or increasing—was used as the continuous dependent variable). We ran separate models for Estonian- and Russian-speakers. Because our primary interest is to see how moves to different destinations change the ethnic residential context of individuals, the main explanatory variables are the types of moves: intra-urban moves, moves to urban and rural settlements in the suburbs; and long-distance moves either to other cities or to rural districts.

The models also include a set of control variables, namely gender, age (10-year groups), educational level (highest general education acquired), and employment status (ISCO-classification from 0 to 9, merged into three larger groups, plus unemployed and inactive people). All these variables are measured at the moment of the 2000 census. Some of the variables are time-varying. For example, we take into account changes in employment status of individuals during the inter-census period. In addition, we added family status in the form of a change variable as one of the controls. Finally, to avoid larger families who move together being over-represented in the individual-level analyses, we randomly selected one member of each multi-person household living in Tallinn in 2000.

# 5. Results

## 5.1. Ethnic differences in moving intensity and destinations

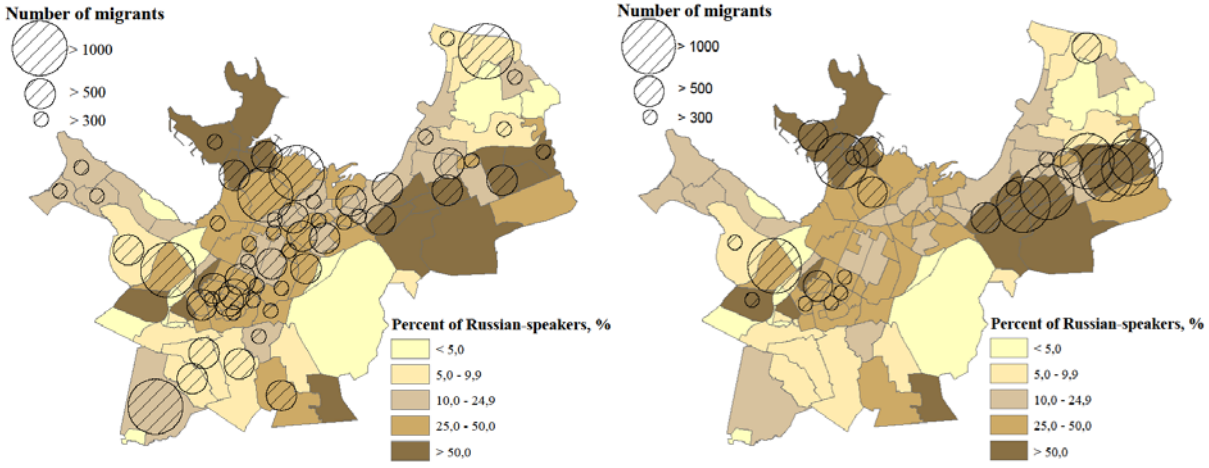
The first result of our analysis broadly confirms earlier findings (Tammaru and Kontuly 2011) by showing that among residents of Tallinn in 2000, Estonians were more likely to change their place of residence between 2000 and 2011 than Russian-speakers (Table 1). 50 percent of Estonians and 34 percent of the minority population moved to one of the studied destinations between 2000 and 2011. With regard to migration from Tallinn, the number of Russian-speakers who undertook such a move is considerably lower than of Estonians, especially for long-distance migration.

Surprisingly, almost equal numbers of each ethnolinguistic group undertook an intra-urban move during this period. This is a new insight that runs counter to the previous understanding that the Russian-speaking population is less mobile than the Estonian. This is probably because the city of Tallinn is a long-established activity space for the Russian-speaking minority population. Therefore, if they move, they are more likely to stay in the city where their own-language educational system and social networks are accessible. For Russian-speakers it is possible to work in many enterprises in the capital city without speaking Estonian. Because Estonian-speakers leave Tallinn more often, the observed mobility flows may contribute to making Tallinn a more Russian city over the course of time.

**Table 1.** The intensity of moving.

| | Population | Change in place of residence 2000-2011 | | Intensity of moving | |
|---|---|---|---|---|---|
| | Number | Number | % | 2000-2011 ‰ | Per 1 year ‰ |
| **Total** | | | | | |
| Estonian-speakers | 132,404 | 65,609 | 50 | 496 | 42 |
| Russian-speakers | 105,813 | 36,374 | 34 | 344 | 29 |
| **Intra-urban mobility** | | | | | |
| Estonian-speakers | 132,404 | 36,778 | 28 | 278 | 24 |
| Russian-speakers | 105,813 | 28,506 | 27 | 269 | 23 |
| **Suburbanisation** | | | | | |
| Estonian-speakers | 132,404 | 20,076 | 15 | 152 | 13 |
| Russian-speakers | 105,813 | 6,007 | 6 | 57 | 5 |
| **Long-distance migration** | | | | | |
| Estonian-speakers | 132,404 | 8,755 | 7 | 66 | 6 |
| Russian-speakers | 105,813 | 1,861 | 2 | 18 | 2 |

