





**KADRI LEETMAA**

Residential suburbanisation  
in the Tallinn metropolitan area



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## LIST OF PUBLICATIONS

Publications included in the dissertation:

LEETMAA, K. & T. TAMMARU (2007), Suburbanisation in countries in transition: destinations of suburbanizers in the Tallinn metropolitan area. *Geografiska Annaler. Series B: Human Geography* 89 (2), pp. 127–146. (ISI Web of Science, Social Sciences Citation Index)

This article has been published. I am the primary author. I wrote the theoretical discussion, I conducted the data analysis and drew up the conclusions. The co-author contributed to the theoretical discussion and conclusions, and advised as regards the statistical method used for the data analysis.

TAMMARU, T. & K. LEETMAA (2007), Suburbanisation in relation to education in the Tallinn metropolitan area. *Population, Space and Place* 13 (4), pp. 279–292. (ISI Web of Science, Social Sciences Citation Index)

The article has been published. As co-author of this study, I participated in writing the theoretical background and in drawing up the conclusions. In addition, I collected comparative data from other post-communist countries in order to create a comparative framework for the study.

TAMMARU, T., K. LEETMAA, S. SILM & R. AHAS (2008), New residential areas in the Tallinn metropolitan area. *European Planning Studies*. (ISI Web of Science, Social Sciences Citation Index)

The article has been reviewed and accepted by the journal, and is currently in press. Publication is foreseen to take place in 2008. In this study I wrote the draft of the article based on discussions within the research team. My role was essential in the systematization of the theoretical discussions, in the interpretation of the results of the data analysis and in the preparation of the conclusions.

LEETMAA, K., T. TAMMARU & K. ANNISTE (2009), Urban actors and residential suburbanisation in the Tallinn metropolitan area. *Tijdschrift voor Economische en Sociale Geografie*. R. Van Kempen & A. Murie, eds., *Special issue: Neighbourhood change in European cities: new developments in the context of the changing role of the state*. (ISI Web of Science, Social Sciences Citation Index)

The article has been invited to be included in a special issue of the journal, and has been reviewed and accepted by the journal. The publication of the special

issue is foreseen to take place in 2009. I was the primary author of this article. Based on earlier empirical studies in which I have been involved, in this article I present a theoretical interpretation of the experience of suburbanisation in the Tallinn metropolitan area.

TAMMARU, T., K. LEETMAA, A. KÄHRIK & M. NUGA (2009), Living in a nevereverland: new suburban settlements on previous farmlands around Tallinn. *In: L. Sýkora & K. Stanilov, eds., Confronting Suburbanization: Urban Decentralization in Post-Socialist Central and Eastern Europe*, Oxford: Blackwell Publishing Ltd.

(Book series of Urban Studies by the journal *International Journal of Urban and Regional Studies* (ISI Web of Science))

The article has been invited to be included in a book that collects articles on post-communist suburbanisation in different Central and Eastern European countries, and is currently in the review process. In this study I have participated in writing the theoretical discussions and the overview of the suburbanisation experience of the Tallinn metropolitan area, and I have contributed to the interpretation of the data analysis.

Other publications:

LEETMAA, K., P. METSPALU & T. TAMMARU (2006), Suburbanisation and commuting modes in the Tallinn metropolitan area. *In: Ü. Mander, C.A. Brebbia & E. Tiezzi, eds., The Sustainable City IV. Urban Regeneration and Sustainability*, pp. 127–135. Southampton, Boston: WIT Press. (ISI Proceedings)

LEETMAA, K. (2005), Eeslinnastumine Tallinna linnaregioonis üleminekuajal: eluasemetüübid ja sihtkohad tagamaal (Suburbanisation in Tallinn metropolitan area in post-communist period: dwelling types and destinations in suburbs). *In: H. Kulu & T. Tammaru, eds., Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.

AHAS, R. & K. LEETMAA (2005), Uusurbanismi ja kompaktilinna kontseptsioonid säästva linnaplaneerimise lähtekohana (The concepts of new urbanism and the compact city as starting points for sustainable urban development). *In: A. Roose, ed., Keskkonnasäästlik planeerimine ja ehitus*, Publicationes Instituti Geographici Universitatis Tartuensis, 99. Tartu: Tartu University Press.

LEETMAA, K. (2003), Tallinna linnaregiooni ränne, *In: T. Tammaru & H. Kulu, eds., Ränne üleminekuaja Eestis*. Tallinn: Estonian Statistical Office.

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## ABSTRACT

This dissertation focuses on residential suburbanisation in the capital city metropolitan area of Estonia (Tallinn metropolitan area) in the post-communist period. Since the 1990s, residential suburbanisation has been observed as the dominant migration trend in many post-communist metropolitan areas in Central and Eastern Europe. In the research literature, this is mostly associated with the same migration motives that have led to massive residential suburbanisation in Western countries in the middle of the twentieth century. The cities have inherited from the communist period an enormous shortage of contemporary housing. A remarkable share of the urban population in the Central and Eastern European countries now also live in large communist-era housing estates. It was expected that during the post-communist period, in parallel to the increase in wealth, people would begin to improve their living conditions, and like in Western countries this would lead to migration into the suburban zones of cities.

Due to the lack of high quality data, however, migration analyses mostly operate with aggregate migration data that do not make it possible to analyze the migration motives of persons moving from city to suburb. Therefore the explanations of generalized theories, based on comparative studies in Western countries, have very often been automatically transferred to the post-communist context. I argue in my dissertation that the different societal and economic conditions in the post-communist context, as well as the inherited spatial structure of metropolitan areas shaped migration patterns in the Tallinn metropolitan area.

I use the data from the 2000 Census to demonstrate that the suburbanizers in the first decade of transition differed fundamentally from classical city-to-suburbs movers in Western countries. I demonstrate that people with relatively lower social status were more likely to contribute to suburbanisation in the 1990s, and they were more likely to move to existing, cheaper suburban housing. This may be explained by the economic hardships that many people faced due to economic restructuring and reforms in the housing market. The suburbanisation of more well-off people also began in the 1990s, but this was relatively less important than the former phenomenon. Nevertheless, these people were more likely to move into new suburban houses, in accordance with suburbanisation experiences in Western countries.

In addition, I have analyzed new housing construction in the new suburban residential areas and the renovation activities in Soviet-era summer home areas based on the New Residential Areas Survey of 2006 and on two Summer Home Areas Surveys from 2002 and 2007. New housing construction was still relatively insignificant in the 1990s in the Tallinn metropolitan area. A drastic increase in new housing construction occurred since the 2000s. New residential areas have been built in very close areas of Tallinn and in the 2000s the share of new apartment buildings increased considerably in total suburban housing

construction. I argue that this phenomenon is related to the extreme lack of contemporary urban housing and a high quality living environment in the city. Therefore people who prefer the urban environment move to areas that are very close to Tallinn. A less visible form of new housing construction takes place in the former summer cottage settlements that were built for urban residents in the Soviet years. Although these settlements are socially more heterogeneous, as concerns the number of permanently inhabited houses this phenomenon is comparable with new housing construction on former free areas.

I argue that the traditional explanations for residential suburbanisation that emphasize the push-factors in the city (unsatisfactory living environment) and the pull-factors in the suburban areas (more attractive living environment) are insufficient to explain the spatial and temporal dynamics of the phenomenon of suburbanisation in the Tallinn metropolitan area. I have demonstrated that essential enabling factors — the availability of suburban land, a functioning housing market, wealth and the availability of housing loans — were absent at the beginning of the post-communist era. Even when the majority of urban inhabitants lived in cramped Soviet-era apartments, and the metropolitan area had inherited large free areas around the city from the Soviet period (areas that were previously reserved for agricultural and military purposes), the circumstances were not favourable for classic push- and pull-factors to become effective.

It has often been discussed how long the post-communist research framework will be informative in analysing urban change in former communist countries. Describing the phenomenon of residential suburbanisation in the post-Soviet period in Estonia, I conceptualize post-communism in three ways. First, the post-communist period is a period of changes (“post-communism as change”). Neither the socio-economic situation nor people’s migration motives were similar at the beginning of the 1990s, the end of the 1990s or now. Therefore it is also impossible to define the notion of post-communist suburbanisation, as the nature of city-to-suburbs movers has changed over the course of the two last decades. Second, I argue that “post-communism as a shock” is an appropriate research perspective for migration patterns in the first half of the 1990s. The changes that took place in society were rapid, and this challenged the capabilities of many people to adapt to the new circumstances. In this situation, migration was one strategy to cope with emerging economic difficulties.

The third concept that is central to my arguments is “post-communism as continuity”. Moving to suburban areas in the shock-shift years was possible because the Tallinn metropolitan area has inherited a large older housing stock in suburban areas. The former summer homes, for instance, now served as vacancies in the metropolitan housing market. In addition, many Russian-speaking inhabitants returned to Russia in the early transition years. This also left vacancies in the suburban housing market in the 1990s. Vacancies in summer home areas still influence intra-metropolitan migration patterns. Today,

however, the inherited metropolitan spatial structure — the increasing of the supply of suburban land on the one hand and a shortage of modern living environment in the city on the other — also affects intra-metropolitan migration patterns.

## INTRODUCTION

This dissertation is a collection of studies on post-communist residential suburbanisation in the capital city metropolitan area of Estonia that have been performed since 2002. During the last nine years I have in one or another way been related to the analyses of the development of the Tallinn metropolitan area. Since my master studies I have been systematically interested in residential changes in metropolitan areas, and more specifically in the phenomenon of residential suburbanisation. This doctoral dissertation is a more profound analysis of the same phenomenon, supplemented with new research results and deeper theoretical discussions.

I define residential suburbanisation as the migration phenomenon that causes population deconcentration in an urban region. In the case of the Tallinn metropolitan area, this process mainly takes place due to city-to-suburbs migration, and to lesser extent due to migration to suburban areas from other parts of the country. In my studies, I presume that migration to suburban areas may be related to various migration motives. The area of my case study, the Tallinn metropolitan area, has been defined as a functional urban region based on daily job-related commuting. The Tallinn metropolitan area is a mono-centric region; today almost three quarters of the regional population live in the city of Tallinn. The suburban area of Tallinn consists of municipalities from which at least 15 percent of the working population commuted daily to the central city, according to the 2000 Census data. In my studies, I have focused on the post-communist period, which I have defined as the period from the political changes that took place at the beginning of the 1990s to the present day.

These relatively broad definitions are related to the general research design. Studies on post-communist suburbanisation often take for granted that the Western type of city-to-suburbs migration, the migration of relatively more affluent family households to a quieter suburban living environment, also occur in the post-communist context after social conditions become similar. For this reason, suburbanisation is often defined as a migration phenomenon that is related to environmental migration motives. I define the suburbanisation phenomenon as any migration to a suburban area, because I presume that city-to-suburbs migration in the post-communist period may have been related to different motives, and it may have included different population groups.

It has been also often discussed how long “post-communism” as a research perspective will be an appropriate approach to the investigation of urban change in former communist countries. Since the initial political changes of the end of the 1980s, enormous change has taken place in the society and economy in these countries, and therefore it is not reasonable to treat the last two decades as a homogeneous post-communist period. The social context of the beginning of the 1990s was very different from that of the end of the 1990s or today, and therefore the preconditions for migration were also different. Thus I first conceptualise post-communism as a period of “change”. The empirical data that



I use in my analyses extend from the year 1989 to 2007. I presume that city-to-suburbs migration has undergone remarkable changes during this period.

Another concept of post-communism that I find informative for migration studies is post-communism as a “shock”. In the first transition years, extraordinarily rapid social and economic changes took place in these countries. This challenged people’s capabilities to adapt to new circumstances, and migration was one of the strategies to cope with the new situation. For some people, the changes offered an opportunity to improve their living conditions. For others, moving might have been a strategy to avoid growing costs in the city and cope with decreasing incomes.

The third concept that informs my research is post-communism as “continuity”. In my studies I am primarily interested in how the spatial structure inherited from the Soviet years changed migration patterns in the Tallinn metropolitan area. For instance, the inherited housing stock in the suburban area (former summer homes, less expensive suburban apartments) creates pre-conditions for city-to-suburbs migration for less well-off inhabitants. Continuity is, however, also expressed in the compact spatial structure of the post-communist metropolitan area — many people live in cramped Soviet-era apartments in the city, and there are vast free areas very close to the city.

The latter is a typical precondition for residential suburbanisation. The factors that favour residential suburbanisation are classically divided into push-factors in the city (unsatisfactory living environment), pull-factors in the suburban area (attractive areas for potential new home) and enabling or structural factors (that make the realisation of personal-level preferences possible). Classical enabling factors are a functioning real estate and land market, a level of welfare that enables one to invest in housing, car-ownership and transport infrastructure, and the availability of housing loans. In addition, the public authorities play an important role in favouring or restricting suburbanisation, and in shaping its spatial patterns. Therefore I also analyse how the balance of different actors in an urban region — households and the private and public sectors — changes the preconditions for intra-metropolitan migration.

The following are the main research questions that have guided my research:

- What are the reasons behind the suburbanisation phenomenon in the post-communist context in the Tallinn metropolitan area?
- How has post-communist migration towards suburbs changed spatially and in the course of time in the Tallinn metropolitan area?

In order to answer these questions, I used different data. First, the individual level 2000 Census data were accessible in the Estonian Statistical Office to describe the migration flow to suburban areas in the first decade of transition. This data made it possible to clarify who were the people that left the city for the suburbs in the period since the last census (1989–2000). The database contained information about the socio-demographic characteristics of the

migrants and about their dwelling type in the year 2000. This analysis also permitted us to discuss the possible migration motives of suburban movers. As the quality of annual migration statistics in Estonia is inadequate, similar analyses about the city-to-suburbs migration are not available after the last census year. In addition I used data from research projects conducted by the Institute of Geography of the University of Tartu. First, in 2006 the New Residential Areas Survey was performed to describe compact new settlements built since 1991 on the former undeveloped areas in the suburban area of Tallinn. Second, in 2007 the Summer Home Areas Survey was conducted in order to estimate the intensity of construction activities in Soviet-era recreational settlements. In addition, I used the results of the former study on summer home areas that I performed in 2002 while working at the Harju County Government.

My research activities during my doctoral studies have been structured into smaller studies, each concentrating on a specific aspect of suburbanisation with its own more detailed research questions. All of these studies have been summarized in articles addressed towards the broader international scientific community. These articles form an essential part of the dissertation (chapter II). The first two articles (2.1.) give an overview of the suburbanisation process in the Tallinn metropolitan area in the 1990s. The next two articles (2.2.) describe new housing construction in the same region, which mainly took place in the 2000s. The last article (2.3.) brings together the results of former empirical analyses on residential suburbanisation in Estonia and discusses the driving forces for population change in the suburban area of Tallinn since the later part of the Soviet period.

In the first introductory chapter I summarize the theoretical discussions that have guided my research. As this chapter of the dissertation was written after the empirical studies, the theoretical arguments presented are partly grounded on the results of empirical analyses. In fact, every new study also shed new light on the conclusions of former studies. In this chapter I also summarize the results of empirical analyses, and I present the main conclusions of my research. A more detailed overview of the steps in the empirical analyses has been provided in respective publications.

This division of the research process into smaller studies has turned out to be a very fruitful way of doing research. First of all, it has given me the opportunity to be part of a very encouraging research team. It has been possible to debate both the theoretical background of the studies and the results of the data analyses with other colleagues. The design and implementation of the New Residential Areas Survey (2006) and Summer Home Areas Survey (2007) that provided essential information for my research have been a project of the entire Department of Geography. Thereby the summer home areas survey was an excellent initiative of my former student and present colleague Kristi Anniste.

In addition, these interim summaries of the research process have also given me the opportunity to re-evaluate the arguments that have been proposed and to

determine what could be the best theoretical framework to explain post-communist residential suburbanisation. The international scientific conferences and workshops as well as my stay at the Leibniz Institute for Regional Geography in Leipzig have offered a good opportunity to place the results of the analyses in the context of studies that have been conducted in other countries. In the same way, the main results have been discussed by planning experts in Estonia, and this has also contributed to the understanding of recent urban change in the scientific context.

I acknowledge the support and help of all of my former and present colleagues who have made my studies and research possible. My interest in the topic originates from the days I worked for the government of Harju County. These colleagues have later also been very supportive. I notably appreciate the synergy that has been achieved with my scientific adviser PhD Tiit Tammaru. He has been an excellent discussion partner and has encouraged me during my studies. The Department of Geography and the University of Tartu more generally have created excellent conditions for my research activities and studies.

I am especially grateful to my family, which has emotionally supported me during the research. My mother has given me a lot of free time for writing the thesis in the last spring. Invaluable contributions have been made by my children Rein and Leena, who have shown understanding of my scientific efforts every day over the past two years.

Elva, 2008

# CHAPTER I: INTRODUCTORY CHAPTER

## I.1. Key concepts

### I.1.1. Suburbanisation

The key concept of my research is the suburbanisation process. This has generally been defined (Encyclopaedia of the City 2005, 436–440) as a movement of households and businesses out of city centres to districts located within commutable distance of a city and the consequent growth of low-density peripheral urban areas. The factors contributing to suburbanisation could be divided into three groups: push-factors (the people's desire to move away from the city), pull-factors (all the attractions that the suburban area contains), and the enabling factors that make it possible to transform that desire into action.

The out-migration of rich people from the industrial cities to suburban villas was a phenomenon that began in the nineteenth century (Couch et al 2007, 7–11; Encyclopaedia of the City 2005, 436–440). In addition, urban planners began to elaborate solutions to improve the living conditions of the growing industrial workforce in the cities (Hall 2001, 13–46; Düwel & Gutschow 2001, 36–37). One of these ideas was to build settlements further away from urban congestion (Hall 2001, 89–91; Schollmeier 1990, 25–26, 55–56), inspired by the garden-city movement of the beginning of the twentieth century. Nevertheless, to a great extent these new settlements remained satellites dependent on the bigger cities where the jobs were concentrated (Hall 2001, 86–135; Schollmeier 1990), and they were located close to main transport routes. This process of separating the residential and working districts of cities, made possible by the development of transport infrastructure (Champion 2001, 148; Van den Berg et al 1982, 26), could be considered to be the precursor of rapid residential suburbanisation in the twentieth century.

The forerunner of contemporary suburbanisation was the United States, with its rapid growth in car ownership (Bourne 1997, 170; Hall 2001, 275) that began before World War II. The 1920s was the first decade in which suburban population growth exceeded population growth in the central cities of the United States (Bourne 1997, 171). The economic crisis of the 1930s and the Second World War somewhat slowed down this process in the United States, and in the post-war decades, rapid residential suburbanisation has established itself in the industrialised countries on both sides of the Atlantic (Bourne 1997, 171; Champion 2001, 149–150; Hall 2001, 275–276).

Suburbanisation generally starts with the migration of more affluent urban inhabitants, often family households, outside the city, where more spacious living conditions and a quiet and naturally attractive living environment act as suburban pull-factors. The traditional push-factors that make cities less attractive to people are congestion, intense traffic, crime, high land prices, the absence of green spaces, etc. In addition, the changed racial composition of the

urban population in some cities (Downs 1999, 23–24; Müller & Rohr-Zänker 2001, 28, 37), the post-war „baby-boom“ (Downs 1999, 32; Hall 2001, 291) and the in-migration of poorer residents from rural areas (Downs 1999, 23, 25), have contributed to the outflow of more well-off people from the cities. Different enabling factors, e.g. increasing wealth (the opportunity to invest in housing), fewer working hours (the possibility to travel increasing distances), growing car ownership, road construction, government support for housing construction, the availability of mortgages, transform the process into an extensive movement of middle classes into suburban residential areas (Van den Berg et al 1982, 30; Parr 1999, 228; Bourne 1997, 170; Champion 2001, 148; Encyclopaedia of the City 2005, 436–440).

Residential suburbanisation is often considered to be the first stage of wider decentralisation processes in metropolitan areas (Van den Berg et al 1982, 29–40; Hartshorn & Muller 1989). In the first stage of the suburbanisation process, the new suburbanites retain close connections with the inner city: they have jobs there, and they consume the services available only in the city, while their new living environment mostly only has a residential function (Van den Berg et al 1982, 30; Hartshorn & Muller 1989). Later, shifted demand also brings services and retail enterprises into suburban areas. Traffic jams and high land costs in the city on the one hand and cheaper suburban locations with good transport accessibility on the other hand also cause other enterprises to favour suburban locations. The growth of the suburban workforce due to residential suburbanisation could also become a decisive factor for enterprises looking for a location with a sufficient labour force catchment area (Garreau 1991). Analogously, the new jobs in suburban areas could in turn amplify the in-migration to areas around the new employment growth poles (Parr 1999, 228; Van den Berg 1999, 542).

This kind of intra-metropolitan decentralisation process is a challenge for urban planners and politicians. On the one hand, the cities need to improve their living and business environments to avoid further destabilization, while on the other hand the tax base of those cities worsens since first of all more well-off people leave the cities. This makes it increasingly difficult to control the process. In suburban areas, suburbanisation transforms former rural and natural areas into construction sites and often closes off former attractive recreational areas. The provision of a sprawling population with infrastructure and services is complicated and significantly more expensive than compact settlement forms. In addition, mobility in the region increases because the central city needs to be accessible for the suburban population, but in parallel to the functional diversification of suburban areas, different directions of traffic flows inside the metropolitan area grow.

One might generalize that suburbanisation has become a universal phenomenon of metropolitan areas in Western countries, even when migration flows to the suburbs have been more modest in some countries or in some periods (Champion 2001, 152–158; Cheshire 1995). This has also led researchers to

consider the metropolitan area rather than the city as an appropriate research unit (Champion 2001, 149; Champion 2002, 95–96; Van den Berg et al 1982, 59) while studying urban change in industrial countries. The way urban planners have responded to this situation has varied. There are examples where the aim has been containment of the suburbanisation process or at least keeping the new emerging settlement structure as compact as possible (many Western European countries) (Hall 1998, 103; Van den Burg & Dieleman 2004). There are, however, other examples where new housing construction in the suburban zone has been treated as a normal way in which people can improve their housing situation (United States), and national governments' housing and transport policies have instead promoted new housing construction in suburban areas (Downs 1999, 19, 25; Hall 2001, 291–293)

In addition to applied geography searching planning solutions for the changed spatial structure of metropolitan areas, geographers have adopted very different perspectives while conducting their research on suburbs (e.g. Hall 1998, 104–105). The traditional image of suburban homes — a peaceful living environment, proximity to nature, the rural idyll, safety, domesticity — has been criticised by feminist geographers, for instance. Suburban homes are mostly maintained by women, who are trapped in these areas due to insufficient public transport connections, and whose efforts to take care of this rural idyll remains unappreciated in comparison to the paid work of their husbands in the cities. Humanist geography refers to the monotony of suburban landscapes. It is an inherent component of human character to feel that one belongs somewhere, whereas suburbanisation creates identical places without any originality. Marxist geography criticises the driving forces behind the phenomenon of suburbanisation. As the capitalist economy is searching for new profitable investment opportunities, capital switches to financial and property markets (see also: Timár & Váradi 2001; Heeg 2003; Harvey 2002), thereby fuelling suburban expansion.

In addition, intra-metropolitan migration may be treated as a phenomenon contributing to socio-spatial segregation (Friedrichs 1995; Heye & Leuthold 2006; Fassmann & Matznetter 2005). Differences in the economic performance of different population groups are translated into the ability to consume, including the ability to pay rent or buy a dwelling, in other words social divisions in society are translated into spatial divisions (Musterd et al 1999, 573). It has also been argued that the accumulation of both wealth and poverty is inevitable in contemporary multicultural “global cities” (Sassen 1991; 2001), and it does not necessarily negatively influence the economic performance of these cities (Musterd 2006). In addition to the high-skilled well-paid specialists working in high-tech branches of the economy, i.e. in finance, business services, creative and cultural industries, the workforce also needs to perform lower-skilled activities in the cities to serve affluent people, e.g. home cleaning, restaurant operation and low-skill personal services. Therefore these population groups inevitably also have to live side-by-side in the most affluent cities, but

since these groups have different consuming abilities, they “are simply kept apart” (Amin & Graham 1997, 419).

According to filtering and the vacancies chains theory (Friedrichs 1995, 72–73; Kaplan et al 2004, 209–210; Knox & Pinch 2000, 350–353), new housing construction in suburbs may also be considered to be the process that vacates housing space and creates the opportunity for upward movement within existing housing stock for other population groups. While out-migration towards better housing stock is a socially selective process, however, we can conclude that migration into new suburban housing contributes to increasing socio-spatial inequalities in cities. As a result, many social problems tend to accumulate into those parts of metropolitan areas where the tax revenues that would make it possible to solve these problems are the lowest.

In my studies, my main research interest has been residential suburbanisation. I also treat new suburban housing construction as an essential factor that leads to increased socio-spatial differences in the metropolitan area. While formulating the hypotheses for my studies, I have presumed that newly built suburban housing is the most expensive type of housing stock in the metropolitan area, apart from new and renovated houses and infill developments in Tallinn proper (see also Steinacker 2003).

In the first two studies (2.1.), I defined suburbanisation as a demographic phenomenon — migration from the city of Tallinn to its suburban area. The people who lived in the city of Tallinn in the census year 1989 and in the suburban area in the census year 2000 were defined as suburbanizers. Although people from other parts of Estonia also moved to the suburban area of Tallinn in the 1990s, the newcomers from the central city were predominant. As the census data enabled multivariate statistical analysis, the first studies were designed to estimate which population groups moved to the suburban areas compared to those that stayed to Tallinn or to those that lived in the suburban areas even before, and to determine their favoured suburban locations and dwelling types. This way of defining suburbanisation in merely demographic terms made it possible to use the discourse of Western suburbanisation as an informative background, while at the same time observing the possible special features in the intra-metropolitan migration processes in the first decade of transition (1990s). Unfortunately, due to the lack of reliable annual migration statistics, the similar analyses for the 2000s must await the results of the new census that will be held in 2011.

Later analyses (2.2. and 2.3.) describe the dynamics of new housing construction and also the transformation of summer home areas (built in the Soviet era) into permanently used residential areas. The focus of these analyses is the changes in suburban settlement structure in recent decades, and therefore newcomers from Tallinn and other regions are not differentiated. At the same time, as residents from remoter regions also arrived in the metropolitan labour (or service) market, it may still be considered as a metropolitan decentralisation process, since they also had the possibility to consider the city as a potential

destination. In conclusion, in this dissertation I define residential suburbanisation as a migration process that leads to population decentralisation in a metropolitan area.

My analyses are addressed towards changes in the suburban area of Tallinn, and intra-urban migration processes in the same period are not covered. The main reason for this is the lack of migration data that would make it possible to analyse to which extent different population groups have made their housing careers inside the city. The aggregate data on new housing construction, however, reveals that most new housing construction has taken place in the city during the last two decades (Census 2000, Estonian Building Register 2008). Therefore the changes in suburban settlement structure, especially when analysed in the framework of socio-spatial segregation, is only one phenomenon in the wider process of socio-spatial differentiation in the metropolitan area. On the other hand, using the example of suburban areas, these analyses have elucidated the logic behind metropolitan population change, for instance the role of vacancies and the differential migration of population groups, and therefore the knowledge created also helps to understand intra-urban processes. The question where the phenomenon of suburbanisation begins and ends is also debatable. Cities that include large free areas inside their administrative borders (e.g. Berlin: Herfert 2005) have proved to be suburbanized partly within their borders. As the suburbanisation process most strongly influenced areas near Tallinn, one might also suppose that the same processes were even more accentuated inside city limits.

### **1.1.2. The Tallinn metropolitan area**

The key terms that appear regularly in this dissertation are “metropolitan area” (urban region, urban area, agglomeration), “central city” (core city) and “suburban area” (suburbs, hinterland, metropolitan periphery). The concept of “metropolitan area” became widespread in the urban research in parallel to the increasing prevalence of suburbanisation. The formation of suburban residential areas created a situation where cities and the surrounding municipalities started to share the population during the day, and the daily movements of that population increasingly took place inside a functional urban region, consisting of the central city with its jobs and services and the suburban area with its residential function. The 1960 census in the United States already used the „Standard Metropolitan Area“ as the unit of analysis; later the notion was accepted by official statistics in many countries (Champion 2001, 149), and has also been used in comparative trans-national analyses (e.g. Espon 2006).

Metropolitan areas are most often defined according to the intensity of daily commuting towards the centre of the region. The cities with certain population figures are considered as central cities, and the settlement units (municipalities) surrounding the central city from where a certain proportion of the working



population works in the city are considered as part of the suburban area (Champion 2001, 149). Frequently the commuting threshold of 15 percent to the central city has been used in the analysis to define the reach of the suburban area (Van den Berg et al 1982, 59; Champion 2002, 95–96; Gordon 1979, 287).

The presumption of a mono-centric urban region with commuting flows directed only to the centre of the region is certainly a simplification while analysing the complex spatial structure of contemporary urban regions. The suburbs in the countries with a long history of suburbanisation history now not only perform a residential function, but there has also been an increase in employment functions in the suburbs (Garreau 1991; Hartshorn & Muller 1989; Müller & Rohr-Zänker 2001), and commuting patterns in a contemporary urban region instead form a complex network of multi-directional movements. Some cities in densely built-up areas (e.g. the Ruhr area in Germany, and the Netherlands) have already originally a multi-nodal settlement structure and therefore also a more complex commuting network. In addition to job-related commuting, other reasons for moving (e.g. consumption of services, mobility needs of non-working family members) also form a significant part of aggregate mobility in an urban region. The mobility analyses of the suburban population of the Tallinn metropolitan area in 2006, for instance, reveal that housewives do not have considerably shorter daily trajectories than working women (Silm et al, forthcoming).

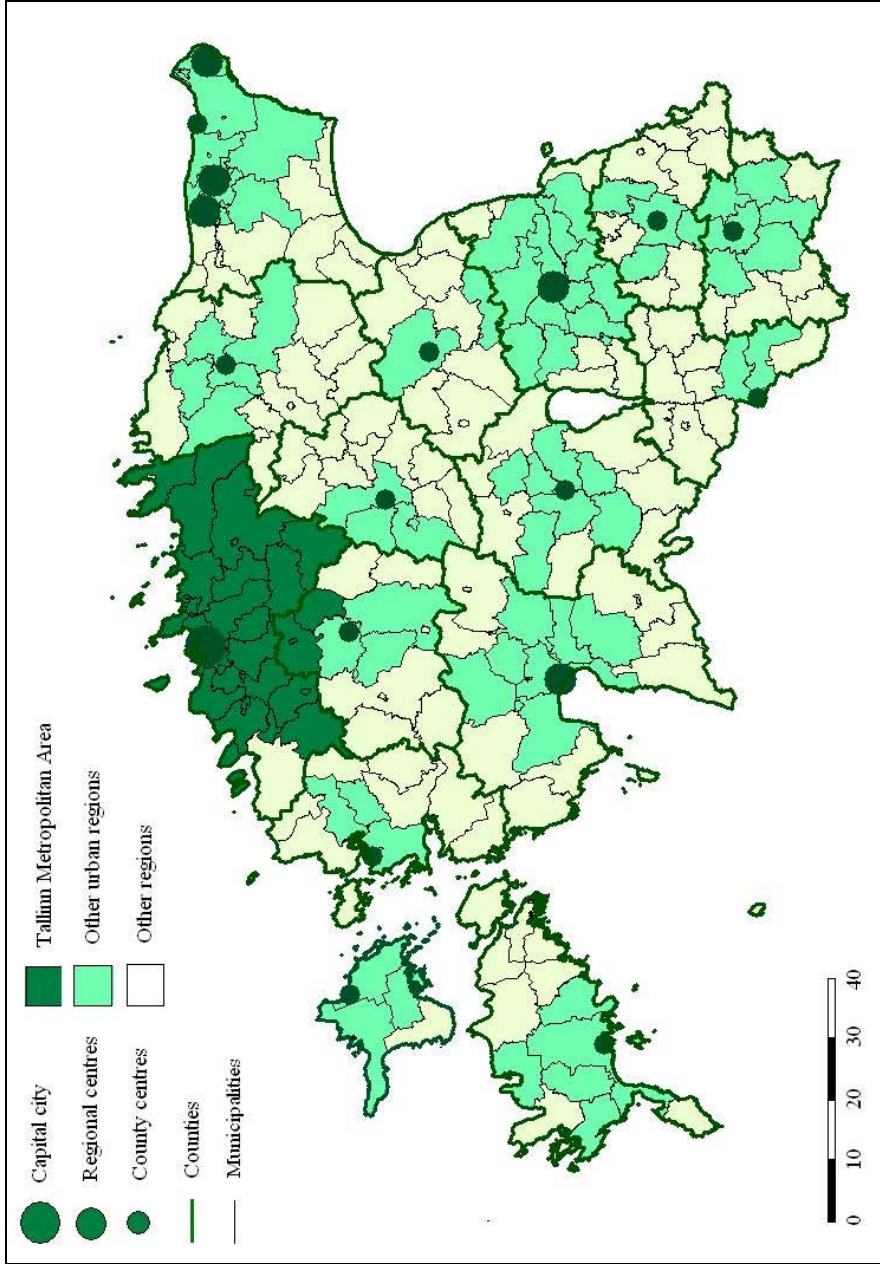
Urban agglomerations in former communist countries have had a somewhat different development logic. It has been argued that due to the insufficient investments in urban housing in the communist era compared to the investments to create industrial jobs in the cities (under-urbanisation: Szelenyi 1996), a remarkable mono-directional commuting to the city from the surrounding rural areas occurred, for instance in countries like Czech Republic, Poland and Hungary (e.g. Muliček & Sýkora 2007). In Estonia as in many other former communist countries incorporated into the Soviet Union, job growth in areas surrounding major cities was also important. Due to the industrial decentralization, industrial satellite towns emerged (Estonia: Tammaru 2001b, 1346; Russia: Brade & Nefjodova 1998, 26; Lappo & Hönsch 2000, 121) and the priority that had been given to agriculture since the 1970s (Marksoo 1984b, 52–53; Ofer 1980) created jobs in the suburban centres of agricultural collective farms. For that reason, commuting at the end of Soviet period in the Tallinn metropolitan area was not mono-directional, but commuting flows from the suburbs to Tallinn and from Tallinn to the suburbs were similar in size (Marksoo et al 1983).

After the collapse of the Soviet economy, important changes took place in the metropolitan labour market. The suburban area that formerly functioned as both a residential and employment area lost its employment function in the 1990s. The growth in commuting is therefore not only attributable to suburbanisation in the Tallinn metropolitan area, because in addition to suburbanisation, commuting to Tallinn (as an attractive centre of employment)

also attracted suburban residents who formerly worked close to their place of residence (Tammaru 2005). Indeed, the commuting flows to Tallinn from suburban areas increased considerably in the 1990s, whereas the opposite migration flows remained at the level of the 1980s, and only began to increase in the 2000s, when the suburbs began to regain their employment function (Ahas et al 2008; Marksoo et al 1983, Tammaru 2005; Tammaru et al forthcoming (b)).

To conclude, the metropolitan spatial structure not only in the Western cities with their diversified suburbs and multinuclear structure (Hartshorn & Muller 1989; Garreau 1991; Gober 1989) but also in the communist and post-communist cities is too complex to consider the criterion of the mono-directional commuting threshold as an adequate way to delimit a metropolitan area. For that reason, combinations of other relevant criteria have been sought, for instance the centrality and job functions of urban centres (Mulíček & Sýkora 2007). Nevertheless, recent urban analyses in Estonia have found consensus in using the criterion of a commuting threshold towards the central city to define urban regions in the country. The data most frequently used to estimate commuting intensities is the 2000 census data that make it possible to compare a person's place of residence and place of employment. Different thresholds have been in use, e.g. 30, 25 and 15 percent, depending on the aim of the research project.

In this dissertation, the 15 percent criterion based on the 2000 census data is employed. This choice was initially made due to the aim to compare the population groups that migrated from Tallinn into the nearer and more distant suburban municipalities (publications in 2.1.). Later we have retained this definition in the summer home areas survey 2007 (2.3.). According to this definition, 26 suburban municipalities (according to the administrative division in 2000) form the suburban area of Tallinn (Figure 1 and 2). Due to the incorporations of some municipalities in recent years, the number of suburban municipalities under analysis according to this definition has diminished to 23. This functional urban region largely coincides with the area of Harju County, and only one western rural municipality (Padise) and one eastern urban municipality (Loksa town) are not included. In addition, two rural municipalities (Juuru and Kohila) and one satellite town (Kohila) in the neighbouring southern county form part of the Tallinn metropolitan area. Table 1 describes the population figures in the central city and in the suburban municipalities in the census years 1989 and 2000, and according to the last data of the Estonian population register in 2008.



**Figure 1.** Tallinn metropolitan area in Estonia

Source: Census 2000.

Urban region: central city, and municipalities from which at least 15 percent of workers work in the central city (administrative division in 2000)



**Table 1.** Population of the municipalities of the Tallinn metropolitan area in 1989, 2000 and 2008

	urban - 1 rural - 0	1989	2000	2008
<b>Tallinn</b>	<b>1</b>	<b>499,421</b>	<b>400,378</b>	<b>401,345</b>
<b>Suburban area</b>		<b>127,792</b>	<b>127,609</b>	<b>144,785</b>
... Aegviidu	1	1,097	952	910
... Anija	0	2,734	3,161	6,203
... Kehra	1	4,053	3,224	Incorp. to Anija
... Harku	0	5,760	6,617	10,358
... Juuru	0	1,682	1,597	1,595
... Jõelähtme	0	4,913	5,217	5,607
... Keila	1	10,072	9,388	9,487
... Keila	0	4,900	3,847	4,539
... Kernu	0	1,355	1,688	2,063
... Kiili	0	1,697	2,375	3,944
... Kohila	0	2,238	3,407	6,775
... Kohila	1	3,593	2,570	incorp. to Kohila
... Kose	0	5,724	5,829	5,712
... Kuusalu	0	4,727	4,683	6,831
... Loksas	0	2,784	1,831	incorp. to Kuusalu
... Kõue	0	1,677	1,716	1,698
... Maardu	1	16,052	16,738	16,520
... Nissi	0	3,430	3,352	3,278
... Paldiski	1	7,690	4,248	4,242
... Raasiku	0	4,163	4,429	4,585
... Rae	0	6,953	7,979	10,063
... Saku	0	5,834	7,308	8,423
... Saue	1	4,395	4,958	5,917
... Saue	0	6,450	7,342	8,458
... Vasalemma <sup>1</sup>	0	8,575	5,175	2,860
... Viimsi	0	5,244	7,978	14,717
<b>Total: Tallinn metropolitan area</b>		<b>627,213</b>	<b>527,987</b>	<b>546,130</b>

Source: Census 1989, Census 2000, population register 2008

<sup>1</sup> Includes institutional households in 1989 and 2000

### 1.1.3. The post-communist period

Finally, my research is first of all related to the period after the political changes in 1991. I explain the context in which I use the term “post-communist<sup>1</sup>” in my analyses. Social as well as urban research has traditionally been divided into two approaches. The evolutionary approach presumes that universal trends occur in different societies, but possibly at different points in time (in urban research, for instance: Van den Berg et al 1982; 1987; Fielding 1989; Geyer 1996; Geyer & Kontuly 1993). Another approach, the so-called path-dependence approach, claims that modernization earlier experienced by more developed societies is not an inevitable course of events. Instead, the development of a country is shaped by its historical context (Macionis & Plummer 1998; Taylor 1994). In this light, the discussions of whether post-communist cities will resemble Western cities after the collapse of the communist regime or whether the historical legacy will cause a different path of development has also been central in the post-communist urban debate (Ott 2001; Tosics 2003; Enyedi 1996; Szelényi 1996).

