Chapter 10

Socio-economic and Ethnic Trajectories of Housing Estates in Tallinn, Estonia

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Abstract Housing estates consisting of Soviet-era large-scale multi-family housing hold a dominant position in the housing market of Tallinn; slightly less than two-thirds of residents resided there in 2011. These housing segments were attractive to mixed socio-economic status groups when initially built due to their high rent subsidies and prevalence of modern conveniences in apartments. The historical developments of housing estates intertwined with ethnicity, specifically the extensive in-migration flows during the Soviet era. In this chapter, we investigate how the socio-economic and ethnic position of housing estates changed over the course of the period of political and economic reforms (1989–2000) and the subsequent decade (2000–2011). The focus is interlinkages between social and ethnic patterns. Findings suggest a steady, downward trajectory in the social composition of these housing estates, excluding some centrally located neighbourhoods. The historical circumstances related to construction dynamics, flows of foreign immigration and allocation patterns explain residential dynamics. Ethnically minority-rich neighbourhoods are more likely to experience a downward social trajectory than housing estates with fewer ethnic minorities regardless of location.

Keywords Housing estates • Ethnic concentrations • Neighbourhood trajectories • Neighbourhood decline

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10.1 Introduction

Estonia, as part of the Soviet Union from 1940 until 1991, inherited specific urban landscapes from the Soviet regime (Morton and Stuart 1984). From the 1960s to the early 1990s, the massive construction of large-scale housing estates, i.e. the uniform housing districts with large-scale multi-family buildings, took place in urban centres as well as in rural areas. Cities became spatially dense and compact with new extensive areas containing high-rise apartment buildings springing up on the urban outskirts (Smith 1996).

The construction of housing estates was the main instrument for the state to alleviate the acute housing shortage existing in urban areas after World War II. In addition to war damage on the housing stock, the housing shortage was further exacerbated by policies fostering fast industrialisation-led urbanisation in Estonia (Tammaru 2000). Extensive flows of foreign labour immigrants and their families arrived in Estonian urban areas from the other union republics of the Soviet Union, in addition to the natural increase and local rural–urban migration flows from the 1960s. These flows were mostly pushed to meet the labour-intensive needs of the recently established Soviet industrial enterprises and to contribute to the number of military personnel. These ethnic groups eventually grew in numbers due to family reunifications and demographic expansion (Tammaru 2002; Tammaru and Kulu 2003). By the end of socialist period in Estonia (1991), 71% of the country's population lived in urban areas with the external net migration contributing 36% to the total urban population growth since the post-World War II period (Tammaru 2002). The population of the Tallinn urban region increased by almost 70% between 1959 and 1989 (from 282,000 to 475,000 inhabitants) (Jauhiainen and Kährik 2005).

After Estonia lost its *de facto* independence under the Soviet occupation, housing tenure composition and foundations for housing allocation changed completely. The state confiscated existing dwellings from the private landlords. The state played the main role in housing redistribution, as it became the principal land and housing owner in Soviet Estonia. The pre-World War II housing stock owned by the state during the Soviet occupation received no investment or redevelopment, which led to its physical degradation and loss of popularity among young people and families, indicated by their ageing population structure (Temelová et al. 2016). In comparison, dwellings in newly constructed housing estates with modern facilities and highly subsidised rents became especially attractive for newly formed households and families. During the socialist period, private households built privately owned detached or semi-detached houses, but since this required considerable private investments they were less attractive than housing estates (Ruoppila and Kährik 2003).

Besides financing and constructing housing estates, the state assumed responsibility for the housing distribution mechanisms in Soviet Estonia. The state redistributed existing pre-World War II housing units among households. New apartment distribution utilised queuing lists managed by state-owned enterprises or

local authorities, using priority lists and various allocation criteria (Gentile and Sjöberg 2006). With the construction of large uniform housing districts, the state pursued its ideological aim to build an egalitarian and just society (Bater 1986). In the case of Tallinn, management of socio-economic inequalities was quite successful, measured by a reduction in the socio-economic stratification by the end of the Soviet period (Tammaru et al. 2016). The new established uniform housing districts played a crucial role in this achievement. The central allocation mechanisms and conditions of deficiency, however, created other types of inequalities with certain occupational categories (such as managers, politicians, the military, workers in high-priority enterprises, among others) privileged when allocating the best-ranked public housing (Kährik and Tammaru 2010). Many 'non-priority' groups never received access to the modern apartments.