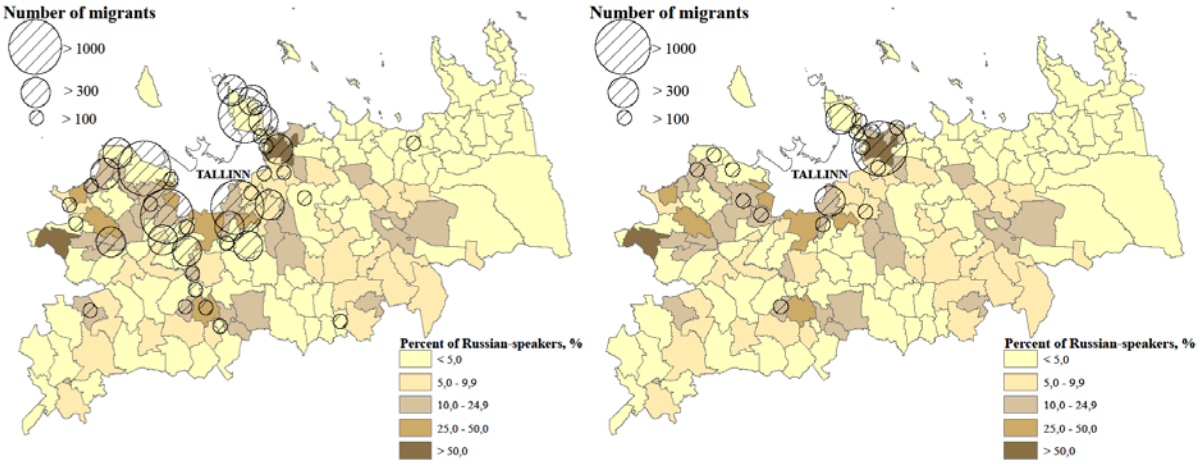
We now focus on the destinations of movers. For those who move within Tallinn (Figure 2) there are large differences in the destinations of different ethnic groups. Russian-speakers who have changed their neighbourhood within the city are later concentrated in a small number of neighbourhoods with a high percentage of other Russian-speakers. These are mainly the large housing estates where many immigrants were accommodated after arriving in the country during Soviet times. Today, the Russian language infrastructure (schools, kindergartens, clubs, etc.) continues to be located mostly in these areas. Interestingly, this ethnic infrastructure is still being expanded, for example an orthodox church was built recently in the largest housing estate in Tallinn. Estonian-speakers, when they move within the city, settle more evenly across the city. Although there are some destinations that are common to the two groups, Estonians only rarely choose neighbourhoods with significant majorities of Russian-speakers. This kind of "avoidance" behaviour of the majority population then contributes to the reproduction of ethnic segregation and leads to further concentration of Russian-speakers in minority-rich neighbourhoods. In sum, our results suggest that the destinations of intra-urban movers are highly selective and both ethnolinguistic groups choose to move into neighbourhoods that contain high numbers of their own ethnic group.




a) Destinations of Estonian-speakers b) Destination of Russian-speakers

**Figure 2.** The destinations of intra-urban movers in Tallinn

Figure 3 provides an overview of the main destinations of those who leave Tallinn for the suburban area around the city. It also shows differences in the patterns of the two ethnolinguistic groups. Russian-speakers, who are in general less likely to move to the surburbs than Estonians, move only to a limited number of suburban destinations, most often to the industrial satellite town of Maardu, east of Tallinn, or to those rural settlements where summer homes for urban families were built during the Soviet years (now they are using those houses for permanent living: Leetmaa *et al.* 2012). The suburban destinations of Estonians are more diverse, but most stay close to the city.