At the same time, the question of how long the research perspective “post-communist city” will be useful for studies of urban change in former communist countries is becoming increasingly relevant. Remarkable changes have taken place during the last two decades in these countries, and therefore it is no longer reasonable to use this time period as a homogenous analytical unit. The need to explain the changes that have taken place in recent decades are also reflected in the efforts to divide the transition period into smaller periods (Salukvadze 2007). Lauristin and Vihalemm (1997), for instance, differentiate three stages in the Estonian “return to the Western world”: 1987–1991 was a period of political breakthrough, in the years 1991–1994 the main strategic reforms were carried out or initiated, and finally, since 1995, the gradual stabilization of the country’s economic and social life has taken place. It has also been argued that the transition period for the former centrally planned countries ended with the joining of the EU in 2004 or 2007 respectively. In scientific circles the term “post-transition countries” is also used.

In my study, I treat the whole period from 1991 to the present day as the post-communist period. This is first of all due to my aim to describe the changes in society, the preconditions for migration and suburbanisation patterns during this heterogeneous time period. In addition, however, I hold the position that in certain aspects the post-communist research framework is still relevant.

First, many changes that became evident in Western Europe in recent decades — deindustrialisation, the growth of the service sector, the decline of the welfare state (Crouch 1999) — were experienced in the post-communist

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<sup>1</sup> The term “socialist” is mostly used in literature. I prefer the term „communist“ here while “socialism” has a wider meaning in the context of Western welfare-state and it does not necessarily have the connotation of totalitarian regime.

world within a very short time period. It therefore challenged the people's ability to cope with the rapid changes in society and the economy. Similarly, the decisive strategic, economic, social and legal reforms were made very quickly by the young inexperienced state institutions. As my study comprises analyses of migration patterns in the 1990s, I presume that these extraordinarily rapid changes in society and the economy in the first half of the decade left their notable imprint on migration patterns too.

Secondly, I recognise the impressive role of the communist-era urban legacy in shaping contemporary urban processes in these countries. The role of the historical legacy, both the inherited social order or spatial forms, in shaping the development chances of a region, is discussed for instance by Massey (1979), in her essay "To what sense a regional question", to show how the global economy "plays" on the historical "layers" of a region. Also, it has been argued that the differences between Western European cities are related to their urban histories (Kesteloot 2000; Beauregard & Haila 2000; Kazepov 2005; Le Galès 2005; Wiegandt 2000). The rapid concentration of people into cities as a result of extensive socialist industrialisation is probably one of the most pronounced examples of urban history when measured in an urban layer created during the half century of communist rule in these countries. I am of the opinion that the communist past, due to its enormous influence on the spatial structure of metropolitan areas, will inevitably continue to shape the urban development paths in countries that formerly had centrally-planned economies for a long time to come.

## **I.2. Theoretical background**

### **I.2.1. Suburbanisation in Western countries**

#### **I.2.1.1. Western urban development as a generalized discourse**

It is a common research strategy in urban and regional studies to compare the processes that take place in different cities and regions. Based on the common trends revealed, it is possible to argue that some trends are universal spatial regularities that become evident in different socio-spatial contexts. Some of the discovered regularities can thus become broadly applicable research frameworks. This may turn out to be both a positive and a negative impulse for further research. On the one hand the explanations that have proved to hold true in comparative studies tend to travel further and trigger next case studies in other urban contexts that either confirm and complement existing explanations or challenge them. On the other hand, the universal research frameworks may exclude other possible research designs and as a result, essential aspects of a case may remain undiscovered. In their essay "Ordinary city", Amin and Graham (1997, 411, 417) warn to be careful when making generalisations from

one or a group of cities to other cities in the world — if all cities were to experience the trends visible in “paradigmatic” cases, there would be no reason to understand processes in other cities.

Studies on post-communist cities very often employ theories that use the development logic of Western cities as a benchmark to describe urban change after the collapse of the communist system. These analogies are based on arguments that the differences in economic and societal preconditions that caused the divergent urban development of the communist world (Pichler-Milanović 2007, 103; Szelenyi 1996) disappeared in the transition period, and the factors shaping urban development in post-communist and former Western world are increasingly similar. At the same time, we should ask how “paradigmatic” and coherent the notion of “Western world” is in urban research. In fact, studies regarding the socialist city, although recognising that specific features characterised urban development under socialism, did not unanimously support the idea that the socialist city was fundamentally different from the Western city (Van den Berg et al 1982; Enyedi 1996; 1998). I argue that in comparative researches that juxtapose Western and post-communist cities, an over-generalised concept of “Western urban development” is very often used.

First, the notion of “Western countries” is not unambiguously defined as concerns the countries and cities that belong to this region. In some respects, there may be greater differences between Italy and Sweden as regards contemporary urban development than between Hungary and Austria in periods when they belonged to two different societal systems. One might also ask why the post-communist countries’ return to the Western world is not compared to the transition processes of Spain, Portugal and Greece only a few decades earlier. Consequently, rather than referring to a specific region, the notion of “Western countries” is a discourse that is used to compare different type of societies, capitalist vs. communist, industrialised vs. third world countries, etc.

Second, in urban research the notion of “Western countries” is often related to the theories that have proved to be universally applicable in a wider set of countries, first of all in the former capitalist and industrialised countries. In migration studies, several theories that assume cities and settlement systems undergo a certain universal development logic have been popular. The phenomenon of suburbanisation has often been explained using the metaphor of the life-cycle of a city, “a youthful growing phase through to an older phase of stability and decline” (Champion 2001, 146). As a result, according to the urban life-cycle theory (Hall 1971; Van den Berg et al 1982; 1987), a city and an urban region develop through corresponding sequential development phases. As concerns the whole settlement systems, the differential urbanisation theory (Geyer & Kontuly, 1993; Geyer 1996) and other contributions have been influential in explaining counter-urbanisation (Berry 1976; Fielding 1989; Vining & Strauss 1977). These theories have formed a popular research framework for the comparison of urban development, both in different countries within the former Western world as well as in third world countries, in the



former communist and present post-communist world (e.g. Hall & Hay 1980; Van den Berg et al 1982; Marksoo 1984a; Cheshire & Hay 1989; Geyer 1990; Tammaru 2000; Champions 2001; Tijdschrift voor ... 94/2003; Tammaru 2003; Tosics 2003).

The notion of “Western countries” moulded in these research frameworks is a generalisation that necessarily does not characterise any single countries or any particular time periods. As regards the phenomenon of suburbanisation, in many countries the intra-metropolitan decentralisation of people and businesses has taken place over more than half a century (Hartshorne & Muller 1989; Schönert 2003; Champion 2001), and the nature of this process has notably changed during that time. Amin and Graham (1997, 416) argue that there is a need to understand the „urban wholeness“. In other words, very different aspects (economic, social, cultural and institutional) of urban change may be observed simultaneously in an urban environment, and these aspects tend also to be reciprocally dependent. It is therefore important to understand that through the theories that claim universal validity, only some aspects of urban change in Western countries have entered into post-communist urban analyses. Moreover, the theoretical arguments that were initially used to formulate these theories have often been discarded (e.g. the idea of divergent migration motives of population subgroups in differential urbanisation theory, the concept of urban dynamics in urban life-cycle theory), and only some specific aspects, e.g. the resulting aggregate migration patterns in the settlement system, are compared.

Consequently, in studying the post-communist city we should be aware that the “Western city” is a vision of a “paradigmatic” city, probably only the safest generalisation, rather than an „urban wholeness“. In addition, the post-communist city itself should be considered as an integral unit. The ongoing urban change in this region is a much more complicated process than catching up to Western cities.

I have briefly described the commonly used notion of Western suburbanisation in the previous introductory section (1.1.1.). In the following, I aim to extend the understanding of how the process of suburbanisation in former Western world has developed. I also aim to demonstrate which additional analogies from the long Western suburbanisation experience that have so far been insufficiently reflected in post-communist studies could help achieve a better understanding of the ongoing suburbanisation process in post-communist countries.

## **1.2.1.2. Suburbanisation in Western countries**

### **1.2.1.2.1. Regional differences**

In analyses describing the course of suburbanisation in the Western countries, the divergent developments in the United States and Western Europe are often distinguished. In general, both in America and in Europe the residential

suburbanisation acquired massive volumes after the Second World War. In America, where direct war damage was not incurred, the pre-war housing boom continued. In the 1950s the suburban population increased 46% compared to the population growth of 12% in the central cities (Bourne 1997, 171). In Europe the intensification of the suburbanisation process occurred somewhat later. 1950s may be considered the first decade of suburbanisation in the United Kingdom, but in other European countries the suburban population began to grow faster than the urban population since the 1960s (Champion 2001, 149–150; Schönert 2003). The main factors encouraging residential decentralisation in metropolitan areas, economic growth together with increasing incomes and improvements in the transport sector (Van den Berg et al 1982, 30; Bourne 1997, 170; Champion 2001, 148; Parr 1999, 228), were present on both continents in the post-war decades.

Other factors contributing to suburban movements differed to some extent in these two sub-regions. The post-war period in the United States was characterized by the housing shortage that built up during the pre-war economic crisis and resulted from the modest construction volumes of the war years (Hall 2001, 294). This was accompanied by the migration of relatively poorer rural population into the cities and the resulting growth of the urban population (Downs 1999, 23, 25). In addition, the suburbanisation in the United States was directly related to the socio-spatial segregation following the racial divisions in cities. Many newcomers were black, and the increase in the proportion of the black population in cities resulted in a so-called “white flight” to the suburbs (Frey & Liaw 1998; Downs 1999, 23–24; Müller & Rohr-Zänker 2001, 28, 37). An additional factor that favoured migration towards the suburbs was the high fertility rate of the years 1950–1965, the so-called post-war baby boom, which led to a demand for suitable housing for families (Downs 1999, 32; Hall 2001, 291).

A remarkable role in the development of the suburbanisation process in the United States was played by the public sector, which instead fuelled suburban growth with its decisions. Federal mortgage insurance was available to help millions of Americans purchase a new suburban house (Downs 1999, 19, 25; Hall 2001, 293). In addition, the decentralized administrative system has further favoured growing socio-spatial segregation in metropolitan areas. The zoning regulations on land use enabled municipalities to control which population groups had access to new suburban housing. The new housing areas were homogenous as concerns their dwelling structure and inhabitants, and the poorest population groups, who did not have access to high-quality suburban housing, remained in the central cities (Downs 1999, 44–45; Hall 2001, 291–293). As there are generally no influential institutions that were responsible for strategic planning at the regional level in the United States (Downs 1999, 17–18; Müller & Rohr-Zänker 2001, 37), it has not been possible to contain the growing socio-spatial segregation or to control the rivalry between the suburban municipalities that contribute to it.

The business sector also responded to the growing demand. The construction of standard houses at a relatively low price developed into a mass business (Hall 2001, 294–295) with good returns. Thus the business sector and not the public sector controlled the emerging spatial patterns of the new suburbia. Rather than adopting the role of restricting or directing the increasingly sprawling settlement, the public authorities in the United States acted to enable the sprawl. The construction of the inter-state highway network since 1956 made it possible for people to live at ever increasing distances from cities (Downs 1999, 25; Hall 2001, 291–292). As a result, the United States became a truly suburban nation: by the early 1960s, more than half of the population of metropolitan areas lived in metropolitan peripheries, and in the 1990s the suburban population made up more than half of the country's total population (Bourne 1997, 167).

Western Europe is very heterogeneous as concerns the suburbanisation history of different nation states. Generally, the similar demographic trends — migration to the cities from rural areas and growing urban population, post-war baby-boom and housing shortage in the cities — formed the background for emerging suburbanisation processes. Immediately after the war, recuperation from the consequences of the war was at the foreground — the reconstruction of the damaged cities and the accommodation of refugees (Gans & Kemper 2001, 22–23). The growth of the urban population in the post-war decades in European cities remained modest compared to the population increase in American cities during the same period (Downs 1999, 27; Bourne 1997, 169). In addition, the racial segregation in urban space in European cities has never emerged as acutely as in America (Downs 1999, 24; Müller & Rohr-Zänker 2001, 37), although to some extent similar trends can also be observed in the European metropolis (London, Amsterdam, Paris).

The main differences between two regions, however, are related to the role of the public authorities. The main planning strategy was to avoid sprawling settlement structures. Instead, more compact settlement structures (Van den Burg & Dieleman 2004) were proposed, and in-fill development and the extension of the existing settlements were favoured. In some countries the “green-belt” policy (e.g. in the UK) was applied to the outer areas of the city (Goodall 1987, 199), and the profit seeking of the real estate development enterprises was more under the control of the planning authorities. The stricter planning regulations led to higher land prices, and as a result relatively fewer people moved to the suburban new single-family houses in comparison to the United States (Bourne 1997, 169; Downs 1999, 48–49).

In addition, the suburban housing structure in many European countries is more diverse than in the United States, due to the intervention of the public authorities in housing markets. In addition to some grandiose post-war new town projects, e.g. in the United Kingdom, which could be considered to be an advanced garden city movement (Goodall 1987, 323), the role of the public sector in the mid-century European welfare state (Crouch 1999) in housing construction has generally been important. In addition, today a notable pro-

portion of people live in public dwellings (Haffner & Hoekstra 2006). Unlike in the United States, not only the poorest population groups are entitled to access to public housing, and instead public tenement houses accommodate very different population groups. Furthermore, public housing has also been located in suburban areas (Downs 1999, 20–21; Aring & Herfert 2001, 49–50). Similar trends, however, are not characteristic only of European cities; public housing in the metropolitan peripheries has also been common in some Canadian metropolitan areas (Bourne 1997, 174).

Possibilities for controlling land use patterns in Europe also derive from historical traditions. In the relatively densely developed European countries (e.g. the Netherlands, Denmark, traditional industrial areas in Germany), land has always been a scarce resource, and therefore the competition between the alternative land use functions has also been more dense. In America, where land has traditionally been a readily available resource, the need for and traditions of restricting the rights of land-owners have not been so acute (Downs 1999, 17).

The degree of authority possessed by individual municipalities has been more constrained by regional-level planning institutions in Europe. Although multi-level government has also been a challenging task for European metropolitan areas, the coordination of the interests of different municipalities in the regional planning process is more of a European phenomenon (Downs 1999, 18; Müller & Rohr-Zänker 2001, 37–38). Regional transport planning is an example of this. In the United States, federal highway construction programs were set as a priority, whereas in European metropolitan areas great investments were made in public transport systems (Downs 1999, 31–32; Müller & Rohr-Zänker 2001, 37). On the one hand, this contributed to a more compact settlement structure, and on the other hand an effective public transport network could only be realized in the relatively compact European settlement structure. Again, however, one should be careful in making generalizations about the whole sub-region. In the area of two-tier regional government, for instance, Canada (e.g. Toronto) also has long traditions (Bourne 2007, 123).

These factors that influence the course of suburbanisation and the resulting settlement pattern have led to the notions of “American” and “European” types of suburbanisation (table 2) (Bourne 1997; Couch 2007; Downs 1999; Hall 2001; Müller & Rohr-Zänker 2001). American suburbanisation is usually associated with extensive car-based sprawling suburban settlement that emerges following business interests and available land plots in suburban areas (with haphazard patchwork settlement structures). European suburbanisation is traditionally described as a more compact settlement pattern following at least to some extent the existing public transport networks. This, however, like the notion of “Western urban development”, is also a generalization, since both cases comprise exceptions from the generalized discourse. Nevertheless, these differences may serve as an example of the diverse nature of “Western suburbanisation”.

**Table 2.** Concepts of “American” and “European” suburbanisation

	<b>Suburbanisation in America</b>	<b>Suburbanisation in Europe</b>
<b>first decade <sup>1</sup></b>	1920s	UK 1950s, mostly 1960s
<b>simultaneous rural-to-urban migration</b>	intensive	less intensive
<b>accompanying baby-boom</b>	occurred	occurred
<b>racial socio-spatial segregation</b>	acute	uncommon or modest
<b>speed of suburbanisation process</b>	rapid	modest
<b>resulting settlement structure</b>	sprawl	relatively compact
<b>means of transport</b>	automobile transport	public transport and automobile transport
<b>administrative control over land use</b>	municipalities	municipalities and regional government institutions
<b>public housing construction</b>	insignificant (mostly in central cities)	significant (in the whole metropolitan area)
<b>impact on central cities</b>	relatively rapid decay	modest decline in attraction

Source: own generalisation

<sup>1</sup> The first decade in which suburban population growth was faster than population growth in the central cities

#### 1.2.1.2.2. Temporal dynamics of the suburbanisation process

Decentralization processes in metropolitan areas have also changed over the course of time. Below I conclude some discussions in the theoretical literature that generalize the logic of the temporal dynamics of a typical suburban area. One of the most “paradigmatic” theories for studies dealing with suburbanisation phenomenon has been the urban life-cycle theory (Van den Berg et al 1982; 1987; Van den Berg 1999).

The central concept of the urban life-cycle theory is “urban dynamics”. The theory argues that the processes that occur in urban environment are the outcomes of the behaviour of three groups of urban actors. The main actors in

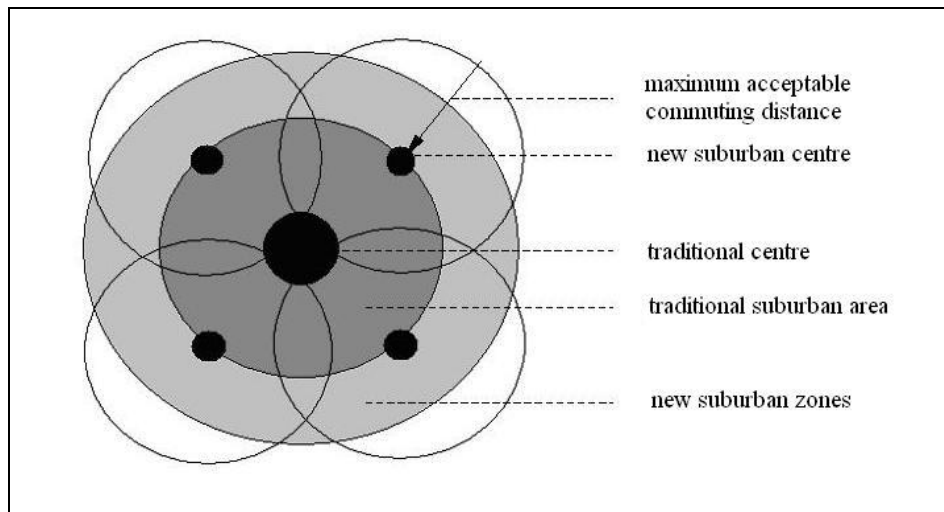
the urban arena are enterprises, households and public authorities. Enterprises make decisions to ensure and increase their profits. Households try to maximize their welfare, to find better jobs and enjoy a better living environment. The public authorities aim to balance these interests and act to ensure general welfare in society. As a result, a complicated process of action and reaction emerges that sets urban dynamics in motion and brings about changes in urban space too.

The most famous statement of this theory is the appearance of sequential urban development phases — urbanisation, suburbanisation, counter-urbanisation, re-urbanisation — that should presumably occur in any city, regardless of the social context. The initial comparative study in 1982 also included cities in countries in the communist world (Hungary, Yugoslavia, Poland, and Bulgaria), and found some decentralization processes occurring there also (Van den Berg et al 1982, 30–32). Later the spatial generalisations of this theory were also emphasized more in comparative studies, and the idea of the interaction of urban actors has almost been forgotten.

According to the life-cycle theory, migration in the urbanisation period mainly has economic motives, and people are concentrated into the bigger cities. Later, after the basic needs of households (job and income) are satisfied, other motives (living conditions and the living environment) rise to the foreground, and population groups with relatively higher incomes begin to leave the cities for the suburbs. This description also represents the classical notion of “Western suburbanisation” that has been referred to in many studies. Soon services and retail follow the consumers. Over time, however, factors such as less traffic, lower land prices and a growing workforce also cause other enterprises to prefer suburban locations. In this way, the central cities are progressively losing their attractiveness, and suburban areas are becoming more independent.

This, according to the theory, leads to the counter-urbanisation stage. The theories analyzing the counter-urbanisation usually presume that there is a deconcentration of population and businesses downward in the settlement hierarchy (to medium-sized and smaller urban regions) (Berry 1976; Fielding 1989; Vining & Strauss 1977; Geyer & Kontuly 1993; Champion 2001, 150–153). Although the life-cycle theory considers deconcentration processes to more distant areas to be another possible development, the key notion of the theory is the proliferation of the functional urban region (figure 3) (Van den Berg et al 1982, 38; Van den Berg 1999, 542). In the course of the suburbanisation process, alternative suburban centres emerge in the suburban area, and these centres attract commuters from suburban settlements, the central city and remoter areas. Later, the suburban area will increasingly come to resemble the city, and similar problems, for instance traffic jams, aggravation of the living environment, increasing land prices etc., will also come to characterize the former suburban zone. As environmental motives will increasingly influence migration decisions, this may lead people to move beyond the former functional

urban regions, as well as to other parts of the settlement system. The theory also considers the possibility that the central cities may to some extent regain their attraction, especially when this is favoured by the public authorities, one of the main urban actors.



**Figure 3.** Proliferation of the functional urban region

Source: based on Van den Berg 1999, 542; Van den Berg et al 1982, 38

There are also other authors who support the argument of overspill in metropolitan areas due to decentralization processes. Gordon (1979), for instance, challenges the migration turnaround (counter-urbanisation) arguments, and argues that at the end of the 1970s the former criteria for delimiting the functional urban regions in the United States no longer made it possible to describe adequately internal migration directions in the country. The majority of the population growth outside larger metropolitan areas was accountable for population growth in areas neighbouring metropolitan areas. Therefore, decentralization processes have influenced a larger region than the defined functional urban region that has heretofore been used for migration analyses. Parr (1999) also argues that all factors that formerly caused decentralization inside an urban region (the increase in the prices of land and office space, the lack of free land for new projects, traffic problems) are later becoming evident in an enlarged region, and the so-called “metropolitan-area-based region” emerges. In addition, enabling factors such as improvements in traffic infrastructure that have formerly favoured suburbanisation are now linking more distant areas with the region. Empirical analyses also provide some evidence of the expansion of metropolitan areas. For instance, in the United States the fastest growth in population figures and in the number of jobs in the

1990s took place in counties surrounding the major metropolitan areas (Müller & Rohr-Zänker 2001, 34). Similarly, in Germany suburbanisation inside the urban regions or the so-called cascade migration was observable in the 1990s: the suburban areas closer to the cities lost population to the more distant suburban areas (Aring & Herfert 2001, 46).

Hartshorne and Muller (1989) have elaborated a more detailed model to describe the suburban area as a potential location for businesses. They also describe the first decades of suburbanisation as the period when the “bedroom communities” (mono-functional residential areas) were built in the suburbs. Even in the 1960s, however, (in the US) the suburbs began to become more diverse. First, shopping malls serving the growing suburban population were built. Later industrial enterprises that had formerly been located in the central cities and new economic activities began to prefer suburban locations in favourable transport locations and with cheaper and more available land. Improvements in communication technology made it possible to separate different job stages in corporations, and therefore more low-skilled functions of production were located in suburban areas. High-level functions originally remained in centres. However, the authors explain that by the 1970s suburban centres also competed with traditional centres for higher-level functions, and growth clusters began to emerge in suburban areas. In terms of traffic nodes, the new landscapes of shopping malls, leisure parks, hotels, offices or specialized clusters (science parks, R & D and high-tech clusters, special activities close to airports etc.) began to develop. As concerns prices or location of office space for prestigious enterprises, some new “suburban downtowns” are already comparable with old centres. Similar processes in the metropolitan periphery are described by Garreau (1991, “edge cities”) and Gober (1989, “urbanisation of suburbs”).

Analogous tendencies are to some extent observable in European cities, and these are sometimes referred to as the “Americanisation of the European metropolis”. European metropolitan areas, however, have some inherent features that have guided these centrifugal forces (Müller & Rohr-Zänker 2001, 35–38). First, many European metropolitan peripheries have an already existing network of small and medium-sized cities, and therefore the growth in employment in suburban areas has partly taken place in these already existing suburban centres. In addition, due to the high population densities in many regions, there has always been less undeveloped free land in suburban areas. Second, despite growing private transport volumes, the public transport networks in European cities are oriented towards city centres and therefore further strengthen the relative position of central cities. Third, the downward spiral in European cities has not achieved a level that is comparable with many American cities. The central cities have succeeded in maintaining their image as popular places for living or as locations for businesses. Many universities, cultural facilities and administrative offices are still concentrated in the cities. In addition, socio-spatial segregation and the concentration of poor residents



(including ethnic segregation) in the inner cities is less obvious here, and does not exert a comparable pressure to leave decaying cities. Public measures for promoting urban renewal and gentrification have also to some extent managed to improve the image of cities (see also Cheshire 1995). Fourth, the traditions of regional-level spatial planning have been influential in Europe to balance both profit-oriented business interests and the interests of individual local municipalities in regions.

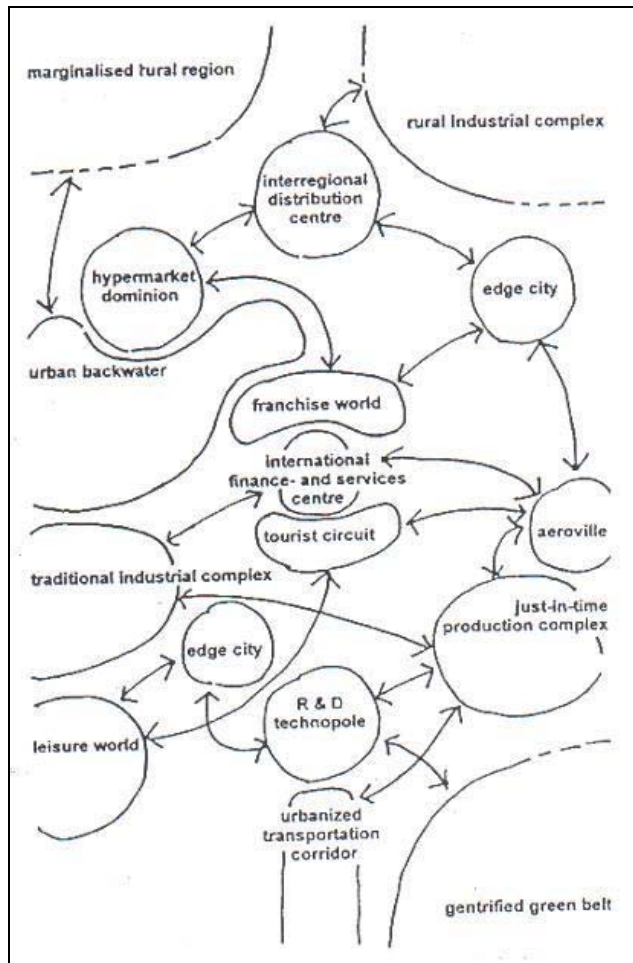
Although according to these models, decentralisation processes in an urban region usually begin with residential suburbanisation, one should be careful in deducing a causal relationship between residential and employment suburbanisation. Indeed, as people tend to have their accustomed activity spaces, one could expect that they also seek jobs close to their place of residence and vice versa. Some analyses have also proved that suburbanisation in cities tends to occur according to radial spatial patterns (Kok & Kovács 1999), i.e. people prefer the part of the metropolitan area that they already know. There are also some cases where housing construction for the future potential employees has been accompanied by big business development projects in the suburban area (Hartshorne & Muller 1989, 385). Consequently, residential and employment-related suburbanisation processes are to some extent mutually related (Parr 1999, 228–229; Garreau 1991).

However, the availability of a workforce is only one of the location factors for businesses. There are other advantages in suburban areas that attract economic activities, e.g. a favourable location in relation to transport networks, the presence of supporting economic clusters and services, the availability of land. Even the most enthusiastic policies that favour revitalisation projects in urban brown field areas cannot attract new space-consuming activities (e.g. distribution centres) into the central cities (Wiegandt 2000, 7). Similarly, some strategic nodal points like airports or harbours tend to cluster certain kind of activities. Employment does not necessarily concentrate close to a potential workforce, but rather in the specialized activity clusters in the suburban area.

Similarly, for the inhabitants the accessibility of a place of employment or the availability of services is not only related to spatial proximity. Instead, the availability in time, i.e. the transport infrastructure, becomes crucial. For instance, in the case of public transport networks in many European cities, commuting to the city centre may still be more convenient than tangential but shorter movements between the suburbs. Moreover, the new employment centres, including offices for scientists, employees in high-tech branches of the economy, advanced services or creative industries, do not recruit only well-paid white-collar specialists. These office parks also need the services of lower-skilled employees (restaurants, cleaning services etc.).

As a result, the multi-nodal suburban settlement structure with independent catchment areas for workforce and consumers (decentralized concentration, “the city of short paths” (Wiegandt 2000, 9)) tends to remain an unachieved ambition of urban planners. In the era of rapid industrial growth in cities in the

nineteenth century and at the beginning of the twentieth century, the separation of work and living places became necessary due to the worsening of living conditions, and today we can see even further separation of individual functions (figure 4) (housing, work, services, recreation etc.) and specialization of different parts of suburban areas (Wiegandt 2000, 7; see also Kunzmann 1997). Wiegandt (2000, 6) compares the contemporary city with “a scrambled egg in which centre and periphery are mixed without difference and frayed in all directions”. In these conditions the aggregate mobility needs of population increase rather than decrease (Aguilera 2005), and movements are increasingly multi-directional and multi-functional. This further favours automobile transport over public transport.



**Figure 4.** Patchwork City Region

Source: Kunzmann 1997

### 1.2.1.2.3. Population groups participating in residential suburbanisation

The decentralisation processes in metropolitan areas, both residential as well as employment suburbanisation, ultimately work towards diversification of suburban space, and this also leads to diversification of the population groups moving to suburban areas. In the first decades of suburbanisation, the composition of suburban movers largely coincided with the traditional discourse of Western suburbanisation — movement of relatively more affluent family households towards the more peaceful and naturally attractive suburban environment, mostly to new single-family houses. Today any new movement towards the suburbs has to take into account the already existing settlement structure and activity patterns in the suburban area.

In addition to the diversification of suburban functions due to employment suburbanisation, the suburban housing market also becomes more diverse over time. Decentralisation of the population has now taken place for approximately half a century in many European cities, and today both traditional movement towards new single-family houses as well as movement into older suburban housing stock is observable.

In Germany, for example, a significant spread of population to suburban areas and especially to new single-family houses also took place in the 1980s and 1990s (Schönert 2003). The investigation of seven major mono-centric cities in former West Germany (Bremen, Frankfurt am Main, Hamburg, Hannover, München, Nürnberg and Stuttgart) reveals average annual population loss of the cities of about 0.5% to suburban areas. A total of 10% of the urban population has migrated to the suburbs in the period 1981–2000. This is also in accordance with new housing construction. The average ratio of the new dwellings that central cities in regions bring to the housing market compared to suburban areas was 1:1.7 during the time period considered; as regards single-family and semi-detached houses, the ratio was as much as 1:4.4 (Schönert 2003, 466).

However, contemporary movement towards suburbs cannot be explained merely through the “exit story” from the cities (Garnett 2007). Many new suburban residents have grown up in the suburbs, and their ties with central cities may be limited only to their grandparents’ memories or to their university years. It is worth recalling that even by the 1960s more people in the United States lived in suburbs than in major cities. The suburban areas have undergone essential generation exchanges (Aring & Herfert 2001, 50–51; Herfert 2001, 117; Schönert 2003, 458). The mid-century suburbanizers have become old now, and their children have reached the age of family formation. In addition, the housing stock built in the first decades of suburbanisation no longer corresponds to the contemporary demands and standards of a single-family house. Some of the first suburban areas have already experienced multiple generation changes. Studies in Germany reveal that although the majority of elderly people prefer to get old in their suburban homes, there is evidence that

part of the “empty nesters” also consider the opportunity of moving back to smaller or medium-sized cities (Glasze & Graze 2007).

As a result, cheaper suburban housing moves to the metropolitan housing market, and in accordance to the idea of the chain of vacancies (Friedrichs 1995, 72–73; Kaplan et al 2004, 209–210; Knox & Pinch 2000, 350–353), this offers affordable housing to the less affluent population groups as well as to the young people beginning their housing ‘careers’ (sic! Many of them have grown up in the suburbs.). A closer look at the net migration flows towards suburbs in the Nordrhein-Westfalen state in Germany (Dortmund, Düsseldorf, Duisburg, Hagen, Münster, Essen, Leverkusen) has revealed that first of all smaller households (with one or two members) have left the cities for the suburbs, and the majority of them have moved to a rented dwelling. For example, 70% of the people who moved from Dortmund to the suburbs in the period from 1989–2000 have rented their dwelling, and only 11% have bought a new house (Heitkamp 2002, 168).

Eventually, parallel to the diversification of the suburban housing market and employment opportunities, the population groups that migrate to suburban areas are becoming more heterogeneous (see also Bourne 1997, 173–174). People in their different life-cycles and with various lifestyles now migrate to the suburbs, similarly people with different incomes and also ethnic minorities. Whereas suburbs have traditionally rivalled central cities in terms of attractiveness for more affluent population groups, today suburbs also compete with each other, and essential socio-spatial inequalities may also be observed while comparing different suburbs.

## **I.2.2. Urban development in communist countries**

### **I.2.2.1. Development of settlement systems and urban agglomerations under communism**

The group of communist or former communist countries includes countries with very different paths of development. Some of these countries are today members of the European Union, and Eastern Germany already became part of the EU in the early transition years; this group also includes other former republics of the Soviet Union, successor countries of the former Yugoslavia, Albania, China and socialist third world countries. Furthermore, to this day the communist regime and centrally planned economic systems persist in some parts of the world. Likewise, the transition to democracy and the market economy has not progressed at the same speed in countries that have abandoned communism (Smith & Pickles 1997).

In my research I have mostly studied urban development in countries of the so-called first wave of transition, i.e. where the fall of communist-led governments took place at the end of the 1980s and the beginning of the 1990s,

many of which today belong to the EU. My discussion is based on a few comparative studies and on many case studies of different cities and countries. Most of my examples are related to the former East Germany, Poland, the Czech Republic, Hungary and the former Soviet Union. In this section I summarise the main features of urban development under a communist regime in these countries, and I describe Estonia's experience in the next section. The Baltic States are often considered to be among the most successful transition countries. This is certainly justified as regards their success in the area of economic and political reforms. It is, however, sometimes necessary to keep in mind their history of belonging directly to Soviet Union in analyzing the role of urban history in contemporary post-communist urban change.

At the time when the capitalist industrialised countries experienced population deconcentration, urbanisation was prevalent in the communist countries (Brown & Schafft 2002; Sýkora & Cermák 1998; Kupiszewski et al 1998; Gans & Kemper 2001, 23). Some analysts (Enyedi 1996; 1998; Van den Berg et al 1982) consider the growth of the urban population under communism as a normal outcome of industrialisation that, according to the universal global urbanisation process, inevitably leads to the concentration of jobs and population in cities. Enyedi (1996, 102; 1998, 12) argues that the socialist political system was not the only source of the differences between Western and socialist urbanisation, but that delayed economic and urban modernisation in the eastern part of Europe also played a role.

Indeed, before the World War II industrial development was at a very early stage in the majority of these countries. Even in the 1950s, the proportion of rural population in Bulgaria and Yugoslavia was more than 80%, in Romania and Poland it was over 70% and in Hungary 60% (Enyedi 1996, 109). In comparison, 34% of the population of England and Wales lived in urban areas in 1801, and 78% in 1901 (Champion 2002, 87). In Germany also, 70% of the population lived in the cities on the eve of World War II (in 1939) (Hamm & Neumann 1996, 91). Exceptions among communist countries were the southern part of East Germany, areas of the Czech Republic, and south-western Poland, which had a relatively well-developed urban network that resembled the settlement structure of Central and Western Europe (Enyedi 1996, 107–108; Lichtenberger 1998, 137–138; Musil 1980, 80; Sýkora & Cermák 1998, 405).

Despite the slower pace of urbanisation in the eastern part of Europe, the first signs of suburbanisation were already evident before World War II. In parallel with advances in transport infrastructure, the separation of jobs and places of residence became possible here also. In Germany new settlements around major cities inspired by the garden city movement were established (e.g. Hellerau) (Düwel & Gutschow 2001, 49; Ott 2001, 409). In Budapest the development of suburban railway lines also paved the way for the first suburban residential settlements (Kok & Kovács 1999, 123). In Prague the villa neighbourhoods and garden towns were built outside the city (Sýkora & Cermák 1998, 407; Lichtenberger 1998, 138). Similar tendencies also characterised

Estonia, as we can see in the next section. These decentralisation processes in major cities were cut off by World War II and subsequent political changes (Sýkora & Cermák 1998, 408).

Although there is no consensus on whether urbanisation under communism was a fundamentally new model of urbanisation or whether it followed the universal model of urbanisation (Van den Berg et al 1982), virtually all researchers agree that there were essential specific features that distinguished communist urbanisation from capitalist urban development. National economies were centrally planned; industrial growth was defined as a priority; other non-priority spheres like housing and infrastructure development suffered from insufficient investment; there was no functioning land market in the cities, the state authorities decided where to locate new enterprises, and as a result the spatial layout of the cities was relatively compact. However, the “communist project” with these specific features lasted half a century in the Central and Eastern European countries, and for even longer in some countries of the former Soviet Union. As this period coincided with rapid growth in the urban population, the socio-spatial layer inherited from this period plays an essential role in all post-communist cities.

The primary aim of the communist system was to achieve a high level of welfare in the society (see also Enyedi 1996, 104–105, 109; Kornai 1992, 54). At times when the communist countries were economically less developed (less industrialised, less urbanised etc.), the aim was to reach a similar level of economic development to that in the advanced capitalist industrial countries, but under a social system that avoided the classical problems of capitalist society. Full employment and the satisfaction of people’s primary needs were promised. In other words, the aim was to build a socialist welfare state in which there would be no inequalities among different population groups. The roots of these inequalities (private property, the accumulation of capital) had to be eliminated by the system. After two devastating wars and in conditions in which two global political and social systems were head to head, the military reinforcement of the socialist block was also necessary.