According to the 1989 Population and Housing Census (PHC), 61% of inhabitants in Tallinn lived in housing estates at the end of the socialist period. One-fourth of the total population inhabited pre-World War II areas of the inner city, whereas only 12% lived in low-rise suburbs. Since the arrival of minority groups during Soviet times, there has been an over-representation of Russian-speaking minorities in housing estates. Housing estates differed by the age structure of residents as well, which was largely determined by the time of completion of the residential buildings. The prime target group for newly constructed state dwellings was families with children.

Rapid economic and political reforms during the 1990s introduced new, market-based foundations for the housing market. Estonia stands out for its radical institutional transition from being highly state-controlled to being one of the most neoliberal market-oriented system (Tammaru et al. 2016). During the ownership reform after the Soviet era, tenants could privatise their dwelling unit free-of-charge, unless the pre-World War II owners returned to their dwellings, as was the case with older housing stock (Kährik 2000). Overall, privately owned housing grew to 96 percent in Estonia by 2002 compared to just 36% prior to the ownership reform (Kährik and Kõre 2013). The rate of privatisation in housing estates in Tallinn was near 100%. The flats became owner-occupied without further subsidies from the state for regular maintenance.

The distinctive Soviet historical legacies, described above, as well as the full privatisation of the market, set a different context for the evolution of social and ethnic trajectories of housing estates in Tallinn, as compared to the cities in Western European or post-Soviet Central European contexts (e.g. Dekker and Van Kempen 2004). In Western Europe, the typical social trajectory found in housing estates is downward with the infiltration of lower status groups and ethnic minorities (e.g. Andersson and BråmÅ 2004; Musterd and Ronald 2007). This chapter expands upon the idea that historical patterns strongly influence contemporary neighbourhood dynamics. In this light, we aim to trace and interpret the specific socio-economic and ethnic trends that characterise the developments in housing estates in Tallinn. We investigate changes during the period of political and economic reforms (1989–2000) and the subsequent decade (2000–2011). The focus is interlinkages between social and ethnic patterns. Our primary hypothesis is that

social trajectories of housing estates are rooted in ethnic processes. We believe that the overall lower social standing of Russian-speaking populations in Estonia and the over-representation of this group in certain housing estates translates to a downward social trajectory.

10.2 Methods and Data

In our empirical study, we define housing estates as urban neighbourhoods with at least 1,000 residents where the share of Soviet large-scale multi-family dwellings exceeds 80% of the housing stock. The neighbourhood units used in the analysis are statistical-administrative spatial units in Tallinn that follow urban and historical development and share similar street and building structures. In average, 8,400 inhabitants lived in those housing estates in 2000. The spatial scale for our defined housing estates was roughly equal to the size of Soviet *microrayons*—the planning units used during the period of the Soviet Union. A few neighbourhoods have *microrayon* names (e.g. *Microrayon D*). We make spatial generalisations based on the scale of urban districts of Tallinn. In our spatial terminology, we use the terms ‘inner city’ and ‘outer city’. Inner city points to the more centrally located historical city from pre-1940 era with newer infills and the outer city is an outlying urban area within the administrative borders of Tallinn. Most housing estates were located in the outer city.

To determine the social and ethnic composition of neighbourhoods and their respective trajectories accurately, the analysis focuses on the economically active population. Calculation of population trends uses the Population and Housing Census (PHC) data from 1989, 2000 and 2011. The division of occupational (ISCO) groups served as a proxy for measuring social status. The ISCO 1–2 categories classify as ‘high social status’ groups, and the ISCO 5–6 and 9 are ‘low social status groups’. The 1989 ISCO occupational categorisation was not the proxy for measuring the social hierarchy in 1989, but this categorisation remains to trace the long-term socio-economic changes. For 2000 and 2011 the ISCO categorisation works relatively well with respect to the hierarchical order of prestige and income levels at that time. The analysis selected all individuals from the age group 18–64 years for whom had a defined ISCO category. The basis for ethnic categorisation is the reported mother tongue of residents. For the analysis of ethnic distribution, three groups divided residents—Russian-speakers, Estonian-speakers and others. Estonian-speakers constituted 53% and Russian-speakers 44% of the residents of Tallinn in 2011.

In order to identify neighbourhood types and trajectories, first, relative shares of each social group (low, middle, high) and ethnic group (Russian-speaking, Estonian-speaking, other) were calculated for each neighbourhood unit. A threshold level of 15% points over or under 100 (100 = average for the city) was used to set the cut-off points for identifying the respective statuses for each neighbourhood. Based on the relative shares the following categories were constructed—low, mixed

and high social status neighbourhoods based on social divisions, and ethnically minority-rich, mixed and minority-poor neighbourhoods based on ethnic divisions. For example, in order for a neighbourhood to be classified of 'low social status', it must fulfil the following criteria: the low social status group must be over-represented by at least 115% of the city average and the high-status group under-represented by less than 85% of the city average (see Temelová et al. 2016 for similar methodology). These cut-off points overlap with the standard deviation value level of 0.5 across neighbourhoods in the case of most categories and years.