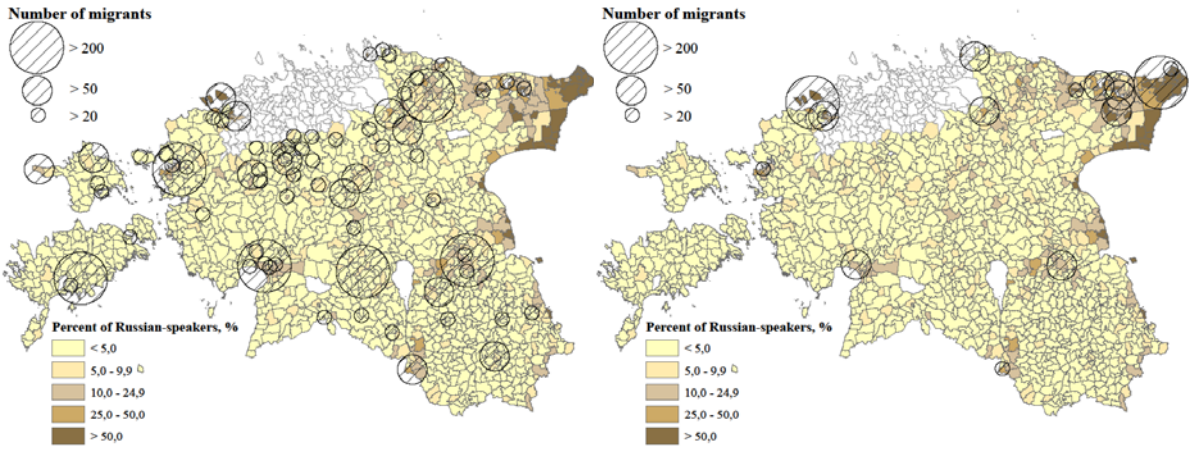



a) Destinations of Estonian-speakers b) Destination of Russian-speakers

**Figure 3.** The suburban destinations around Tallinn

Nonetheless, during the period 2000–2011 70 percent of Russian-speaking people who moved to the suburbs moved to rural neighbourhoods that were mainly Estonian-dominated (4,169 persons). This figure increased compared to the previous intercensus period of 1989–2000 when half the Russian-speaking suburban movers moved to satellite towns (Tammaru *et al.* 2013) and another half to rural suburbs (Leetmaa and Tammaru 2007). Accordingly, because more Russian-speakers now move to rural neighbourhoods, suburbanisation of minorities contributes more to spatial integration.

Finally, there are large differences between the destinations of Estonian- and Russian-speakers who move out of the Tallinn urban region (Figure 4). Russian-speakers mainly move to the industrial Northeast Estonian urban agglomeration, to other major Estonian cities, or to a few cities close to the Tallinn metropolitan area. In all these cities, and in the specific destinations neighbourhoods within those cities, there is an ethnic educational infrastructure available for Russian-speakers. A great number of Estonian long-distance movers move to regional centres and other county seats, as well as to rural peripheral destinations. It is also striking that many long-distance moves for Estonians involve a move to just beyond the borders of the suburbs of Tallinn.




a) Destinations of Estonian-speakers b) Destination of Russian-speakers

**Figure 4.** The destinations of long-distance migrants outside the Tallinn urban region

Because most of the destinations outside of the Tallinn metropolitan area are dominated by Estonians, we might expect that the long-distance relocation of Russian-speakers would result in those Russian-speakers living in environments dominated by Estonian-speakers. However, this is not the case, because 71 percent of Russian-speakers who undertook long-distance moves (1324 persons) away from Tallinn had other urban neighbourhoods as destinations compared to 46 percent among Estonian-speakers (3984 persons). Moreover, Russian-speakers moved mainly to those cities where they could find a familiar ethnic environment (such as the northeast Estonian agglomeration and other cities with a Soviet industrial background). Their social networks and previous experiences of particular places seem to be more strictly defined geographically, and they therefore migrate according to these existing networks. At the same time, for those Estonians who leave the Tallinn urban region, their exposure to Russian-speakers in their destination neighbourhood compared to their origin neighbourhood becomes lower. They only rarely move to the northeast Estonian cities, and in most other locations the percentage of the minority population is considerably lower than in Tallinn.

### 5.2. Individual ethnic residential context before and after the move

We now compare the average percentage of Russian-speakers in neighbourhoods in 2000 (before moving) and in 2011 (after moving; see Table 2). When Estonians move their new neighbourhood generally has a lower percentage of Russian-speakers than their original neighbourhood. This is most striking where people move to rural suburban settlements, but also occurs in the case of long-distance moves (especially when moving to remote rural destinations).

For Russian-speakers, the percentage of other Russian-speakers in their residential surroundings decreases only among those who move to the surburbs (from 52 to 17 percent) or move over longer distances (from 49 to 25 percent) to rural neighbourhoods. Thus, moves to rural areas channel Russian-speakers largely into Estonian-dominated areas. It should, however, be noted that such moves to rural areas characterise only a small proportion of all of moves made by Russian-speakers living in Tallinn in 2000: four percent of all Russian-speakers and 13 percent of Russian-speaking movers. With all other types of moves for Russian-speakers, the percentage of Russian-speakers in the destination neighbourhood increased, with the biggest increase occuring for moves to suburban satellite towns or to the cities in northeast Estonia. We conclude that in the case of long-distance migration, the Estonian- and Russian-speaking

population move to different types of urban area: Russian-speakers more to the Russian-dominated northeast of Estonia, and Estonians more to the Estonian-dominated regional cities and county seats.