To reach these aims, efforts were first made to remodel the former economic system. Farm-based agriculture in rural areas was destroyed, and collectivisation and repressions were common means to achieve this aim. To establish a new order, a centrally planned economy was introduced. Musil (1980) also gives an overview of settlement strategies that were elaborated in the Soviet Union and its East Central European satellite countries. Most of these countries had inherited uneven economic development in different parts of their particular countries (Soviet Union: the European part vs. the northern and eastern regions, GDR: south vs. north, Hungary: Budapest vs. rest of the country, Czechoslovakia: the Czech area vs. Slovakia). The aim in spatial planning was to ensure the equal territorial development of the country (Musil 1980). Settlement systems had to be developed as a whole (Listengurt et al 1987; Horev 1981; 1986; Hausladen 1983), to ensure that different settlements had different

functions and to avoid the domination of big cities (Horev 1981, 18–19, 24). However, although the new system had to reach the aims of equal living conditions and a balanced settlement system together with rapid economic growth, in practice the economic goals often overruled other aims (Shaw 1983; Konrad & Szelényi 1977, 165).

The main economic priority in the first decades of communism was heavy industry, mining and energy production (Enyedi 1996, 109; 1998, 17; Kostinskiy 2001, 452; Van den Berg et al 1982, 31). Large production units were preferred, and these were mainly located in major cities where there was a labour force, and in regions that were rich in energy and raw materials. Investments in housing construction and infrastructure were also directed only towards the industrial regions. As a result, the growth of cities directly resulted from their position in the programs of economic development (Lichtenberger 1998, 139; Van den Berg et al 1982, 31; Enyedi 1996, 109). The cities at lower levels of the settlement hierarchy and rural areas did not receive comparable investments in their social infrastructure (Lichtenberger 1998, 140; Van den Berg et al 1982, 31; Enyedi 1998, 15).

In the communist countries, employment opportunities in the cities and the relatively high proportion of the rural population also caused out-migration from rural areas to the cities (Kupiszewski et al 1998, 267; Gans & Kemper 2001, 23), even under planned industrialisation. Another important source of urban population growth in the former Soviet republics was the immigration of industrial workers from other republics of the Soviet Union (Tammaru et al 2003, 8). The growth of industrial jobs in the cities has brought about a need for additional housing. The housing shortage was exacerbated in the post-war years by extensive war damages in many cities (Warsaw, Tallinn). Per capita living space in the Soviet Union was still 4 square metres in the 1950s, about the same as it had been in 1917 (Renaud 1992, 883).

The most suitable way to solve the housing problem was standardized mass housing construction. This had to meet both the communist ideology for equal living conditions for all citizens as well as the aim that housing construction as a non-productive sphere had to be rationally organized in economic terms. Since the 1960s the large socialist housing estates of prefabricated apartment houses were erected mostly on the edges of the cities (Enyedi 1998, 29; Kok & Kovács 1999, 127; Mali et al 2005; Sýkora & Cermák 1998, 407; Tosics et al 2005; Węclawowicz et al 2005). In the Soviet Union, the first experimental projects of housing estates at a somewhat smaller scale were already realized in the 1950s (Kostinskiy 2001, 461; Bruns 1993, 143–146). Large housing estates brought some relief to the housing shortage problem, at least in quantitative terms. Average per capita living space in the Soviet Union reached 15.8 square metres by 1989 (Renaud 1992, 883), but this was still more than half of the average in Western countries.

The share of people living in communist-era large housing estates is typically high in post-communist Central and Eastern European countries, even

today. In former East Germany, approximately one-fifth of the population lived in this type of dwellings, but in some cities it makes up the majority of the housing stock (Breuer & Müller 2002, 130). In comparison, in Warsaw (Weçławowicz et al 2005, 13) the respective share is approximately one-third of the population, and in Tallinn two-thirds (Tallinn City Government 2000, 7), and in Moscow 70 percent (Lappo & Hönsch 2000, 9). This also depends on the former spatial structure of each city; in the newly built cities or cities rebuilt after the damages inflicted by WW II, it was possible to realize the communist project in a more complete form. In addition, population growth due to immigration (a phenomenon of the former Soviet republics) further encouraged large-scale housing programs.

Nevertheless, despite the housing shortage, a large amount of pre-war housing stock suffered from a lack of investment (Ladányi & Szelényi 1998, 72–73; Kostinskiy 2001, 461; Enyedi 1998, 15–16; Sýkora & Cermák 1998, 408, 413; Bräuer 1997, 94; Ott 2001, 409). The city of Leipzig in former East Germany is an example of this. Here large districts of *Gründerzeit*-housing (dating from the period of the city's industrial growth) were virtually left to decay, and intensive communist-era housing construction instead took place on the edges of the city. The pre-war housing stock was considered a relic of the former capitalist social system in communist cities, where the realization of the communist-era housing ideal was difficult to achieve. The inhabitants in these districts mostly had a relatively lower social status at that time, workers in non-productive spheres, and the provision of modern housing for these population groups was not a great priority compared to the new industrial workforce.

Over time, the emphases of the socialist economy also changed. Other branches of the economy also became important (light industry, food production, services). The enterprises or branch production units that were not unavoidably tied to major cities or raw materials were also located on lower levels of the settlement hierarchy (Enyedi 1996, 112–113; Ladányi and Szelényi 1998, 74). This made it possible to reach the aim of spatial policy in order to ensure the balanced settlement structure of the countries (Musil 1980, Sýkora & Cermák 1998, 407), and in this way resources (workforce) were mobilized to increase industrial production without migration from smaller to larger places. This avoided the excessive growth of major centres, where the provision of housing and services for the growing urban population was already an acute problem. Some evidence that the migration flows towards major centres decreased and that big cities lost their importance in concentration processes may indeed be found in migration analyses (Brown & Shafft 2002, 237; Kupiszewski et al 1998, 267; Marksoo 1992, 131–133).

In addition, especially in the Soviet Union, the decentralization of industry within urban agglomerations was favoured (Musil 1980, 70–72; Tammaru 2001b; Rudolph & Brade 2005). Industry and many other functions were located in satellite towns close to the major city together with large-scale housing construction (Brade & Nefjodova 1998, 26; Lappo & Hönsch 2000,



111–113, 121). This was the compromise that avoided the excessive growth of major cities as well as diseconomies of deconcentration in the settlement system (e.g. transportation). It offered the opportunity to benefit from the concentration of activities in the same economic area (the clustering of industries and supporting activities).

In fact, some authors also called into question the deconcentration processes in the socialist settlement systems. As the industrial enterprises continuously needed additional labour to increase their production, even more jobs and population became concentrated in the already existing cities and agglomerations (Tammaru 2001a, 59). In addition, the choice of jobs in the major cities was more various, as centres they were also better supplied with basic commodities, and therefore the major cities were attractive migration destinations (Tammaru 2001a, 59; Hausladen 1983, 122).

At the other end of the settlement hierarchy, efforts were made to bring the agricultural sector under central government control. Spatial planners considered the “fragmentation” of rural settlement to be the main problem that evaded rational organization and perpetuated the relics of the previous economic system. The most optimistic visionaries even talked of “eliminating differences between town and country” and about the unification of these separate units of settlement systems into one integral urban system (Musil 1980, 63–70). The main measure applied was the collectivization of former farm-based agriculture. The main function that rural areas were expected to perform was to provide food for the urbanized population, but this had to take place in large production units. In the later decades of communist rule, rural centres gained from the processes of economic decentralization, and smaller industries were also located in rural areas.

Urban and rural areas were, however, reciprocally related, even without “eliminating the differences between town and country”. In many cities the majority of the urban inhabitants were first generation urbanites. In Belgrade, the capital of the former Yugoslavia, for instance, about two-thirds of the urban population of the 1970s had come to live in the city during their own lifetime (Enyedi 1996, 116–117). Urban residents returned to their home villages during the weekends and holidays and helped their rural relatives with their farming activities. As compensation they were supplied with food and other materials. Many urban inhabitants had several forms of auxiliary farms (Enyedi 1996, 116–117; Fialová 2003): in their home villages, in their second homes or in the *Schrebergarten* (e.g. in Germany) that were integrated into urban landscapes. In the former Soviet Union, including Estonia, extensive summer home areas (*dacha*-settlements) were established around the major cities in the Soviet decades (Leetmaa 2002; Leetmaa et al forthcoming; Anniste 2007; Kostinskiy 2001, 462; Rudolph & Brade 2005; Lappo & Hönsch 2000, 8).

A distinct way in which the rural population contributed to the industrial growth of particular countries has been formulated in the “under-urbanisation” thesis (Szelényi 1996; Konrad & Szelényi 1977; see also: Brown & Shafft 2002,

236; Kok & Kovács 1999, 120–127; Enyedi 1996, 116; Enyedi 1998, 15; Van den Berg et al 1982, 31–32). The growth of the urban population remained slower than the growth of industrial jobs in the cities would lead one to expect. Part of the industrial workforce in the cities, the lower status employees who worked for non-priority sectors, moved to the urban hinterlands, as they were not given access to the scarce urban housing stock. Administrative measures were applied to restrict migration into the cities. A so-called *propiska* or special permission was often needed to settle down in major cities (e.g. Gans & Kemper 2001, 23; Rudolph & Brade 2005, 136; Gentile & Sjöberg 2006, 706; Renaud 1992, 885; Gang & Stuart 1999). Thus this part of the industrial workforce was forced to commute daily to the city. The combination of urban and rural life offered them the possibility to be engaged in subsistence agriculture in their suburban place of residence. This situation was, however, useful from the point of view of government, as these individuals contributed to industrialization projects without the need to be supplied with public housing and other urban amenities.

### **1.2.2.2. Communist priority economy, balance of urban actors and socio-spatial segregation**

These examples prove that essential internal systemic conflicts occurred in the centrally planned economic system under communism. Was this an inherent failure of the system, or was economic progress simply given preference over other social aims, including equality? Despite rapid forced industrialisation, however, economic development was also much slower than expected. At the beginning of the communist period some economic growth was indeed discernible. For example, the gross national product of Czechoslovakia at the end of the 1960s was comparable with that of Austria (Lichtenberger 1998, 139), but since the 1970s the backwardness of the communist block economies became increasingly evident. An influential explanation that has aimed to elucidate these contradictions as well as to describe the determinants of urbanisation under communism is the “priority approach”, which is discussed most thoroughly by Kornai (1992). The approach focuses on the functioning principles of the centrally planned economy, and has been further complemented by other researchers in the area of resulting spatial outcomes (“landscapes of priorities”) pertaining to settlement systems (Sjöberg 1999) and intra-urban spatial patterns (Gentile & Sjöberg 2006).

The fundamental idea is that a centrally planned economy is resource-rather than demand-based (Sjöberg 1999; Gentile & Sjöberg 2006; Kornai 1992; Leetmaa et al forthcoming). There are no private enterprises, and state-owned enterprises are not motivated to increase their productivity with the resources they have at their disposal. Instead they tend to acquire more resources — production inputs such as labour, raw materials etc. This sooner or later leads to

a scarcity of resources. In the case of labour, it first leads to full employment (which was in fact one of the ideological aims of communism), and later to a shortage of labour. Now it must be decided which enterprises and which economic sectors are more important, to ensure that the most important aims are fulfilled. As a logical outcome of this, an “economy of shortages” develops. Enterprises have to take into account their budget constraints, but they use all available opportunities to compete for scarce resources. At the same time, priority enterprises enjoy so-called „soft budget constraints“, which means that they are in a more favourable position in the competition for resources.

Throughout the socialist period, the increasing of industrial production was the foremost objective. Therefore investments in non-productive spheres — housing construction, social and technical infrastructure related to residential areas, consumer services — regularly lagged behind. However, workers in priority sectors were also better supplied with these public benefits. Mass housing construction in the cities was mainly oriented towards workers in growing industrial enterprises. As modern housing was heavily subsidized, this was practically part of the remuneration (Lichtenberger 1998, 142) provided to workers in priority sectors who had access to it. They were therefore in a considerably better position than those population groups that could not enjoy these subsidies.

In addition, soft budget constraints gave the priority enterprises freedom of action to compensate shortcomings in public benefits. In addition to resources for the execution of their main production tasks, they also received financial means for housing construction, the provision of auxiliary infrastructure and also simple consumer services. In the case of minor salary differences they were able to offer other forms of remuneration to attract workers. This logically even exacerbates the situation in non-priority sectors, as the resources to provide public benefits to other citizens are now even scarcer. The achievement of full employment, however, also gives people freedom to change jobs and obtain better housing.

The literature analysing residential differentiation generally argues that, in comparison to Western cities, a comparable level of socio-spatial segregation could not be found in communist cities (Smith 1996; Sýkora 1999, 679–683). It might, however, be that the inequalities took other spatial forms. The above-described logic of a priority-driven economy enables us to understand the sources of socio-spatial inequalities in a communist regime. Under the circumstances of a shortage of resources, even when equality is an ideological aim, some population groups will inevitably be considered to be more equal than others (see also Enyedi 1996, 110). Besides the principle of prioritisation in the economy, some population groups were also preferred due to ideological considerations, e.g. party leaders and other influential persons in high governmental positions (see also Enyedi 1996, 117).

Gentile and Sjöberg (2006, 707) explain the quality differences inside the modern housing stock in Kazakhstan by distinguishing state-municipal and

state-company housing. They conclude that in general, although all modern housing in the cities was built using prefabrication technology and arranged in *mikroraiony* with exchangeable appearance, the company housing was usually of better quality. They had better locations in the city (e.g. location in relation to transport or air pollution), these *mikroraiony* usually had more extensive auxiliary infrastructure, and they also often had larger apartments. One can therefore argue that even the communist-era standardized housing construction that has become the symbol of egalitarian living conditions actually contained remarkable inequalities.

One can see that the communist-era state-owned companies, although they were theoretically subordinated to the state apparatus, also became powerful actors shaping urban space and settlement structures. Especially in the cities that were dependent on one or a couple of large state-owned companies, decisions made by the key employer had a considerable influence on the future of the city. In addition, the defence industry and the activities of the army often functioned as a “state within a state” in communist countries.

This brings me back to the classics of urban theory, namely to the urban life-cycle theory (Van den Berg et al 1982; Van den Berg 1999) that, with its sequential urban development phases, describes the universal global process of urbanisation. As mentioned above, this theory also aimed to explain urbanisation in the capitalist and communist worlds through similar mechanisms. I claim that urban actors — companies, households, and public authorities — are also recognizable in the communist context.

Whereas central planners and official ideology should theoretically dictate the course of affairs, and they undoubtedly also aim to ensure overall welfare in society, in reality companies and households act according to similar motives in the communist system as in the capitalist world. Although companies cannot directly choose their locations, they can expand *in situ* and they compete for resources like labour. In addition, people had remarkably more freedom under the communist regime than usually presumed (see also Tammaru 2001a). The opportunities that were cut off by the system, e.g. the right to migrate to the city or the right to have a modern dwelling, were replaced by other strategies to reach similar aims. People want to maximize their welfare even under the restrictions created by the communist regime (see also Enyedi 1996, 104–105). This is achieved through interaction with another group of actors — state-owned companies. In the context of labour shortages, people have the opportunity to choose their jobs. The conditions offered by companies enjoying priority status may prove to be more attractive not only as concerns salary (since salary differences were typically negligible), but a new job may also give opportunities for better housing (Leetmaa et al forthcoming). In this situation, the idea that the development of settlement systems was under the control of communist spatial planners may prove to be an illusion (Buckley 1995).

The Western countries that I analyzed in the previous section also offer a rich array of examples of state intervention to different extents and in different

spheres. The public authorities may influence the levels of socio-spatial segregation (e.g. suburbanisation patterns) in metropolitan areas, as demonstrated by the comparison of the United States and the Western European countries. To the extent that the system gives freedom to private actors (people and companies), segregation occurs in urban space. An excellent example of a priority-led economy functioning outside the market is the defence industry, which has also had an important effect on the settlement system in Western countries. One can also find shortage phenomena in sectors subsidized by the state (Kornai 1992, xxii). In conclusion, certain phenomena and mechanisms that are so inherent to the communist system can also be observed in capitalist economies. Kornai (1992, xxiii) uses the metaphor of disease. He argues that in the same way a medical researcher studies a disease in pure laboratory conditions where it is fully developed, the socialist system presents many phenomena in their ultimate form that to some extent occur in every country.

In summary, I am of the position that the main difference between urban development in the Western countries and in those under communist rule was the degree that the political system was able to create effectively functioning restrictions on other urban actors (companies and households), but this also differentiates the countries in the former Western world. As regards suburbanisation, most analysts agree that it is not possible to observe the patterns of the Western style of suburbanisation in the communist countries (Shabad 1986; Medvekov 1990). Indeed, segregation patterns occurred in different forms in Western countries and in communist countries.

In the late Soviet period, in parallel to economic stagnation in the communist countries, a gradual liberalization of the economy took place in the Central and Eastern European countries. A so-called secondary economy or parallel society (Ladányi & Szelényi 1998, 73–77; Kok & Kovács 1999, 128; Enyedi 1996, 106; 1998, 14) emerged alongside the mainstream communist society. People began to earn extra money from their auxiliary agricultural plots, but also from private services and small-scale industries. The accumulation of capital became possible. At the end of the 1980s, public housing construction programs were also constricted (Sýkora & Cermák 1998, 411; Kupiszewski et al 1998, 266; Kok & Kovács 1999, 128), and the restrictions on private housing construction were somewhat eased. This also brought about the first signs of Western suburbanisation. In Hungary the net migration balance of Pest county in relation to Budapest became positive from 1987 (Kok & Kovács 1999, 122, 128). In most of the countries of the Soviet bloc, more intensive residential suburbanisation was observed since the beginning of the 1990s (Sýkora & Cermák 1998; Kupiszewski et al 1998).

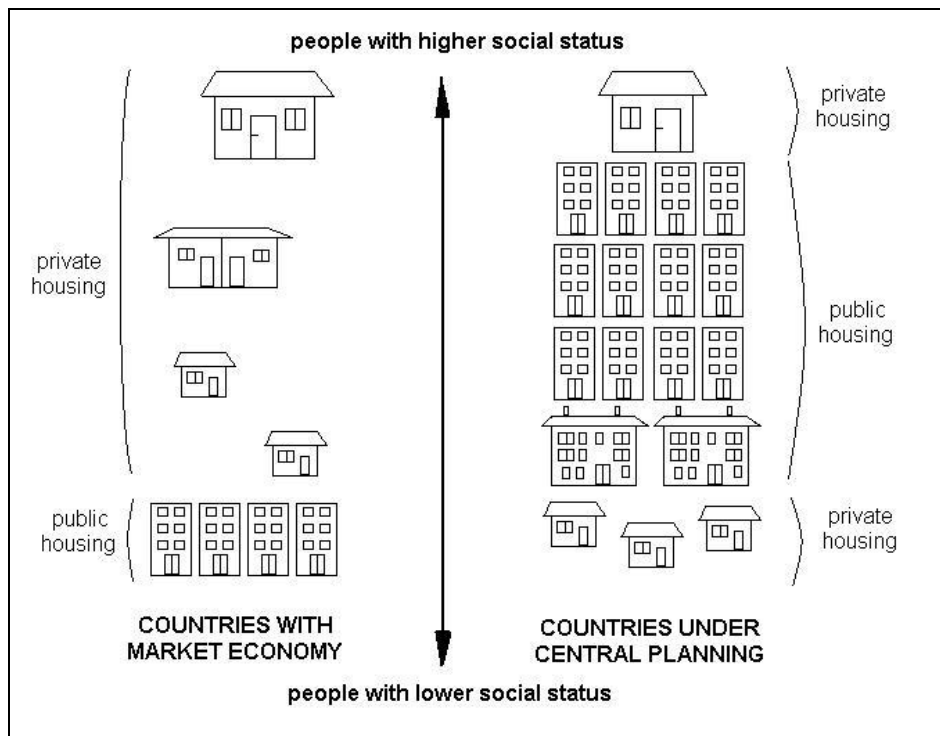
### **I.2.2.3. Push-, pull- and enabling factors as preconditions for suburbanisation**

I demonstrated that decentralization processes were observable in urban agglomerations in the communist countries, e.g. due to the decentralization of industry inside the agglomerations or due to the phenomenon of under-urbanisation. These processes, however, were not explicable by traditional factors that brought about decentralization processes in metropolitan areas in Western countries. This could be most clearly understood by analyzing whether the classical enabling factors favouring suburbanisation in Western countries have also been present in communist countries, and whether traditional push- and pull-factors have occurred in cities and suburban areas respectively.

The efforts of public authorities may be considered to be an important precondition that either enable or restrict residential differentiation in the metropolitan area, including suburbanisation. I have demonstrated that communist states managed to control the housing sector and therefore to avoid traditional spatial inequalities in their cities. This could, therefore, be compared with the Western European mid-century welfare state (Crouch 1999), which also managed to control socio-spatial segregation in the cities in comparison to the United States. Interestingly, the public authorities intervened in different sections of the housing market (figure 5).

Classical public housing construction in Western cities is directed towards population groups that possess relatively weaker social status (the US being an extreme case). At the upper end of the housing market, the accumulation of capital and better salaries allow wealthier people to acquire better housing. Under the communist system, public housing (incl. those built by state-owned companies) construction is, however, an amenity that people with relatively higher social status can enjoy, but the proportion of the population that is entitled to housing subsidies is considerably greater than in Western countries. Private housing in communist countries in general represented the lower end of the housing stock (Gentile & Sjöberg 2006, 707), unless the family had other channels to support their housing costs (e.g. belonging to the primary elite or access to building materials). Another type of inferior housing stock is the public housing from the pre-war housing stock in inner-city areas, which was deprived of investment.

Therefore the strategy for finding better living conditions involved applying for modern public housing in large housing estates, which in Western countries instead represents the lower end of the housing market. As a result, an upside-down housing market emerged — the source of inequalities in Western countries was the upper end, and in communist countries the lower end of the housing market. Socio-spatial inequalities occur, but they do not follow the same spatial patterns as in Western countries.



**Figure 5.** Public and private housing construction and sources of segregation in countries with a market economy and in countries under central planning

Source: Own generalisation

Economic growth is a traditional enabling factor associated with suburbanisation in Western countries. A high level of welfare is an important precondition that has enabled people to invest in the improvement of their living conditions. As I have explained, the communist countries did not reach a comparable level of welfare to that of the capitalist industrialized countries. Similarly and partly related to this, automobile ownership remained relatively modest (Ott 2001, 407; Van den Berg et al 1982, 31–32; Kok & Kovács 1999, 121). Therefore even these basic preconditions did not favour private investments in living conditions or decentralization in metropolitan areas.

Consequently, in communist countries the push- and pull-factors in the cities and surrounding areas did not function according to the traditional logic. The large housing estates in fact contributed to a crowded living environment in the cities. This is best summed up in the words of the long-serving Soviet-era chief architect of Tallinn (from 1960 to 1980), Dmitri Bruns: “densely built standardized housing construction was subordinated to the aim of solving the housing shortage in quantitative terms, but it failed to create a high-quality

agreeable urban living environment” (Bruns 1993, 176). Nevertheless, the exit-strategy, leaving the city for the suburbs, or a communist-era apartment for a privately built house, would have involved the need to give up housing benefits that, as I have discussed above, was practically a part of remuneration.

Similarly, the suburban areas did not function as traditional free, naturally more attractive areas that would “pull” the population out of the cities. Although the traditional land market did not exist in the communist-era, it would be an exaggeration to say that land did not have value. The free land around the cities was used for other purposes, for example for agricultural production (Musil 1980; Leetmaa et al forthcoming; Marksoo 2005). In the next section I describe in detail how the balance of actors in the metropolitan region and the priorities of the communist regime occurred in the Estonian context, and how it shaped suburban land use patterns.

### **1.2.3. The Tallinn metropolitan area before the transition period**

#### **1.2.3.1. Urbanisation before World War II**

As regards belated urbanisation, Estonia resembles other countries in Central and Eastern Europe. Estonia also long retained its agrarian nature. Industrial growth and the resulting formation of an urban network took place relatively late here. The urban population at the turn of the century made up approximately 16 percent of the country’s total population. This increased to 33 percent by the eve of World War II (table 3; Tammaru 2001a, 109). The period of rapid urbanisation, when the share of urban population nearly reached that of the Western European countries, also coincides here with the period in which the country was under communist rule (1940–1991).

In fact, Estonia’s urbanisation experience provides an excellent example to understand the different contexts for urban population growth in a country. First, urban population growth may be based on migration from rural to urban areas in parallel to the surplus of workforce in rural areas and industrial growth in cities. This traditional source of urbanisation has, however, been interrupted by external sources of urban population growth in Estonia. Estonia was part of the Russian empire before World War I and belonged to the Soviet Union after World War II. During these periods, industrial growth and the increase in the urban population was strongly related to immigration from other parts of Russia or the Soviet Union. In the years of national independence (1918–1940), the urbanisation process was solely Estonia-based. During these two decades, urbanisation was slow, but developed at a more balanced rate — smaller urban centres also grew. External sources have, however, traditionally favoured bigger cities, as industrial enterprises did not only serve Estonia, but were oriented towards the needs of a large empire. Some authors have argued that Estonia has



experienced two waves of urbanisation (Katus et al 1998, 4): the first at the end of the nineteenth century until the achievement of national independence in 1918 and the second under communist rule.

Migration played an insignificant role in the formation of Estonian settlement structure until the final decades of the nineteenth century (Laas 1987, 84–85). The intensity of migration only began to increase after the abolition of serfdom in 1816 and in 1819 in Estonian areas, and after the introduction of passports in the middle of the century (Ainsaar 1997, 28; Laas 1987, 86). The growth of the rural population due to demographic transition caused out-migration from rural areas to the cities. In addition, the rural population left for other parts of Russia where it was easier to acquire land, and therefore urban population growth from internal migration remained somewhat more modest (Kulu 1997; Laas 1987, 85–86).

At the same time, Estonia became an important industrial region within Russia, and the empire served the country as a large migration hinterland. An important impulse that favoured industrial growth in Estonia was the opening of the St. Peterburg-Tallinn-Paldiski railway line in 1870, which made it possible to connect the ice-free harbours of the Baltic Sea with the Russian railway network (Bruns 1993, 88–90). This brought many new industrial enterprises to Tallinn, and the city attracted labour from other parts of Russia. Before World War I many military facilities were established (e.g. a naval port), and the defence industry was located in Tallinn (Bruns 1993, 96), which again led to an essential in-migration of foreign labour. In addition, the war and political refugees arrived in Estonia (Ainsaar 1997, 43; Bruns 1993, 110).

**Table 3.** Dynamics of rural and urban population in Estonia, 1881–2000

	<b>Total population</b>	<b>Urban population</b>	<b>Rural population</b>	<b>Proportion urban, %</b>
<b>1881</b>	881,455	114,230	767,225	13.0
<b>1897</b>	958,351	148,778	809,573	15.5
<b>1922</b>	1,107,059	298,873	791,934	27.0
<b>1934</b>	1,126,413	349,826	767,535	31.1
<b>1959</b>	1,196,791	675,515	521,276	56.4
<b>1970</b>	1,356,079	881,168	474,911	65.0
<b>1979</b>	1,464,476	1,016,826	447,650	69.4
<b>1989</b>	1,565,662	1,118,829	446,833	71.5
<b>2000</b>	1,370,052	923,211	446,841	67.4

Source: Census data

**Table 4.** Population dynamics of Tallinn city, 1881–2007

	<b>Total population</b>	<b>Share of Estonians, %</b>
<b>1858</b>	20,680	...
<b>1871</b>	29,162	51.8
<b>1881</b>	45,880	57.4
<b>1897</b>	58,810	68.7
<b>1901</b>	67,007	...
<b>1913</b>	116,132	71.6
<b>1917</b>	159,193	57.7
<b>1918</b>	105,789	81.3
<b>1922</b>	120,179	83.8
<b>1934</b>	135,738	85.6
<b>1938</b>	144,794	...
<b>1940</b>	136,129	...
<b>1945</b>	127,100	...
<b>1959</b>	281,423	60.2
<b>1970</b>	362,462	55.7
<b>1979</b>	429,462	51.9
<b>1989</b>	499,421	47.4
<b>2000</b>	400,378	53.7
<b>2007</b>	396,852	54.9

Sources: Census data; Kask 2002, 22; Pullat 1966, 42; 1972, 39; 1978, 139; Bruns 1993, 88–110; Tallinna linna... 1941, 11; Tallinna linna ... 1925, 16; Estonian Statistical Office, statistical database

... – data not available

**Table 5.** Population dynamics of Tallinn, share of Tallinn in total and urban population, 1881–2000

	<b>Population, Tallinn</b>	<b>Proportion of total population, %</b>	<b>Proportion of urban population, %</b>
<b>1881</b>	45,880	5.2	40.2
<b>1897</b>	58,810	6.1	39.5
<b>1922</b>	120,179	10.9	40.2
<b>1934</b>	135,738	12.1	38.8
<b>1959</b>	281,423	23.5	41.7
<b>1970</b>	362,462	26.7	41.1
<b>1979</b>	429,462	29.3	42.2
<b>1989</b>	499,421	31.9	44.6
<b>2000</b>	400,378	29.2	43.4

Source: Census data

The population of Tallinn (table 4) tripled over four decades, from 1881 (a census year) until the end of the Russian period (1917). In the last two decades of the nineteenth century, internal migration played a relatively more important role in the growth of Tallinn, and the share of Estonians in the city increased from 57 percent in 1881 to 68 percent in 1897. Since the beginning of new century, however, population growth was based much more on external migration, and the share of the titular population in the country's largest city again dropped to 58 percent. At the end of World War I and during the War of Independence, when Estonia became an independent country, Tallinn lost approximately one-third of its population due to flows of refugees, with many industrial workers returning to Russia, and Germans returning to Germany (Tallinna ... 1941, 11). As a result, the share of Estonians in the capital city increased to more than 80 percent.

During the inter-War period, in the years of national independence, the development of the settlement system was based mainly on internal demographic resources. Estonia did not have a large migration hinterland as in the era of the Russian empire, and external migration with other countries did not play an important role. In conjunction with the political changes, the share of industry in the national economy also decreased, as the small republic did not need the large-scale industry, including the defence industry that Estonia had had until then. Instead, agriculture played a remarkable role in the national economy. Internal migration was characterized by a modest and gradual urbanisation process. The population was gradually concentrated from rural areas to smaller centres and from smaller centres to major cities. The migrants arriving in other smaller cities originated mainly from the countryside, whereas Tallinn also received population from other cities in the country (Kant 1933; Reiman 1935). Urban centres of different sizes grew. Many new smaller centres were granted the status of towns (Laas 1992, 1900–1901). At the end of the 1930s, the settlement network of the industrial area in the north-eastern region emerged, which later in the Soviet years became an important industrial agglomeration (Laas 1987, 90; Tammaru 2001a, 122–123).

The share of Tallinn in the country's total population also slightly increased during the years of independence (table 5). More than 10 percent of the Estonian population lived in the capital city on the eve of World War II. The majority of industry was still concentrated in Tallinn. In addition to being a capital city, other activities (e.g. administrative functions) were also concentrated here (Tammaru 2001a, 107, 123–124). Tallinn (together with Nõmme, see below) received approximately half of the total increase of urban population in the inter-war decades (Reiman 1935). The share of Tallinn in the urban population of Estonia therefore remained at the level of about 40 percent. It decreased slightly because Tallinn lost population to its new nearby garden city Nõmme. However, on the eve of World War II, after the emigration of the Germans, Tallinn was almost uni-ethnic (Pullat 1978, 142). The country's urbanisation level increased slowly in this period, from 27 percent in 1922 to 33

percent (table 3) in 1939, and even dropped in the years of economic crisis (1929–1934) (see also: Tammaru 2001a, 109–110).

These fluctuations in urbanisation patterns exemplify the role of political changes in the development of the Estonian settlement system. When Estonia had been part of the vast Russian Empire, industrial growth had favoured larger urban centres, and immigration had accelerated the speed of urbanisation. In many respects, similar trends occurred after Estonia was annexed to the Soviet Union in 1940. The case of Finland could serve as a vivid example of an alternative path of development (Heikkilä 2003, 50, 60). In Finland too, urbanisation took place under Russian Imperial rule until 1917, when the country became independent. Unlike Estonia, Finland managed to retain its independence after World War II, experiencing late but extremely rapid urbanisation based on internal demographic resources. This is also notable because Finland did not receive immigrants from other countries in considerable amounts, as did many European countries in the middle of the century. Finland's population was still 32 percent urban in 1950 (46 percent in Estonia), which increased to 60 percent by 1998 (72 percent in 1989 in Estonia). As a Soviet republic since 1940, Estonia experienced much faster and more extensive urbanisation under the communist industrialisation project.

As concerns the built environment and spatial changes in the city, similar spatial changes to other European cities were also observable in Estonia. At the turn of the century, in parallel to rapid industrial growth, low-quality wooden apartment buildings were erected in cities, close to industrial enterprises (Bruns 1993, 91), e.g. the Kopli district in Tallinn, Supilinn in Tartu and Vana-Pärnu in Pärnu (Tammaru 2000, 83). At the same time, the separation of the locations of jobs and places of residence became evident, and this gave wealthier urban residents the opportunity to enjoy a better living environment.

Westwards from the compact city of Tallinn, the previous summer home area Nõmme was converted into a permanent residential area (Lõhmus, 2006). In this typical garden town, which was connected to the city by rail, detached housing prevailed in the naturally attractive environment. Nõmme was already an attractive recreation area at the end of the century. During the interwar period the permanent population of Nõmme increased rapidly, from 3875 inhabitants in 1918 to 21,748 in 1939 (Pullat 1978, 210). This means that Tallinn lost approximately 14 percent of its inhabitants to Nõmme alone, but other smaller new residential areas (e.g. Merivälja) also emerged in the suburbs. This population growth was explainable by Nõmme's favourable location close to Tallinn, a good railway connection that made it possible to commute to the city, cheap land prices compared to Tallinn and an attractive environment at that time (Paيدا, 1962; Pullat, 1968). In 1940 Nõmme was administratively incorporated into the city of Tallinn. Similar smaller settlements may be found close to other cities in Estonia. Elva, a small garden town 25 kilometres from Tartu (Estonia's second-largest city) also owes its existence to the railway connection that was established at the end of the nineteenth century. Here also, summer homes first

were built in a naturally attractive area (for university professors, among others), and the recreation area gradually became an independent settlement with permanent residents (Veldi 2008).

These last examples prove that the communist-era urbanisation project was a radical shift in Estonia's urban development. Like many other countries in Eastern Europe, independent Estonia experienced slow urbanisation before this political shift, and similar changes in the cities' internal spatial structure were ongoing. As the case of Finland proves, belated urbanisation based on a country's internal demographic sources finally resulted in a relatively high proportion of urban population as well.

### **I.2.3.2. Urbanisation under communism**

A profound overview of urbanisation patterns under communism in Estonia could be found in the studies of Ann Marksoo (literature review in Kurs & Toots 2000) and Tiit Tammaru. Below I conclude the most important features of urban development from the World War II until the 1990s, when Estonia regained its national independence. As we will see later, the priorities of the Soviet era and its spatial outcomes have also fundamentally influenced urban development trends in post-communist decades.

As in other communist countries in Central and Eastern Europe, centrally-planned industrialisation led to a rapid increase in Estonia's urban population. Although over time the rate of urbanisation slowed, as in other countries that have already achieved a high proportion of urban population (UN 2006, 77–85), the maximum level of urbanisation was reached at the end of the Soviet period. In 1989, 72 percent of the country's population lived in the cities (table 3). In 1953 the urban population surpassed the rural population in Estonia (Estonian urbanisation database; Marksoo 1995, 183), which means that by this time, a higher level of urbanisation had been achieved than in many other Central and Eastern European communist countries (Enyedi 1996, 109). The population dynamics of the capital city Tallinn (table 4) demonstrate that the rapid urban growth of the Soviet years may indeed be seen as a second wave of urbanisation in Estonia (Katus et al 1998, 4) which again took place under conditions of the intensive in-migration of foreign workers, under the same logic that applied to the growth of Tallinn in the first decades of the twentieth century. Analogously, after the political upheaval of the early 1990s (as in the years 1917–1918), many inhabitants returned to their country of origin, and the development of Estonian settlement system once again came to be based mostly on internal demographic sources.

A special feature of the centrally planned economy of the Soviet Union that Estonia as a Soviet republic experienced was the need to promote the specialisation of regions in the all-union division of labour. The economic profile of regions was mostly related to local factors of production (such as the proximity

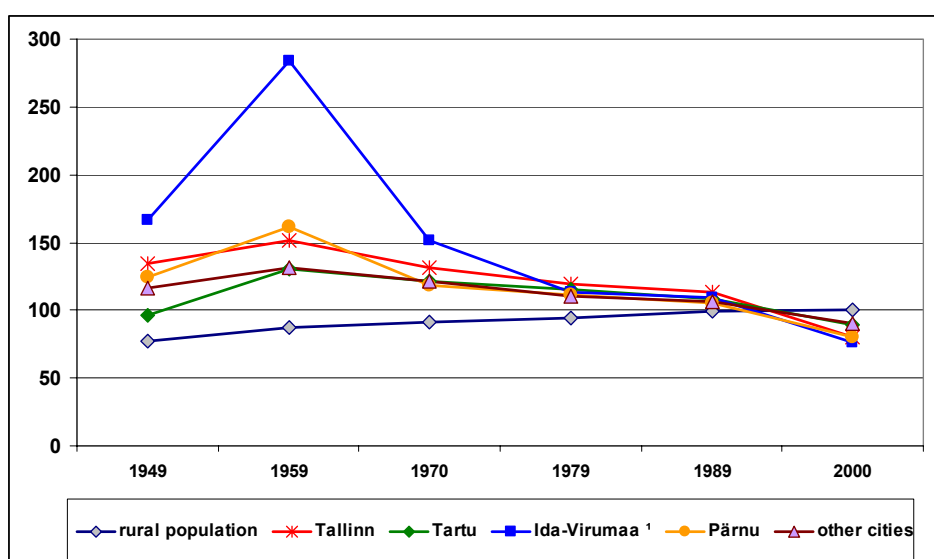
of raw materials, energy, harbours etc; but not labour), but the volumes of production substantially exceeded the needs of local markets (e.g. the Estonian SSR) (Tammaru 2001a, 242–243). The priority branches of the economy in Estonia were the oil-shale industry, the metallurgical industry and engineering, the chemical industry and production related to ports and the defence industry, but also the production of building materials and light industry (Tammaru 2001a, 243–244; Marksoo 1984a, 10; 1984b, 36; 1999, 82). In the later Soviet decades, agriculture and food production also became important. The new industrial jobs mostly became concentrated in the bigger cities, in the capital city and in the burgeoning north-eastern industrial region (Ida-Viru County), where traditional industrial city Narva and other new cities grew very rapidly (figure 6). Also in the Soviet years, many new smaller centres were granted town status, and some new county seats gained administrative functions. As a result, the growth of the second largest city, Tartu, was relatively modest. Pärnu, another poly-functional regional centre, grew somewhat faster in relative terms immediately after the War. Since the 1960s, in Estonia attempts were also made to channel industrial growth into smaller centres (Tammaru 2001a, 245–246), and the variation in growth rates between cities and settlements of different sizes became insignificant.