These categorisations for each year are the basis of modelling and interpretation of neighbourhood trajectories. For better interpretation of the trajectories, we identified residential flows contributing to socio-economic change in Tallinn neighbourhoods (using a longitudinal dataset based on the HPC 2000 and 2010 data) (Kangur 2016). Based on this study, calculating the relative weights of these flows informed assessment of whether the 'dominating flow' of change in particular neighbourhoods was 'in situ change of social status' or 'residential mobility'.

10.3 Urban and Housing Policy Conditions for Spatial Change in Housing Estates

When Estonia incorporated into the Soviet Union after World War II, the most widespread form of new dwelling construction in Tallinn consisted primarily of large-scale prefabricated apartment buildings. These types of dwellings became highly dominant forms of housing, constituting slightly less than two-thirds of the overall housing supply in the city (Fig. 10.1). In Tallinn, 61.4% of 470,000 residents resided in housing estates (defined according to the explanation presented above) by the eve of the Socialist era (1989). Housing estates were master planned following the *microrayon* planning structure (Smith 1996). Clusters of neighbouring *microrayons* formed larger urban districts. Some urban districts in Tallinn consist solely of large-scale apartment buildings (such as the Lasnamäe and Mustamäe districts, see Figs. 10.2 and 10.3).

Construction of the first *microrayons* occurred during the 1950s in the inner city district of Northern Tallinn. In the first new outer city area, Mustamäe (Figs. 10.2 and 10.3), construction began in the early 1960s (Kährik and Tammaru 2010). The oldest segments of housing estates consist of five-storey buildings with small apartments known as *khrushchëvki*. In the Haabersti district (Väike-Õismäe neighbourhood) the construction began in 1974. The quality of the apartments in this district improved and the flats were a more suitable size for families. The neighbourhoods' construction included pedestrian zones, green areas, social infrastructure and conveniently located groceries. The fourth and densest cluster of housing estate neighbourhoods followed from the 1980s to the early 1990s in the Lasnamäe district. This newer panel housing district has the most spacious apartments and good connectivity to the city; however, the population density is high in

Fig. 10.1 Evolution of housing stock by dwelling type in Tallinn. *Source* Database from statistics Estonia

Fig. 10.2 Locations and population size of housing estates. *Source* Database from housing and population census 2000; map layers: Land Board of Estonia, Tallinn city government

this district. It is comprised of roughly 100,000 inhabitants, which constitutes roughly 25% of the total city population. In Tallinn’s central city, small-scale housing estates generally functioned as infill construction within the existing urban fabric (Fig. 10.2).

Fig. 10.3 Selection of housing estates in Tallinn (top left: *Northern Tallinn*, top right: *Mustamäe*, bottom left: *Lasnamäe* (new social housing), bottom right: *Lasnamäe*). Source A. Väiko, A. Kährik

The high rate of foreign net migration from 1960 to 1990 drove the development of housing estates (Tammaru 2002). As mostly Russian-speaking immigrant groups needed housing upon their arrival, the central administrations allocated them to the new panel housing districts (see Gentile and Tammaru 2006). Immigrants, who were over-represented in the industrial sector, had priority access to new housing over the native population (Kõre et al. 1996; Org 1989; Sommer 2012). As a result, with a few exceptions, there was ethnic skewing in housing estate neighbourhoods. Ethnic minorities made up 56% of the resident populations of housing estates by the end of the Soviet era, despite these ethnic groups consisting of slightly less than half the total urban population (Table 10.1). The Russian-speaking blue-collar immigrant workers became the most concentrated in the district of Lasnamäe (arriving during the 1970s and 1980s) (Nerman 1998).

The Estonian population, on the other hand, was primarily located in pre-World War II dwellings in the inner city, which were often dilapidated and rundown (Ruoppila and Kährik 2003). The most striking concentration of Estonian-speaking populations took place in the low-rise suburbs: only one-fourth of the population in these suburban areas was Russian-speaking (Table 10.1). Previous research explores the issues related to high rates of ethnic segregation and housing market

segmentation in Estonian cities (Hess et al. 2012; Kulu 2003; Raitviir 1987; Tammaru et al. 2016).

Housing estates in general remained socially heterogeneous in Tallinn as the place of residence for the socialist 'middle class' (Kährik and Tammaru 2010). When initially built, the estates were attractive to young families, contributing to a rather young population composition at the time.