**Table 2.** The percentage of Russian-speakers in origin (in 2000) and destination neighbourhoods (in 2011)

| | **Origin neighbourhood** (in Tallinn in 2000) | **Destination neighbourhood** (in Tallinn, suburbs, or other regions in 2011) |
|---|---|---|
| **Estonian-speakers** | | |
| Intra-urban moves | 36.53 | 31.98 |
| Suburbanisation – urban | 39.75 | 37.88 |
| Suburbanisation – rural | 37.74 | 11.80 |
| Long-distance migration – urban | 37.01 | 15.54 |
| Long-distance migration – rural | 37.17 | 4.10 |
| Stayers | 35.02 | 36.72 |
| **Russian-speakers** | | |
| Intra-urban moves | 49.65 | 53.63 |
| Suburbanisation – urban | 53.75 | 68.61 |
| Suburbanisation – rural | 51.66 | 17.23 |
| Long-distance migration – urban | 48.21 | 62.75 |
| Long-distance migration – rural | 49.27 | 24.52 |
| Stayers | 52.78 | 56.98 |

For those Russian-speakers who move within the capital city, their individual ethnic environment also becomes more Russian-dominated (increase from 50 to 54 percent). We saw above that the tendency to leave the city is considerably lower among Russian-speakers, and this indirectly increases the proportion of Russians in the capital city given that Estonians are more likely to move out of the capital. Hence, intra-urban moves strengthen still further the segregation patterns that emerged in the Soviet years.

As a final point, the phenomenon of immobility also seems to play an important role in changing the residential ethnic contexts of individuals. In Tallinn, the neighbourhoods in which people who did not move were living in both observation years became more Russian-dominated for both Estonian- and Russian-speaking stayers. It is however noteworthy, that the proportion of non-movers was as high as two thirds for all Russian-speakers living in Tallinn in 2000 and half for Estonian-speakers, indicating that residential 'stability' also contributes to segregation.

Using a binary regression (see Table 3) we investigate further who the mobile and who the immobile residents actually are. The results confirm that Estonian-speakers have a considerably higher propensity to move compared with Russian-speakers. Non-movers are more likely to be older, with a lower education level, and with a lower employment status than movers. Those whose employment status increased over the 10-year period were more likely to move compared to people with more stable careers, and people who married during the period where also more likely to be mobile compared to those who did not.

Finally we use linear regression to analyse the effect of different types of moves on changes in the ethnic residential contexts of individuals, and to explore which population groups are more likely to integrate spatially as a result of moving (models 2 and 3 in Table 4). The results support the findings of the descriptive analysis. Compared to intra-urban residential mobility (the reference category), Estonian-speakers who move outside of the Tallinn metropolitan region (both to rural areas and to cities) as well as those moving to the rural suburbs of Tallinn, move

more often to areas more dominated by Estonian-speakers. It is only when Estonian-speakers from Tallinn move to suburban satellite towns (where the industry and military sector played an important role during the Soviet period), that their destination neighbourhood becomes slightly more Russian-dominated compared to the destinations of those Estonians who move within the city.

**Table 3.** Comparison of stayers (0) and movers (1)

| | **Model 1** |
|---|---|
| | *Exp(B)* |
| **Ethnic origin (ref. Russian-speakers)** | |
| Estonian-speakers | 1.835*** |
| **Age (ref. 18-29)** | |
| 30-39 | 0.470*** |
| 40-49 | 0.281*** |
| 50-59 | 0.209*** |
| 60-69 | 0.132*** |
| 70+ | 0.110*** |
| **Education (ref. university)** | |
| Secondary | 1.012 |
| Primary | 0.872*** |
| **Family status (ref. remained single)** | |
| Exit marriage | 1.311*** |
| Enter marriage | 2.086*** |
| Remained in marriage | 0.767*** |
| **Employment status (ref. higher occupations)** | |
| Upper-middle | 0.899*** |
| Lower-middle | 0.666*** |
| Low occupations | 0.765*** |
| Unemployed | 0.756*** |
| Inactive | 0.949*** |
| **Employment status change (ref. stable)** | |
| Higher | 1.211*** |
| Lower | 0.987 |
| Nagelkerke R Square | 0,232 |

***p < 0,01

*Note: the model also controlled for gender; results not presented here*

For the minority population, the proportion of Russian-speakers in destination neighbourhoods decreases considerably when they leave Tallinn for rural suburban or peripheral destinations. However, suburbanisation to satellite towns as well as long-distance moves to cities (mostly to the Russian-dominated urban agglomeration in northeast Estonia), channel them into neighbourhoods with even higher proportions of Russian-speakers compared to those Russian-speakers who move within the city in the same period. The descriptive analysis demonstrates that Estonians who suburbanise or move over longer distances to rural areas end up in even more Estonian-dominated neighbourhoods (Table 2). This implies that the spatial integration process is gradual: Russian-speakers who leave their own-group environment in Tallinn and choose a rural residential context are relatively more exposed to Estonians after their move than before.