Compared to the communist countries of Central and Eastern Europe that were not part of the USSR these patterns of urban growth were accountable for both internal and external migration in Estonia. Although administrative changes and natural increase also contributed to the growth of the urban population (Tammaru 2001a, 140–147, 167–174), the main source of the country's rapid urbanisation was migration. Due to positive net migration with other republics of the Soviet Union, the share of Estonians continuously decreased in Estonia (table 4 and 6). As immigrants' main destinations were the most rapidly growing cities, the change in the ethnic composition of these cities was also more pronounced. The cities of Ida-Viru County became mostly Russian-speaking during the Soviet years. By 1989, less than half of the population of Tallinn (almost an uni-ethnic city after World War II) was Estonian. The share of the titular population also slowly decreased in rural areas. By the end of the Soviet period, distinct differential patterns of urbanisation arose (Tammaru 2003) — 90 percent of non-Estonians lived in the cities, whereas among Estonians, the corresponding proportion remained at 60 percent, which interestingly corresponds with the level of urbanisation in Finland (1998).

**Table 6.** Share of Estonians in total, urban and rural population and in Tallinn, 1959-2000

	<b>Total population, %</b>	<b>Urban population, %</b>	<b>Rural population, %</b>	<b>Tallinn, %</b>
<b>1959</b>	74.6	61.9	91.0	60.2
<b>1970</b>	68.2	57.5	88.2	55.7
<b>1979</b>	64.7	54.7	87.5	51.9
<b>1989</b>	61.5	51.2	87.5	47.4
<b>2000</b>	67.9	56.6	91.3	53.7

Source: Census data



**Figure 6.** Population dynamics of the Estonian settlement system, previous observed year<sup>2</sup> = 100%

Source: Census data; 1949: Estonian urbanisation database

<sup>1</sup> All urban settlements in Ida-Viru County (an industrial region in Northeast Estonia)

<sup>2</sup> Data from the year 1949 has been compared to 1934 Census data

Different explanations for the intensive immigration to Estonia have been offered. Immediately after the War, not only workers but also people related to administrators and communist party functionaries arrived in Estonia, as well as Estonians who had formerly been living in the Soviet Union (Laas 1987, 91; Kulu 1997). During most of the Soviet period, however, the majority of

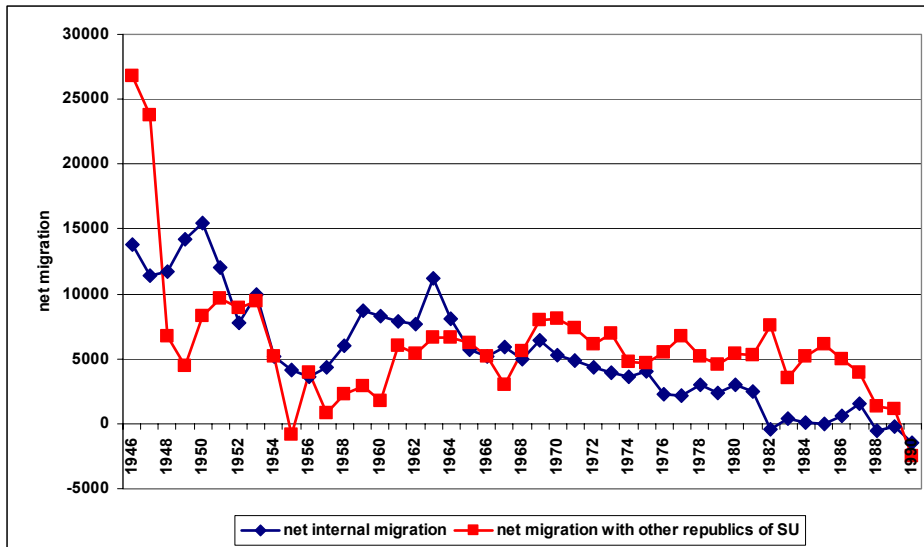
immigration could be explained by the need for industrial workers. This is partly related to the fact that Estonia, as a small country, was unable to provide a sufficient labour pool for the branches of industry that were located in the republic. There are also examples of foreign workers being brought to work at companies in Estonia in the interwar period (Laas 1987, 89), and the lack of skilled workers even today limits the manufacturing sector. For some specialized industries, the labour catchment area remains too small. As the state also supported industrial workers with housing, many migrants stayed in Estonia. However, positive net migration was the result of two-way migration and not a one-way inflow of foreign workers (Leetmaa 2004, 37). The economic reasons were intertwined with ideological considerations (Marksoo 1999, 82), as industrialisation in turn helped to transform Estonia into a multicultural country. Immigration has also been explained by the relatively later demographic transition in other republics of the USSR than in Estonia (Marksoo 1984b, 35–36; 1995, 182; Sakkeus 1991, 2–3). And, last but not least, the presence of military personnel (Jauhiainen 1997; Marksoo 1999, 82) and their families increased the proportion of non-Estonians in the country.

Net migration of the cities in relation to other republics of the USSR remained positive throughout the Soviet period (figure 7). Only in the second half of the 1980s did it begin to decrease. Though immigrant industrial workers were generally among the first-priority population that was supplied with urban housing, the administrative restrictions for in-migration to big cities (Tallinn: Marksoo 1990, 54; 1992, 131; 1999, 83) also influenced them. Some immigrants first settled down in smaller settlements and towns and later moved on to the major cities (Marksoo 1990, 59; 1992, 141), where the cultural and language environment was more familiar for them. This also somewhat increased the balance of internal migration within the country in favour of the cities.

Migration from rural areas to cities has also promoted an increase in the urban population. The intensity of rural-urban migration (migration flows) in fact exceeded the intensity of migration with other parts of the USSR, but this has been connected with education-related migration flows towards the major Estonian cities (Tallinn and Tartu) and with the migration of graduates to rural areas due to state-controlled mandatory employment assignments (Marksoo 1984a, 10; 1985, 29; 1990, 59; 1992, 135). Out-migration from rural areas was connected with collectivization and the difficult working and living conditions in rural areas, as well as to the new job openings in the cities. Hindering circumstances included difficulties obtaining housing, the deteriorating living environment and the changed ethnic composition of the cities (Raagmaa 1996). Figure 7 demonstrates that the negative net migration from rural areas to cities gradually diminished during the Soviet period, until the balance turned positive in 1982. This has been referred to as the migration turnaround in the Estonian settlement system (Marksoo 1990; 1992). According to Marksoo (1984b, 36), it could not be explained so much by the intensification of urban-to-rural migration, but instead rural-to-urban migration flows withered. Collectivised



agriculture in rural areas became relatively successful, and this was treated as one of the priority economic fields in Estonia in the late Soviet decades. As a result, since the end of the 1960s urban settlements in Estonia received more additional population from migration from other Soviet republics than from migration from within the country.



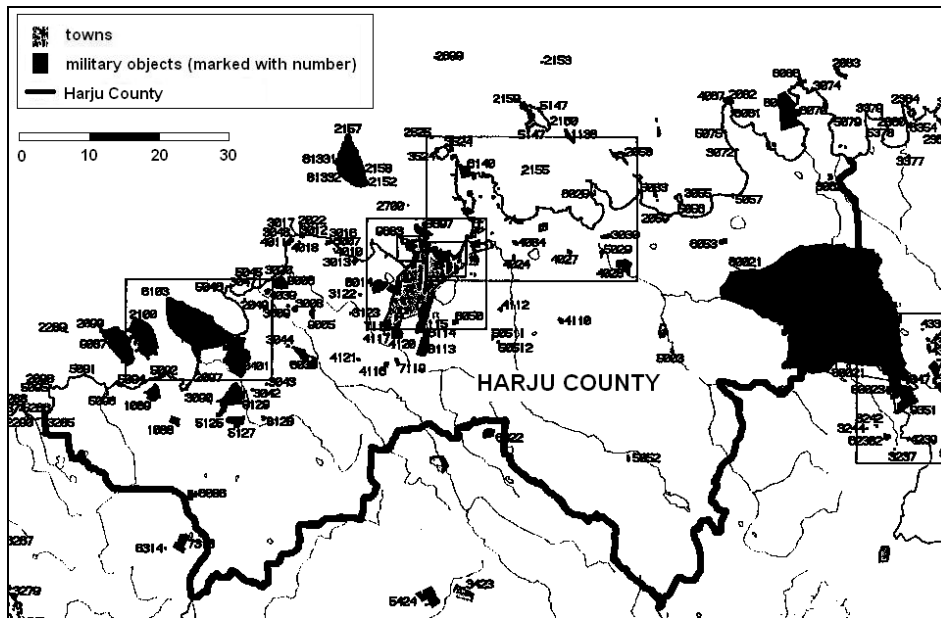
**Figure 7.** Net internal migration and net migration with other republics of the Soviet Union<sup>1</sup> of urban settlements, 1946–1990

Source: Sakkeus 1991

<sup>1</sup> excluding special migration

The population of Tallinn increased 3.8 times under Soviet rule. Tallinn’s share of the country’s urban population did not, however, increase considerably (table 5), since many other initially smaller settlements also grew in these years (figure 6). The growth of the cities in the north-eastern part of Estonia kept Tallinn’s proportion stable. At the same time, the capital city’s share of the country’s total population grew considerably. In 1989, 32 percent of the Estonian population lived in the capital city. This was not related only to the fact that the city was the administrative and economic centre of the Estonian Soviet republic. Tallinn was also a harbour city, an important centre of industry and tourism, as well as an educational city (for marine education) of USSR-wide importance. Marksoo concludes that Tallinn was “a big capital city of a small republic”<sup>4</sup>. Due to the said USSR-wide functions, a certain part of the economy (harbours, rail transport, the defence industry) functioned “as a state within a state” (Marksoo 1990, 94; 1999, 83).

A good example of the functions that were developed without taking into account the local circumstances was the location of many military facilities in Estonia (Jauhiainen 1997). Almost two percent of Estonia's area was covered by military objects, and the military bases were mainly located in coastal areas (figure 8; Raukas 1999, 9). Even when not all coastal areas were closed, the permanent military monitoring of coastal areas was executed. The presence of military restrictions inevitably also influenced the development of the settlement system and urban space. A special permit was required to visit the so-called border zones (e.g. Estonian islands). Due to the military airport, Tartu was closed to foreigners (Kulu 2003). Extensive seashore areas in the city of Tallinn and its urban region were closed for border guard and military objects as well as for the semi-secret defence industry (Bruns 2007). Paldiski, a town fifty kilometres West of the capital city, was a closed naval base and a training centre for nuclear submarine personnel.



**Figure 8.** Location of former Soviet military objects in the Tallinn metropolitan area

Source: based on Estonian Ministry of the Environment (Keskkonnaministeeriumi Info- ja Tehno-keskus 1996)

In-migration made the housing situation in cities even more crowded. In Tallinn (Bruns 1993, 122–177) approximately half of the housing stock was destroyed in the course of World War II. Therefore the reconstruction of the damaged housing stock and housing construction in the post-war years took mainly place in the pre-war built-up areas. The pace of construction, however, lagged

considerably behind population growth in the city. Average living space per capita before World War II 13.8 square metres, had dropped to only 9.1 square metres in 1955. For this reason also, the private construction of single family houses was permitted until the 1960s; plots were shared in free areas in the city (Nõmme, Pääsküla, Merivälja, Pirita, Kose, Maarjamäe, Mähe, and Lilleküla).

Mass housing construction began in Estonia in the 1950s. At that time the first standard apartment houses were built in smaller groups on free areas in Tallinn. The first larger residential district, Pelgurand, was also begun in the 1950s. Extensive industrial housing construction was launched in the 1960s, and this lasted until the end of the 1980s. Housing construction was concentrated in three large housing estates, Mustamäe, Õismäe and Lasnamäe, which were built mainly in the 1960s, 1970s and 1980s respectively. Quantitatively this somewhat helped solve the housing shortage, and per capita living space increased to 19.1 square metres by 1990. Yet, as in other communist countries, the purpose of the construction was mainly to ensure that the “square metres were built” (Bruns 2007), and the construction quality as well as the quality of the surroundings of the blocks of flats were disregarded. The construction of auxiliary infrastructure for these residential areas was also delayed.

Today these three larger housing areas make up 53 percent of dwellings in the city, Mustamäe with 30,500, Õismäe with 14,500 and Lasnamäe with 47,000 apartments (Census 2000). Together with other smaller apartment block districts, the standard Soviet-era apartments built in the period from 1960–1990 still make up approximately 68 percent of total housing units in Tallinn in the year 2000 (Census 2000).

In the previous section I explained how the priorities of the communist regime determined the development of settlement systems and the spatial structures of the cities. Also, in Estonia not only the ideological aims of the regime, but also the priorities of the Soviet economy (and the changes in those priorities over the course of time) were influential in shaping the resulting socio-spatial patterns. The pre-war housing stock was nationalized, and as in many other countries this part of the urban housing market suffered from poor maintenance. These dwellings were then mainly inhabited by people with relatively lower social status (Kährik 2006, 36). The political elite was a privileged group that was more generously supplied with better housing (Kährik 2000), and the construction of dwellings for the rapidly growing industrial workforce was also an utmost priority. In addition, military personnel were accommodated first. This prioritization created inequalities in urban space. However, people used different strategies to use their relations and human capital to their best benefit in the housing market, and some analyses indeed reveal that better educated people had a higher likelihood of living in better dwellings in the Soviet period (Pöder & Titma, 2001; Kulu 2003).

It is, however, worth reconsideration more thoroughly which type of housing was more valuable in the Soviet period and how the valuation of different housing has changed over time. If we presume that the most desired housing in

the Soviet period was a modern apartment in a large housing estate, we could deduce that priority groups had better access to modern housing stock.

**Table 7.** Share of dwellings in multi-family houses and share of Estonians in districts of Tallinn, 2000

	<b>Total population</b>	<b>Share of apartments, %</b>	<b>Share of Estonians <sup>1</sup>, %</b>
<b>Tallinn</b>	400,378	90	52
<b>... Haabersti district</b>	37,394	91	50
<b>... Kesklinna district</b>	45,009	95	67
<b>... Kristiine district</b>	30,407	84	66
<b>... Lasnamäe district</b>	115,243	100	33
<b>... Mustamäe district</b>	67,842	100	59
<b>... Nõmme district</b>	37,203	48	82
<b>... Pirita district</b>	9,962	12	89
<b>... Põhja-Tallinna district</b>	56,809	97	42
<b>... District unknown</b>	509	0	55

Source: Census 2000

<sup>1</sup> mother tongue Estonian

An excellent example is the accommodation of the immigrant industrial workforce. The most obvious segregation pattern in the case of Tallinn is segregation by ethnicity (table 7), but this is related to the logic of historical population growth in the city. The share of the Russian-speaking population is highest in Lasnamäe (67 percent: Census 2000), the largest and the latest of the large housing estates in Tallinn, whereas the average figure for Tallinn was 48 percent. In some older districts of the city with mainly single-family houses, the Russian-speaking population is clearly a minority, e.g. in Nõmme 18 percent and in Pirita 11 percent. This is explained by the fact that Lasnamäe was built in the late-Soviet period when the main source of urban population growth was immigration of Russian-speaking population (figure 7). The labour force hired for Estonian industrial enterprises was provided with new housing (sic! Lasnamäe makes up more than a quarter of the total housing stock of Tallinn), regardless of the fact that Tallinn belonged to those Soviet cities where administrative restriction of population growth was applied (Marksoo 1990, 54; 1992, 131; 1999, 83).

We can conclude that in the social context of their arrival, they were accommodated in the best housing. However, today the perceived value of large housing estates as well as other districts in the city with older housing (which were considered out of date in the Soviet period) has changed considerably. I

therefore conclude that prioritization in the Soviet era created inequalities in the respective social context.

### I.2.3.3. Development of the metropolitan periphery in the Soviet period

Below I analyse in greater detail the role of communist-era priorities in the formation of the suburban area of Tallinn. In parallel to population growth in the capital city, the population of the suburban area of Tallinn also increased (table 8) in the Soviet period, although not in relative terms. The population of Harju County (covering approximately the same area as the defined Tallinn metropolitan area today) reached 605,000 by 1989, and one fifth of this population lived in the suburban area<sup>2</sup>. In spatial terms it was possible to observe some population as well as employment growth in the suburban zone. Commuter flows increased, and the relations between suburban settlements and the city intensified in many ways. We can therefore conclude that the formation of the Tallinn metropolitan area (as a functional urban area) already took place in the Soviet years. If one analyses the driving forces behind the centrifugal processes in the region, one can, however, see that these trends were fundamentally different from the suburbanisation phenomenon in the Western countries.

**Table 8.** Population dynamic of the Tallinn metropolitan area, 1959–2000

	1959	1959	1970	1970	1979	1979	1989	1989	2000	2000
	Popul.	%	Popul.	%	Popul.	%	Popul.	%	Popul.	%
<b>Tallinn</b>	279,853	79	362,462	80	429,642	81	478,974	79	400,378	76
<b>Total suburban area</b>	72,194	21	89,576	20	102,154	19	126,441	21	125,304	24
<b>... Satellite towns</b>	16,845	5	27,452	6	36,757	7	47,674	8	43,002	8
<b>... Rural suburban area</b>	55,349	16	62,124	14	65,397	12	78,767	13	82,302	16
<b>Total: Tallinn metropolitan area</b>	352,047	100	452,038	100	531,796	100	605,415	100	525,682	100

Source: Estonian urbanisation database <sup>1</sup>, county-level statistics

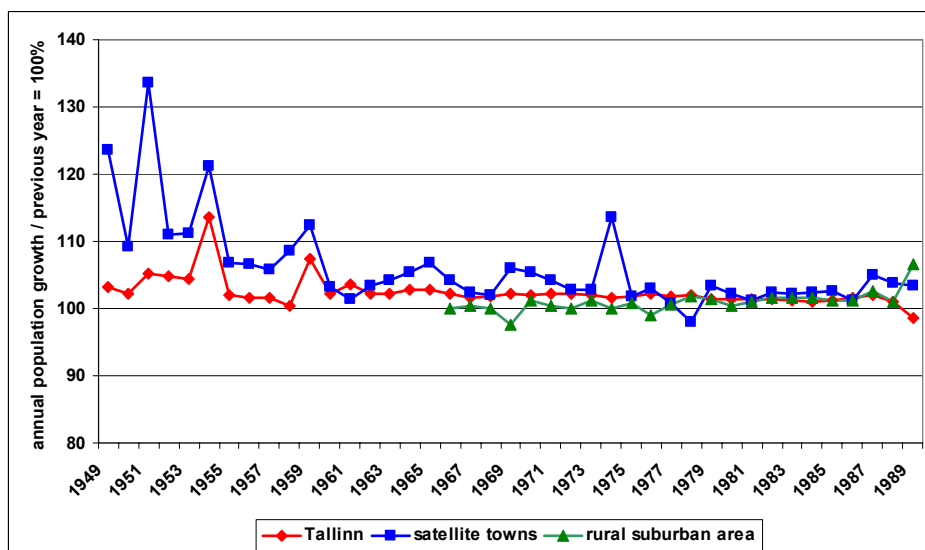
<sup>1</sup> Based on annual population statistics. Population figures vary slightly from census data.

<sup>2</sup> Different satellite towns have been considered as part of the Tallinn agglomeration in the Soviet period (Tammaru 2001b; Kaup 1986). Here I use the county-level (Harju County) statistics to estimate the development of the Tallinn metropolitan area in the Soviet period.

The population in the suburban zone did not grow only due to under-urbanisation (Szelényi 1996) in Estonia, as has been observed in some East Central European communist countries. According to Tammaru (2001a, 132–134; 2001b, 1346), industrial job openings in the cities only barely exceeded urban population growth in Estonia, and therefore the under-urbanisation thesis is not sufficient to explain the developments in the suburban area of Tallinn. While an essential proportion of the industrial labour force consisted of immigrants, this indirectly hindered population concentration inside the country. Newcomers in the country did not have any connections with Estonian rural areas, and they were also accommodated in the cities under circumstances in which there was a housing shortage. As under-urbanisation by its nature is also a process of population concentration in the settlement hierarchy (due to industrialisation in the cities), intensive immigration in Estonia also decreased the probabilities of under-urbanisation probabilities.

Instead, the growth of satellite towns around Tallinn played a remarkable role in the Tallinn metropolitan area (figure 2 and 9). In addition to administrative measures to restrict the growth of Tallinn (Marksoo 1992, 131), urban planners aimed to decentralize industrial investment in the Tallinn agglomeration. Factories together with workforce were located in the emerging satellite towns (e.g. Maardu, Kehra), which were previously only small settlements. The biggest satellite town at the end of the Soviet years was Maardu, which had 16,000 inhabitants in 1989. The main reasons for population growth here were in the first half of the Soviet period the chemical factory, and in the 1980s the construction of the port. Together with production facilities, dwellings were built for the workers. The plans for decentralisation were even more extensive than that which was actually implemented. Construction of housing for 50,000 inhabitants was planned for Keila and Aruküla (a small settlement in Raasiku municipality), together with new industrial enterprises in these locations (Bruns 1993, 148).

As a result, satellite towns in the agglomeration grew faster than Tallinn and the rural hinterland throughout the Soviet period (figure 9), and by the end of the Soviet period 8 percent of the population of the metropolitan area lived in such satellite towns (table 8) (see also: Tammaru 2001b). Like in the city, immigration was also an essential source for the industrial labour force in the satellite towns. Like under-urbanisation, industrial decentralisation within an urban agglomeration is instead a phenomenon of concentration in the urban hierarchy, as it keeps the production units inside an economic area of a bigger city. Both under-urbanisation and the promotion of the development of industrial agglomerations were motivated by the priority that the Soviet system attached to industry. In addition to these concentration processes, as a result of industrial decentralisation downward in the settlement system since the 1960s, the growth of cities of different sizes was more balanced in the second half of the Soviet period (figure 6).



**Figure 9.** Annual population growth in Tallinn, satellite towns and rural suburban area

Source: Estonian urbanisation database, county-level statistics

Another trend that contributed to population deconcentration in Estonia, including suburban areas, in the late-Soviet period, was the emergence of agriculture as a priority field of the economy. Agriculture and food production became another of Estonia’s areas of specialisation within the division of labour in the former Soviet Union (Marksoo 1984b, 52–53; 1992; Tammaru 2001b, 1352). Out-migration from rural areas had also raised the shortage problem in the production of sufficient food supplies for the growing urban population of the Soviet Union. Therefore more resources were also allocated to rural areas ((Marksoo 1990; 1992; Raagmaa & Kroon 2005, 212; see also: Ofer 1980), and rural enterprises also began to enjoy “soft budget constraints” (Kornai 1992). For this reason the cities’ net internal migration balance decreased gradually during the Soviet period, and at the beginning of the 1980s it became negative, favouring rural areas (e.g. Marksoo 1992; Tammaru 2000; Katus et al 1998; figure 7). This considerably improved the socio-demographic composition of the rural population. People stayed in the countryside or migrated to more prosperous collective farms. Young people returned more frequently to rural areas after completing their studies in the cities.

If one analyses this topic in terms of push-factors in the cities and pull-factors in the countryside, the deterioration of the urban living environment and the changed ethnic composition of the urban population (Raagmaa 1996, 689–693) were the factors that made cities less attractive. This could also be compared to the “white flight” (Frey & Liaw 1998) in American cities — the latest large housing estate Lasnamäe in Tallinn in a way became a symbol of the

resistance movement against Russification, as recorded in the words of a song “Stop the Lasnamäe” during the Singing Revolution at the end of 1980s. In the rural collective farms, however, salaries increased, and more prosperous collective farms were able to offer apartments to attract labour, and more investments were made in the social infrastructure (Marksoo 1984b, 53; Raagmaa & Kroon 2005; Kliimask 1997, 156; Kõre et al 1996, 2141–2142; Must & Lõo 1985, 21; Sillaste 1985).

One could even claim that the collective farms acted as local governments, as they had a wide array of functions for the arrangement of local life under conditions where official local level governmental organisations only executed some minor administrative functions. Although all companies were state-owned under the communist regime, the range of functions possessed by collective farms allows us to conclude that they were also essential actors that shaped the development of settlement structures in the Soviet period in Estonia (Raagmaa & Kroon 2005, 210–213). They also had relatively “soft budget constraints”, and they competed for the labour available within the Soviet economy, both with industrial companies in the cities and among each other. The more well-off collective farms were able to offer better conditions to their workforce. This also gave households additional latitude — with the shortage of labour, people had the opportunity to choose jobs in priority sectors and priority companies, and this also enabled them to achieve their housing ambitions.

These dispersion processes did not, however, equally favour all rural areas in Estonia. Population growth was more rapid in the hinterlands of Tallinn, around poly-functional regional centres Tartu and Pärnu, close to the county centres and in other places with more favourable transport connections (Marksoo 1992, 138; Kliimask 1997, 156). Spatially, the process therefore essentially contributed to the growth of the suburban population. Tallinn began to lose population to its suburban areas (Marksoo 1990), even when Tallinn’s growth was still supported by external migration. The reasons for the movement, however, were not related to the classical pull-factors referred to in suburbanisation discussions, as with the migration a change in both place of employment and place of residence took place simultaneously.

Population growth in both satellite towns and in the centres of collective farms in the Tallinn agglomeration diversified the economic functions of the suburban area of Tallinn. This has also increased commuter flows in the metropolitan area. The daily job-migration, however, consisted not only of one-way commuting towards the cities, as in the case of under-urbanisation in the major cities of East and Central Europe or as at the onset of suburbanisation in many Western countries. Instead the employment opportunities outside the city also caused urban residents to commute daily towards jobs in suburban industrial enterprises or in rural collective farms. Studies on commuting patterns at the end of the Soviet period have revealed that the commuting flows to the city of Tallinn and the opposite flows from Tallinn were equal at that time (Marksoo et al 1983).



An additional phenomenon that connected suburban areas and cities was the construction of summer home areas (*dacha*-settlements) around the major cities in Estonia in the communist decades (Anniste 2007; Leetmaa 2002; Leetmaa et al forthcoming; Saluveer 2001). The establishment of compact large areas of summer or weekend homes was a distinctive phenomenon of the former Soviet Union (Kostinskiy 2001; Rudolph & Brade 2005; Ioffe and Nefjodova 1998; 2001; Brade & Nefjodova 1998; Lappo & Hönsch 2000), although other types of second homes and auxiliary farms were also common in Eastern and Central Europe (Enyedi 1996, 116–117; Fialová 2003; Hirt 2007; Ptáček 2002). This gave people the possibility to practice subsistence agriculture and grow additional food products to compensate food shortages. In addition to this, it also offered people living in ultra-dense Soviet housing areas the possibility to have “their own” small green area. For the immigrant population this was in fact the only connection with the Estonian countryside. It is also important to remember that international tourism was restricted at that time, and summer homes became important recreation areas (Fialová 2003).

However, the distribution of plots for *dachas* was also related to communist-era priorities. Here also, membership in a priority population group played a role. People working for more influential companies were granted better plots. The size of the plots varied considerably, from 500 to 4000 square metres in the Tallinn metropolitan area. As summer homes also offered an excellent opportunity to accumulate capital, e.g. to grow agricultural products for sale or to acquire larger living space, this was also regulated in several ways (standard projects, maximum numbers of square metres, etc.). In the suburban area of Tallinn, the number of summer home plots have been estimated at approximately 26,000 (plus 1600 in Tallinn) (figure 16; table 16) (Leetmaa 2002), which means that in 1989 every sixth urban family had a suburban *dacha*. This phenomenon is also sometimes called “socialist suburbanisation” (Rudolph & Brade 2005) or “seasonal suburbanisation” (Laas 1985, 9), as people often lived in their summer homes for part of the year.

To compare the trends in metropolitan peripheries in the communist countries with suburbanisation in the Western countries, we can also examine decentralisation processes (Enyedi 1996; 1998; Van den Berg et al 1982). Both population growth in suburban areas and employment decentralisation was observable in the case of Tallinn. The connections between suburbs and the central city also intensified in many ways. I explained that the diversification of suburban areas has also brought about a multi-directional increase in commuter flows in Western countries. Under communist rule, the availability of housing is a special factor that determines intra-metropolitan migration and commuting. The employment function in the suburbs (both in industry and in agriculture) partly also attracted urban inhabitants. Once a household had received a satisfactory apartment, change of job led to commuting, which explains commuting from Tallinn to suburban settlements.

One can also explain the communist-era migration patterns in terms of push- and pull-factors in the cities and the suburbs respectively. It is, however, important to understand that the push-factors in the cities (the deteriorating living environment) only came into effect when there were alternative strategies available to acquire satisfactory housing. Here the priority economy had a mutual relation with the people's personal strategies to improve their situation. One possibility was to move to companies where the remuneration also comprised housing (either directly or indirectly). Renouncement of subsidized housing was only possible when people had other resources to invest in privately built housing. Subsidized housing was a crucial factor that restricted migration.

In conclusion, in the Western societies suburbanisation became a symbol of large-scale socio-spatial segregation in metropolitan areas. In communist countries segregation followed the patterns of priorities in society and the economy, on the one hand, and on the other hand the people's initiative to improve their living conditions as long as the system left them some freedom to act. Under these circumstances, inequalities occurred in urban space, but it did not take the same shape as wealthy suburbia and the mix of elite and decaying neighbourhoods in the cities.

The processes described above also left their spatial imprint on the suburban area of Tallinn. Table 9 summarizes the spatial structure of the suburban area of Tallinn, which may be interpreted as the direct spatial outcome of the priorities of the Soviet economy and society. This interpretation is inspired by earlier studies by Sjöberg (1999) and Gentile and Sjöberg (2006), which analyse the impact of the priorities of the communist system on settlement systems and on "intra-urban priority landscapes" respectively. In my analysis I identify three priority areas of the Soviet regime that have left their clear imprint on the "suburban priority landscape" of the Tallinn metropolitan area — industry and agriculture as economic priorities, and the military ambitions of the Soviet regime in Estonia.

Industrial intra-metropolitan decentralisation produced new satellite towns and contributed to the growth of existing suburban settlements. The priority position of agriculture also brought additional people to suburban areas. Yet, as it also increased the value of agricultural land, the collective farms could not afford to use it for other purposes, including housing construction (Marksoo 2005). In the same way, the Soviet army "closed off" a significant amount of suburban land for military purposes. Even if not all coastal areas were closed to civilians, construction activities were restricted in areas that were under permanent military surveillance (figure 8).

**Table 9.** Soviet priority areas and their implication on suburban settlement structure in the Tallinn metropolitan area

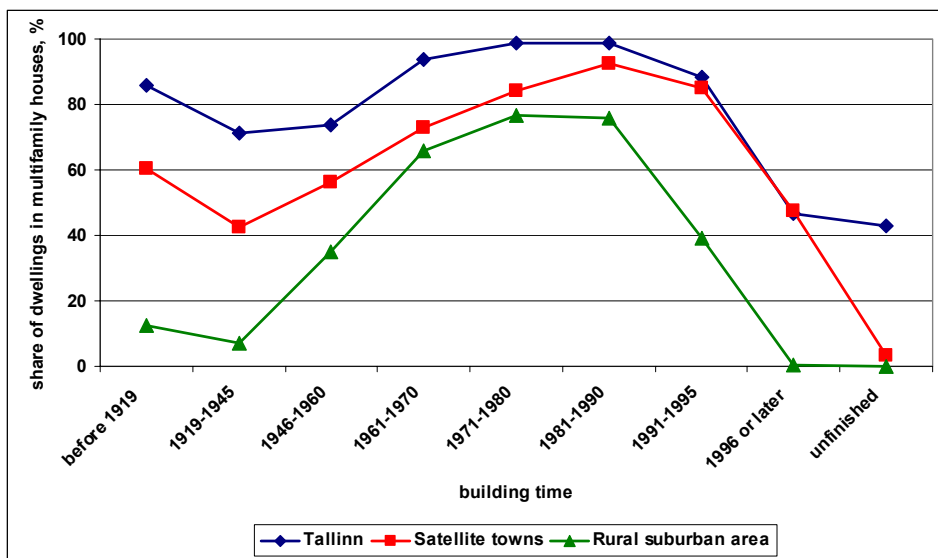
<b>SOVIET PRIORITY AREAS</b>	<b>IMPLI-CATIONS ON SUBURBAN LAND USE</b>	<b>TRENDS IN HOUSING CONSTRUCTION</b>	<b>LOCATION OF NEW SUBURBAN HOUSING</b>	<b>RESULTING SETTLEMENT STRUCTURE</b>
INDUSTRY (throughout the communist period)	Need to restrict the growth of capital city, industrial decentralisation	Standardised housing construction, egalitarian ideology and cheapest means of construction  Compact new summer home areas	Satellite towns	COMPACT SETTLEMENTS THROUGHOUT THE SUBURBAN AREA  LARGE UNUSED AREAS AROUND THE CITY
AGRI-CULTURE (since mid-1970s)	Agricultural land as an important resource, not available for construction		Agricultural centres  Summer home areas	
MILITARY FORCES (throughout the communist period)	Coastal areas engaged by military facilities and border zones, not available for construction		New settlements close to military facilities  Housing for military personnel in old settlements	

Source: own generalisation

This demonstrates that the traditional push- and pull-factors in analyses of suburbanisation should be complemented with discussions about the availability of free land. Even when urban environment is with unsatisfactory quality, suburbs cannot be considered as alternative places of residence when naturally attractive land is not available. In this area, however, the public sector usually plays a crucial role, for instance through urban and regional planning in Western European countries, compared to the United States, where this was not so much the case. As the communist system was based on state land ownership, the regime's priorities determined land use patterns.

Limited space for suburban residential expansion and equalitarian housing ideals led to the replication of compact urban housing structures in suburban areas. Standardised large-scale apartment blocks constituted the dominant new

suburban housing type, both in the satellite towns and in the centres of agricultural production (figure 10). Military personnel were also housed in new and compact settlements close to military objects or in other existing settlements. *Dacha*-settlements were the only remarkable low-rise new settlements in the suburban zone, but they were also built in a compact form in comparison to traditional Estonian village settlements. We can conclude that the urban dynamics during the Soviet era in Estonia worked in favour of the compact suburban settlement structure, and as a result the Tallinn urban region inherited large free areas around the city for potential residential development in the post-Soviet period (also compared to other European cities today: Kasanko et al 2005). These “suburban priority landscapes” began to shape intra-metropolitan migration processes since the 1990s.



**Figure 10.** Proportion of dwellings in multifamily houses in total housing stock of 2000, by construction date

Source: Census 2000

In addition, the city of Tallinn was a “compact city” in the strictest sense of the word at the end of Soviet period. Almost 80 percent of the population of the Tallinn metropolitan area lived in the city of Tallinn (table 8). In Tallinn, in turn, more than two-thirds of inhabitants lived in apartments built by the mass housing construction programs of the Soviet era (table 7; figure 10).

## **1.2.4. The post-communist context**

### **1.2.4.1. Conceptualising “post-communism”**

Since the political changes of the end of the 1980s and the early 1990s, the situation in the countries of the former communist block changed. The former communist cities were confronted with rapid changes that were analysed in scientific circles under the research framework “post-communist city”. There have been discussions of how long this research framework will be appropriate, and how long the post-communist (transition) period actually lasted.

My research has led me to differentiate between three concepts of “post-communist city” — “post-communism as change”, “post-communism as shock” and “post-communism as continuity”. As I discussed in introductory section 1.1.3., post-communism is not a cohesive period, it is a “period of change”. In studying this period, one must take into consideration that the social and economic conditions that form the background for personal level migration decisions have differed between various smaller time periods. The first years after political changes, the early 1990s, was a period of extraordinarily rapid changes in the economy and society, and this rapidity itself challenged the capacities of people and institutions to adjust themselves to the new circumstances. I therefore metaphorically define the concept of post-communism appropriate to analyse this period to “post-communism as shock”. According to the latter concept, “post-communism as continuity”, the post-communist period is an era that follows the communist era. Urban development under the communist regime coincided with the rapid growth of cities, and therefore from this period these cities have inherited an enormous socio-spatial layer. Therefore in this context the term post-communism refers to urban history.

I will first of all examine the notion of “post-communism as shock”. In the early 1990s the inefficient communist resource-constrained economic system collapsed. Companies dependent on raw materials from the Soviet Union were faced with reduced production inputs. The economic structure in these countries was biased towards industry, and moreover towards production that did not match the demands of new markets. In addition, the proportion of people employed in agriculture was high. People’s skills and educational backgrounds did not often correspond to the new requirements (Brown & Schafft 2002, 234–235; Kok & Kovács 1999, 123–125; Kostinskiy 2001, 453; Ladányi & Szelényi 1998).

In Hungary (Brown & Schafft 2002, 235; Enyedi 1998, 21; Kok & Kovács 1999, 123–124; Ladányi & Szelényi 1998, 68–77), for example, both industrial output and the share of people working in industrial enterprises dropped by one-third between 1989 and 1993, and agricultural employment shrank from 18.5 percent in 1988 to 9.9 percent in 1993. In addition, people living in suburbs and working for industrial companies in the cities (the phenomenon of under-urbanisation) suffered from the industrial decline in the cities. The auxiliary

farming that had until then provided the rural population with essential additional income lost its vitality. The new jobs in the service sector and in modern branches of industry somewhat compensated this loss in employment, but on a regional level, new jobs were primarily concentrated in the main urban regions. Unemployment in Hungary (15 percent) peaked in 1992 and 1993, and the society rapidly became polarized.

Compared to East and Central European countries, the Estonian economy was even less closely linked to Western markets (Ministry of Finance 2000, 4). Until the mid-1990s, a drastic drop in GDP took place. Here the Soviet-oriented industry and collectivised agriculture was hardest-hit. The proportion of people employed in the primary sector (mainly agriculture) stood at 20 percent in 1990, but fell to 5 percent by 2005, with the decrease being fastest in the early 1990s (table 10; figure 12). The aggregate loss in industry was relatively small, because Soviet-oriented industry was gradually replaced by more up-to-date branches of industry. Estonia's relatively cheap labour attracted investments (mainly from the Nordic countries) in the subcontracting of production units (Kliimask 1997, 160). Employment in the tertiary sector in Estonia increased from 39 to 56 percent.

Regionally, the losers in Estonia included rural areas on the country's peripheries, predominantly the industrial region of Northeast Estonia and the smaller mono-functional industrial settlements. In the major cities (Tallinn), the loss of industrial employment was more successfully replaced by other jobs. However, as a result of the restructuring process the full employment of the end of the Soviet period was replaced by a high level of unemployment, which reached 10 percent in 1995 and peaked in 2000 (figure 11). In addition, the employment rate fell. In 1989, 76 percent of people aged 15–69 were employed. By 1995 that figure had fallen to 62 percent, and by 2000 to just 58 percent. In other words, many people had lost hope of finding an appropriate job, and left the labour market. The beginning of the 1990s was also characterized by price liberalisation and hyperinflation (Ministry of Finance 2000, 5). In many enterprises, extremely low salaries were paid to avoid the mass dismissal of employees (Kliimask 1997, 160). These circumstances led to a significant decrease in purchasing power, and the social inequalities became increasingly obvious (Loogma 1997, 175).