After the completion of the privatisation process, tenants got the legal right to sell or exchange their dwelling in the housing market, allowing households to more easily relocate. Since then, property values fluctuated across different housing and neighbourhood types with housing estates placing at the lower end of the price range. Residential properties in the Lasnamäe district had the lowest pricing in Tallinn (Padrik 2016). After 2000, the size of private rental stock grew (Hussar 2018; Lux et al. 2012). Based on data from the 2011 census, owner-occupied housing constituted about 80% of the total housing stock in Tallinn, whereas the share of rental housing stock was around 20% (incl. 1.8% public rental units). With such high rate of homeownership, the situation in Tallinn contrasts the Northern and Western European cities where often social rental tenure dominates in housing estates.

Since 2000, construction of new private multi-family buildings is occurring in housing estates. As the property prices of these dwellings are far above the average for housing estates, these new developments are likely to have an impact on the existing social structure of housing estates (Hess et al. 2018 forthcoming). To address problems related to the lack of affordable, modern living space in the city, the city government implemented new social housing programmes between 2003 and 2013 in the districts of Lasnamäe and Northern Tallinn. All together, these public initiatives increased the housing supply in Tallinn by nearly 2% (Kährik and Kõre 2013). Although the new housing is equipped with all modern amenities and is of relatively good standards, its location is likely to lead to severe consequences, most notably the further spatial segregation of the population with lower social standing.

Recent studies reveal an increasing stigma and unpopularity among Estonian-speakers associated with certain kinds of housing estates based on ethnic grounds. These housing estates are still the most preferred type of residence for Russian-speakers, who prefer the locations due to the available Russian-language social infrastructure (kindergartens, primary and secondary schools), and proximity to the similar ethnic groups (Kährik and Tammaru 2010; Leetmaa et al. 2015). Estonian-speakers are more likely to leave housing estates as compared to Russian-speaking minorities (Kährik and Tammaru 2010, 2008; Tammaru et al. 2013).

The economic restructuring after Estonia regained independence, which included a shrinkage of the industrial and agricultural sectors, affected the Estonian-speaking and Russian-speaking minorities differently. This reflects the changing in situ social patterns of Tallinn's neighbourhoods. The 'professionalisation' of the labour force involved more Estonians than the minorities (Tammaru et al. 2016). After the structural and economic reforms, Estonians more frequently found work among the

top ISCO categories, while the opposite is true for ethnic minorities, further highlighting the growing gap between the two ethnic categories from 2000 to 2011. Arguably, Russian-speaking minorities in Estonia were at a disadvantage in the labour market since societal restructuring, leading to decreased opportunities for upward social mobility (e.g. Aasland and Fløtten 2001). The insufficient level of Estonian-language proficiency adds an extra risk factor for their labour market integration (Leppik and Vihalemm 2015; Lindemann and Kogan 2013). In addition, unemployment levels hit Russian-speaking minorities harder, since being over-represented in the large industrial enterprises that largely shut down during the course of the reforms. This may explain the increasing correlation between areas of high Russian-speaking population and the relative social decline of neighbourhoods (due to in situ processes).

10.4 Socio-economic and Ethnic Trajectories of Neighbourhoods

The intra-urban spatial patterns, as inherited from the Soviet past, clearly reflect the over-representation of Russian-speakers in the panel housing areas of Tallinn. In total, 40% of all housing estates in the city were classified as ethnically ‘minority-rich’, and slightly less than half as ethnically mixed by the end of the Soviet period in 1989 (Fig. 10.4). Regarding population trends during the times of political and economic reforms, the 1990s marked a dramatic decline in the total population, with the number of inhabitants shrinking by 15% in Tallinn (Table 10.2). Most influential to this decline was the negative net migration rate and low birth rates, which lasted throughout the decade. About one-fourth of all Russian-speaking minorities left Estonia by the early 1990s. The net migration rate for this group remained in decline until 2011 (Anniste and Tammaru 2014), increasing the overall share of Estonian-speakers in the city.