We also find that younger people (both Estonian- and Russian-speakers) move to neighbourhoods with a lower proportion of Russian-speakers than older residents. For both groups the percentage of Russian-speakers in their residential environment decreases when they marry or stay married. Both Estonian- and Russian-speakers with a higher socio-economic status in 2000 (working in higher-status occupations and having higher levels of education) were more likely to move to Estonian-dominated neighbourhoods. This supports the main argument of the theory of spatial assimilation, which states that higher socio-economic status among minority groups favours residential integration. For Estonians, an improvement in employment status often correlates with a move to a more Estonian-dominated neighbourhood, separating them even more from the Russian-speaking population.

**Table 4.** Linear regression model: the change in individual ethnic residential context
(values of the linear dependent variable range from -100% to +100%, 0 denotes the situation when the % of Russian-speakers in origin and destination neighbourhood was equal)

| | **Model 2 Estonian-speakers** | | **Model 3 Russian-speakers** | |
|---|---|---|---|---|
| | *Coeff.* | *SE* | *Coeff.* | *SE* |
| **Mobility types (ref. intra-urban moves)** | | | | |
| Suburbanisation – urban | 2.895*** | 0.603 | 15.633*** | 0.705 |
| Suburbanisation – rural | -23.503*** | 0.258 | -37.584*** | 0.498 |
| Long-distance migration – urban | -16.198*** | 0.437 | 11.819*** | 0.780 |
| Long-distance migration – rural | -28.698*** | 0.411 | -23.607*** | 1.255 |
| **Gender (ref. female)** | | | | |
| Male | 0.990*** | 0.228 | 0.668** | 0.318 |
| **Age (ref. 18-29)** | | | | |
| 30-39 | 2.216*** | 0.303 | 0.932** | 0.427 |
| 40-49 | 4.297*** | 0.366 | 2.397*** | 0.454 |
| 50-59 | 4.941*** | 0.391 | 5.249*** | 0.565 |
| 60-69 | 4.694*** | 0.481 | 6.289*** | 0.703 |
| 70+ | 5.659*** | 0.773 | 6.013*** | 1.045 |
| **Family status (ref. remained single)** | | | | |
| Exit marriage | -0.133 | 0.375 | -1.004** | 0.471 |
| Enter marriage | -1.675*** | 0.313 | -1.641*** | 0.425 |
| Remained in marriage | -3.828*** | 0.301 | -5.203*** | 0.395 |
| **Education (ref. university)** | | | | |
| Secondary | 3.836*** | 0.455 | 2.465*** | 0.404 |
| Primary | 2.122*** | 0.285 | 2.790*** | 0.596 |
| **Employment status (ref. higher occupations)** | | | | |
| Upper-middle | 0.491 | 0.424 | 2.408*** | 0.661 |
| Lower-middle | 2.354*** | 0.502 | 5.969*** | 0.620 |
| Low occupations | 3.007*** | 0.455 | 6.205*** | 0.625 |
| Unemployed | 3.673*** | 0.593 | 5.465*** | 0.659 |
| Inactives | 3.427*** | 0.345 | 5.234*** | 0.574 |
| **Employment status change (ref. stable)** | | | | |
| Higher | -1.138*** | 0.338 | -0.154 | 0.396 |
| Lower | -.367 | 0.363 | 0.373 | 0.418 |
| Constant | -9.183*** | | -7.653*** | |
| Adjusted R2 | 0.223 | | 0.251 | |
| N | 45 768 | | 26 015 | |

**p < 0,05; ***p < 0,01

## 6. Conclusions

In this study we investigated whether different types of residential moves lead to different outcomes in terms of the ethnic composition of both origin and destination neighbourhoods for two major ethnolinguistic groups living in Estonia. This approach was novel because most studies do not distinguish between the effects of different types of mobility. The existing empirical evidence leads us to expect that mobility, as opposed to immobility, increases residential integration, especially for members of the minority population who often become socially and economically better integrated as a result. For example, when minority groups leave ethnically diverse major cities, e.g., when they move towards suburbs or more peripheral regions, the tendency to settle in a neighbourhood where the proportion of minorities is smaller than in urban environment, could be likely. For the majority population, in turn, mobility can be a tool to escape the increasing ethnic diversity of cities.

We studied how spatial mobility shapes the destination neighbourhoods of movers and non-movers who lived in Tallinn, a post-Soviet Estonian capital city, in 2000. Estonia serves as an interesting case for the study of ethnic segregation and residential integration processes because central planners distributed migrants unevenly across the country and across the cities during the Soviet period. Our main finding is that only very few Russian-speakers integrated spatially during the 2000s. Most of their moves resulted in an increased presence of other Russian-speakers in their immediate residential environment when we compare their origin and destination neighbourhoods. Changes towards residential integration occur only in those few cases when members of the Russian-speaking minority group move to rural suburbs and peripheral villages, yet this characterises only a small proportion of the moves of Russian-speakers.