From the mid-1990s onward, the economic environment gradually began to stabilize. In macro-economic terms the country's economy began to grow in 1995. Although the structural changes continued, other activities created alternative job opportunities, and purchasing power increased. According to private household expenditures (table 11), in 2000 an average Estonian household had the ability to consume 40 percent more goods and services, and in 2005 already more than double the 1995 amount (Eurostat 2008). This also reflects the opportunity to spend more on housing. Consumption volumes have also significantly converged to EU average (table 12).

**Table 10.** Employed persons aged 15–69 by economic activity in 1990, 1995, 2000 and 2005, annual average, proportion of the employed, %

	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>
<b>Primary sector</b>	<b>19.9</b>	<b>10.2</b>	<b>7.2</b>	<b>5.3</b>
... Agriculture, hunting and forestry	17.0	9.3	6.7	4.8
... Fishing	2.9	0.9	0.5	0.5
<b>Secondary sector</b>	<b>37.4</b>	<b>34.2</b>	<b>33.3</b>	<b>34.1</b>
... Mining and quarrying	1.5	1.4	1.3	1.0
... Manufacturing	25.6	25.0	22.5	23.0
... Electricity, gas and water supply	2.3	2.4	2.6	2.1
... Construction	8.0	5.4	6.9	8.0
<b>Tertiary sector</b>	<b>38.6</b>	<b>51.0</b>	<b>54.3</b>	<b>55.5</b>
... Wholesale and retail trade; repair of motor vehicles, etc.	7.7	12.7	13.8	13.3
... Hotels and restaurants	2.2	2.7	3.5	3.6
... Transport, storage and communication	8.3	10.1	9.9	9.0
... Financial intermediation	0.5	1.1	1.3	1.1
... Real estate, renting and business activities	4.1	4.9	7.0	7.6
... Public administration and defence; compulsory social security	3.9	5.4	6.0	6.1
... Education	5.9	8.5	7.8	9.0
... Health and social work	6.0	5.6	5.0	5.8
<b>Other economic activities</b>	<b>4.1</b>	<b>4.6</b>	<b>5.2</b>	<b>5.1</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Estonian Statistical Office, statistical database

**Table 11.** Volumes of final consumption expenditure of households, 1995 = 100%

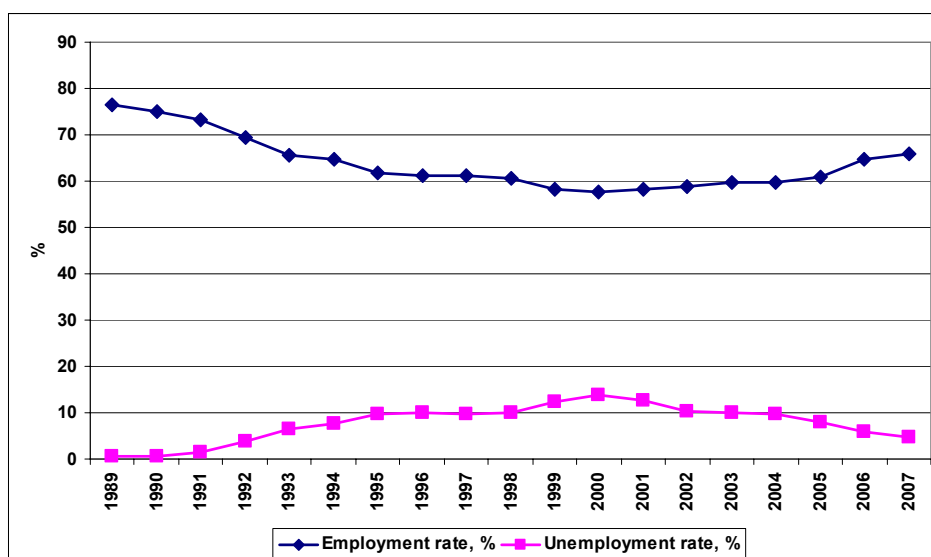
	<b>1995</b>	<b>2000</b>	<b>2005</b>
<b>Bulgaria</b>	100	101	135
<b>Czech Republic</b>	100	114	134
<b>Estonia</b>	100	140	216
<b>Latvia</b>	100	130	196
<b>Lithuania</b>	100	130	198
<b>Hungary</b>	100	114	154
<b>Poland</b>	100	133	153

Source: Eurostat

**Table 12.** Final consumption expenditure of households per inhabitant, compared to EU-27 average, EU-27 = 100

	1995	2000	2005
<b>Bulgaria</b>	39	33	43
<b>Czech Republic</b>	65	61	64
<b>Estonia</b>	34	42	58
<b>Latvia</b>	34	39	54
<b>Lithuania</b>	39	44	59
<b>Hungary</b>	47	50	61
<b>Poland</b>	45	53	55

Source: Eurostat



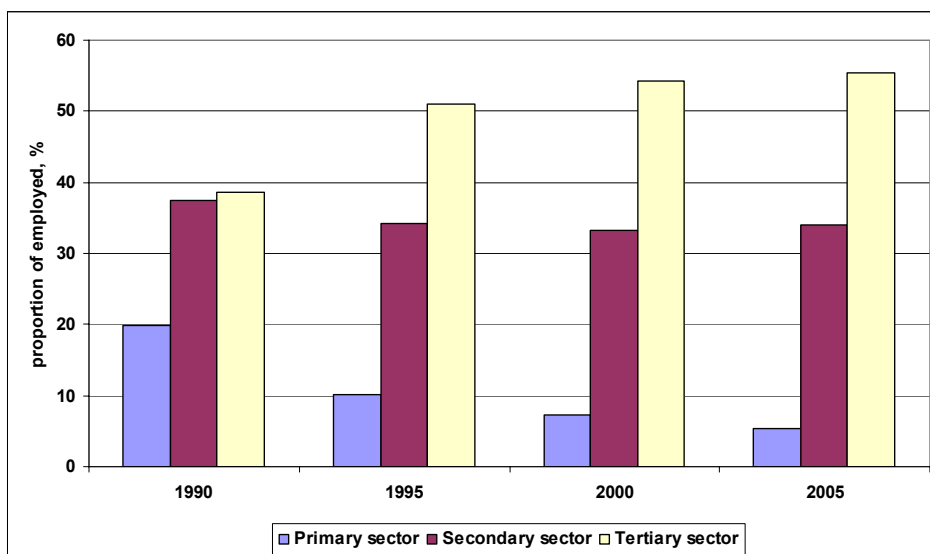
**Figure 11.** Labour status of population aged 15–69, annual average

Source: Estonian Statistical Office, statistical database

Employment rate: the share of the employed in the working-age population

Unemployment rate: the share of the unemployed in the labour force (total number of employed and unemployed persons)





**Figure 12.** Employed persons aged 15–69 by main economic sectors in 1990, 1995, 2000 and 2005, annual average, proportion of the employed, %

Source: Estonian Statistical Office, statistical database

In the early transition years, the state also withdrew from the housing sector. The construction of subsidized housing was halted (Kok & Kovács 1999, 125; Sýkora & Cermák 1998, 413). At the beginning of the 1990s the privatisation of urban housing began (see for example: Ott 2001; Marcuse 1996; Tosics 2003; Enyedi 1998; Kostinskiy 2001). In most cases the apartments built by communist mass housing construction programs were privatised to the existing tenants on favourable terms. An exceptional case here was East Germany, where the large-scale privatisation of flats in large housing estates did not take place. As concerns the restitution of pre-war housing stock, different countries have made different choices. Restitution was preferred in East Germany, the Czech Republic, Slovenia and the Baltic countries. Urban housing was not restituted in Hungary, and only rarely in Slovakia and Poland. In Estonia almost complete restitution as well as privatisation of Soviet-era apartments was carried out. Whereas in 1994, 71 percent of dwellings were still owned by the state or municipalities in Estonia, by 2002 this figure had dropped to 4 percent (Ministry of Economic Affairs ... 2004, 6). Approximately 14,000 apartments were restituted in the capital city (Tallinn City Government 2002), i.e. 8 percent of total housing stock in Tallinn. In addition, land restitution in rural areas began in the first half of the 1990s.

The privatisation process made many people into owners, but also concurrently made the new owners responsible for the maintenance costs of their apartments. Changes in ownership principles inevitably created inequalities or deepened existing ones. The people who inhabited the pre-war

housing stock did not have access to modern housing in the communist period, nor did they have the right to privatize their dwellings now. Also, post-privatisation real estate prices were higher in major cities than in other parts of the country.

This allows one to conclude that people were faced with extremely rapid changes regarding the need to adapt to the changed labour market or to cope with the new housing policy situation. In fact, analogous transformations have taken place in Western countries, e.g. the withdrawal of the mid-century welfare-state (including from public housing provision), problems in old industrial and rural regions, the tertiarisation of the economy and globalisation. In addition, shocks such as the oil crises of the 1970s were experienced, which have given an impetus to more thorough structural changes in the economy. Nevertheless, these changes have taken place over decades, not a couple of years as was the case in post-communist countries.

The speed of the process in Central and Eastern Europe challenged people's capacity to adapt. It did not give them the opportunity to improve their skills and knowledge through the process of formal education, nor did the state then have a sufficient welfare function to arrange people's large-scale retraining. The changes in ownership structure and the people's ability to transform their former connections and human capital into wealth in the post-communist period determined different population groups' success. In these years, thorough changes in the social stratification took place (Węclawowicz 1998; Kok & Kovács 1999, Loogma 1997; Puur 1997; Helemäe et al 2000).). Under these circumstances, migration could also be considered as a possible strategy to adapt to the new social context.

I will now turn to another concept of post-communism that emphasizes the continuity of urban processes. Socio-spatial structures tend to persist (Massey 1997; Kesteloot 2000; Beauregard & Haila 2000; Kazepov 2005; Le Galès 2005; Wiegandt 2000). Even after profound societal shocks, institutional structures do not vanish completely, since the people remain the same. In the case of Estonia, some actors indeed left the arena, for example the Russian army, part of the Russian-speaking population, and some companies were liquidated. For those that remained, the rules of the interplay between urban actors changed, e.g. the freedom to apply profit, and the freedom to improve living conditions. Changes in ideology and in attitudes occurred, but these were not necessarily accompanied by changes in people's knowledge, skills and habits.

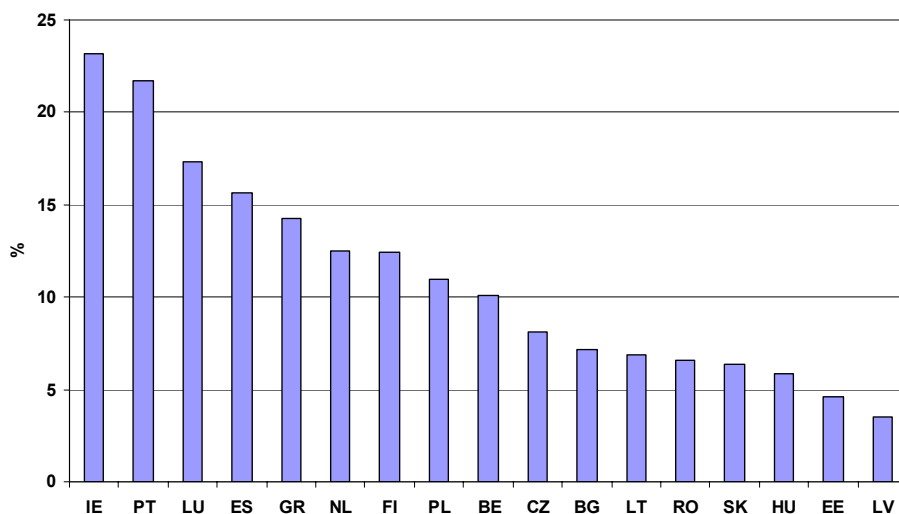
Raagmaa and Kroon (2005) explain this in the context of urban and regional planning. They argue that the current planning culture in Estonia has inherited many features from the Soviet planning system (path-dependence). Contradictions between planned and actual activities as well as between sectoral and local comprehensive planning could be mentioned here. The role of powerful single actors (big companies, charismatic leaders) also often plays a more decisive role than a pluralist collaborative planning process (e.g. Healey 1997).

Even though planning legislation has been copied from Western European countries, planning practice is fundamentally tradition-based.

In my research I have been more focused on spatial continuity (fixity of the built environment: Kesteloot 2000; Wiegandt 2000). In the previous section I described the land use patterns that the Tallinn metropolitan area inherited from the Soviet period. This was the outcome of the interplay between different actors under the Soviet priority-economy. The Tallinn metropolitan area inherited the compact city of Tallinn with its shortage of contemporary housing on the one hand and the compact settlement structure in the suburban area of Tallinn with large green areas on the other hand (table 9). Theoretically these were classical favourable preconditions for suburbanisation. As push-factors, the living environment in the cities was unsatisfactory, and there was an absence of suitable dwellings for families. As a pull-factor, naturally attractive areas in the suburbs were free now that agricultural production had decreased and the Soviet army had left Estonia (the last troops left in 1994). Analyses of Tallinners' residential preferences in the mid-1990s (Loogma 1997, 180) indeed revealed that the most preferred dwelling type among the inhabitants of the capital city was the single-family house, whereas only 10 percent lived in this dwelling type at that time.

Nevertheless, these push- and pull-factors could not be realized, because the essential enabling factors were absent. Above all, the living standard of the majority of the population was not comparable with wealth in mid-century Western or Northern Europe or in the United States. Increases in new housing construction and suburbanisation are traditionally accompanied by economic growth, but instead the early 1990s were characterised by severe economic recession. In addition, mortgages typically play a crucial role in financing residential housing construction in advanced countries (Palacin & Shelburne 2005; Égert & Mihaljek 2007). In Estonia this source of housing financing was also absent until the end of the 1990s. Figure 13 demonstrates that in post-communist countries, residential housing construction was indeed considerably less intensive in the 1990s than in Western and Northern European countries. This allows one to conclude that the financial means to invest in housing were not available at that time.

One could compare this situation with the former East Germany (Herfert 2005; Aring & Herfert 2001), where expectations for fast returns, tax exemptions and subsidies attracted Western investments and encouraged people to invest in new homes. Since the financial means were available here, intensive housing construction in suburban areas already took place in the 1990s. Moreover, it ceased at the end of the 1990s, when the tax incentives were cancelled and the initial expectations for profit were not fulfilled due to a severe decrease in the population (Herfert 2007).



**Figure 13.** Proportion of dwellings built in 1991–2000 of total residential dwellings in European countries in 2000 or 2001

Source: Eurostat, National Censuses, round 2001

IE – Ireland, PT – Portugal, LU - Luxembourg, ES – Spain, GR – Greece, NL – Netherlands, FI – Finland, PL – Poland, BE – Belgium, CZ – Czech Republic, BG – Bulgaria, LT – Lithuania, RO – Romania, SK – Slovakia, HU – Hungary, EE – Estonia, LV – Latvia.

Another enabling factor that was absent in the early 1990s was an effective real estate market. The property reforms were launched in the first half of the 1990s, but the apartments and land only gradually came on the market. Urban apartments had largely been privatised by the year 2001 (Kährlik 2006, 37). Land privatization in rural areas was also not an automatic process. Sometimes the clarification of ownership progressed slowly. In 1995 only 2 percent of land in Harju County was registered in the national land cadastre, and this had increased to 42 percent by 2001 and 79 percent in 2007 (Estonian Land Board). Although transactions were also performed with unreformed land, this proves that the prospective free land around Tallinn was not available all at once. As in the Soviet period, the demand for better living conditions existed alongside green areas around the city, but the circumstances were not favourable to cause a rapid out-flow of the urban population to the suburbs. In the Soviet period suburban land had another function due to communist priorities, and now aspirations for new land use functions had to wait for more favourable circumstances.

Continuity in spatial structures also becomes obvious in the Tallinn metropolitan area through other mechanisms. Namely, a large amount of vacant housing became available due to the departure of part of the Russian-speaking population back to Russia at the beginning of the 1990s (including Soviet

military forces). The population of Tallinn dropped from 478,974 in 1989 to 400,378 in 2000, the main reason for which was negative net external migration (table 13). The decrease in population in Tallinn was similar to that in some East German cities (Nuissl et al 2007, 147–149), yet there is no noticeable excess supply of dwellings in the city.

**Table 13.** Components of population change, 1989–2000

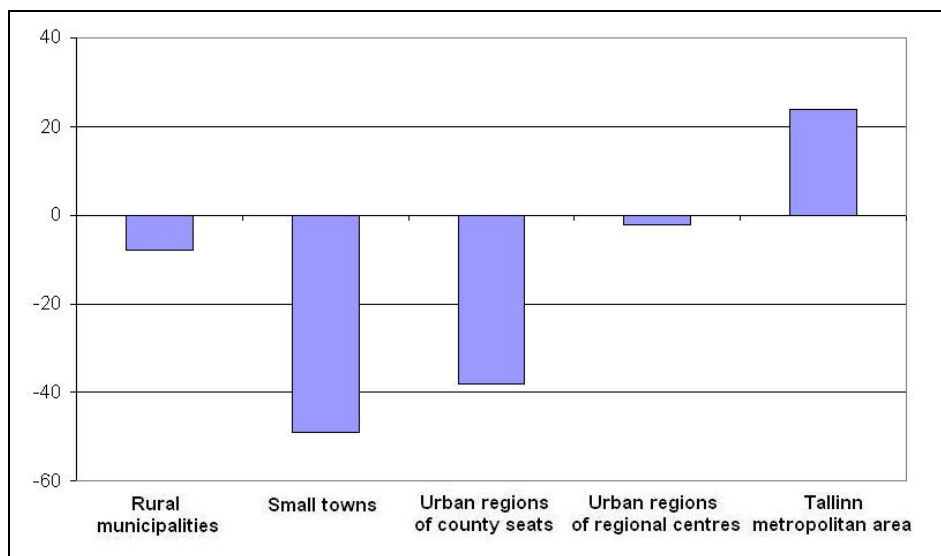
	<b>Popul. 1989</b>	<b>Popul. 2000</b>	<b>Popul. change 1989- 2000</b>	<b>Natural change 1989- 2000</b>	<b>Net internal migration 1989-2000</b>	<b>Net external migration<sup>1</sup> 1989-2000</b>
<b>Tallinn city</b>	478,974	400,378	-78,596	-14,499	-4228	-59,869
<b>Suburban area</b>	127,792	127,609	-183	-605	20,264	-19,842
<b>... satellite towns</b>	46,952	42,915	-4,037	178	6,117	-10,332
<b>... rural suburban area</b>	80,840	84,694	3,854	-783	14,147	-9,510
<b>Total: Tallinn metropolitan area</b>	606,766	527,987	-78,779	-15,104	16,036	-79,711

Source: Estonian urbanisation database<sup>2</sup>

<sup>1</sup> residual of other components

<sup>2</sup> Based on annual population statistics. Population figures differ slightly from census data.

This is explicable by internal migration within Estonia. The analyses (Tammaru et al 2003; Tammaru et al 2004; Leetmaa 2003) have revealed clear urbanisation trends in the Estonian settlement hierarchy (figure 14), migration towards larger urban regions where jobs were available (Antons 2003) in the 1990s. This is related to the migration turnaround of the 1980s — young families moved to the countryside at the peak of Soviet agriculture, which improved the demographic composition of rural areas (Marksoo 1992, 135–139) and caused remarkable out-migration potential for the 1990s. At this point, the emigration somewhat relaxed the housing situation in the capital city and in other bigger cities, and thus enabled in-migration to the cities. Also the suburban area lost population as a result of negative net external migration, and therefore, provided there is a demand, vacancies in the suburban area potentially had to attract new migrants as well, according to the principles of filtering theory (Friedrichs 1995, 72–73; Kaplan et al 2004, 209–210; Knox & Pinch 2000, 350–353).



**Figure 14.** Net migration rate in Estonian settlement hierarchy, 1989–2000, %  
 Source: Tammaru et al 2003, 16

An additional source of vacancies in the Tallinn metropolitan area was provided by the summer home colonies of the Soviet era (figure 16; table 16). Until the 1990s permanent residence in these *dacha*-settlements was either not technically possible or was not permitted. One should keep in mind that every sixth urban family had a suburban *dacha* (after the mass emigration to Russia approximately one fifth). Although the *dachas* were of differing quality, the economic prospects of the households were also various in the early transition period. When Estonians had closer connections with rural areas and at the beginning of the 1990s also the wave of restoration of traditional farms took place, for non-Estonians *dachas* were basically the only connection with the Estonian countryside.

There are also several examples of how former recreational areas have been transformed into areas of permanent residence, for instance to alleviate the housing shortage in the post-war period (Clout 1974, cit. in Nyström 1989, 184) and accommodate immigrants (Brier 1970, cit. in Nyström 1989, 184) in France, or to offer an attractive suburban environment to families that cannot afford a new detached house (Nyström 1989, 198) in Northern Europe. Even when suburban municipalities have not officially promoted in-migration to summer home areas in the Tallinn metropolitan area, the coordination of construction activities in these areas consists mainly in technical regulations that must be fulfilled to turn the summer home into a permanent house. In reality, effective supervision of which buildings are inhabited does not take place.

This allows one to conclude that the traditional preconditions (enabling factors) that could have supported rapid residential suburbanisation were not present in the early transition period in Estonia. Nevertheless, the economic problems that a large part of the population had to confront coincided with the availability of vacancies in the already existing housing stock. Next we will see how, over time, enabling factors — wealth, the availability of mortgages, a functioning housing market and access to suburban land — have unrolled gradually, and the push- and pull-factors that were theoretically present from the very beginning have become real effective factors that determine intra-metropolitan migration.

#### **1.2.4.2. Changing strategies of urban actors and urban continuity**

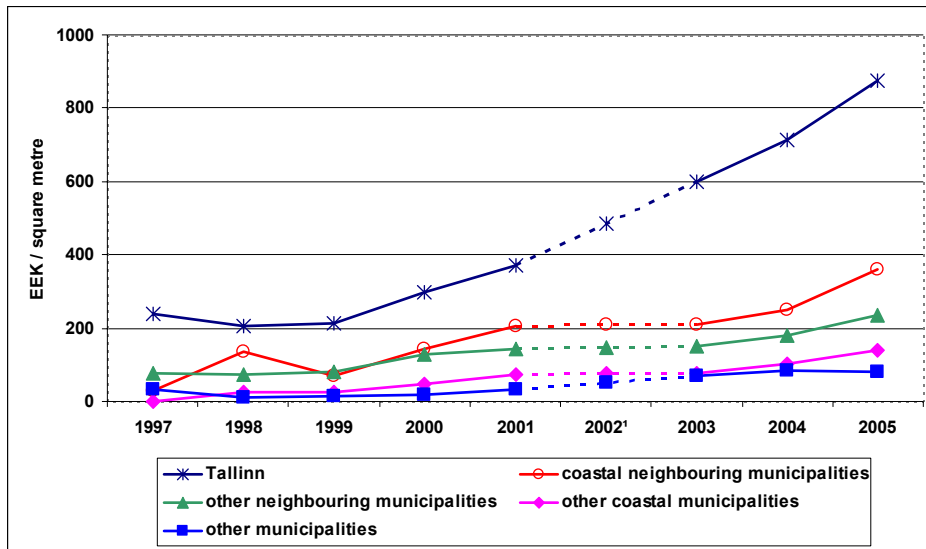
At the end of the 1990s, in addition to the existing vacancies, corporate actors began to contribute to housing supply in the Tallinn metropolitan area. At the beginning of the transition period, new housing construction was to a great extent financed by people's own resources, as affordable mortgages were not available. A stable financial sector developed by the mid-1990s. Later, the Russian financial crisis of 1998 interfered with the process and a significant decrease in interest rates only took place since 1999 in Estonia (Ministry of Economy ... 2000, 7) (table 14). Interest rates reached their lowest level in 2004 and 2005, and the stock of housing loans granted by Estonian commercial banks expanded exponentially.

**Table 14.** Average annual interest rates of housing loans and stock of loans of Estonian commercial banks

	<b>interest rates<sup>1</sup></b>	<b>loans granted (stock in millions EUR)</b>
<b>1997</b>	12.8	137
<b>1998</b>	12.7	185
<b>1999</b>	9.8	215
<b>2000</b>	10.3	286
<b>2001</b>	7.8	387
<b>2002</b>	6.8	593
<b>2003</b>	5.3	954
<b>2004</b>	3.6	1,500
<b>2005</b>	3.5	2,618
<b>2006</b>	4.8	4,278
<b>2007</b>	5.8	5,626

Source: Estonian Central Bank

<sup>1</sup> interest rates in 31.12.; DEM denominated in 1997 and 1998, EUR denominated 1999–2007



**Figure 15.** Dynamics of land prices in Tallinn metropolitan area in period 1997–2005  
land use function: residential housing areas as intended land use, no buildings

Source: Estonian Land Board

<sup>1</sup> 2002 data is missing

As in Western countries, together with increasing wealth and the availability of money, the construction and real estate development sector became a favourable business here too. The restituted land offered a good opportunity to „develop the land“, i.e. to change its former agricultural function to a (residential) construction function, and sell it for a higher price. The pressure for this was especially high around Tallinn. First, Tallinn offered many alternative jobs for people who had previously been employed in agriculture (Tammaru 2005), and therefore the agricultural land was needed even less than in more peripheral rural regions. Second, the increase in wealth and the demand for a contemporary living environment was highest in major urban regions. Land prices increased rapidly in the Tallinn metropolitan area, especially in two neighbouring coastal municipalities of Tallinn, but also in other municipalities bordering the city (figure 15).

The “development of land”, however, was a time-consuming procedure that also required considerable knowledge and skills. The procedures for detailed planning were increasingly carried out by specialized companies. Over time, it became increasingly rare to organize the building process of the houses by the end-users themselves, and development began to take the form of “keys in hand” (Tammaru et al forthcoming (b)). The planning of new housing areas soon reached the level of over-planning. By 2004, planned residential space (together with potential transformation of summer home areas) in the suburban



area of Tallinn already amounted to one quarter of the population of the capital city, which clearly surmounts the potential demand created by the increase in wealth. This has been referred to by Metspalu (2005) as the process of “booking” suburban land for prospective real estate business (see also Leetmaa et al 2006).

As a result, the free areas around Tallinn, former agricultural land and coastal areas were strewn with patches of residential development projects. The location of the new residential areas depended on the success of the “developer” on the one hand and on the availability of land on the other. The clarification of ownership and performance of all of the privatisation procedures took time. For that reason, not all land was immediately available to developers, and the so-called patch-work structure of new settlements was observable. This was further favoured by a law (adopted with the purpose of preventing foreign investors from buying up cheap agricultural land in Estonia), which only permitted self-employed entrepreneurs or agricultural enterprises to buy agricultural land 10 hectares or larger (Kinnisasja ... 2003).

In attractive areas close to the city, one can often observe the merging of individual development projects that represent visually different architectural styles and business plans (single-family homes interspersed with multifamily homes). The immediate technical infrastructure has also often been solved “locally” for each development plot. Consequently, business interests began to play an important role in the emerging housing market; they were, however, constrained by households’ purchasing power and the availability of land.

The public sector did not intervene significantly in the dynamics of supply and demand for new dwellings and land. At the beginning of the transition period, strategic decisions were adopted concerning privatisation and restitution, and the public authorities implemented these decisions administratively. As concerns classical welfare state functions the role of the public sector has been minimal in Estonia. Minimal social benefits are paid to people living in extreme poverty. The official position of housing policy has been that the vast majority of the population should be able to improve their living conditions in the private housing market (Ruoppila 2005). As the share of public housing has been reduced to a minimum (e.g. in Tallinn 3 percent: 2000 Census), only an insignificant proportion of the population is provided municipality housing (orphans, former prisoners). Special regulations have been applied to inhabitants of restituted houses (Kährrik 2006, 35–36). The owners of these houses were initially not allowed to increase rents to the market rate (these apartments were mainly in the central cities). Tallinn City Government launched a municipal housing program in 2002 (Tallinn City Government 2002), which also had to provide apartments for the people in restituted houses who had not found alternative dwellings. As the public sector has also not been able to finance policies that would enable people to adjust to changes in the labour market, one can conclude that many people were left alone to cope with

economic hardships in the early transition years, and that social and labour policy has been liberal since then.

After the launching of strategic reforms that enabled a functioning land and housing market, residential preferences began to be realized at the tempo determined by increasing prosperity and emerging business interests. The influence of public spatial planning on the location of new settlements has also remained minimal. This is partly related to the Estonian planning system, where county level spatial plan mostly only remains a recommendation that informs municipal master plans. Although planning legislation (the Planning and Construction Act first adopted in 1995 and amended later) is inspired by the planning laws of the Nordic countries (e.g. Denmark), Estonia does not have a similar two-tier system of self-government (Raagmaa & Kroon 2005, 213–214) with which to apply these planning principles. A good example is the perspective settlement areas outlined in the first post-communist Harju County master plan adopted in 1999 (when the housing construction volumes in suburban areas were still relatively small) (1999), which are not transferred to municipal plans, and therefore are not followed.

Under the current planning system, and administrative system in general, in which the county governor merely represents the central government in the regions, planning principles of regional and national importance can only be achieved through restrictive planning instruments, e.g. reserving land for nationally important infrastructure objects (roads, dumping grounds etc.). For instance, nationally important green areas are determined on the basis of a regional land use plan (Harju County Government 2003), and the area for a potential Tallinn-Helsinki channel has been set aside. The supervisory function performed by county governments makes it possible to observe whether these restrictions are accepted in municipal master plans and plot-level detailed plans. In this way it is only possible to specify those areas where is not possible to build, which is, however, insufficient to channel new developments into planned perspective settlement areas, not to mention the designing of a sustainable compact suburban settlement structure.

In addition, municipal comprehensive development and land use planning does not function properly. In some municipalities (e.g. the rapidly growing Viimsi municipality that lies just east of the capital city), the local government has succeeded in introducing a consistent planning culture, and regular updates to planning documents have been made since the planning legislation was adopted in the mid-1990s. At the same time, there are other municipalities where the late-Soviet general plans were reinstated, and no updates have been made since (e.g. Kiili municipality lies just south of the capital city) (Harju County Government 2008). This means that land use planning in the Tallinn metropolitan area is in many cases not even performed at the municipal level. Instead, the municipalities often decide land use on a plot-by-plot basis, negotiating the detailed plans that follow particular business interests.

This also allows one to conclude that the public sector has not played an active role in shaping the emergent urban dynamics in the Tallinn metropolitan area in the whole post-communist period, and the resulting changes in metropolitan settlement patterns have developed under free market conditions. However, the market conditions in the early transition years differed fundamentally from the present situation.

I now return to the three key urban actors specified by Van den Berg et al (1982) in urban life-cycle theory — enterprises, households and the public sector. The Soviet-era priorities and balance in urban actors theoretically created ideal preconditions for residential suburbanisation, if the metropolitan spatial structure is analysed in terms of classical push-factors in the cities and pull-factors in suburban areas. However, the changes in the strategies of urban actors determined the enabling factors for suburbanisation (the availability of money, a functioning housing market, access to suburban land, etc.).

In table 15 I conclude how these three groups of actors and their strategies to reach their basic ambitions influenced migration into suburban areas in the Tallinn metropolitan area in three periods, in the 1980s, 1990s and 2000s. In my last article (2.3.), I have provisionally named these the late-Soviet, transition and post-transition periods.

In general, the basic ambitions (to ensure profits, to have better jobs and living conditions, and to increase general welfare) of these groups of actors were quite similar in the different periods. It is arguable whether companies should be considered a separate group of actors in the Soviet period, as all companies were state-owned. However, we demonstrated in the previous section that the central planning of the settlement system and egalitarian housing ideals were overridden by economic priorities. Therefore companies, both industrial companies and collective agricultural farms in the countryside, became powerful actors and influenced land use patterns and housing construction. They could even be considered to be the main “real estate developers” in suburban areas. The migration of people was restricted using different means, for example by administrative restrictions on moving to major cities or due to the difficulty of obtaining an apartment. Nevertheless, people had the freedom to choose their job when there was a shortage of labour, and this often broadened housing career opportunities too. Migration to the suburbs was related to Soviet priorities generalised hereinbefore in table 9 as “suburban priority landscapes”.

In the 1990s some actors left the arena. The Russian army and part of the Russian-speaking population left the country. Many companies were liquidated, others were restructured, and therefore priority enterprises lost their role as local “real estate developers”. People now officially possessed the freedom to move, but migration decisions were influenced by the new economic hardships and uncertainty, and as Marksoo (1992, 134; 1999, 84) concludes, there was a “wait-and-see attitude” in migration. The welfare level was insufficient to support extensive new housing construction, and affordable mortgages were

also not available. The state launched strategic ownership reforms and performed these administratively, although the withdrawal of welfare functions (including housing construction) was total in comparison to the previous decade. This left people alone to cope with the new circumstances. Vacancies, apartments left empty by emigrated families, the stock of summer homes and to a smaller degree also restituted farms, offered affordable housing alternatives in the metropolitan housing market.

**Table 15.** Ambitions and strategies of urban actors in the 1980s, 1990s and 2000s

	<b>1980s</b>	<b>1990s</b>	<b>2000s</b>
<b>COMPANIES</b> aim to ensure profit	To reach their aim in a shortage economy, priority companies became essential local actors, also in the area of land use patterns and the construction of housing and infrastructure.	Liquidation and restructuring of many companies took place. Priority companies lost their role.	Real estate development became an attractive business. The financial sector began to offer affordable mortgages, and the real estate development sector created an over-supply of potential suburban housing.
<b>HOUSEHOLDS</b> aim to have better jobs and living conditions	There were administrative restrictions to moving. It was difficult to obtain an apartment. However, the economy of shortages enabled workers to choose their job, which also opened up opportunities for housing careers.	Part of the Russian-speaking population left the country. People officially had freedom to move. Economic hardships and the lack of affordable housing loans restricted migration. Vacancies favoured adaptation in the housing market.	People had the freedom to migrate. This was favoured by the increase in wealth, the availability of “cheap money” and by the continuing over-supply of alternative suburban dwellings (new dwellings and summer homes).
<b>PUBLIC AUTHORITIES</b> aim to increase general welfare	The aim to plan a balanced settlement system and create an egalitarian housing policy were overridden by economic (and defence) priorities. This led to contradictions between spatial and sectoral planning.	The Russian army left. The state created a legal framework for privatization and restitution. Total withdrawal of the welfare state (including from housing construction) took place.	Public planning authorities do not respond to the supply-led suburbanisation process with efficient spatial planning.

Source: own generalisation

From the end of the 1990s, real estate development became an attractive business. The financial and real estate development sector became powerful actors in urban dynamics. Due to the availability of land, an excess supply of suburban development projects was created. People's freedom to move was now supported by the increase in wealth and the availability of "cheap money" (housing loans). Furthermore, the business sector offered new "keys in hand" housing projects, and also the stock of suburban summer homes had not yet been depleted. In this context, however, public authorities have failed to respond efficiently to the migration of people from the cities to alternative dwellings in suburban areas. Therefore, the suburbanisation process in the last decade may be referred to as real "supply-led suburbanisation".

### **1.3. General research questions and hypotheses**

Below I summarise the general research questions and hypotheses that have guided my analyses throughout my research into post-communist suburbanisation. Every empirical analysis has raised its own more specific questions and hypotheses, which are presented in respective articles.

Suburbanisation seems to be a general migration pattern in Central and Eastern European post-communist countries since the 1990s. The classical theory explaining suburbanisation in Western cities is the urban life-cycle theory, according to which suburbanisation is the situation when the population of the suburban area of a city is growing faster than the population in the city (Van den Berg et al 1982, 36), and this is mainly responsible for intra-metropolitan migration flows. In many cities in Central and Eastern Europe, suburbanisation became notable in the 1990s (Aring & Herfert 2001; Brown & Schafft 2002; Hirt 2007; Kok & Kovács 1999; Krisjane 2005; Kupiszewski et al 1998; Ladányi & Szelényi 1998; Ouředníček 2007; Ravbar 1997; Sýkora & Čermák 1998; Tammaru et al 2004; Timár & Váradi 2001; Tosics 2003). In Russia too, where privatisation, the development of the financial sector and increasing wealth were relatively slower, the first signs of residential suburbanisation were observable (Kostinskiy 2001). Nevertheless, analyses of the situation in East Germany prove that the rapid suburbanisation of the 1990s came to an end in the late 1990s, and instead one can today observe re-urbanisation trends in major growth centres (Herkfert 2007). This diversity calls one to analyse the phenomenon of suburbanisation in a broader context — that of intra-metropolitan migration and metropolitan housing markets in the post-communist countries.

However, migration into the suburbs is a qualitatively new migration pattern in the post-communist countries in comparison to the communist period, even when in volumes this migration flow is less visible in some periods or in some countries. In Western countries too, notwithstanding that suburbanisation has been faster or slower in certain periods (Champion 2001; Cheshire 1995), it is

today still an important migration phenomenon (Schönert 2003) (at least for certain population groups), which shapes the suburban areas spatially and is one of the mechanisms that favours residential segregation in metropolitan areas. In my opinion, suburbanisation therefore also deserves to be studied in those post-communist countries where migration towards the suburbs is only sub-volume (Geyer & Kontuly 1996) under other dominant migration trends. In my research on post-communist suburbanisation I do not focus on comparing the volumes of suburbanisation. Instead, I aim to explain the factors behind post-communist intra-metropolitan migration. In my case study on the Tallinn metropolitan area, my first research question is as follows.

Research question 1: What are the driving forces behind suburbanisation in the post-communist context in the Tallinn metropolitan area?

There are relatively few sources of information to answer this question that could inform us directly about people's migration motives. This information is not among the information gathered by regular administrative statistics in various countries. Special surveys that would enable representative analyses of migration motives are also relatively rare. Migration motives can be deduced indirectly from the migration behaviour of different population groups and on the destinations of different movers (e.g. settlement and dwelling types that clearly represent more attractive and expensive or less attractive and cheaper destinations).

However, the official regular migration statistics are also typically inadequate in Central and Eastern European countries (Sjöberg & Tammaru 1999), and the data on the personal characteristics of migrants and detailed information about their destinations is rarely available. Unfortunately the aggregate migration data do not adequately describe the nature of post-communist migration processes. Moreover, if we put this in the context of generalised migration models based on the Western urban experience, they may lead to misleading conclusions. For example, the differential urbanisation model presumes that population deconcentration can usually be explained by environmental and population centralisation with economic motives (Geyer and Kontuly 1993); urban life-cycle theory also presumes that suburbanisation is a phenomenon of affluent family households that wish to improve living conditions and live in a more attractive environment (Van den Berg et al 1982). These mechanisms should not be transferred automatically from the Western context to the post-communist context.

If the Western suburbanisation experience is used as a background, many questions should be asked. First, we saw that as concerns different countries and time periods, the Western suburbanisation experience is a much more diverse phenomenon than the cliché of classical suburbanisation. Therefore we should ask what aspects of Western suburbanisation actually inform us. In fact, only rarely have thorough analyses been conducted on suburbanising population groups or favoured destinations (Hirt 2007; Herfert 2007, Ouředníček 2007).