Despite this decrease in the overall numbers of Russian-speakers, the overall share of Russian-speaking minorities increased in housing estates with Russian-speakers making up nearly 60% of the total housing estate population by

Fig. 10.4 Distribution of housing estates by socio-economic and ethnic status. *Source* Database from housing and population censuses 1989, 2000 and 2011

Table 10.1 Average shares of social and ethnic groups (by percentage) and mean age (in years) across neighbourhood types in Tallinn in 1989, 2000 and 2011

	City total	Housing estates			Inner city (excl. HEs)	Suburbs (excl. HEs)
	Total	Total	... in inner city	... in suburbs	Total	Total
High social status, 1989	26.1	26.2	23.0	27.0	24.6	29.1
High social status, 2000	31.3	28.0	25.5	28.5	34.4	41.1
High social status, 2011	32.2	23.7	24.2	23.5	41.6	46.0
Low social status, 1989	14.5	12.6	15.8	11.9	16.2	21.1
Low social status, 2000	23.2	24.6	25.8	24.4	22.4	17.9
Low social status, 2011	22.6	26.8	28.1	26.5	18.7	14.8
Russian-speakers, 1989	48.1	55.6	60.7	54.4	41.7	23.5
Russian-speakers, 2000	43.2	53.0	28.1	63.5	32.8	16.5
Russian-speakers, 2011	44.1	58.9	23.9	62.1	27.5	18.9
Mean age, 1989	36.3	35.2	36.4	34.8	36.2	37.1
Mean age, 2000	37.8	39.2	40.0	38.9	39.7	34.9
Mean age, 2011	40.3	42.1	42.3	42.0	38.9	35.8

Source Database from housing and population censuses 1989, 2000, 2011

2011. Although this trend minimally affects the overall number of ‘minority-rich’ housing estates, it reflects the growing concentration of ethnic minority groups in the housing estates (Fig. 10.4). From this, we can assume that the increase of ethnic minorities in housing estates has been spatially selective, leading to the accumulation of this group in neighbourhoods that already possessed an over-representation of Russian-speaking population. The greatest increase in the share of ethnic minorities occurred in the outer city housing estates where the share of Russian-speakers peaked in 2000 with some areas reaching as high as two-thirds of the population. The inner city housing estates experienced growth in the Estonian-speaking population (Table 10.1). The largest relative loss of Russian-speakers took place in pre-World War II housing in the inner city, with the share of the minority group decreasing its presence from 42 to only 28%. Previous research points out the role of Estonian-speakers in gentrification (Kährik et al. 2015). This relates partly to their distinctive neighbourhood and housing type preference patterns as compared to Russian-speaking minorities (Hess et al. 2012; Leetmaa et al. 2015). In total shares,

Table 10.2 Comparative population dynamics for neighbourhood types in Tallinn, 1989–2011

	City total	Housing estates			Inner city (excl. HEs)	Outer city (excl. HEs)
		Total (%)	... in inner city (%)	... in outer city (%)	Total (%)	Total (%)
Population in 1989 (tho. inh.) Distribution	n = 469.6 100%	61.4	...11.9	...49.4	26.6	12.0
Population in 2000 (tho. inh.) Decline (1989 = 100) Distribution	n = 400.4 -14.7% 100%	62.9	...10.8	...52.1	23.2	13.9
Pop in 2011 (tho. inh.) Decline (1989 = 100) Distribution	n = 392.7 -16.4% 100%	57.9	...9.7	...48.2	24.1	18.0

Source Database from housing and population censuses 1989, 2000, 2011

the rate of Russian-speaking minorities is the smallest in low-density suburbs; however, this tendency is historically rooted.

Our findings suggest that ‘Soviet-style’ neighbourhoods can be an attractive option for Estonian-speakers if these places provide residents with good access to inner city locations and are ethnically less minority-dense. Astonishingly, Estonian-speakers are highly over-represented in inner city housing estates compared to the pre-World War II inner city housing stock.

During the late Soviet period, housing estates had a largely mixed socio-economic composition (Table 10.1). In 1989, 24 out of 29 housing estates could be classified as ‘socially mixed’ (Fig. 10.4). This attribute is a side effect of the central planning system that existed in Soviet Estonia, since, as described previously, market-based redistributions did not occur in Tallinn before the mid-1990s. Until the collapse of the Soviet Union, housing estates were considered attractive housing for various population categories (Tammaru et al. 2016). The socio-economic disparity was less drastic in the older, pre-World War II sections of the inner city. Only the low-rise outer city stood out by the over-representation of low-skilled workers up until 1989. The social dynamics occurring in two periods (1989–2000 and 2000–2011) reveal a trend of gradual social degradation of housing estates in Tallinn. In 2000, one-third of housing estates were low socio-economic status, i.e. with over-representation of unskilled labourers. By 2011, the share of low social status neighbourhoods rose to cover 50% of all housing estates (Fig. 10.4).