Immobility is another phenomenon that relates to residential environment; those who do not move experience changes in the ethnic context of their neighbourhood as a result of other people moving. Older and socioeconomically less successful residents are over-represented among stayers in both ethnolingusitic groups. The decision not to change neighbourhood might derive from connections that non-movers have developed with their surroundings through long-term residence, as well as from the economical constraints of undertaking a move. However, as Estonian-speakers leave Tallinn more often than Russian-speakers, the neighbourhoods of stayers tend to lose Estonian-speakers and become more Russian-speaking. This may have far-reaching effects. Namely, so far the minority-rich neighbourhoods in post-Soviet cities have served as mixed-ethnic urban environments where the minority population and their descendants and the native population have become accustomed to one another's cultures. When these mixed-ethnic environments become more Russian-dominated in the future, they may lose their role as diverse meeting places for ethnic groups in Estonia.

In contrast to Russian-speakers, all types of moves—within the city, to suburban satellite towns, rural suburbs, rural peripheral villages, and other cities in the country—led Estonians to destination neighbourhoods where the percentage of Russian-speakers was lower than in their origin neighbourhoods. Estonians thus tend to move towards more Estonian residential environments. We know that many Estonians have strong preferences for living with other Estonians (Leetmaa, Tammaru, and Hess 2015), and it is also known that Estonians were more advantaged by economic restructuring in the 1990s and therefore enjoy better economic

opportunities to undertake a move. Mobile Estonians indeed are generally young, well educated, and socioeconomically successful.

To conclude, the spatial assimilation thesis holds that the socio-economic advancement of minorities leads to residential integration (Massey and Denton 1985), but this is not always supported by the empirical evidence (e.g., Li 1998). Our study adds to this understanding, first that the mobility behaviour of minorities tends to follow pre-existing ethnic networks even irrespective of their socio-economic achievements. We argue that in the situations where sizeable ethnic minority groups live in separate parts of a country's settlement system, and their communication networks and daily activity spaces are also different, they may behave as 'parallel populations' also in their destination choices while moving. Indeed, only a small fraction of the moves of members of the minority population facilitated ethnic residential segregation. Second, our findings show that socio-economic advancement of the majority population leads to higher, not lower, levels of ethnic residential segregation. This is a very important finding and needs to be tested in other country contexts. Furthermore, such a finding suggests that current ethnic integration policies require serious revision to shift attention to the social and spatial integration of members of the majority population in addition to dealing merely with the issue of how immigrant population integrates socially and spatially.

## 7. Acknowledgements

This research received funding from the following sources: Institutional Research Grant No. IUT2-17 of the Ministry of Education and Science Estonia; Grant No. 9247 of the Estonian Science Foundation; the European Research Council under the EU FP7 Programme (FP/2007-2013) / ERC Grant Agreement n. 615159 (ERC Consolidator Grant DEPRIVEDHOODS, Socio-spatial inequality, deprived neighbourhoods, and neighbourhood effects), the Marie Curie programme under the EU FP7 Programme (FP/2007-2013) / Career Integration Grant n. PCIG10-GA-2011-303728 (CIG Grant NBHCHOICE, Neighbourhood choice, neighbourhood sorting, and neighbourhood effects). The authors also owe special thanks to Professor Liina-Mai Tooding from the University of Tartu for her advice on statistical modelling.

## References:

**Alba, R.D., Logan, J.R., Stults, B.J., Marzan, G., and Zhang, W. (1999).** Immigrant Groups in the Suburbs: A Re-examination of Suburbanization and Spatial Assimilation. *American Sociological Review* 64(3): 446-460.

**Bolt, G., Özüekren, A.S., and Phillpis, D. (2010).** Linking Integration and Residential Segregation. *Journal of Ethnic and Migration Studies* 36(2): 169-186.

**Bråmå, Å. (2006).** 'White Flight'? The Production and Reproduction of Immigrant Concentration Areas in Swedish Cities, 1990–2000. *Urban Studies* 43(7): 1127–1146.

**Bruns, D. (1993).** Tallinn: linnaehituslik kujunemine (Tallinn: architectural formation). Tallinn: Valgus.

**Clark, W.A.V. (1992).** Residential Preferences and Residential Choices in a Multiethnic Context. *Demography* 29: 451-466.

**Clark, W.A.V., van Ham, M., and Coulter, R. (2014**). Spatial mobility and social outcomes. *Journal of Housing and the Built Environment* 29(4): 699-727.

**Cooke, T.J. (2011).** It is not Just the Economy: Declining migration and the rise of secular rootedness. *Population, Space and Place* 17:193-203.