The latter is my strategy in my first studies on suburbanisation in the 1990s based on individual-level 2000 Census data available in Estonia. I aim to describe the whole migration stream in the inter-census period 1989–2000, and I seek connections between persons' socio-demographic characteristics and their destinations in suburbs.

Although similar societal and economic rules to those of Western societies were introduced in the Central and Eastern European countries in the 1990s, it would be too far-reaching to presume that the cities in this region immediately came to resemble an “average European city”, and that the processes described in generalized urban development models will automatically unfold here. The communist era was not just an interruption of universal Western urban development trends. For half a century it created communist-era cities and suburban areas that will now interact with the new social context (compare, for example, Massey 1979). This leads one to ask how the inherited socio-spatial layer will influence urban processes, including suburban areas.

In addition, although the inherited settlement patterns theoretically corresponded to classical push-factors in the cities and pull-factors in the suburban areas that favoured residential suburbanisation in Western countries, I demonstrated that classical enabling factors for suburbanisation — wealth, the availability of money, a functioning housing market, access to suburban land — were absent at the beginning of the transition period. I explained that the inherited preconditions gradually became effective when the enabling factors unfolded during the two post-communist decades. Post-communist migration analyses should consequently ask which point in the transition era we actually are, and to what extent factors like people's desire to leave unattractive communist-era large housing estates and move towards better living conditions in suburban areas can be translated into action in the given social context.

Earlier analyses on the 1990s refer to the possibility that the suburbanisation trends in this period may reflect the shock-shift in society. Kok and Kovács (1999, 129–137) have explained that in addition, classical suburbanizers and also older people left the cities for the suburbs due to the increasing cost of living in the cities of Hungary. People with different social status have migrated to different districts, and thus more and less prestigious suburban districts emerged around Budapest in the 1990s. In addition, counter-urbanisation trends, for instance migration to remote villages, has been explained in Hungary by the economic hardships that the people were faced with at that time (Brown & Schafft 2002, 239–241; Ladányi & Szelényi 1998, 81–84). Similar trends in the suburbanisation of older people have been observed in the Prague metropolitan area (Sýkora & Čermák 1998, 136). Ouředníček (2007, 114) also describes the migration of “atypical” suburbanizers to older housing stock in the suburban area of Prague and to former second homes (see also Ptáček 2002; Fialová 1999; Bulgaria: Hirt 2007). In Estonia too, the research project “Internal migration in 1989–2000” (Tammaru et al 2003; 2004) conducted by population groups already referred to the possible differential nature of suburbanisation

(Jõeveer 2003; Kutsar 2003; Tammur 2003; Uiboupin 2003). According to this study, the positive net migration of suburbs in relation to the central cities characterised very different population groups.

This means that migration processes may be considered to be household-level strategies to cope with new requirements in the labour market and new housing policy situation. However, the explanatory power of this concept will gradually diminish as economic restructuring is overcome. In the first analyses of suburbanisation in the 1990s I used the shock-shift in society as a background for my analyses. These analyses already indicated that the suburbanisation of the early transition years and in the late 1990s was probably of a different nature. I therefore aimed to grasp the logic of the changes that have taken place in society and the economy as well as in migration behaviour in my later analyses.

Research question 2: How has the post-communist migration towards suburbs changed spatially and over time in the Tallinn metropolitan area?

I next summarise the main hypotheses that have guided my studies. In empirical analyses (publications in 2.1., 2.2., 2.3.), more specific hypotheses that have informed the data analyses have been formulated.

At the most general level I have presumed that the suburbanisation process in the Tallinn metropolitan area reflects both the “social shock” as well as the “continuity” in metropolitan space. The profound changes in society and the economy formed the background for the migration processes in the 1990s, causing different household-level strategies to cope with economic hardships or to realize now the housing ideal that was not possible in the Soviet times. The concept of post-communism as continuity is also partly appropriate to analyse the suburbanisation phenomenon in this period, as vacancies in the suburban area expanded dwelling choices in the metropolitan area. Later important changes have taken place in urban dynamics, which have gradually also changed the social context for migration. However, the inertia effect of the inherited spatial structure of the metropolitan area, both the still-existing vacancies in *dacha*-settlements and the compact spatial structure of the Tallinn metropolitan area still influence the metropolitan housing market. I could therefore sum up my main hypotheses as follows:

Hypothesis 1: Since the beginning of the 1990s, the residential suburbanisation process in the Tallinn metropolitan area has included features of both classical Western suburbanisation and special features characterising post-communist shock-shift in economy and society.

Hypothesis 2: The preconditions of the beginning of the post-communist period (until the late 1990s) did not favour the large-scale Western type of suburbanisation. More specifically, migration into new suburban homes was only modest at this time.



Hypothesis 3: As the enabling factors that classically favour suburbanisation (a functioning land and housing market, increasing wealth, the availability of mortgages) gradually unfolded during two post-communist decades, the nature of suburbanisation changed as well. The migration of wealthier family households from cities to suburban single-family homes, motivated by environmental considerations, increased considerably.

## **I.4. Data and methods**

As in many post-communist countries, the quality of annual migration statistics in Estonia is inadequate. Therefore the regular statistics cannot be used to estimate the dynamics of migration flows, not to mention analyses that examine different population groups. In addition, the statistics of new housing construction are vague, and the quality differs by years and municipalities. For this reason my research combines different data sources.

The Census 2000 data have been the main source for analyses of the suburbanisation process in the 1990s. This individual level database by the Estonian Statistical Office contains information about the whole population of Estonia in 2000. Migration can be analysed, as we know the place of residence of a person in 2000 and also in the previous Census, which was performed in 1989. The Census gives us information on demographic and socio-economic characteristics (e.g. education, labour market situation). In addition, information about the dwellings people inhabited in 2000 has been collected. The combination of these characteristics has made it possible to analyse the housing careers of population subgroups, and has therefore also shed light on the possible motivations that might have directed that migration.

The main shortcoming of the census data concerns variables that change over time (e.g. education, labour market condition). We only possess information on these circumstances in the year 2000. Similarly, the Census has not registered all moves during the time period considered. It only informs us where the person lived in 2000 and in 1989. The problem that directly concerns intra-metropolitan migration is that the 1989 place of residence only specifies the municipality in which a person lived. As Tallinn is one municipality, we cannot observe to what extent different population groups have made their housing career within the city rather than moving to a suburban area. Therefore these high-quality data enable detailed analyses of population subgroups that have moved from the city to the suburbs, but inner-city movements (e.g. between different districts of Tallinn) cannot be observed.

In the first two articles (2.1.), the demographic and socio-economic characteristics have been treated as potential determinants influencing persons' probability to suburbanize (here: moving from the city to the suburbs). These characteristics have been combined into variables reflecting the dwelling type

(e.g. single-family home, multifamily home) in which the person lived in 2000 and the geographical part of the suburban area (e.g. coastal area vs. inland area) to which he/she moved. In this manner one can analyse which were the typical destinations of the different population groups that moved to suburban areas between 1989 and 2000. In the multivariate research design, the method of binary logistic regression was employed. A more detailed description of these data analysis strategies has been reported in two respective articles.

There is no data that could make it possible to describe the suburbanisation of different population subgroups and their destinations in suburbs later than the year 2000. Further analyses have been based on special studies, the New Residential Areas Study conducted in 2006 and two Summer Home Areas Studies, in 2002 and 2007.

The New Residential Areas Survey (see the publications in 2.2.) was conducted by the Department of Geography of the University of Tartu in 2006. This study mapped all new compact residential areas built between 1991 and 2006. Settlements with at least five households (counted on the basis of main entrances/front doors) built since 1991 with a minimum distance between the centric points of the houses being 200 metres were considered new residential areas. As such, the study did not include new freestanding detached houses or Soviet-era summer home areas. The first cases were excluded since their number was small, but their location was scattered, and it would have been very time-consuming to include all of them in the inventory. Also, housing construction in summer home areas was considered to be a qualitatively different process (renovation rather than construction). New freestanding multifamily houses containing at least five households are also considered to be new residential areas.

First, the study used several available cartographic materials to create the research database. The basis for the dataset was the 2000 census (the map of houses built since 1991). For additional data on post-census housing construction, data from the Estonian Building Registry and Estonia's leading map company, Regio Ltd., were used. Later the fieldwork to control the pooled dataset was performed. An inventory card for every settlement was filled in about the number of houses, the composition of the housing stock, existing infrastructure etc. Some data, e.g. infrastructure outside the settlements, came from other existing datasets. Photos of the views in the new settlements were also taken during the fieldwork. The final house-level GIS database included information about 171 new settlements in the suburban area of Tallinn.

In addition to the mapping and observation of the settlements, the sample survey (structured interviews) was conducted among residents in the new residential areas in spring 2006. There are 3426 houses and 5589 front doors/households in the 171 research settlements. The sample consisted of 600 families, and all households had an equal opportunity to be interviewed. As there is no register of the inhabitants of the new settlements, the sample was taken from the dataset of the new residential areas, with the basic selection units

once again being front doors/households, in order to maintain the true distribution of households over dwelling types. A minimum of five interviews were performed in one settlement. The interviews were carried out by the leading survey company in Estonia, TNS Emor. This dataset also contains information on people's migration motives and on their assessments of the migration experience. In data analyses, different descriptive methods of statistical analysis offered by the SPSS program were used, as well as cartographical methods of data description. The method of one-way analysis of variance was used to compare the migration motives of different suburbanizers who moved to new suburban settlements.

The analyses of construction activities on former summer home settlements (see 1.5.3. and 2.3.) are based on two inventories of *dacha* settlements in the Tallinn metropolitan area, the first of which was conducted in 2002 (Leetmaa 2002), and the second in 2007 (Anniste 2007). These results are interpreted using the results of the New Residential Areas Survey as a background. This makes it possible to compare two types of new suburban settlements in the TMA.

The study in 2002 was carried out by Harju County Government. The municipality experts (officials responsible for construction, planning and land use issues) were asked about the number of Soviet-era *dacha* areas and the number of plots in these settlements. They also estimated the share of dachas that are (officially or unofficially) used for permanent residence. In addition, they gave an estimation of the share of summer home plots that could be taken into permanent use in the future.

The 2007 study was conducted by the Department of Geography of the University of Tartu and by the Harju County Government. In this fieldwork, the transformation processes in the *dacha* areas were estimated through observation during the fieldwork. The data of the 2002 study and the Census 2000 GIS database were used as a starting point to find all summer home areas. During the field study, only observation was carried out, and interviews with residents were not performed.

The two main characteristics investigated were the technical condition of the summer home and signs of permanent residence. The study was carried out in the winter period, when it should be complicated to live in unrenovated houses. The presence of snow also made it easier to estimate signs of permanent residence. The inventory card was completed for every fifth summer home.

As access to some summer home cooperatives (smaller units within a settlement) was restricted, we estimate that about 88 percent of all summer homes were covered by the survey. Although it might be the case that in the summer home cooperatives where access was not possible, the composition of houses of different condition is slightly different, we presume that approximately the same share of renovated and inhabited houses also characterises those areas. We therefore use the data from the 2002 inventory to estimate the total number of summer homes in the respective local municipalities, and we

have generalized the results of the sample survey in 2007 to the numbers of dachas in respective municipalities according to the 2002 study.

Another inventory card was filled out about settlements, for instance the presence of infrastructure, the average size of plots, etc. Some data were collected directly during the field study, and some data were also drawn from the secondary data sets (infrastructure outside the settlement, the size of plots). In addition, the research database also includes photos of *dacha*-settlements in the winter of 2007.

## **I.5. Main results**

### **I.5.1. Residential suburbanisation in the 1990s**

In section 2.1., two studies on residential suburbanisation in the 1990s are presented in detail.

The first analyses of the 2000 Census data revealed that suburbanisation (negative net migration from cities towards their suburban areas) was a dominant migration trend in almost all urban regions in Estonia in the period 1989–2000, and this was most intensively expressed in the metropolitan area of the capital city (Tammaru et al 2003, 17; 2004; Leetmaa 2003). Moreover, the net migration of suburban areas was not only positive among the so-called classical Western suburbanisers but among very different population groups observed (differentiated by gender, age, education, nationality) (Jõeveer 2003; Kutsar 2003; Tammur 2003; Uiboupin 2003). This made it necessary to analyze in greater detail the population groups that were involved in the suburbanisation process of the 1990s.

In my research I have conducted more detailed data analyses of individual level 2000 Census data in multivariate research settings. I have chosen the Tallinn metropolitan area as the area for the case study. In the two studies conducted (2.1.), “suburbanizers” were compared to those who stayed in Tallinn and those who stayed in the suburbs. Suburbanizers were defined as the people who lived in Tallinn at the time of the previous census in 1989 and in a suburban area in 2000. Those who stayed in Tallinn and those who stayed in the suburbs lived in the capital city or in the suburban area both in 1989 and in 2000, respectively. The first study (Leetmaa & Tammaru 2007) described the probability of different population groups (characterized by demographic and socio-economic variables) to move to suburban area of Tallinn, and the destinations (dwelling and municipality types) of the suburbanizers. The second study (Tammaru & Leetmaa 2007) aimed to explain how the residential suburbanisation process of the 1990s contributed to socio-spatial segregation in the region.

Both analyses indicated that the suburbanisation process of the 1990s in the Tallinn metropolitan area was a socially manifold process. It contained both the

signs of classical Western suburbanisation and special features of the post-communist shock-shift years. While people in the family age group (30–49) and married people were most likely to suburbanize, very young people (15–29) also had high propensities to move from Tallinn to the suburbs. The socio-economic variables defined the diverse nature of suburbanisation. People with higher education had the lowest and people with less education had the highest probabilities to suburbanize. Labour market status revealed similar results, with unemployed and especially inactive people becoming suburbanized more frequently than other population groups, but in parallel people working in high-ranking occupations and entrepreneurs also had relatively higher suburbanisation probabilities. Consequently, suburbanisation in the 1990s in the Estonian capital city's metropolitan area included very different population groups, and these groups presumably also had different motives for moving out of the city.

The analysis proceeded by dwelling types. The composition of the housing stock into which the suburbanizers moved also demonstrates that the process cannot be interpreted as a classical migration of affluent urban families into new and more spacious suburban single-family houses. In fact, only one-fifth of suburbanizers in the 1989–2000 period chose to live in newly-built single-family homes. Other suburbanizers moved into already existing dwellings. Almost half of them moved into Soviet-era apartment houses in satellite towns and in the centres of agricultural collective farms. The remainder migrated to older single-family houses (including restituted farms) and to the *dacha*-settlements established in the Soviet decades.

The population groups analyzed differed in terms of the destinations they chose in the suburbs. I have considered new single-family houses to be the most attractive destinations in suburbs (in terms of price). Moving into new detached houses presumed that persons have relatively more financial resources, especially in the beginning of the period, as affordable housing loans were not yet available. Of the different geographical districts in the suburbs, I presumed that coastal and rural municipalities and those situated closer to Tallinn are more attractive locations for housing construction. The analysis demonstrated that although people with higher social status (education and labour market status) had lower probabilities of becoming suburbanized, if they did, they moved to the most attractive destinations in the suburban zone. People with lower social status, on the contrary, moved more into older and cheaper housing stock and to less attractive geographical areas.

This confirms my argument that although classical push-factors in the city (the unattractive living environment of communist-era large housing estates) and pull-factors in the suburban area (free land in naturally attractive areas) should have theoretically led to rapid suburbanisation, many supporting structural factors in the first post-communist decade were absent. Although people now theoretically had the freedom to move, this alone did not bring about mass construction of single-family houses in suburbs, as happened in East

Germany in the 1990s, for instance. There was no wealth, no mortgage money, and no functioning land and housing market at that time in Estonia that would have favoured new housing construction.

Therefore, as proposed, the concept of “post-communism as shock” could explain part of the city-to-suburbs movements in the first post-communist decade in Estonia. One can surmise that rapidly increasing living costs “pushed” people with labour market problems “out” of the city, as they were not related to daily jobs in the city. The cheaper suburban dwellings as well as opportunities for subsistence agriculture offered them an alternative to the expensive cities. People working in low-rank occupations, for instance, preferred to stay in the cities, where they had jobs.

Nevertheless, as the census data do not include motives for migration, we cannot directly deduce that the coping problems played the most important role in the migration of non-working people. Indeed, as the employment rate in general dropped in the 1990s, many people, for instance people in older working age, probably left the labour market, since they had lost hope of finding a new job. However, people who withdrew from the labour market now also had the opportunity to opt for a better living environment in the suburbs, especially when they had previous relations to suburban areas (summer homes, restituted farms).

Similarly, the analysis also indicates that moving into the suburban housing market is related to people’s stage in the life cycle. Bigger households in need of more spacious dwellings more often moved to newly-built single-family houses, while younger people and smaller households preferred apartments in multifamily houses. The prices of existing housing stock were lower in the suburbs, which made it easier to start one’s housing career there rather than in Tallinn. In addition, even Soviet-era multifamily houses in suburban centres may offer a better residential environment than the large housing estates in the capital city.

This means that in suburbanisation decisions, different migration motives (environmental, economic and people’s life-cycle stage) could also have merged. Nevertheless, the study proved that the suburbanisation phenomenon in Estonia in the first transition decade was related to the inherited spatial structure of the metropolitan area. Even when factors like the lack of high-quality housing space in the city and free areas in the suburbs only gradually became effective, other aspects of the post-communist social context determined the metropolitan housing market in the 1990s. Namely, return migration to Russia left vacancies in the metropolitan housing market, and additional vacancies emerged from the stock of suburban summer homes. Thus the interaction of vacancies and economic hardships favoured the suburbanisation of less well-off population groups.

An interesting result of the analysis is the divergent pattern of the suburbanisation of Estonians and the Russian-speaking population. Estonians in general had a remarkably higher likelihood to become suburbanized. However,

the comparison of different dwelling types reveals that when Russian-speaking people moved to the suburbs, they preferred suburban apartments, relatively more frequently also *dachas* and new single-family houses, but they very rarely moved to single-family houses built in the Soviet period or earlier. At first glance these results may refer to their relatively worse economic performance after the collapse of Soviet-era industry. However, as demographic and socio-economic variables were also controlled in regression models, other explanations should underlie ethnic differences in suburban destinations. By municipality type, they also preferred satellite towns where, due to industrial decentralization in the Soviet period, there is a relatively higher proportion of Russians (e.g. Maardu).

Whereas suburbanisation is usually considered to be a process that contributes to socio-spatial segregation in Western metropolitan areas, expressed in wealthy suburbs and decaying central cities, the suburbanisation of the 1990s in the Tallinn metropolitan area had somewhat different spatial effects. In the second analysis (Tammaru & Leetmaa 2007), educational level was considered to be a variable characterizing social stratification. The results revealed that the residential suburbanisation of the 1990s reduced the differences between the central city and the suburbs in the area of educational composition. At the same time, it increased socio-spatial segregation in the suburbs. This, however, is once again related to the historical socio-spatial order of the region inherited from the Soviet period.

In the Soviet period, public housing in the cities was the most desired housing stock in the urban agglomerations. Analyses have proved that people with university educations lived in the best dwellings in the communist cities (Pöder & Titma 2001; Gentile & Tammaru 2006; Bodnár & Böröcz 1998). Also, the suburbanisation of people with university educations was modest, and they preferred to live in the major cities (Kulu 2003). Theoretically, this situation is in contrast to the housing allocation schemes, as industrial workers generally had first claim to apartments in the cities. Also, the communist regime aimed to keep salary differences minimal between different occupations. The relatively better position of educated people assumes that they probably had other channels to end up in the best housing stock of the major cities, e.g. abilities to interpret the rules, or personal contacts.

In the transition period this also placed them in a better position. Privatization gave them the opportunity to become the owners of the best housing stock in the major cities, where prices grew most rapidly in the emerging housing market. In addition, returns from education increased in the post-communist period, as the new economy offered better opportunities in the labour market for better educated people (Puur 1997). Therefore, for the better educated people relatively higher welfare level as an important enabling factor for applying better (also suburban) housing was already there, and this was later amplified with the emergent mortgage market. Despite that situation, however,

people with lower levels of education had higher probabilities of becoming suburbanized.

The comparison of the educational composition of suburbanizers and those who stayed in suburbs, however, reveals opposite results. Namely the suburbanisation of the 1990s improved the educational composition of the suburban population. This is because at the end of the Soviet period, suburban areas had a significantly smaller share of people with higher education than the capital city, despite in-migration due to the agriculturally-based rural-urban migration turnaround in the 1980s. The same could be claimed about the ethnic composition of the suburban population. Migration towards agricultural suburbs in the 1980s was overwhelmingly a process of ethnic Estonians, and therefore the proportion of ethnic minorities in the suburban area was very low (except for industrial satellite towns). Therefore, in the 1990s the suburbanisation process slightly smoothed the differences in educational and ethnic composition between the suburbs and Tallinn. However, inside the suburban area of Tallinn the suburbanisation process brought about some socio-spatial segregation. The destinations of new suburbanites were different as concerns dwelling type or preferred geographical areas. But also, in comparison to the population that lived in the suburban area of Tallinn before the transition period, the new and old suburban population are different. Newcomers from Tallinn are on the average better educated and younger.

Spatially, the suburbanisation process also changed the former settlement patterns. Whereas the new housing construction in the suburban area of the city in the Soviet period took place in extremely compact form (i.e. the standardized Soviet-era apartment blocks were built in satellite towns and agricultural centres), in the 1990s newly built housing stock consists only of single-family houses (except some former projects that were finished in the first years of transition). Suburbanizers in general, however, even those who moved to older housing stock, preferred to settle down relatively closer to Tallinn and rather in a rural environment and coastal areas in comparison to older suburbanites. This accounts for the greater need to be close to jobs in a central city (earlier the suburban area also had a considerable employment function), and for the gradual tendency to occupy the attractive free areas around the capital city.

### **1.5.2. New housing construction since 1991**

Section 2.2. includes two articles on new housing construction where the results of the studies have been presented in detail.

Unfortunately, similar high-quality individual level data comparable to the 2000 Census database is not available to analyze the changes in the suburbanisation process and the housing career of different population groups since 2000. However, the stabilizing economy in macroeconomic terms since the mid-1990s allows one to presume that the effect of economic hardships on



migration decisions lost its weight, at least in relative terms. The 2000 Census data already indicated that new housing construction intensified at the end of the 1990s in comparison to the standstill at the beginning of the 1990s. Similarly, all classical factors enabling suburbanisation — increasing wealth, the availability of mortgages, a functioning housing and land market and a liberal planning culture — began to promote new housing construction.

The next analyses were based on the research project “New residential areas in the Tallinn metropolitan area 1991–2005” performed by the Department of Geography of the University of Tartu in spring 2006. First, the temporal and spatial dynamics of new housing construction in the Tallinn metropolitan area in the period 1991–2005 was estimated (Tammaru et al forthcoming (a)).

A total of 5600 households and 17,200 inhabitants lived in all observed new residential areas by 2006, but these did not, however, include freestanding detached houses scattered in older villages, or construction and renovation activities in summer home areas (see the following section). In the 1990s new housing construction was modest in comparison to pre-transition period construction volumes, and also with the increase in housing construction in the 2000s. The heyday of collective agriculture and industrial decentralization in the Soviet period had brought about huge construction volumes in suburban centres in the form of pre-fabricated apartment buildings, but in the early 1990s housing construction came to an almost complete standstill. At the beginning of the 1990s, construction activities were mostly self-financed by a few rich people who could afford it even without commercial housing loans. Since the mid-1990s modest growth in construction volumes was observable, but this was again interrupted by the Russian crisis in 1998. Since 2001, however, a drastic increase in the construction of new houses took place in the suburbs of Tallinn. Two-thirds of all new dwellings built in the period from 1991 to 2005 were built during the last three years (2003–2005).

As compared to the late-Soviet decade, the construction of apartment buildings ceased, and mostly detached houses were built since 1991. However, in parallel to the housing boom that took place since 2003, the proportion of multifamily houses increased once again. While an increase in housing construction could be predicted after the period of the standstill of the 1990s, no change in dwelling types was expected.

The absence of high-quality housing suitable for families in the major cities was a pathological condition of post-communist cities. I also demonstrated that Soviet priorities shaped the Tallinn metropolitan area, leaving large suburban areas free after the collapse of collective agriculture and after the departure of the Russian army. As the enabling factors for large-scale suburbanisation also unfolded gradually, all obstacles were now removed from people realizing their housing ideals or doing profitable real estate deals. Despite of that many former urban residents began to move into urban-like settlements and dwellings in suburbs, and not into single-family homes, which was the preferred dwelling

type (Loogma 1997). This refers to people's desire for contemporary housing even when they cannot afford or do not need a single-family home.

In addition, due to the increasing land prices in and near the city, some sprawl of suburban settlements into more distant suburbs was expected. Instead, the new suburban settlements were located in the immediate vicinity of Tallinn. The settlements of the 2000s were located even closer to the capital city than those built in the 1990s. In the neighbouring areas of the city the newer settlements grew into heights and merged with formerly built single-family settlements (included the self-financed villas of the early transition years).

To a certain extent this was similar to the inter-war period, when suburbanisation was also directed to areas nearest Tallinn. In that period, however, commuters were dependent on trains, whereas now the prevalent mode of commuting was the private car, which made a more scattered settlement structure possible. The migration to new suburban settlements, however, was certainly different from the population decentralization processes of the Soviet period, when people simultaneously changed both their jobs and places of residence.

In spatial terms, new residential areas were built on areas that were formerly closed to other functions. These functions were in accordance with the priorities of the Soviet economy and regime. Agricultural land was a valuable resource in the Soviet period, and fields began on the outskirts of Tallinn. After the collapse of Soviet agriculture, land was no longer needed for this purpose. Similarly, the areas used and controlled formerly by the Soviet military forces (mostly in coastal areas) were now available. Approximately half of the new settlements were on former agricultural lands, and also half was located in a 5 kilometre band from the coastline. In areas closer to Tallinn the pressure for changes in function was stronger. Almost half of all new residential areas were located in two coastal municipalities bordering Tallinn in the west and the east (Harku and Viimsi municipalities), demonstrating both the need to be close to Tallinn and the preference for naturally attractive areas (seaside).

When spatial patterns of new housing construction are compared to the Soviet period, one can observe the sprawl of settlement on a micro-scale. In the Soviet decades housing construction also took place in more peripheral areas, but it concentrated in compact settlements, satellite towns and centres of collective farms. Now construction activity almost exclusively took place in the immediate vicinity of the capital city, but it was dispersed into small settlements. The vast majority of the new residential areas were located in rural municipalities where more (former agricultural) land was available. The new settlements were, however, not situated in a completely haphazard manner. The majority of new settlements were located quite close to older settlements, which refers to the need to be close to the primary infrastructures (electricity, roads). This means that the resulting settlement structure is still relatively compact.

In conclusion, the analysis confirmed the expectations that new housing construction in the suburban areas of Tallinn increased in parallel to the

unfolding of enabling factors for suburbanisation, i.e. in parallel to the described post-communist change in urban dynamics. Urban inhabitants increasingly began to prefer suburban locations, which could be associated with classical push- and pull-factors. However, these factors did not only direct people into suburban single-family houses.

Whereas suburbanisation in Western countries has usually been associated with new detached houses, here new suburban apartment houses emerged as an intermediate choice in the metropolitan housing market. Moreover, these were built with private money, in expectation of high returns. This is most likely related to the extreme shortage of contemporary dwellings in post-communist Tallinn. People who are just starting their housing careers or who cannot afford a new detached house prefer to live in urban-like settlements in suburbs, where the dwellings are more modern and the surroundings more comfortable than in Soviet-era large housing estates. As these people maintain close daily contacts with the city, one can argue that there is in fact a need for urban housing, but since not enough contemporary dwellings are available in the city, the overspill effect brings these people to suburban districts.

The next study (Tamaru et al forthcoming (b)) focused more specifically on the recent housing boom years, analyzing the factors behind the drastic increase in the volumes of new housing construction. Over time, when former agricultural land became increasingly available, housing construction became extremely active in areas very close to Tallinn, and especially on former agricultural fields. In addition, real estate development and construction companies increasingly brought half-ready or completed dwellings onto the market, which made it possible for individuals to acquire a new dwelling with the “keys-in-hand” method without the need to invest time and effort in organizing the construction process. This is comparable with the boom years in Western societies (e.g. in the United States), when the construction of standard (also pre-fabricated) suburban houses became a separate industry (Hall 2001, 294–295) that in turn lowered the prices of new houses.

The study used the database of the new residential areas survey and analyzed the migration motives of people who moved to new residential areas in the years 1991–2005. The aim was to understand the specific migration motives of the suburbanizers who chose dwellings built on the former fields, mainly in the years of the housing boom (since 2003).

It turned out that in comparison to the inhabitants of other new suburban settlements, the people in those “field settlements” were even more closely related to the central city of the region. Their previous place of residence was more frequently Tallinn, an even larger proportion of them worked in Tallinn, and the need to remain close to Tallinn was a stronger argument for them, while choosing a particular destination in the suburban area for their new homes. They more often emphasized push-factors, especially those related to previous dwellings and the insecure urban environment, in their decision to leave the city. They also more often lived in suburban semi-detached and multi-family

houses than in single-family houses, and they preferred to buy a (half)ready-built dwelling with modern technical infrastructure from a developer.

This confirms the overspill argument explained above — the need for contemporary urban housing brought them to the suburbs, while not enough suitable houses at affordable prices were available inside the city limits. Although new apartment houses are also built in Tallinn, land prices and the resulting prices of the apartments are considerably higher in the city. All of the new suburban dwellings were considerably more spacious than the average amount of living space per person in Tallinn or also in old suburban settlements. The dwellings in “field settlements” were somewhat smaller than other new suburban dwellings, but the households moving into them were also smaller. This means that the additional supply of new housing stock created by business interests offered people the opportunity to take a further step in their housing career, away from Soviet-era urban apartments.

This means that the desired good-quality urban environment (which did not exist in the Soviet city: Bruns 1993) is currently built around the city rather than within city limits. These people have, however, made compromises concerning the proximity of social infrastructure (nurseries, schools, public transport, but also greenery and playgrounds), but they are generally not satisfied with these conditions in their place of residence. We have, however, found that of all alternative residential choices in the metropolitan area, these “field settlements” close to the city form the most reasonable option for a large part of the urban population to improve their living conditions.

### **I.5.3. Soviet summer home areas in residential suburbanisation**

The role of summer homes in post-communist residential suburbanisation has been briefly described in section 2.3 (Leetmaa et al forthcoming). Here I present some additional results.

New suburban residential settlements mapped in the framework of the survey of new residential areas form the most visible part of new housing construction in the suburban part of Tallinn. This study, however, included only new compact residential housing areas (for a definition see section 1.4.) built since 1991, and excluded free-standing single-family houses as well as renovation activities in former built-up areas. Whereas the former most probably formed a relatively small share of new housing construction, renovation activities in summer home areas, *dacha*-settlements built in Soviet decades (mostly in the 1960s, 1970s and 1980s) may be considered to be another form of new housing construction in the post-communist era in the Tallinn metropolitan area. As renovation activities in these areas do not occupy new areas, this part of housing construction is less visible and has therefore received less attention.

Three surveys have enabled us to estimate the role of these areas in residential suburbanisation in the post-Soviet period. First, the analysis of the 2000 Census data described above revealed that almost one-tenth of migration from Tallinn to the suburban area in the period 1989–2000 was directed to former *dacha*-settlements (Leetmaa & Tammaru 2007; Leetmaa 2004). The second analysis, conducted by Harju County Government (Leetmaa 2002) in spring 2002, collected the estimations of local government officials concerning the number of summer homes in Soviet-era *dacha*-settlements and the share of houses used for permanent living. The third analysis, a profound observation study, was conducted in spring 2007 by the Department of Geography of the University of Tartu (Anniste 2007), and this also estimated the renovation activities in these settlements and their residential function.

These studies make it possible to claim that Soviet-era summer home settlements played a fundamental role in residential suburbanisation in the post-communist decades. The census data indicated that the new population in the former *dacha* settlements was socially more heterogeneous than the people who moved into new single family houses. In particular, the share of older and inactive people was relatively high among suburbanizers in former summer homes in the 1990s. This means that as vacancies, former summer homes created preconditions for suburbanisation for people with relatively lower social status or for those who left the labour market. However, these areas also attracted new housing construction.

The total number of Soviet-era summer homes in the suburban area of Tallinn has been estimated at 26,000 (Leetmaa 2002). In addition, some summer home areas were located within the borders of Tallinn, and *dachas* for the inhabitants of Tallinn were also built in more distant areas that are not included in the metropolitan area by the definition used in this dissertation. Approximately every fifth urban family (after the emigration of part of the Russian-speaking population at the beginning of the 1990s) had a suburban *dacha*.

Most of the *dacha*-settlements were built in coastal areas or along railway lines. In addition, most of them were located in municipalities near Tallinn (table 16; figure 16), although in comparison to the new residential areas built since 1991, the *dacha*-settlements were situated in somewhat more distant areas, and many of them were also located in inland municipalities. As automobile transport was less important in the Soviet decades, these settlements were well equipped with public transport networks.

The summer home areas and also different cooperatives inside one settlement were of very different quality. The size of plots already varies from about 500 to 4000 square metres. The construction of permanent houses was mostly not permitted in the Soviet period. Different regulations concerning house size and the right to grow agricultural products applied. The allocation of summer home plots was also related to the communist priority economy. People working for priority employers received better plots (larger plots, better location, softer regulations etc.), and consequently also acquired a better-quality

plot that could potentially be used for new housing construction in the post-Soviet period.

It is important to understand that many urban residents were related to these rural areas even before the transition period. For the Russian-speaking population the *dacha*-settlements were mainly the only connection with the Estonian countryside they had, as they also did not gain from land restitution in rural areas. Summer home areas in the Soviet period have also been associated with “seasonal suburbanisation” (Rudolph & Brade 2005), which has sometimes been considered to be a precondition for subsequent permanent suburbanisation (Oučedníček 2007; Nyström 1989). As all *dachas* were privatized to their users in the post-communist period, many people now had two dwellings, an apartment in the city and a summer home where the former building regulations no longer applied, or at least it was not verified whether these regulations were followed.

The data does not enable one to estimate the exact temporal dynamics of renovation activities in *dacha*-settlements. However, whereas at the beginning of the 1990s *dachas* were only used seasonally, according to estimations in 2002, approximately 15 percent of the stock of summer homes was in permanent use, and the 2007 survey already gave an estimation of 35 percent (table 16). Therefore almost 60 percent of permanently inhabited *dachas* were taken in permanent use between 2002 and 2007. In the same period (until 2006), almost 75 percent of new dwellings in new residential areas were built. This demonstrates that in parallel to the housing boom of the 2000s in new residential areas, construction intensity also increased remarkably in summer home areas. As in the case of new residential areas, summer home areas located closer to Tallinn also had more permanent residents according to both the 2002 and 2007 study. Therefore the transformation of *dacha*-settlements generally follows a similar pattern to emerging new suburban settlements on former free areas. Coastal and inland municipalities were not, however, different in this aspect.

In the 2007 study a profound observation of all summer home areas was conducted (Anniste 2007). Two main characteristics estimated were the signs of permanent residence and the technical condition (level of renovation) of the summer home. These results also revealed the heterogeneous architectural composition of the *dacha*-settlements that apparently also reflects the heterogeneous social composition of the population (figures 17 and 18). Permanently inhabited homes were not only homes in better technical condition. About one tenth of houses with permanent residents were estimated as buildings where permanent residence is not possible due to the technical condition of the houses. Similarly, about one tenth of the houses where signs of permanent residence could not be detected were entirely renovated. This means they were used as second homes in the same way as other *dachas*.

However, the share of entirely renovated houses that resembled new single-family homes (as in new residential areas) and that were also permanently

inhabited was very high — in the year 2007, this made up 19 percent of the total stock of summer homes. This is especially impressive when compared to the results of the new residential areas survey<sup>3</sup>. By spring 2006, 5600 households lived in new dwellings in new residential areas, and approximately 5000 inhabited houses were totally renovated or newly built in summer home areas by spring 2007. The number of single-family homes in compact new residential areas, however, was only 3000. Consequently, the former *dacha*-settlements played a remarkable role in post-communist residential suburbanisation, especially as concerns the construction of suburban single-family houses. Although there are no thorough analyses that would make it possible to compare the residents in these settlements with the inhabitants of new residential areas, the observation study revealed that these areas are also attractive for people with relatively higher social status.

Today a large proportion of summer homes is still in reserve. This means that the Soviet “continuity-effect” on the metropolitan housing market related to vacancies will still last many years. The estimations of local municipalities in spring 2002 predicted that approximately 60 percent of the total stock of Soviet-era summer homes will be permanently inhabited in the future.

However, in the same way as the *dacha*-settlements are invisible in the suburban landscape (as they do not occupy new areas), the planning problems related to these areas are also invisible. Whereas in the case of new residential areas suburban municipalities often transfer obligations related to technical infrastructure to developers, in summer home areas there are no similar business interests. Therefore the planning solutions here are even more anarchic and fragmented. In addition, however, the *dacha*-settlements contain social diversity (different social groups are residing here) as well as functional diversity (they are permanent residential areas as well as recreational areas), and therefore the planning of these settlements is an even more complex issue. Here the needs of traditional gardeners and modern holidaymakers, as well as poor and affluent permanent residents should be solved side-by-side in one settlement.

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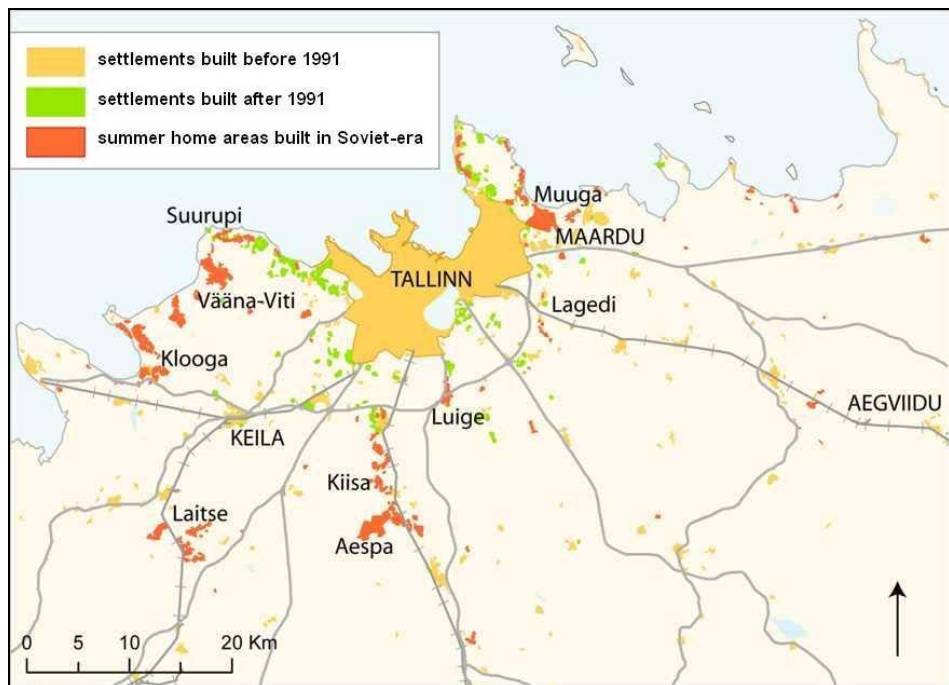
<sup>3</sup> The New residential areas survey was conducted in spring 2006, and the Summer home areas survey in spring 2007. The volumes of new housing construction in free areas in the interim year were probably also very high.