Figures 10.5 and 10.6 depict the dynamics in intra-urban geography of social status and ethnic groups. Most housing estates in the outer city district Lasnamäe show loss of socio-economic status since 1989. Decrease of social status takes place

Fig. 10.5 Socio-economic status changes in housing estates in Tallinn, 1989, 2000 and 2011. *Source* Database from housing and population censuses 1989, 2000 and 2011; Map layers: Land Board of Estonia, Tallinn city government

in other districts, as well with the exception of housing estates located in Central Tallinn. Mustamäe and Haabersti districts differ only in regards to their initial social status, as some of these neighbourhoods enjoyed conditions that were more favourable before 1990 compared to Lasnamäe or Northern Tallinn. Concerning ethnic distributions, the entire district of Lasnamäe and housing estate neighbourhoods in Northern Tallinn were distinguished by high shares of Russian-speakers in 1989. The other outer city areas as well as Central City housing estates were mostly ethnically mixed or, to a smaller degree, ‘minority-poor’.

Overall, ethnic change in the urban fabric of the city is less remarkable compared to changes in social dynamics. The neighbourhoods of Mustamäe continue to be mixed or largely Estonian-speaking communities, especially in locations near Tallinn Technical University. Seemingly, only the housing estates in Haabersti district (Väike-Õismäe) became ‘minority-rich’ over time.

Further insight into the social and ethnic trajectories of housing estates emerges when we investigate overlaps between social and ethnic dimensions of panel housing areas (Figs. 10.7 and 10.8). Our hypothesis suggested a positive relationship between social decline and ethnic concentrations. We predicted that social degradation is more likely to happen in the ‘minority-rich’ neighbourhoods. Figure 10.7 extracts the distinctive social and ethnic trajectories. ‘Upgrade’, ‘downgrade’, or ‘stable’ trajectory refers to the situations where the housing estate

Fig. 10.6 Ethnic status changes in housing estates in Tallinn, 1989, 2000 and 2011. *Source* Database from housing and population censuses 1989, 2000 and 2011; map layers: Land Board of Estonia, Tallinn city government

either moved from one neighbourhood status to another or remained stable, during the two observational decades. If the neighbourhood experienced mobility during the first phase (1989–2000) we call it respectively the ‘early’ upgrader or downgrader, whereas the change during the second decade (2000–2011) refers to a ‘late’ upgrade or downgrade.

As shown in Fig. 10.6, ‘minority-rich’ areas have a much greater tendency to experience ‘stable low’, ‘early downgrade’, or ‘late downgrade’ social cycles. Barely any such housing estate continued to stay mixed, and none experienced social upgrade. Likewise, none of the ‘minority-poor’ housing estates fell into the ‘stable low’ or ‘social downgrade’ cycles. It seems having a larger share of Estonian-speakers in a neighbourhood is a key factor in fostering the social stability in housing estates. Although certain overlap between the social and ethnic factors in the spatial fabric is clear, there is a share of ethnically mixed neighbourhoods that followed the ‘low stable’ or the ‘downward’ social trajectory during the two independence decades. Hence, the social degradation processes hide more than the ethnic and historical components and require attention when analysing the causes behind the decrease in popularity and status in housing estates.

Both the social and ethnic risk factors are associated with Lasnamäe. Lasnamäe has the highest concentration of Russian-speaking ethnic minorities across all neighbourhoods, as well as a gradual decline in socio-economic conditions

Fig. 10.7 Decomposition of social dynamics in Tallinn housing estates by ethnic distribution between 1989 and 2011. *Source* Database from housing and population censuses 1989, 2000 and 2011

Fig. 10.8 Interaction of social and ethnic dynamics (trends) within housing estates, 1989, 2000 and 2011. *Source* Database from Housing and Population Censuses 1989, 2000 and 2011; map layers: Land Board of Estonia, Tallinn city government

(Fig. 10.8). The spatial scale of the district, which has a high population density comprising one-fourth of all Tallinn’s residents, further undermines its prospects. Additionally, neighbourhoods in Lasnamäe are relatively distant from the city centre, which adds a further risk factor, despite readily available and low-cost

public transport connections. The social environment of the neighbourhood does play an important role in explaining the ethnic preferences and growth of Russian-speaking communities in Lasnamäe (i.e. as said social infrastructure, and representatives of the same ethnic groups further attract ethnic minorities). The neighbourhood in Lasnamäe where construction of new social dwellings occurred during the 2000s first experienced social and ethnic mixing followed by social decline along with the growth of Russian-speaking minorities.