**Coulter, R. and van Ham, M. (2013).** Following People Through Time: An Analysis of Individual Residential Mobility Biographies. *Housing Studies* 28(7): 1037-1055.
**Coulter R., van Ham M., and Findlay A.** (2015). Re-thinking residential mobility: Linking lives through time and space. *Progress in Human Geography*. doi:10.1177/0309132515575417.
**Crowder, K. (2000).** The racial context of white mobility: an individual-level assessment of the white flight hypothesis. *Social Science Research* 29:223–257.
**Damm, A.P. (2004).** The Danish Dispersal Policy on Refugee Immigrants 1986-1998: A Natural Experiment? Aarhus: Aarhus School of Business (Working Paper 05-3).
**Farrell, C.R. (2014).** Immigrant suburbanisation and the shifting geographic structure of metropolitan segregation in the United States. *Urban Studies*. doi:10.1177/0042098014558537.
**Feijten, P., Hooimeijer, P., and Mulder, C.H. (2008).** Residential Experience and Residential Environment Choice over the Life-course. *Urban Studies* 45(1):141-162.
**Finney, N. and Simpson, L. (2008).** Internal Migration and Ethnic Groups: Evidence for Britain from the 2001 Census. *Population, Space and Place* 14: 63–83.
**Gijsberts, M. and Dagevos, J. (2007).** The Socio-cultural Integration of Ethnic Minorities in the Netherlands: Identifying Neighbourhood Effects on Multiple Integration Outcomes. *Housing Studies* 22(5): 805-831.
**Goering, J.M. (1978).** Neighbourhood tipping and racial transition. *Journal of the American Institute of Planners* 44(1): 68–78.
**Hanson, S. (2005).** Perspectives on the geographic stability and mobility of people in cities. *Proceedings of the National Academy of Sciences* 102: 15301–15306.
**Harrison, M., Law, I., and Phillips, D. (2005).** Migrants, minorities and housing: exclusion, discrimination and anti-discrimination in 15 member states of the European Union. Vienna: European Monitoring Centre on Racism and Xenophobia: 150 pp.
**Hausladen, G.J. (1983).** Regulating Urban Growth in the USSR. The Role of Satellite Cities in Soviet Urban Development. [PhD thesis]. Syracuse: Syracuse University.
**Heckmann, F. (2005).** Integration and integration policies: IMISCOE network feasibility study. Bamberg: European Forum for Migration Studies: 277 pp.
**Hedman, L., van Ham, M., and Manley, D. (2011**). Neighbourhood choice and neighbourhood reproduction. *Environment and Planning A* 43: 1381 – 1399.
**Hess, D.B., Tammaru, T., and Leetmaa, K. (2012**). Ethnic differences in housing in post-Soviet Tartu, Estonia. *Cities* 29(5): 327 - 333.
**Johnston, R., Forrest, J., and Poulsen, M. (2002)**. The ethnic geography: The 'American model' and residential concentration in London. *Ethnicities* 2(2): 209–235.
**Kamenik, K., Tammaru, T., Toomet, O. (2015**) Ethnic segmentation in leisure time activities in Estonia, *Leisure Studies* 34(5): 566-587.
**Kley, S.A. and Mulder, C.H. (2010).** Considering, planning, and realizing migration in early adulthood. The influence of life-course events and perceived opportunities on leaving the city in Germany. *Journal of Housing and the Built Environment* 25:73–94.
**Korts, K. (2009).** Inter-Ethnic Attitudes and Contacts Between Ethnic Groups in Estonia. *Journal of Baltic Studies* 40(1):121-137.
**Kulu, H. and Milewski, N. (2007).** Family change and migration in the life course: An introduction. *Demographic Reasearch* 17(19): 567-590.
**Kährik, A. and Tammaru, T. (2010).** Soviet Prefabricated Panel Housing Estates: Areas of Continued Social Mix or Decline? The Case of Tallinn. *Housing Studies* 25(2):201-219.
**Leetmaa, K., Brade, I., Anniste, K., and Nuga, M. (2012).** Socialist Summer Home Settlements in Post-Socialist Suburbanisation. *Urban Studies* 49(1): 3 - 21.
**Leetmaa, K. and Tammaru, T. (2007).** Suburbanization in countries in transition: Destinations of suburbanizers in the Tallinn metropolitan area. *Geografiska Annaler Series B-Human Geography* 89B(2):127 - 146.