**Table 16.** Number of summer homes in the suburban area of Tallinn and share of permanently used summer homes in 2002 and 2007

	Number	Inhabited in 2002, %	Inhabited in 2007, %
<b>Nearby vs. distant municipalities</b>			
... nearby	15,781	20	39
... distant	10,183	8	27
<b>Urban vs. rural municipalities</b>			
... satellite towns <sup>1</sup>	3,093	25	43
... rural areas	22,871	14	33
<b>Coastal rural vs. other municipalities</b>			
... coastal rural	11,806	16	33
... other	14,158	14	36
<b>Total: suburban area of Tallinn</b>	<b>25,964</b>	<b>15</b>	<b>35</b>

Sources: Estimations of municipality officials in 2002 (Leetmaa 2002); Summer Home Areas Survey 2007

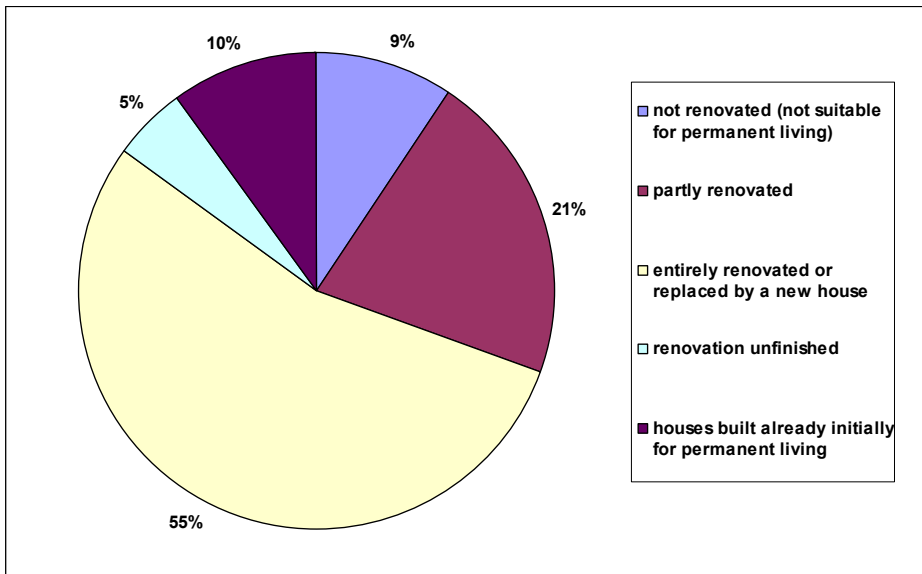
<sup>1</sup> mainly Maardu satellite town (close to Tallinn)



**Figure 16.** Location of summer home areas built from the 1960s to the 1980s in the Tallinn metropolitan area

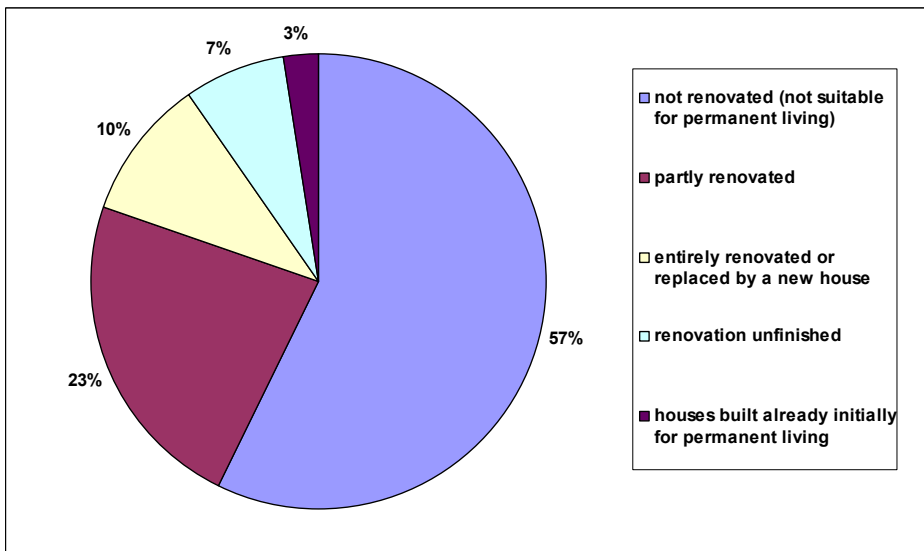
Source: Anniste 2007; Summer Home Areas Survey 2007





**Figure 17.** Technical condition of summer homes where signs of permanent residence are visible

Source: Summer Home Areas Survey 2007



**Figure 18.** Technical condition of summer homes where no signs of permanent residence are visible

Source: Summer Home Areas Survey 2007

## SUMMARY AND CONCLUSIONS

My dissertation focused on residential suburbanisation in the Tallinn metropolitan area in the post-communist period. I defined the Tallinn metropolitan area as a region that consisted of the city of Tallinn (central city) and of the municipalities from which at least 15 percent of the workforce commute daily to the capital city (suburban area). I defined the phenomenon of suburbanisation as the flow of migration into the suburban area that contributed to population decentralisation in the metropolitan area. This was mostly explainable by migration from the central city in the Tallinn urban region. I defined the post-communist period as the whole period from the regaining of Estonian independence to the present day. As the economic and societal situation has changed considerably during this period, the preconditions for migration have also changed. I therefore assumed that the factors causing city-to-suburbs migration have also changed in the course of the post-communist decades. The main research questions that guided the analyses were as follows: What were the reasons behind the phenomenon of suburbanisation in the post-communist context in the Tallinn metropolitan area? How did post-communist migration towards the suburbs change spatially and over time?

Many studies have demonstrated that residential suburbanisation has been a common migration phenomenon in the metropolitan areas of the former centrally planned countries since the 1990s. This migration trend has often been compared to the residential suburbanisation process in Western countries in the middle of the last century (Van den Berg et al 1982, Champion 2001). The concept of “Western suburbanisation” has mostly been associated with the aggravation of the urban living environment due to the rapid growth of the cities. The unpleasant living environment in the cities begins to act as a push-factor, and the naturally attractive environment in the suburban area acts as a pull-factor causing people to leave the cities for suburbs. Under these circumstances, first of all more affluent families with children move from the cities to the suburbs, as high quality living environment in the cities is in short supply. These factors can, however, only become translated into action when the structural factors that enable suburbanisation are present. For instance, the increase in welfare enables people to invest in their living environment, and improvements in transport infrastructure permit people to live further away from their jobs and services in the city. Spatially, suburbanisation has been associated with the intensification of new housing construction that contributes to socio-spatial segregation in urban regions.

Analyses of post-communist cities often presume that as the socio-economic conditions in these countries gradually became similar to the conditions in Western countries, here people also began to improve their living conditions by moving from cramped communist-era apartments into contemporary dwellings in suburban areas. At the same time, the migration analyses in the post-communist countries are mostly based on aggregate data, and detailed analyses

of the migration directions of different population groups and migration motives are rare. I presume in my research that the classical explanations of migration trends in Western countries should not automatically be transferred to the post-communist context, as the social background for people's migration decisions is different here.

There are no representative surveys on the migration motives of city-to-suburbs movers in Estonia. The 2000 Census data makes it possible to analyse other characteristics that indirectly explain the driving forces behind suburbanisation. I analyse the whole migration flow from Tallinn to its suburban area in the period 1989–2000 using a multivariate research design. I demonstrate which population groups participated in the post-communist suburbanisation process in Estonia and to which destinations in the suburban area (dwelling types and geographical areas) different suburbanizers moved. Such an analysis is also quite extraordinary in the context of suburbanisation analyses in other post-communist countries. Additional information on the temporal dynamics and spatial patterns of the suburbanisation process were obtained from surveys that estimated the development of new housing construction in the Tallinn metropolitan area since 1991 (New Residential Areas Survey 2006: Ahas et al 2008; Tammaru et al forthcoming (a); (b); Kährik and Tammaru 2008) and construction activities in the summer home settlements built in the Soviet years in the suburban area of Tallinn (Summer Home Areas Surveys 2002 and 2007: Leetmaa 2002; Anniste 2007; Leetmaa et al forthcoming).

In the theoretical introduction to the dissertation I explained that the classical concept of “Western suburbanisation” is an over-generalisation that does not enable one to understand the logic of the suburbanisation process that has now taken place in Western countries for more than half a century. The key factors that have shaped the intensity and spatial patterns of suburbanisation in different countries and periods have been public policies and the existing spatial structure of the respective metropolitan areas. The role of public sector strategies has been summarized in the concept of “urban dynamics” by the urban life-cycle theory (Van den Berg et al. 1982; Van den Berg 1999). The theory presumes that the decisions and interaction of three groups of actors — households, enterprises and public authorities — shape urban dynamics and cause changes in urban space. For example, people's desire to improve their living conditions or the business interests of real estate enterprises could be influenced by several public strategies like the planning of perspective settlement patterns, transport policies, urban revitalisation programs, public housing construction, etc. In addition, migration trends are shaped by the inherited spatial structure of the region (Kesteloot 2000; Wiegandt 2000), which in turn is the result of the urban dynamics of former periods. For instance, in the countries where the suburbanisation process has lasted for decades, the older and cheaper suburban housing stock moves to the housing market and thereby expands the residential

choices in the metropolitan housing market (Herfert 2007; Aring & Herfert 2001).

I have also summarized the development logic of metropolitan areas in the communist period, and the resulting spatial patterns of urban agglomerations. In the research literature it is generally agreed that urban development under central planning was fundamentally different from the processes that took place in Western cities in the same period. It has been argued, for instance, that the communist regime managed to control the development of the economy and settlement patterns to such an extent that it was impossible to observe large-scale socio-spatial segregation or Western-type residential suburbanisation in cities under central planning. Many analyses still prove that segregation processes also characterized cities in the communist era, but it did not follow classical city-suburbs patterns. Analogously, population growth in suburban areas was noticeable, but the driving forces behind this migration flow were different. I demonstrate that in fact even under central planning spatial changes were caused by the ambitions of three groups of urban actors — households, companies and public authorities, but the strategies of these actors in communist cities were different.

Compared the Western countries, where public housing construction provided housing for people with relatively lower social status, in communist cities so-called upside-down segregation patterns occurred. The most valued housing was subsidized public housing, and subsidized housing was first of all provided to people with relatively higher social status. Apartments that originated from the pre-communist period (which received no investment), and the private housing construction that was also not subsidized were less attractive. The economic system, the so-called priority economy (Kornai 1992), also favoured socio-spatial segregation. Due to the shortage of resources in the economy, priority enterprises were financed more generously, and therefore those employers could also provide their workers with better conditions, including the construction of apartments. Due to the shortage of labour, people in turn had the opportunity to choose their jobs and to work in priority fields that also guaranteed opportunities for better housing. This also caused some inequalities in communist cities, as people working in priority economic fields and other people with higher social status (*nomenclatura*, military forces) enjoyed better living conditions.

The priorities of the communist regime also influenced the areas surrounding the cities. In the underurbanisation concept, Szélényi (1996) explains how the industrial workers who worked in the city in non-priority fields and were not provided with urban apartments resided in the suburban areas of the cities, thus causing some population growth in these areas. In the Tallinn metropolitan area, as in many other former Soviet republics, suburban population growth also took place due to other factors — industrial decentralisation, investments in collective agriculture in rural areas, and the residing of military personnel in some suburban settlements (Tammaru 2001b; Leetmaa et al forthcoming).

The urban dynamics under communism and the resulting settlement patterns create the point of departure for subsequent processes in the metropolitan area in the post-communist era. Namely, the key factor that has shaped the suburbanisation process in the Tallinn metropolitan area has been the existing metropolitan space. At the end of the Soviet period the Tallinn metropolitan area was extremely compact (Kasanko et al. 2005). Approximately 80 percent of the metropolitan population lived in the city of Tallinn, and more than two-thirds of these people resided in the standard Soviet-era apartments in large housing estates. Average living space per person was only 19 square metres in the late Soviet years. Therefore an enormous shortage of contemporary housing had accumulated in the Tallinn metropolitan area by the beginning of the transition period.

At the same time, there was abundant free space for potential housing construction in the suburban area of Tallinn. In the Soviet years mainly large apartment buildings were built in the industrial satellite towns and in the centres of collective agriculture. This was in accordance with the ideological aim of providing equal living condition for different population groups, and standardized housing construction was the most rational way to build these new dwellings. The exceptions in the suburban housing market were low-rise seasonally used Soviet summer home areas. In addition, suburban land was used for other purposes. As agriculture had been a priority field in the economy since the 1970s, suburban land was occupied for agricultural production. Similarly, many naturally attractive coastal areas were used or controlled by the military forces, and therefore housing construction was not possible in these areas. Due to these priorities, the Tallinn metropolitan area inherited an extremely compact suburban settlement structure. These land use functions lost their importance in the 1990s, and the areas in naturally attractive areas close to the city now awaited new functions.

An important aspect that has influenced the development of cities in Estonia is the growth of the urban population due to immigration. Tallinn was an almost uni-ethnic city after the Second World War, but only half of its population were Estonians by the end of the Soviet era. Also, whereas 60 percent of native Estonians lived in urban settlements in 1989, the urbanisation level of the immigrant population was considerably higher — 90 percent. The high percentage of immigrant population differentiates Estonia and some other former Soviet republics from other communist countries in Central and Eastern Europe, and this had also shaped post-communist urban processes. For example, many Russian-speaking families left to Russia in the first half of the 1990s. This relaxed the housing market in the Tallinn metropolitan area and enabled immigration to the capital city from other parts of the country as well as migration into the vacant dwellings in the suburban area.

This demonstrates that the spatial structure of the metropolitan area — the shortage of a contemporary living environment in the city and extensive undeveloped free areas outside the city (push- and pull-factors) — were

theoretically favourable to large-scale residential suburbanisation. Nevertheless, the classical enabling factors that could have launched suburbanisation processes were not present. Whereas in Western countries the economic growth and increasing personal incomes have generally favoured residential suburbanisation, the situation in the post-communist cities at the beginning of the transition period was different. Here people faced economic hardships due to the problems in the labour market and increasing housing costs in the cities. Only a small proportion of people had the financial means at their disposal to invest in their homes. Living standards gradually began to increase since the middle of the 1990s in Estonia. Besides, affordable housing loans came on the market in the late 1990s. The privatisation and restitution of apartments and land activated the metropolitan real estate market, but not all apartments and land were marketable immediately in the first transition years. Instead, the real estate market also developed gradually. Therefore the classic enabling factors for suburbanisation unfolded in the course of the post-communist years.

The business sector also reacted to this course of events. The construction and financing of modern housing stock became a profitable business for the financial and real estate sectors. The role of the public authorities, however, remained irrelevant in Estonia. The strategic decisions taken in the early transition years gave impetus to privatisation processes, but later the public sector did not intervene significantly in the emerging housing market. Public housing construction is of minor importance. Public planning does not efficiently shape the emerging new settlement patterns. One could conclude that the urban dynamics today are guided by business interests on the one hand and by the preferences of households on the other, and the inherited spatial structure of the metropolitan area has given direction to these changes. This results in pure market-led changes in metropolitan housing market.

In my empirical analyses, the 2000 Census data revealed that the migration from the city of Tallinn to its suburban areas in the period from 1989–2000 was a socially diverse process — both wealthier people, poorer inhabitants and people who left the labour market left the city for the suburbs. Moreover, the probability of people with relatively lower social status to migrate to suburban areas was even higher than the probability of the people with higher social status doing the same. The latter would presumably have been the classical suburbanizers according to the traditional concept of „Western suburbanisation“. Different population groups moved to different destinations in the suburbs. More affluent suburbanizers preferred the coastal areas, rural municipalities and the areas very close to Tallinn. People with lower social status instead migrated to areas further from the coast and the city of Tallinn and the satellite towns. They also more often moved to existing and cheaper dwellings. Altogether 80 percent of the city-to-suburbs migration flow in this period was related to the existing housing stock in suburban municipalities, and only one-fifth of the suburbanizers actually went to live in the newly built houses. This demonstrates that existing housing stock shapes migration flows.

In addition, many vacancies were added to the metropolitan housing market due to the emigration of part of the Russian-speaking population and the opportunity to rebuild former summer homes.

Due to the lack of high-quality migration data, it is not possible to estimate the housing career of different population groups after the year 2000. It is very likely that as economic hardships were overcome, out-migration from the city for economic reasons decreased, at least in relative terms. On the other hand, new housing construction began to intensify since the late 1990s. Housing construction volumes in the 1990s were modest in comparison to the late Soviet period and with the 2000s. Also, in comparison to other European countries, the construction of new dwellings was at a very low level. This confirms that the overall economic context did not favour investments in housing construction in the first post-communist decade.

In comparison to the Soviet era, however, a change in built dwelling structure took place. The new dwellings of the 1990s in the suburban area of Tallinn were almost exclusively single-family houses, while it was mainly apartment houses that were built in the communist years. Therefore some sprawl of settlement began in the 1990s as a result of the migration preferences of those population groups that resembled classical Western suburbanizers. The sprawl was made possible by the presence of undeveloped areas around the city; areas formerly used for agricultural or military purposes became available, and land reform gradually brought these areas on the market.

Housing construction increased rapidly in the 2000s. Two-thirds of all new dwellings built in new residential areas in the period 1991–2005 were built during the last three years (2003–2005). At the same time, construction activities took place in the near vicinity of Tallinn instead of spreading to more distant suburban areas. In parallel, the proportion of multi-family homes and large apartment blocks increased in the growing construction volumes. Only one-third of the dwellings completed in 2005 were detached houses. Thus the share of people who lived very close to the capital city in urban-like residential districts grew over time. This can most likely be explained by the extreme shortage of contemporary urban environment within the city borders, which causes even those people who actually prefer an urban living environment to leave the city. As public sector planning strategies do not channel emerging settlement patterns, the push- and pull-factors lead to market-led suburbanisation. In addition, the spatial legacy of the Soviet era shapes this process. In parallel to classical suburbanisation, an alternative modern urban environment is built in suburban areas. In other words, suburban areas gained from the overspill effect of urban housing construction.

In addition to new housing construction in new residential areas, housing construction also takes place in a more hidden form in the summer home settlements that were built in the Soviet decades in the suburban areas of Tallinn. A total of every sixth urban family had a suburban summer home at the beginning of the transition period. The summer home surveys revealed that

people with very different social backgrounds have moved to live permanently in these formerly seasonally used settlements. In addition, the summer home areas are functionally heterogeneous, as they have also retained their former functions as recreation areas and plots for growing agricultural products. Some of them have been made into modern second homes. The summer home settlements have, however, also attracted new housing construction. The construction of new houses or the complete renovation of old summer home even exceeds the new housing construction on former undeveloped suburban areas. Consequently, classical Western-style suburbanisation, i.e. the construction of detached houses, has partly moved into the summer home settlements that the urban population was earlier connected with.

One can conclude that the spatial outcome of the suburbanisation process in the Tallinn metropolitan area has changed considerably over the last two decades. Although the classical concept of “Western suburbanisation” does not explain city-to-suburbs migration, the main principles guiding residential changes in the Tallinn metropolitan area follow the logic of intra-metropolitan migration in other countries, also in Western Europe and Northern America. First, new housing construction is more intensive in periods of economic growth. Second, spatial changes in the metropolitan area, including migration trends, are the result of the activities of three groups of urban actors — households, enterprises and the public sector. Third, vacancies in the metropolitan housing market broaden the residential choices for respective population groups. Fourth, the presence and location of attractive areas for housing construction as well as the quality of the urban environment determines whether the more affluent households improve their living conditions within the city borders or move out of the city.

This leads one to discuss to what extent the post-communist research framework that has inspired a large number of studies in recent decades helps to interpret urban changes in Central and Eastern European countries. In other words, how should we define the post-communist period in migration analyses? I have defined the post-communist period in three ways to give more analytical content to the concept of “post-communism”. First it is important to understand that these societies have gone through extensive changes in the course of the last two decades. The social background in the individual moments on this time scale has been very different. This allows one to assume that migration processes have changed considerably over this period. We cannot, therefore, presume that the suburbanisation phenomenon is a homogeneous process as concerns migration motives in the early transition years and today. I therefore define this approach as “post-communism as change“ — every analysis needs to take into account continuous social change in the post-communist years.

The second concept that possesses analytical power is “post-communism as shock”. The first post-communist years were related to thorough and extraordinarily rapid changes in the society and economy. Although similar changes have also taken place in Western societies (e.g. decreases in industrial



and agricultural employment, withdrawal of the welfare state, decreased public housing subsidies), in the post-communist context these changes occurred over a couple of years. This rapidity itself challenged people's ability to adapt. Under these circumstances, migration was one of the strategies to cope with emerged economic hardships that many people faced in the early transition years. This explains the special features in migration behaviour at the beginning of the post-communist period, for instance low migration intensities (Marksoo (1992, 134; 1999, 84) or the escape of people with lower social status from the city in my analyses. Although the power of this concept of post-communism has diminished over time, it explains the migration processes in the early post-communist period.

The third concept that will remain relevant for many years is "post-communism as continuity". Continuity was already reflected in the existence of vacancies in the housing market that enabled different population groups to migrate to the suburbs. In fact, as there is still a significant stock of summer homes in seasonal use, the transformation of these areas into permanent residential areas will most likely continue. In a broader context, continuity means the macro-level spatial structure of the metropolitan area. Even today, most of the inhabitants of Tallinn live in cramped Soviet-era apartments, and there is still a need for contemporary housing. The undeveloped areas around the city are now available for new housing construction. As long as the public sector does not apply efficient strategies to contain or channel new housing construction, the push-factors in the city and the pull-factors in suburban areas will cause population decentralisation and urban sprawl in the metropolitan area in accordance with the increase in people's living standards.

Some authors argue that the importance of the post-communist research framework in explaining urban change in former centrally planned countries has diminished. For instance, Haase et al (2008) and Steinführer and Haase (2007) propose a shift in research perspective. They argue that as in many developed countries, post-communist cities are influenced by a phenomenon called second demographic transition (low fertility rates, an increase in the number of small households, aging of the population etc.). Analogously, global economic trends influence urban processes in post-communist countries in the same way as in other regions of the world. I argue that post-communist cities should be analysed as an "urban wholeness" (Amin and Graham 1997) where different processes (demographic, social, cultural, economic, political etc.) come together simultaneously in an urban environment that is in turn inherited from previous periods (Massey 1979). Most of the cities have inherited an enormous socio-spatial "layer" that inevitably interacts with contemporary macro-trends. At the same time, the urban dynamics today, for instance the balance between public and private interests, also shapes cities. I am therefore of the position that there is no reason to abandon the post-communist research framework. Instead, different research perspectives should exist side-by-side and complement each other.

## SUMMARY IN ESTONIAN

### Rahvastiku eeslinnastumine Tallinna linnaregioonis

Uurisin oma doktoritöös rahvastiku eeslinnastumist Tallinna linnaregioonis sotsialismijärgsel perioodil. Tallinna linnaregiooni defineerisin piirkonnana, mille moodustavad Tallinn ning need Tallinna ümbritsevad kohaliku omavalitsuse üksused, mille töötavast elanikkonnast vähemalt 15 protsenti töötab Tallinnas 2000. aasta rahvaloenduse andmetel. Eeslinnastumise defineerisin rändetrendina linna tagamaale, mille tulemusena toimub rahvastiku hajumine linnaregioonisiseselt. Enamasti oli eeslinnastumine Tallinna linnaregioonis seotud rändega Tallinnast tagamaale. Sotsialismijärgse perioodina käsitlesin perioodi alates Eesti taasiseseisvumisest tänaseni. Selle perioodi jooksul on majanduslikud ja ühiskondlikud tingimused, mis loovad konteksti rahvastiku rändele, oluliselt muutunud. Seetõttu eeldasin, et ka linnast tagamaale suunduva rände põhjused võisid sel perioodil oluliselt muutuda. Peamised uurimisküsimused, mis uurimistööd suunasid, olid järgmised:

- Mis olid peamised tegurid, mis põhjustasid rahvastiku eeslinnastumist postkommunistlikus kontekstis Tallinna linnaregioonis?
- Kuidas on eeslinnastumine kui rändetrend Tallinna linnaregioonis postkommunistliku perioodi jooksul muutunud ning millised muutused on toimunud eeslinnastumise ruumilises avaldumisvormis?

Uurimistöö lähtus levinud seisukohast teaduskirjanduses, mille kohaselt endiste sotsialistlike Kesk- ja Ida-Euroopa riikide suuremates linnaregioonides kujunes 1990. aastatest alates valdavaks rändesuunaks eeslinnastumine (Aring ja Herfert 2001; Brown ja Schafft 2002; Hirt 2007; Kok ja Kovács 1999; Krisjane 2005; Kupiszewski jt 1998; Ladányi ja Széleányi 1998; Ouředníček 2007; Ravbar 1997; Sýkora ja Čermák 1998; Tammaru jt 2004; Timár ja Váradi 2001; Tosics 2003). Sellise rände põhjuseid on seostatud sajandi keskpaigas (või varem) alanud eeslinnastumisega Lääneriikides (Van den Berg et al 1982, Champion 2001). „Lääne eeslinnastumist“ on seletatud linna elukeskkonna halvenemisega kiire tööstuse arengu ja sellest tuleneva linnade kasvu tõttu. Linna ebageeldiv elukeskkond hakkab toimima kui tõuketegur linnast lahkumiseks ning linna tagamaa looduslikult atraktiivne keskkond toimib kui tõmbetegur. Neis tingimustes lahkuvad linnast ennekõike jõukamad perealised leibkonnad, kelle jaoks sobivat elukeskkonda linnas napib. Need tõuke- ja tõmbetegurid saavad aga realiseeruda üksnes soodsate struktuuriliste (eeslinnastumist võimaldavate) tegurite esinemisel. Näiteks üldise elatusaseme tõusuga tekib inimestel võimalus parandada oma elamistingimusi ja transpordivõimaluste avardamine võimaldab elamist linna töökohtadest ja teenustest kaugemal. Ruumiliselt seotatakse eeslinnastumist uuslamuehituse aktiveerumisega linna tagamaal, mis toetab sotsiaal-ruumilise segregatsiooni väljakujunemist regioonis.

Postkommunistlikke linnasid käsitlevad analüüsid eeldavad sageli, et ühiskondlike tingimuste sarnastumisel ja varasemate elukohavahetuse piirangute kadumisel hakkasid jõukamad inimesed ka neis linnades lahkuma kitsastest sotsialismiajal ehitatud linnakorteritest paremate elamistingimustega eeslinnaaladele. Samas põhinevad rändeanalüüsid postkommunistlikes riikides enamasti agregaatandmetel ja põhjalikke analüüse erinevate rahvastikurühmade rändesuundade ja rändemotiivide kohta on vähe. Seetõttu eeldan oma uurimistöös, et klassikalisi Lääne-Euroopas ja Põhja-Ameerikas varem kogetud rände seletusi ei peaks automaatselt üle tooma sotsialismijärgsesse konteksti. Rännet suunavad ühiskondlikud ja majanduslikud taustatingimused võisid sel perioodil postkommunistlikes riikides olla erinevad Lääneriikide tingimustest sajandi keskpaigas.

Ka Eestis puuduvad esinduslikud uuringud eeslinnaaladele suunduva rände motiivide kohta. 2000. aasta rahvaloenduse andmed võimaldavad eeslinnastumise põhjuseid analüüsida teiste tunnuste alusel. Esiteks on teada, millised rahvastikurühmad perioodil 1989–2000 eeslinnaaladele elama asusid ning teiseks võimaldab rahvaloenduse andmebaas analüüsida, millistesse tagamaa eluasemetesse ja geograafilistesse sihtkohtadesse erinevad eeslinnastujad suundusid. Nende tunnuste kombinatsioon võimaldas arutleda, kuivõrd on linn-tagamaa suunaline ränne postkommunistlikul perioodil võrreldav kirjeldatud „Lääne eeslinnastumisega“. Oluline on, et viimase rahvaloenduse andmed Eestis võimaldavad analüüsida kogu linn-tagamaa suunalist rändevoogu ning see on erakordne eeslinnastumist käsitlevate uuringute taustal teistes postkommunistlikes riikides. Iga-aastase rändestatistika ebapiisava kvaliteedi tõttu ei olnud analoogsed analüüsid võimalikud 2000. aasta rahvaloenduse järgse perioodi kohta. Olulist infot eeslinnastumise ajalise dünaamika ja ruumilise avaldumisvormi kohta andsid uuringud, mis hindasid uuselamuehituse dünaamikat alates 1991. aastast (uuselamualade uuring 2006. aastal: Ahas jt 2008; Tammaru jt ilmumas; Kährik ja Tammaru 2008) ning ehitustegevust nõukogude perioodil rajatud suvilaaladel (suvilaalade uuringud 2002. ja 2007. aastal: Leetmaa 2002; Anniste 2007; Leetmaa jt ilmumas).

Esimeseks ülesandeks oma töös seadsin analüüsida lähemalt eeslinnastumise arenguloogikat Lääneriikides. Ma näitasin, et “Lääne eeslinnastumise” kontseptsioon on üldistus ja see ei võimalda piisavalt mõista ka aastakümneid kestnud eeslinnaaladesuunalist rännet Lääne-Euroopas ja Põhja-Ameerikas. Võtmetegurid, mis eeslinnastumise intensiivsust ja ruumilist avaldumisvormi erinevates riikides ja erinevatel perioodidel on mõjutanud, on avaliku sektori kaudsed ja otsesed poliitika ning linnaregioonide varasem ruumistruktuur.

Linnaregioonis toimuvad ruumilised muutused võtab kokku linna elutsükli-teooria “linna arengudünaamika” kontseptsiooniga (Van den Berg jt 1982; Van den Berg 1999). Teooria eeldab, et linnaregiooni ruumistruktuur kujuneb kolme peamise toimijate grupi — ettevõtteid, inimesed ja avalik sektor — tegevuse ja omavahelise vastastikmõju tulemusena. Näiteks loovad inimeste soovile parandada elamistingimusi ja erasektori kasumile suunatud elamuehitusärile

konteksti avaliku sektori strateegiad: asustuse planeerimine, transpordipoliitika, linnakeskuste taaselustamise programmid, avaliku sektori elamuehitus jne. Lisaks mõjutab rändesuundumusi varasema linna arengudünaamika tulemusena kujunenud linnaregiooni ruumistruktuur (Kesteloot 2000; Wiegandt 2000), näiteks olukord elamuturul (Herfert 2007; Aring ja Herfert 2001). Paljudes linnaregioonides, kus eeslinnastumine on toimunud juba aastakümneid, on linnaregiooni eluasemeturul saadaval odavamad vanemad elamispinnad linna tagamaal, mis samuti mõjutab linnaregioonisest rännet.

Lisaks Lääne eeslinnastumise kogemusele analüüsisin linnaregioonide arengut kommunistliku režiimi perioodil ja kujunenud linnaregioonide ruumistruktuuri. Enamasti ollakse veendumusel, et sotsialismiaegne linnade areng oli põhimõtteliselt erinev samal ajal aset leidnud suundumustest Lääne linnades. Näiteks väidetakse, et režiim kontrollis asustuse ja majanduse arengut sedavõrd, et neis linnades ei kujunenud välja analoogset sotsiaal-ruumilist segregatsiooni, sealhulgas mitte Läänega võrreldavat eeslinnastumist. Mitmed analüüsid aga näitavad, et kommunismiaja linnades kujunes välja nii sotsiaal-ruumiline segregatsioon ning kasvas ka eeslinnaalade elanikkond, ent riigi sekkumise tõttu elamuehitusse ja asustuse planeerimisse ei järginud segregatsioon klassikalist linn-tagamaa mustrit. Ka plaanimajanduse tingimustes suunasid muutuseid linnaruumis inimesed, ettevõtted ja avalik sektor oma klassikaliste ambitsioonidega (omada paremat tööd ja elamistingimusi, tagada ettevõtte head majandustulemused, parandada üldist heaolu), kuid nende toimijate strateegiad olid erinevad nimetatud gruppide strateegiatest Lääne linnades.

Võrreldes Lääne linnaregioonidega, kus avaliku sektori elamuehitus on suunatud vähemjõukatele rahvastikurühmadele, kujunes kommunistlike riikide linnades välja “tagurpidine segregatsioon”. Inimesed püüdsid oma elamistingimusi parandada, ent nende peamiseks eesmärgiks oli saada subsideeritud elamispind. Vähem atraktiivsed olid vanemad enne kommunistlikku perioodi ehitatud eluruumid (sageli kesklinnale lähemal) ja individuaalelamud, mida riik ei subsideerinud. Sotsiaal-ruumilist segregatsiooni soodustas majanduse korraldus, mida Kornai (1992) nimetab prioriteetide juhitud majanduseks. Defitsiidimajanduse tingimustes finantseeriti prioriteetseid ettevõtteid ja tegevusalasid paremini ning seetõttu said need tööandjad tagada paremad tingimused oma töötajatele, sealhulgas ehitada elamispindasid. Inimestel omakorda oli tööjõupuuduse tingimustes võimalik liikuda tööalaselt prioriteetsesse valdkonda ning saavutada nii ka oma eluasemekarjääri eesmärgid. Seetõttu elasid prioriteetsete ettevõtete töötajad (Gentile ja Sjöberg 2006) ning samuti teised tollal kõrgema staatusega elanikerühmad (nomenklatuur, sõjaväelased) muu elanikkonnaga võrreldes paremates tingimustes.

Kommunistliku režiimi prioriteetid mõjutasid ka eeslinnaalaseid. Ränne linna tagamaale toimus ka sel perioodil, kuid põhjused linna tagamaale elama asumiseks olid põhimõtteliselt erinevad Lääne eeslinnastumisest. “Alalinnastumise” kontseptsioonis kirjeldab Szelenyi (1996) nende tööstustöölise koondumist linna tagamaale, kellele ei tagatud linnas elamispinda. Tallinna linna-

regioonis, nagu paljudes endistes Nõukogude Liidu liiduvabariikide linnades, oli eeslinnapiirkondade elanikkonna kasv seotud veel tööstuse detsentraliseerimise, põllumajanduse eelisarendamise ning sõjaväelaste elama asumisega linna tagamaa asulatesse (Tammaru 2001b; Leetmaa jt ilmumas). Nii toimus eeslinnaalade rahvastiku kasv ning kujunes välja sotsiaal-ruumiline segregatsioon ka kommunistliku režiimi tingimustes, ent need protsessid ei olnud tingimata vastastikku seotud.

Kommunismiperioodi linna arengudünaamika ja sel ajal välja kujunenud ruumistruktuur on aluseks linnaregiooni edasisele arengule. Ma analüüsin oma töös nõukogude perioodist pärineva linnaregiooni ruumistruktuuri mõju eeslinnastumise väljakujunemisele postkommunistlikul perioodil. Nõukogude aja lõpuks oli Tallinna linnaregioon äärmiselt kompaktne (Kasanko jt 2005). Ligikaudu 80 protsenti linnaregiooni rahvastikust elas Tallinnas ning sellest omakorda enam kui kaks kolmandikku elas nõukogude perioodil ehitatud paneelalukorterites. Elamispinna suurus ühe inimese kohta nõukogude aja lõpus oli vaid 19 ruutmeetrit. Seega oli kuhjunud oluline kaasaegse elamispinna defitsiit.

Linna tagamaal seevastu oli rohkesti vaba ruumi potentsiaalseks elamuehituseks. Nõukogude perioodil ehitati Tallinna tagamaa tööstuslikes satelliitlinnades ja põllumajanduste keskasulates peamiselt suuri paneelkorterimaju. See oli kooskõlas ideoloogiliste eesmärkidega tagada erinevatele elanike gruppidele võrdsed elamistingimused ning kujutas endast ka kõige ratsionaalsemat elamuehituse vormi. Erandiks tagamaa ehitustegevuses olid nõukogude perioodil rajatud suvilaalad, mille kasutamine püsielamuna ei olnud sel ajal lubatud. Nende puhul oli tegemist madalhoonestusega, kuid ka suvilaalad ehitati kompaktsete asulatena. Lisaks oli linnaümbruse maa nõukogude perioodil kasutuses teistel eesmärkidel. Põllumajandus oli tööstuse kõrval prioriteetne majandusharu ja linna ümbruses asuvaid põllumaid ei olnud võimalik kasutada elamuehituse eesmärgil. Ka looduslikult atraktiivsetel rannaaladel ei olnud võimalik ehitada, sest seal asusid sõjaväeobjektid ja enamik rannaaladid olid piiritsoonid. Seega päris Tallinna linnaregioon nõukogude perioodist ka kompaktse asustusstruktuuri linna tagamaal ning varasemate maakasutusfunktsioonide äralangemisega 1990. aastate alguses ka palju vaba maad linna lähedal looduslikult kaunites piirkondades.

Oluline tegur, mis on suunanud linnade arengut Eestis, on linnarahvastiku kasv nõukogude perioodil immigratsiooni tulemusena. Tallinn oli pärast II maailmasõda peaaegu üherahvuseline linn, nõukogude perioodi lõpus aga moodustasid eestlased vaid poole linna rahvastikust. Eestis tervikuna oli põlisrahvastiku linnastumise tase nõukogude perioodi lõpuks 60 protsenti, oluliselt kõrgema linnastumise tasemega oli immigrantrahvastik — 90 protsenti. Võib öelda, et immigrantrahvastiku suur osatähtsus eristab linnade arengut Eestis ja mitmes teises endises Nõukogude Liidu vabariigis teistest Kesk- ja Ida-Euroopa kommunistlikest riikidest. Immigrantrahvastiku rändekäitumine mõjutab ka rändesuundumusi postkommunistlikul perioodil. Näiteks üle-

minekuaja alguses rändas osa mitte-eestlastest tagasi endise Nõukogude Liidu aladele. Selle teguri mõjul kahanes Tallinna linna rahvaarv kuuendiku võrra ning vabade elamispindade olemasolu linnaregioonis soosis nii sisserännet Tallinnasse teistest Eesti regioonidest kui ka rännet linna tagamaale.

Postkommunistliku perioodi analüüsimisel lähtusin sellest, et muutused, mis ühiskonnas ja majanduses toimuma hakkasid, kujundasid ka konteksti inimeste rändeotsustele. Linnaregiooni ruumistruktuur — kaasaegse eluaseme nappus linnas ning vaba maa olemasolu tagamaal — olid teoreetiliselt eelduseks eeslinnastumise väljakujunemisele klassikaliste tõuke- ja tõmbetegurite mõjul. Samas ei toetanud eeslinnastumist 1990. aastate alguses klassikalised eeslinnastumist võimaldavad tegurid — kõrge elatustase ja inimeste suutlikkus investeerida elamistingimuste parandamisse, eluasemelaenu kättesaadavus, funktsioneeriv eluasemeturg ning maa kättesaadavus tagamaal. Need tingimused kujunesid välja postkommunistliku perioodi jooksul.