The housing estates of Northern Tallinn are distinguished by low-status socio-economic conditions and high percentages of Russian-speakers, which led to some controversial developments in the area. Despite occupying a coastal area with beach access, which is an attractive feature for other gentrifying areas (Temelová et al. 2016); this district retained its lower status populations. Establishment of the Russian-speaking population in this area was largely due to the location of several Soviet industrial plants within the region. This further establishes the connection between the population allocation patterns of the Soviet era, and recent ethnic/social trends, as the historical factors tend to keep back gentrification processes. The other smaller scale inner city housing estates located in Central Tallinn largely preserved their social mix with a small-scale increase in the overall Estonian-speaking population.

In examining the age composition of the districts, we can see that the period of construction for panel housing areas influenced the overall age composition of the respective area. During the Soviet era, residential mobility was rather modest, as housing shortages tied most people to their apartments. The population composition of different housing estates is reflective of the time at which they were constructed (Tammaru et al. 2016). The age of housing estates positively correlates with the age of the population, such that in older housing estates the age structure is more biased towards elderly (Mustamäe, Northern Tallinn). The proportion of younger individuals was the highest in Lasnamäe. The mean age increased in housing estates more rapidly than the city average: the mean age of 42 years in 2011 in housing estates (compared to 40 years in all of Tallinn) is higher than in all other neighbourhood types (pre-World War II inner city low-rise suburban districts) (Table 10.1).

Different population mechanisms can correspond with changes in the social dynamics of neighbourhoods. Change in the population structure of these areas can occur because of in situ changes (e.g. selective upward or downward social mobility without moving the place of residence), also due to actual displacement or replacement of some population categories because of residential mobility. By cross-comparing with the results of a recent study conducted by Kangur (2016), covering the period 2000–2010, we conclude that social change in housing estates in Tallinn has been induced by residential mobility rather than in situ change. According to the results of the aforementioned study, social decline in Mustamäe and Haabersti is shown to be directly associated with the outflow of higher social status residents (as post-2000 suburban developments are likely to attract them in the nearby surroundings). In Lasnamäe and Northern Tallinn, the picture is less clear. For example, half of the housing estates in Northern Tallinn followed the

decline path because of the inflow of low social groups, while the other half downgraded due to the outflow of high social status groups. However, this finding does not diminish the overall importance related to in situ processes on the social trajectories of neighbourhoods, such as the relative lowering of social status position of Russian-speakers as compared to Estonian-speakers in society.

10.5 Discussion and Conclusion

Several complex factors affect social and physical degradation processes in large housing estates, as pointed out in Western European urban contexts. The density of social housing and the high concentration of immigrants from less wealthy countries, who usually hold a lower social position in society than native populations, deserve the most attention. The context of Tallinn differs somewhat from Western European cities. In the post-Soviet context of Tallinn, the interplay between distinctive Soviet historical legacies and new housing market mechanisms is shaping the neighbourhood trajectories for the large housing estates. The almost full-extent privatisation of dwellings and the issue that housing estates play such a predominant position in the housing market reveal the main differences compared to Western contexts. Tallinn's high percentage of Russian-speaking ethnic minorities makes the role of ethnic factor a central focus. While these minorities are less distinguishable from the Estonian-speaking population as compared to the minorities of Western European cities, the trend of minority ethnic groups holding a less favourable economic position in society as compared to the majority populations still holds true. The concentration of Russian-speakers in housing estates remains an important issue hampering the social integration of ethnic minorities in Tallinn.

The findings from this chapter raise warnings about the spatially selective but large-scale social degradation tendencies taking place in housing estates of Tallinn. On one hand, we identified a trend towards the over-representation of elementary occupations (i.e. low social status categories) in these areas during the two decades after Estonia regained its independence, on the other hand, we see that the overall strengthening in the position of ethnic minorities in housing estates is taking place. These trends indicate a step towards narrowing the gap between the differences in the housing estates of post-socialist Eastern and Western cities.

The social dynamics in housing estates connect to the specifics of the ethnic fabric established by Soviet housing allocation policy. It is clear from the analysis that the areas most suffering from social degradation are those with the highest concentrations of Russian-speaking minorities. The lower socio-economic resources of the ethnic minorities living in Estonia, as compared to natives, affected the social downward mobility of neighbourhoods. Nevertheless, the processes of social degradation do not stop with in situ change. The historical patterns of ethnic distribution continue to reproduce themselves based on residential location decisions. This is due to already established perceptions, community networks and ethnic

infrastructure present in housing estates but often absent in other types of neighbourhoods. Residential mobility in housing estates led to further ethnic and social sorting in Tallinn (Kährik and Tammaru 2010). Estonian-speakers are much more likely to opt for gentrifying areas in the inner city or less dense outer low-rise suburbs than Russian-speakers (Kährik and Tammaru 2008; Kährik et al. 2012; Tammaru et al. 2016). Housing estates are the most preferred type of neighbourhoods for Russian-speaking minorities (i.e. the cultural preferences explanation of residential separation/integration patterns holds true in Tallinn) (Leetmaa et al. 2015; Mägi et al. 2016). Assumingly, the most attractive locations are those where a considerable size of minorities already settled, such as the district of *Lasnamäe*.