**Leetmaa, K., Tammaru, T., and Anniste, K. (2009).** From priority-led to market-led suburbanisation in a post-communist metropolis. *Tijdschrift voor economische en sociale geografie* 100(4): 436–453.
**Leetmaa, K., Tammaru, T., and Hess, D.B. (2015**). Preferences Toward Neighbor Ethnicity and Affluence: Evidence from an Inherited Dual Ethnic Context in Post-Soviet Tartu, Estonia. *Annals of the Association of American Geographers* 105(1):162-182.
**Li, W. (1998).** Anatomy of a new ethnic settlement: The Chinese ethnoburb in Los Angeles. *Urban Studies* 35(3): 479-501.
**Lindemann, K. and Saar, E. (2012).** Ethnic inequalities in education: Second generation Russians in Estonia. *Ethnic and Racial Studies* 35:1974–1998.
**Lindemann, K. and Kogan, I. (2013).** The Role of Language Resources in Labour Market Entry: Comparing Estonia and Ukraine. *Journal of Ethnic and Migration Studies* 39(1): 105-123.
**Lundholm, E. (2012).** Returning Home? Migration to Birthplace among Migrants after Age 55. *Population, Space and Place* 18(1): 74-84.
**Marcińczak, S., Tammaru, T., Novák, J., Gentile, M., Kovács, Z., Temelová, J., Valatka, V., Kährik, A., Szabó, B. (2015)** Patterns of Socioeconomic Segregation in the Capital Cities of Fast-Track Reforming Postsocialist Countries, *Annals of the Association of American Geographers*, 105(1): 183-202.
**Martinovic, B., van Tubergen, F., and Maas, I. (2009).** Dynamics of Interethnic Contact: A Panel Study of Immigrants in the Netherlands. *European Sociological Review* 25(3): 303-318.
**Massey, D.S. and Denton, N.A. (1985).** Spatial Assimilation as a Socioeconomic Outcome. *American Sociological Review* 50(1): 94-106.
**McPherson, M., Smith-Lovin, L., and Cook, J.M. (2001).** Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology* 27: 415-444.
**Musterd, S. (2003).** Segregation and integration: a contested relationship. *Journal of Ethnic and Migration Studies* 29(4): 623-641.
**Musterd, S. and van Kempen, R. (2007).** Trapped or on the springboard? Housing careers in large housing estates in European cities. *Journal of Urban Affairs* 29(3): 311-329.
**Quillian, L. (2003).** How long are exposures to poor neighbourhoods? The long-term dynamics of entry and exit from poor neighbourhoods. *Population Research and Policy Review* 22(3): 221–249.
**Schelling T. C. (1971).** Dynamic models of segregation. *Journal of Mathematical Sociology*. 1: 143 – 186.
**Silm, S. and Ahas, R. (2014).** Ethnic Differences in Activity Spaces: A Study of Out-of-Home Nonemployment Activities with Mobile Phone Data. *Annals of the Association of American Geographers* 104(3): 542-559.
**Silvestre, J., Reher, D.S. (2014).** The Internal Migration of Immigrants: Differences between One-Time and Multiple Movers in Spain. *Population, Space and Place* 20: 50–65.
**Simpson, L., Finney, N. (2009).** Spatial Patterns of internal migration: Evidence for Ethnic groups in Britain. *Population, Space and Place* 15: 37-56.
**Tammaru, T. (2001).** Suburban Growth and Suburbanisation under Central Planning: The Case of Soviet Estonia. *Urban Studies* 38(8):1341– 1357.
**Tammaru, T., van Ham, M., Leetmaa, K., Kährik, A., and Kamenik, K. (2013**). The Ethnic Dimensions of Suburbanisation in Estonia. *Journal of Ethnic and Migration Studies* 39(5): 845-862.
**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.
**Thompson, H.A. (1999).** Rethinking the Politics of White Flight in the Postwar City Detroit, 1945-1980. *Journal of Urban History* 25(2): 163-198.

**Timberlake, J.M., Howell, A.J., and Staight, A.J. (2011).** Trends in the Suburbanization of Racial/Ethnic Groups in U.S. Metropolitan Areas, 1970 to 2000. *Urban Affairs Review* 47(2): 218–255.
**Van Ham, M. and Clark, W.A.V. (2009)**. Neighbourhood mobility in context: household moves and changing neighbourhoods in the Netherlands. *Environment and Planning A* 41(6): 1442–1459.
**Van Ham, M. and Feijten, P. (2008).** Who wants to leave the neighbourhood? The effect of being different from the neighbourhood population on wishes to move. *Environment and Planning A* 40: 1151-1170.
**Van Kempen, R. (2005).** Segregation and Housing Conditions of Immigrants in Western European Cities. In: Kazepov, Y.(ed.). *Cities of Europe: changing contexts, local arrangements and the challenge to urban cohesion.* Oxford: Blackwell Publishers: 190-209.
**Van Kempen, R. and Özüekren, A.S. (1998).** Ethnic segregation in cities: New forms and explanations in a dynamic world. *Urban Studies* 35(10): 1631–1656.
**Özüekren, S. and Ergoz-Karahan, E. (2010).** Housing Experiences of Turkish (Im)migrants in Berlin and Istanbul: Internal Differentiation and Segregation. *Journal of Ethnic and Migration Studies* 36(2): 355-372.