As these residential processes develop, certain socio-ethnic 'hierarchies' are highlighted across various housing estates. The higher share of Estonian-speakers in combination with more attractive locations seem to yield prospects that are more favourable. In this respect, the small-scale housing estates of the Central City, and some neighbourhoods in suburban area *Mustamäe*, seem to be placed in the upper levels of this 'hierarchy'. Some of these areas retained a social and ethnic mix, while others became largely Estonian-speaking over time. This suggests that it is not solely the 'Soviet-style' urban form that determines the socio-economic disadvantage per se, but rather the function of historical conditions and related allocation patterns, and the specific locational features (planning, natural surroundings and other characteristics). The neighbourhoods in *Mustamäe* and *Haabersti* (*Väike-Õismäe*) stand out with more successfully implemented neighbourhood plans, with more developed recreational areas and greenery, which all adds to the upkeep of social stability and attractiveness. These more developed environments still seem to hold popularity among Estonian-speakers, whereas in the suburban *Lasnamäe* district a 'tipping point' in terms of 'Estonian-speaker flight' seems reached. Many factors drive the unattractive position of this district in the eyes of Estonian-speakers, for example, the ethnic character of the district, dense building structure, distant locations in some cases and lack of natural attractions.

The prospects for other housing estates located in *Northern Tallinn* are less clear, given its dense population of ethnic minorities. Regardless of the attractive location in terms of natural surroundings and access to the inner city, historical trends seem to hinder the social regeneration of these areas. Existing research shows minimal or no interaction between the communities of these housing estates with the surrounding pre-World War II, gentrifying neighbourhoods (Tammaru et al. 2017). Rather, the areas function as two parallel worlds within close physical proximity that are otherwise socially segregated. Both a high share of homeowners, which led to a more stagnant resident population, and the existing socio-ethnic image of the areas presumably contribute to maintaining the low social status. Additionally, the physical characteristics of the housing (relatively small apartments in *khrushchovka* type of buildings) do not match with the neighbourhood preferences of potential gentrifiers. As the course of gentrification evolves, the inertia of trends rooted in the socialist times will likely be broken, which would lead to change in the residential composition.

The effects of regeneration initiatives and the construction of multi-family housing on the overall socio-ethnic composition in housing estates, is a point of interest. The effects of such urban restructuring have not clearly manifested in socio-economic patterns. According to a study conducted by Hess et al. (2018), the renovation of existing buildings has yet to affect the socio-economic structure of residents, whereas another study (Hess et al. 2018) noted that there are inevitable effects on the social environment when new apartment buildings are built in neighbourhoods. The current study did find that the implementation of municipality-initiated housing projects worsened the accumulation of social disadvantage in *Lasnamäe*.

To conclude, the fact that none of the ‘minority-poor’ housing estates experienced downward mobility while the majority of ‘minority-rich’ housing estates have revealed deeper concerns. This manifests the idea that exclusion from economic capital leads to spatial exclusion, e.g. that lower socio-economic position translates into lower spatial resources (note that the real estate values are the lowest in *Lasnamäe*). These processes build upon one another as the increase in ratios of lower social status and ethnic minorities further accelerate socio-economic ‘flight’ and the relocations of Estonian-speakers. As these processes build and become cemented, they become more difficult to address, especially when a certain ‘tipping point’ is reached.

Tallinn still has many strengths including the high homeownership rate in housing estates (making owners more responsible and motivated with regards to housing upkeep and neighbourhood maintenance), the prevalent role the housing estates play in the housing market, their good connectivity to the city centre, as well as good infrastructure available. These factors allow for tackling of the issues at hand somewhat more easily compared to many Western cities. Applying a targeted urban policy could still lead to the reversal of social and ethnic trends in the at-risk areas. For example, undertaking physical restructuring projects could diversify the existing homogeneous urban fabrics. The inclusions of mixed ethnic and middle-class status families into the neighbourhoods can contribute to the overall transformation of the neighbourhood environment, making these areas more attractive and liveable, as well as encouraging a sense of community spirit. Some of the initiatives, such as developing community activism, community gardening, developing public spaces and subsidies to housing renovations, among others, are already on the way (Leetmaa et al. 2018) with more still to do.

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