Kui eeslinnastumine Lääneriikides on tavaliselt kaasnenud majanduskasvu ja inimeste sissetulekute suurenemisega, siis 1990. aastate alguse olukord postkommunistlikes riikides oli vastupidine. Majanduse restruktureerimise tõttu seisis suur osa rahvastikust sel perioodil silmitsi majandusraskustega ning vahendeid elamistingimuste parandamiseks oli vähestel. Erastamisprotsessi käigus said inimesed oma eluasemete omanikuks ja see soosis eluasemeturu aktiveerumist. Samal ajal tähendas riigi subsidiumite äralangemine kasvavaid eluasemekulusid. Elatustase hakkas järkjärgult tõusma alles alates 1990. aastate teisest poolest. Samuti muutusid 1990. aastate lõpust alates kättesaadavaks soodsad eluasemelaenud. Ka kogu linnaümbruse vaba maa ei olnud 1990. aastate alguses kohe kättesaadav. Maareformi käigus selgitati õigusjärgsed omanikud ning seetõttu kestis funktsioneeriva maaturu kujunemine samuti teatud aja. Seega, kuigi kaasaegse elamispinna järele oli suur vajadus, puudus raha eraelamuehitusse investeerimiseks, eluasemeturg oli veel passiivne ning kogu maa linna ümbruses polnud veel kättesaadav. Need ulatuslikku eeslinnastumist võimaldavad tegurid kujunesid välja kahe kommunismiperioodi järgse kümnendi jooksul.

Sarnaselt Lääneriikide eeslinnastumisega reageeris sellele äri sektor. Lisaks finantssektori laenu pakumistele kujunes uuselamuehitus kasulikuks äriks ka ehitus- ja kinnisvaraettevõtetele. Avaliku sektori roll eeslinnastumise suunamisel on aga Eestis jäänud piiratuks. Olulised olid avaliku sektori üleminekuaja alguses tehtud strateegilised otsused, mis käsitlesid maa ja eluasemete erastamist ja tagastamist. Hiljem ei ole avalik sektor elamuturu arengusse oluliselt sekkunud. Avaliku sektori poolne elamispindade ehitus on minimaalne. Samuti ei mõjuta planeerimine kujunevaid muutusi linnaregiooni asustusstruktuuris. Võib öelda, et linna arengudünaamika kujuneb ennekõike inimeste ja äri sektori ambitsioonide ning päritud linnaregiooni ruumistruktuuri tulemusena ning avalik sektor klassikalise linna arengut suunava osapoolena jääb passiivseks.

Järgnevalt võtan kokku peamised andmeanalüüside tulemused oma doktoritöös. Rahvaloenduse andmete analüüs perioodi 1989–2000 kohta näitas, et

esimesel üleminekuaja kümnendil oli linna tagamaale suunduv ränne sotsiaalselt mitmekihiline protsess — linnast lahkusid nii majanduslikult paremal järjel olevad inimesed kui ka vaesemad ja tööturult lahkunud inimesed. Seejuures oli madalama sotsiaalse staatusega rahvastikurühmade lahkumine linnast tagamaale isegi tõenäolisem võrreldes klassikaliste eeslinnastumises osalevate rahvastikurühmadega ehk kõrgema sotsiaalse staatusega inimestega. Erinevad rahvastikurühmad suundusid aga erinevatesse sihtkohtadesse tagamaal. Paremal majanduslikult järjel olevad inimesed valisid sagedamini sihtkohaks rannaalad, hajaasustusega maapiirkonnad ja Tallinna lähivallad ning asusid elama uutesse eramajadesse. Madalama sotsiaalse staatusega inimesed suundusid suurema tõenäosusega eemale rannikust, satelliitlinnadesse ja Tallinnast kaugematesse piirkondadesse ning kolisid vanematesse ja odavamatesse eluasemetesse. Eluasemetüüpide lõikes oligi enamuse (80 protsenti) linn-tagamaa suunalisest rändest sel perioodil seotud tagamaa varasema elamufondiga ning vaid viiendikku eeslinnastumisest võis seostada kirjeldatud Lääne eeslinnastumise ehk uuselamuehitusega. Nii mõjutab tagamaa eluasemefond (nõukogude perioodil ehitatud korterid, endised suvilad ja teised vanemad elamud) eeslinnastumise kujunemist postkommunistlikul perioodil.

Erinevate rahvastikurühmade eluasemekarjääri analüüsimine 2000. aastatel pole kvaliteetsete andmete puudumise tõttu võimalik. Majandusraskuste taandumisega vähenes tõenäoliselt majanduslikel põhjustel linnast lahkumine vähemalt suhteliselt. Samuti hakkas 1990. aastate lõpus uuselamuehitus linna tagamaal hoogustuma. Tallinna tagamaa uuselamuehituse uuringu (2006) järgi toimus uute eluasemete ehitamine 1990. aastatel linna tagamaal väga tagasihoidlikult, seda nii võrreldes nõukogude aja lõpukümnendi kui ka 2000. aastatega. Ka võrdluses teiste Euroopa riikidega olid elamuehitusmahud 1990. aastatel Eestis äärmiselt tagasihoidlikud, mis kinnitab veel kord, et üldine majanduskeskkond ei soosinud sel perioodil investeerimist elamuehitusse.

Samas toimus nõukogude ajaga võrreldes muutus tagamaal ehitatavate elamute tüüpides. Need vähesed ehitatud elamispinnad, mis ehitati Tallinna tagamaal 1990. aastatel olid enamasti eramajad, nõukogude perioodil ehitati aga peamiselt kortermaju. Seega hakkas asustus linnaregioonis teatud määral laiali valguma nende rahvastikurühmade rände-eelistuste tulemusena, kes sarnanesid klassikalistele Lääne eeslinnastujatele. Asustuse laialivalgumine sai võimalikuks vabade maa-alade olemasolu tõttu Tallinna ümbruses. Varasemad nõukogude sõjaväe ja piirivalve hõivatud rannaalad olid nüüd vabad. Samuti ei haritud enam linnalähedasi põllumaid. Maareformi käigus toodi need maa-alad järkjärgult kinnisvaraturule.

2000. aastatel kasvas elamuehitus hüppeliselt. Kaks kolmandikku kõigist uusasumite uutest elamutest, mis olid ehitatud perioodil 1991–2005, olid valminud kolme viimase aasta jooksul (2003–2005). Ehkki tagamaa elamuehituse kogumaht kasvas, koondus elamuehitus 1990. aastatega võrreldes Tallinnale lähemale. Samal ajal elamuehituse kiirenemisega kasvas mitmepereelamute ja suurte kortermajade osatähtsus. Vaid kolmandik 2005. aastal ehitatud elu-

asemetest Tallinna tagamaa uuselamualadel olid eramajad. Seega kasvas aja jooksul eeslinnastumises nende inimeste osatähtsus, kes olid väga tihedalt seotud Tallinnaga ning elasid Tallinnale väga lähedal uutes linnasarnastes elurajoonides. Tõenäoliselt seletab seda protsessi Tallinna linnaregioonis äärmise kaasaegse eluaseme nappus, mistõttu tagamaale rändavad ka need inimesed, kes otsivad kvaliteetset linna elukeskkonda. Järelikult loodi 2000. aastatel klassikalise eeslinnastumisega paralleelselt alternatiivset linnakeskkonda linna lähialadel. Kuna regionaalplaneerimine asustusstruktuuri kujunemist efektiivselt ei kujunda, siis on kirjeldatud tõuke- ja tõmbetegurite kontekstis välja kujunenud turujuhitud eeslinnastumine, mida suunavad peamiselt ärihuvid ning inimeste soov elada tänapäevastes elamistingimustes.

Lisaks ärihuvidega seotud uuselamualadele linnaümbruse vabadel maalidel toimub elamuehitus varjatumas vormis ka Tallinna linnaregiooni suvilaaladel. Üleminekuaja alguses omas suvilat viiendik Tallinna linnaperedest. Suvilaalade uuringud näitasid, et suvilapiirkondadesse on elama asunud väga erineva sotsiaalse taustaga rahvastikurühmad. Samuti on suvilaalad kujunenud funktsionaalselt mitmekesiseks. Kõrvuti tekkiva püsiasustusega on säilinud endine puhke- ja aiasaaduste kasvatamise funktsioon ning osa suvilatest on ehitatud ümber kaasaegseteks suvekodudeks. Oluline on suvilaalade roll uuselamuehituses. Analüüsist selgus, et uute eramajade ehitamine või suvilate täielik renoveerimine (mis ehituskuludelt on võrreldav uue eramaja ehitamisega) ületab absoluutarvudes isegi eramajade ehitamist uuselamualadel. Järelikult toimub individuaalelamuehitusel põhinev eeslinnastumine Tallinna linnaregioonis osaliselt suvilapiirkondades, millega paljud linnaelanikud olid seotud juba varem.

Kokkuvõttes võib öelda, et kahe viimase aastakümne jooksul on eeslinnastumise ruumiline avaldumisvorm oluliselt muutunud. Seda ei saa seletada ainult üksi lastega jõukamate perede rändega linnast tagamaa meeldivamasse elukeskkonda. Samas võib öelda, et eeslinnastumine Tallinna linnaregioonis sarnaneb linnaregioonisese rände loogikale teistes riikides, sh Lääne-Euroopas ja Põhja-Ameerikas. Esiteks, elamuehitus on aktiivsem majanduskasvu perioodidel. Teiseks mõjutab rändeprotsessi linnaregioonis nii inimeste, ettevõtete kui ka avaliku sektori tegevus. Kolmandaks avardavad vabad eluaseimed linnaregioonis inimeste valikuid eluasemeturul. Neljandaks, vaba maa olemasolu linnas või linna tagamaal ja linna elukeskkonna kvaliteet määrab, kas jõukama osa rahvastikust parandab oma elamistingimusi linna piires või linnast väljaspool olevatel aladel. Järelikult ei saa väita, et postkommunistlik eeslinnastumine oleks põhimõtteliselt erinev rändetrendidest Lääne linnades, küll aga ei seleta klassikaline „Lääne eeslinnastumise“ kontseptsioon postkommunistlikul perioodil linna tagamaale suunduvat rännet.

See paneb arutlema, kuidas postkommunistlik uurimisraamistik aitab tõlgendada Kesk- ja Ida-Euroopa linnade arengut. Teisisõnu, kuidas peaksime postkommunistlikku uurimisraamistikku rändeanalüüsides defineerima. Oma uurimistööl alusel sõnastasin kolm postkommunistliku perioodi kontseptsiooni.



Kõigepealt on oluline mõista, et paralleelselt muutustega ühiskonnas ja majanduses, muutusid neis riikides ka rändesuundumused. Ka eeslinnaaladesuunaline ränne uuritud perioodil ei kujuta endast rändepõhjustelt homogeenst rändevoo. Seetõttu on esimeseks postkommunismi kontseptsiooniks rändeanalüüsid "postkommunism kui muutus", sest igasse analüüsi on sisse programmeeritud vajadus arvestada antud hetkel valitsevate taustatingimustega ühiskonnas ning rände seletused erinevatel ajamomentidel viimase kahe aastakümne jooksul on tõenäoliselt erinevad.

Teiseks oli vaadeldud perioodi algus seotud kardinaalsete muutustega ühiskonnas ja majanduses ning majanduslangusega. See olukord kujutas endast ka rändeprotsesside konteksti ja seletas nii tagasihoidlikku rändeintensiivsust 1990. aastate alguses (Marksoo (1992, 134; 1999, 84) kui ka minu töös selgunud majanduslikult kehvemal järjel olevate inimeste lahkumist linnast alternatiivsetele elamispiindadele linna tagamaal. Seda uurimisraamistikku väljendab kontseptsioon "postkommunism kui šokk". Sarnased muutused majanduses ja ühiskonnas on toimunud ka teistes Euroopa riikides (nt tööstus- ja põllumajandushõive langus, heaoluriigi taandumine ja riigi rolli vähenemine elamuehituses), kuid postkommunistlikus kontekstis toimusid need muutused loetud aastate jooksul. Kiired muutused majanduses ja eluasemepoliitikas olid väljakutseks inimeste kohanemisevõimele. Ehkki selle uurimisraamistiku tähtsus sotsialismijärgse rände analüüsimisel on ajaga vähenenud, seletab see hästi eeslinnastumist 1990. aastatel, eriti kümnendi alguses.

Kolmanda uurimisraamistikuna olen nimetanud "postkommunismi kui jätkuvust". Juba 1990. aastate alguses võimaldas linnaregiooni ruumistruktuur erinevate rahvastikurühmade rännet tagamaale vabade elamispiindade tõttu. Vabade elamispiindade mõju võib jälgida tänaseni suvilaaladel toimuvate ehitus- ja renoveerimistöde näol. Laiemas kontekstis mõjutab aga sotsialismiajast päritud ruumistruktuur linnaregiooni rännet veel kaua. Suur enamus tallinlastest elab tänagi kitsastes nõukogudeaegsetes paneelilamukorterites ja vajadus kaas-aegse elamispiinna järele kestab, hoolimata elamuehitustempo kiirenemisest. Linna tagamaa vaba maa — endised põllumaad ja sõjaväe valduses olnud rannaalad — on tänaseks maaturul vabalt saadaval. Avaliku sektori mõjukate strateegiate puudumise korral ja elatusaseme kasvades realiseeruvad need klassikalised tõuketegurid linnas ja tõmbetegurid linna tagamaal üha suuremal määral.

Mõned autorid viitavad sellele, et aja jooksul on postkommunistliku uurimisraamistiku tähtsus Kesk- ja Ida-Euroopa linnade arengu seletamisel vähenenud. Näiteks Haase jt (2008) ning Steinführer ja Haase (2007) väidavad, et nii nagu kõikjal arenenud riikides mõjutab ka postkommunistlikke linnasid üha enam nn teine demograafiline üleminek (nt madal sündimus, lasteta leibkondade arvu kasv, rahvastiku vananemine). Samamoodi avanes poliitiliste muutustega nende riikide majandus ja majanduse globaliseerumine mõjutab linnade arengut ka siin. Seetõttu peaks postkommunistlikke linnasid käsitlema kui „linnalist tervikut“ („urban wholeness“: Amin ja Graham 1997), kus kaasaegsed

demograafilised, ühiskondlikud, kultuurilised, majanduslikud ja poliitilised protsessid avalduvad üheaegselt linnalises keskkonnas, mis on päritud varasematest perioodidest (Massey 1979). Enamik Kesk- ja Ida- Euroopa linnadest on sotsialismiperioodist pärinud olulise sotsiaalruumilise “kihi” ja see ruumistruktuur on paratamatult seotud üleilmsete trendidega ka tulevikus. Seetõttu pole postkommunistliku uurimisraamistiku tahaplaanile jätmiseks põhjust. Pigem peaks erinevad uurimisraamistikud teineteist täiendama. Samas mõjutavad linnade arengut tulevikus ka tänased valikud, näiteks avalike ja erahuvide tasakaal linna arengudünaamikas.

## REFERENCES

- AGUILERA, A. (2005), Growth in Commuting Distances in French Polycentric Metropolitan Areas: Paris, Lyon and Marseille. *Urban Studies* 42, pp. 1537–1547.
- AHAS, R., J. JAUHAINEN, S. SILM, M. NUGA, A. TÄHEPÖLD, E. SALUVEER & K. KIVI (2008), *Tallinna ja ümbritsevate omavalitsuste koostöövõimalused ja perspektiivid valglinnastumise kontekstis* (Urban sprawl and inter-municipality cooperation in Tallinn metropolitan area) (Manuscript electronically available at <http://www.tallinn.ee/est/g2402s38094> – 30.04.2008).
- AINSAAR, M. (1997), *Eesti rahvastik Taani hindamisraamatust tänapäevani* (Estonian population from Danish appraisal book until today). Tartu: Tartu University Press.
- AMIN, A. & S. GRAHAM (1997), The Ordinary City. *Transactions of the Institute of British Geographers NS* 22, pp. 411–429.
- ANNISTE, K. (2007), *Eeslinnastumine Tallinna tagamaa suvilapiirkondadesse* (Suburbanisation into the summer home areas in the suburban area of Tallinn) (Study report, Institute of Geography, University of Tartu).
- ANTONS, P. (2003), Tööhõive regionaalsed erinevused ja siseränne (Regional differences in employment and internal migration). In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 121–141. Tallinn: Estonian Statistical Office.
- ARING, J. & G. HERFERT (2001), Neue Muster der Wohnsuburbanisierung. In: K. BRAKE, J.S. DANGSCHAT & G. HERFERT, eds., *Suburbanisierung in Deutschland: aktuelle Tendenzen*, pp. 43–56. Opladen: Leske+Budrich.
- BEAUREGARD, R.A. & A. HAILA (2000), The Unavoidable Continuities of the City. In: P. MARCUSE & R. VAN KEMPEN, eds., *Globalizing Cities: a New Spatial Order?* pp. 22–36. Malden, Oxford, Carlton: Blackwell Publishing.
- BERRY, J. (1976), The Counterurbanization process: Urban America since 1970. *Urban Affairs Annual Review* 11, pp. 17–30.
- BODNÁR, J. & J. BÖRÖCZ (1998), Housing Advantages for the Better Connected? Institutional Segmentation, Settlement Type and Social Network Effects in Hungary's Late State-Socialist Housing Inequalities. *Social Forces* (76)4, pp. 1275–1304.
- BOURNE, L.S. (1997), Reinventing the Suburbs: Old Myths and New Realities. *Progress in Planning* (46)3, pp. 163–184.
- BOURNE, L.S. (2007), Understanding Change in Cities: A Personal Research Path. *The Canadian Geographer* 51(2), pp. 121–138.
- BRADE, I. & T. NEFJODOWA (1998), Entwicklungstendenzen und Perspektiven der Stadt-Umland-Prozesse in Rußland. *Europa Regional* 6(4), pp. 23–34.
- BRÄUER, M. (1997), Stadtentwicklung in der DDR und den neuen Ländern. In: H. MONHEIM & C. ZÖPEL, eds., *Raum für Zukunft. Zur Innovationsfähigkeit von Stadtentwicklungs- und Verkehrspolitik*, pp. 89–107. Essen: Klartext-Verlag.
- BREUER, B. & E. MÜLLER (2002), Großwohngebiete. In: LEIBNIZ INSTITUT FÜR LÄNDERKUNDE, LEIPZIG, ed., *Nationalatlas Bundesrepublik Deutschland. Dörfer und Städte*, pp. 130–131. Berlin, Heidelberg: Spektrum Akademischer Verlag.
- BRIER, M. A. (1970) *Les residences secondaires*. Paris. Cit. in: NYSTRÖM, J. (1989), From the City to the City's Countryside. *Geografiska Annaler, Series B: Human Geography* 71, pp. 183–200.

- BROWN, D. & SCHAFFT, K. A. (2002), Population Deconcentration in Hungary during the Post-Socialist Transition. *Journal of Rural Studies* 18, pp. 233–244.
- BRUNS, D. (1993), *Tallinn: linnaehituslik kujunemine* (Tallinn: architectural formation). Tallinn: Valgus.
- BRUNS, D. (2007), *Raadio ööülikooli loeng: linna kujunemislugu* (Lecture in radio night-university: story of formation of the city). In: A. GANS & J. TOOTSEN, eds., *Raadio ööülikool*. [http://www.ylikool.ee/et/13/dmitri\\_bruns](http://www.ylikool.ee/et/13/dmitri_bruns) – 29.05.2008.
- BUCKLEY, C. (1995), The Myth of Managed Migration: Migration Control and Market in the Soviet Union. *Slavic Review* 54, pp. 896–916.
- CASTELLS, M. (2002), An Introduction to the Information Age. In: G. BRIDGE & S. WATSON, eds., *The Blackwell City Reader*, pp. 125–134. Malden, Mass.: Blackwell Publishing.
- CENSUS (2000), Data available in Estonian Statistical Office: [www.stat.ee](http://www.stat.ee) – 01.05.2008; Individual level database available in Estonian Statistical Office.
- CHAMPION, T. (2001), Urbanization, Suburbanization, Counterurbanization and Reurbanization. In: R. PADDISON, ed., *Handbook of Urban Studies*, pp. 134–161. London: Sage Publications.
- CHAMPION, T. (2002), Population Change and Migration in the British Urban System. In: H. GEYER, ed., *International Handbook of Urban Systems*, pp. 87–120. Chaltenham: Edward Elgar.
- CHESHIRE, P.C. & D.G. HAY (1989), *Urban Problems in Western Europe*. London: Unwin Hyman.
- CHESHIRE, P. (1995), A New Phase of Urban Development in Western Europe? The Evidence for the 1980s. *Urban Studies* 32, pp. 1045–1063.
- CLOUT, H. D. (1974), The Growth of Second-Home Ownership: An Example of Seasonal Suburbanisation. In: J. H. JOHNSON, ed., *Suburban Growth. Geographical Processes at the Edge of the Western City*. Aberdeen. Cit. in: NYSTRÖM, J. (1989), From the City to the City's Countryside. *Geografiska Annaler, Series B: Human Geography* 71, pp. 183–200.
- COUCH, C., L. LEONTIDOU & K.-O. ARNSTBERG (2007), Introduction: Definitions, Theories and Methods of Comparative Analysis. In: C. COUCH, L. LEONTIDOU & G. PETSCHHEL-HELD, eds., *Urban Sprawl in Europe: Landscapes, Land-Use Change & Policy*, pp. 3–38. Oxford: Blackwell Publishing Ltd.
- CROUCH, C. (1999), *Social Change in Western Europe*. Oxford: Oxford University Press.
- DOWNS, A. (1999), Contrasting Strategies for the Economic Development of Metropolitan Areas in the United States and Western Europe. In: A. SUMMERS, P. CHESHIRE & L. SENN, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 15–56. Washington: The Urban Institute Press.
- DÜWEL, J. & N. GUTSCHOW (2001), *Städtebau in Deutschland im 20. Jahrhundert: Ideen – Projekte – Akteure*. Stuttgart, Leipzig, Wiesbaden: B.G. Teubner.
- ÉGERT, B. & D. MIHALJEK (2007), *Determinants of Housing Prices in Central and Eastern Europe*. Bank for International Settlements Working Papers 236 (<http://www.bis.org/list/wpapers/index.htm> – 28.03.2008).
- ENCYCLOPEDIA OF THE CITY (2005), R.W. CAVES, ed. London: Routledge.
- ENYEDI, G. (1996), Urbanization Under Socialism. In: G. ANDRUSZ, M. HARLOE & I. SZELÉNYI, eds., *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, pp. 100–118. Oxford: Blackwell Publishers.

- ENYEDI, G. (1998), Transformation in Central European Postsocialist Cities. In: G. ENYEDI, ed., *Social Change and Urban Restructuring in Central Europe*, pp. 9–33. Budapest: Akadémiai Kiadó.
- ESPON (European Spatial Planning Observation Network) (2006), *Applied Territorial Research. Building a Scientific Platform for Competitiveness and Cohesion. ESPON Scientific Report II, Autumn 2006*. Luxembourg: ESPON Programme.
- ESTONIAN BUILDING REGISTER (2008), Data available in Estonian Statistical Office: [www.stat.ee](http://www.stat.ee) – 01.05.2008
- ESTONIAN CENTRAL BANK (2008), *Statistical indicators. Weighted average annual interest rates of loans granted to individuals* ([www.eestipank.info](http://www.eestipank.info) – 28.03.2008).
- ESTONIAN LAND BOARD (2007), Transactions database. Data forwarded to Department of Geography, University of Tartu.
- ESTONIAN LAND BOARD (2008), *Eesti kinnisvaraturg 2007. aastal* (Estonian real estate market in 2007) ([www.maaamet.ee](http://www.maaamet.ee) – 28.03.2008).
- ESTONIAN URBANISATION DATABASE. Data available in Department of Geography, University of Tartu.
- EUROSTAT (2008), Public database. <http://epp.eurostat.ec.europa.eu> – 29.05.2008.
- FASSMANN, H. & W. MATZNETTER (2005), Stadtentwicklung in Ostmitteleuropa: Konvergenzen, Divergenzen, Transformation. *Geographische Rundschau* 57, pp. 52–59.
- FIALOVÁ, D. (1999), Second Homes in the Hinterland of Prague and Possibilities of their Transformation for Permanent Houses. *Acta Facultatis Rerum Naturalium Universitatis Comenianae. Geographica*, Supplementum 2/II, pp. 213–221.
- FIALOVÁ, D. (2003), Regional Differentiation of Second Housing Transformation in Czechia. *Acta Universitatis Carolinae, Geographica XXXVIII*, 1, pp. 59–65.
- FIELDING, A. (1989), Population Redistribution in Western Europe: Trends since 1950 and the Debate about Counterurbanization. In: P. CONGLON & P. BATEY, eds., *Advances in Regional Demography*, pp. 167–179. London: Belhaven.
- FRIEDRICH, J. (1995), *Stadtsoziologie*. Opladen: Leske + Budrich.
- FREY, W.H. & K.-L. LIAW (1998), Immigrant Concentration and Domestic Migrant Dispersal: Is Movement to Nonmetropolitan Areas „White Flight“? *Professional Geographer* 50(2), pp. 215–232.
- GANG, I. & R. STUART (1999), Mobility Where Mobility Is Illegal: Internal Migration and City Growth in the Soviet Union. *Journal of Population Economics* 12, pp. 117–134.
- GANS, P. & F.-J. KEMPER (2001), Bevölkerung in Deutschland – eine Einführung. In: LEIBNIZ INSTITUT FÜR LÄNDERKUNDE, LEIPZIG, ed., *Nationalatlas Bundesrepublik Deutschland: Bevölkerung*, pp. 12–25. Berlin, Heidelberg: Spektrum Akademischer Verlag.
- GARNETT, N.S. (2007), Suburbs as Exits, Suburbs as Entrance. *Michigan Law Review* 106, pp. 277–304.
- GARREAU, J. (1991) *Edge City: Life of the New Frontier*. New York: Doubleday.
- GENTILE, M. & Ö. SJÖBERG (2006), Intra-Urban Landscapes of Priority: the Soviet Legacy. *Europe-Asia Studies* 58, pp. 701–729.
- GENTILE, M. & T. TAMMARU (2006), Ethnicity and Housing in Ust'-Kamenogorsk, Kazakhstan. *Urban Studies* 43, pp. 1757–1778.

- GEYER, H.S. (1990), Implications of Differential Urbanization on Deconcentration in the Pretoria-Witwatersrand-Vaal Triangle Metropolitan Area, South Africa. *Geoforum* 21, pp. 385–396.
- GEYER, H. (1996), Expanding the Theoretical Foundation of Differential Urbanization. *Tijdschrift voor Economische en Sociale Geografie* 87, pp. 44–59.
- GEYER, H. & T. KONTULY (1993), A Theoretical Foundation for the Concept of Differential Urbanization. *International Regional Science Review* 17, pp. 157–177.
- GLASZE, G. & P. GRAZE (2007), Raus aus Suburbia, rein in die Stadt? Studie zur zukünftigen Wohnmobilität von Suburbaniten der Generation 50+. *Raumforschung und Raumordnung* 65, pp. 467–473.
- GOBER, P. (1989), The Urbanisation of Suburbs. *Urban Geography* 10, pp. 311–315.
- GOODALL, B. (1987), *The Penguin Dictionary Of Human Geography*. London: Penguin Books.
- GORDON, P. (1979), Deconcentration without a “Clean Break”. *Environment and Planning A* 11, pp. 281–290.
- HAASE, A., K. GROßMANN, K., KABISCH, S & A. STEINFÜHRER (2008), Städte im demographischen Wandel: Perspektivenwechsel für Ostmitteleuropa. *Osteuropa* 58. pp. 77–90.
- HAFFNER, M.E.A. & J.S.C.M. HOEKSTRA (2006), Housing Allocation and Freedom of Movement: a European Comparison. *Tijdschrift voor Economische en Sociale Geografie* 97, pp. 443–451.
- HALL, P. (1971), Spatial Structure of Metropolitan England and Wales. In: M. CHISHOLM & G. MANNERS, eds., *Spatial Policy Problems of the British Economy*, pp. 96–125. Cambridge: Cambridge University Press.
- HALL, P. (2001), *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, Massachusetts: Blackwell Publishers Ltd.
- HALL, P. & D. HAY (1980), *Growth Centres in the European Urban System*. Los Angeles: University of California Press.
- HALL, T. (1998), *Urban Geography*. London: Routledge.
- HAMM, B. & I. NEUMANN (1996), *Siedlungs-, Umwelt- und Planungssoziologie*. Opladen: Leske+Budrich.
- HARJU COUNTY GOVERNMENT (1999), *Harju maakonnaplaneering I etapp* (Master plan of Harju county. 1st phase). Tallinn: Harju County Government
- HARJU COUNTY GOVERNMENT (2003), *Harju maakonnaplaneeringu teemaplaneering. Asustust ja maakasutust suunavad keskkonnatingimused* (Thematic master plan of Harju county. Environmental conditions guiding the development of settlement and land use patterns). Tallinn: Harju County Government.
- HARJU COUNTY GOVERNMENT (2008), *Harju maakonna kohalike omavalitsuste üldplaneeringute seis 10.04.2008* (The state of municipality master plans in Harju county in 10.04.2008). www.harju.ee – 29.05.2008.
- HARTSHORN, T. & P. MULLER (1989), Suburban Downtowns and the Transformation of Metropolitan Atlanta’s Business Landscape. *Urban Geography* 10, pp. 375–395.
- HARVEY, D. (2002), The Urban Processes under Capitalism: a Framework for Analysis. In: G. BRIDGE & S. WATSON, eds., *The Blackwell City Reader*, pp. 116–124. Malden, Mass.: Blackwell Publishing.
- HAUSLADEN, G. (1983), *Regulating Urban Growth in the USSR. The Role of Satellite Cities in Soviet Urban Development* (PhD Dissertation, Library of the Syracuse University).

- HEALEY, P. (1997), *Collaborative Planning: Shaping Places in Fragmented Societies*. London: McMillan Press Ltd.
- HEEG, S. (2003), Städtische Flächenentwicklung vor dem Hintergrund von Veränderungen in der Immobilienwirtschaft. *Raumforschung und Raumordnung* 61, pp. 334–344.
- HEIKKILÄ, E. (2003), Differential Urbanisation in Finland. *Tijdschrift voor Economische en Sociale Geografie* 94, pp. 49–63.
- HEITKAMP, T. (2002), Motivlagen der Stadt-Umland-Wanderung und Tendenzen der zukünftigen Wohnungsnachfrage. *Informationen zur Raumentwicklung* 3, pp. 163–171.
- HELEMÄE, J., SAAR, E. & VÖÖRMANN, R. (2000), *Kas haridusse tasus investeering? Hariduse selekteerivast ja stratifitseerivast rollist kahe põlvkonna kogemuse alusel* (Returns to education: the selective and stratifying effect of education in two generations). Tallinn: Estonian Academy of Science Press.
- HERFERT, G. (2001), Stadt-Umland-Wanderungen nach 1990. In: LEIBNIZ INSTITUT FÜR LÄNDERKUNDE, LEIPZIG, ed., *Nationalatlas Bundesrepublik Deutschland: Bevölkerung*, pp. 116–119. Berlin, Heidelberg: Spektrum Akademischer Verlag.
- HERFERT, G. (2005), Neue Entwicklungen in der metropolitanen Peripherie von Berlin. In: J. BURDACK, G. HERFERT & R. RUDOLPH, eds., *Europäische metropolitane Peripherien*, pp. 26–50. Leipzig: Leibniz Institut für Länderkunde.
- HERFERT, G. (2007), Regionale Polarisierung der demographischen Entwicklung in Ostdeutschland – Gleichwertigkeit der Lebensverhältnisse? *Raumforschung und Raumordnung* 65, pp. 435–455.
- HEYE, C. & H. LEUTHOLD (2006), Sozialräumlicher Wandel in der Agglomeration Zürich: Konsequenzen von Suburbanisierung und Reurbanisierung. *disP* 42, pp. 16–29.
- HIRT, S. (2007), Suburbanizing Sofia: Characteristics of Post-Socialist Peri-Urban Change. *Urban Geography* 28, pp. 755–780.
- HOREV, B. (1981), *Problemy raselenija v SSSR*. Moscow: Statistika.
- HOREV, B. (1986), *Razmesheniye naselenija v SSSR*. Moscow: Mysl.
- IOFFE, G. & T. NEFJODOVA (1998), Environs of Russian Cities: A Case Study of Moscow. *Europe-Asia Studies* 50, pp. 1325–1356.
- IOFFE, G. & T. NEFJODOVA (2001), Land Use Changes in the Environs of Moscow. *Area* 33, pp. 273–286.
- JAUHIAINEN, J. (1997), Militarization, Demilitarization and Re-Use of Military Areas: the Case of Estonia. *Geography* 82, pp. 118–126.
- JÕEVEER, J. 2003. Siserände vanuserisused üleminekuaja Eestis (Age differences in internal migration of Estonia in the transition period) . In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 28–48. Tallinn: Estonian Statistical Office.
- KANT, E. (1933), *Ümbrus, majandus ja rahvastik Eestis: ökoloogilis-majandus-geograafilise uurimus* (Environment, economy and population in Estonia: ecological-economic study) (PhD dissertation. University of Tartu). Tartu.
- KÄHRIK, A. (2000), Housin Privatisation in the Transformation of the Housin System: the Case of Tartu, Estonia. *Norsk Geografisk Tidsskrift* 54, pp. 2–11.
- KÄHRIK, A. (2006), *Socio-spatial Residential Segregation in Post-Socialist Cities: the Case of Tallinn, Estonia* (PhD dissertation. University of Tartu). Tartu: Tartu University Press.

- KÄHRIK, A. & T. TAMMARU (2008), Population Composition in New Suburban Settlements of the Tallinn Metropolitan Area. *Urban Studies* 45, pp. 1055–1078.
- KAPLAN, D.H., J.O. WHEELER, S.R. HOLLOWAY & T.W. HODLER (2004), *Urban Geography*. Hoboken, NJ: John Wiley & Sons.
- KASANKO, M., J.I. BARREDO, C. LAVALLE, N. McCORMIK, L. DEMICHELLI, V. SAGRIS & A. BREZGER (2005), Are European Cities Becoming Dispersed? A Comparative Analysis of 15 European Urban Areas. *Landscape and Urban Planning* 77, pp. 111–130.
- KASK, I. (2002), *Tallinna ränne aastatel 1989–1999* (Migration related to Tallinn 1989–1999) (Bachelor's thesis, Department of Geography, University of Tartu).
- KATUS, K., M. KUPISZEWSKI, P. REES, L. SAKKEUS, A. HERM JA D. POWELL (1998), *Internal Migration and Regional Population Dynamics in Europe: Estonian Case Study*. Working paper 98/14. School of Geography. University of Leeds (<http://www.geog.leeds.ac.uk/wpapers/working.html> – 28.03.2008).
- KAZEPOV, Y. (2005), Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 3–42. Malden, Oxford, Carlton: Blackwell Publishing.
- KESTELOOT C. (2000), Urban Socio-Spatial Configurations and the Future of European Cities. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 123–148. Malden, Oxford, Carlton: Blackwell Publishing.
- KINNISASJA OMANDAMISE KITSENDAMISE SEADUS (Law restricting acquirement of a real thing). Adopted 12.02.2003.
- KLIIMASK, J. (1997), Economic Transformation in the Post-Socialist City: the Case of Tallinn. In: M. ÅBERG & M. PETERSON, eds., *Baltic Cities: Perspectives on Urban and Regional Change in the Baltic Area*, pp. 151–167. Lund: Nordic Academic Press.
- KNOX, P. & S. PINCH (2000), *Urban Social Geography*. Essex: Pearson Education Ltd.
- KOK H. & Z. KOVÁCS (1999), The Process of Suburbanisation in the Metropolitan Area of Budapest. *Netherlands Journal of Housing and Built Environment* 14, pp. 119–141.
- KONRAD, G. & I. SZELÉNYI (1977), Social Conflicts of Underurbanisation. In: M. HARLOE, ed., *Captive Cities: Studies in the Political Economy of Cities and Regions*, pp. 157–173. London: John Wiley and Sons.
- KÕRE, J., M. AINSAAR & M. HENDRIKSON (1997), Eluasemepoliitika Eestis 1918–1995 (Housing policy in Estonia 1918–1995). *Akadeemia* 10, pp. 2133–2163.
- KORNAI, J. (1992), *The Socialist System: the Political Economy of Socialism*. Princeton: Princeton University Press.
- KOSTINSKIY, G. (2001), Post-Socialist Cities in Flux. In: R. PADDISON, ed., *Handbook of Urban Studies*, pp. 451–465. London: Sage Publications.
- KRISJANE, Z. (2005), *The Trends of Urban Concentration and Suburbanization: the case of Riga* (Paper presented at the Inaugural Nordic Geographers Meeting, May 2005, Lund, Sweden).
- KULU, H. (1997), *Eestlaste tagasiränne, 1940–1989: Lääne-Siberist pärit eestlaste näitel* (Return migration of Estonians in 1940–1989: the case of Estonians originating from West Siberia). Tartu: Tartu University Press.



- KULU, H. (2003), Housing Differences in the Late Soviet City: the Case of Tartu, Estonia. *International Journal of Urban and Regional Research* 27, pp. 897–911.
- KUNZMANN, K. (1997), The Future of the City Region in Europe. In: K. BOSMA & H. HELDIGE, eds., *Mastering the City I: North European City Planning, 1900 – 2000*, pp. 16–29. Hague: NAI Publishers.
- KUPISZEWSKI, M., H. DURHAM, H. & P. REES (1998), Internal Migration and Urban Change in Poland, *European Journal of Population* 14, pp. 265–290.
- KURS, O. & A. TOOTS (2000), *Ann Marksoo 70. Teadus- ja õppetöö* (Ann Marksoo 70. Scientific and pedagogical work). Tartu: Publicationes Instituti Geographici Universitatis Tartuensis.
- KUTSAR, K. 2003. Siserände sooserisused üleminekuaja Eestis (Gender differences in internal migration of Estonia in the transition period) . In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 49–65. Tallinn: Estonian Statistical Office.
- LADÁNYI, J. & I. SZELÉNYI (1998), Class, Ethnicity and Urban Restructuring in Postcommunist Hungary. In: G. ENYEDI, ed., *Social Change and Urban Restructuring in Central Europe*, pp. 67–86. Budapest: Akadémiai Kiadó.
- LAURISTIN, M. & P. VIHALEMM (1997), Recent Historical Development in Estonia: Three Stages of Transition (1987 – 1997). In: M. LAURISTIN, P. VIHALEMM, K. ROSENGREN & L. WEIBULL, eds., *Return to the Western World*, pp. 73–126. Tartu: Greif.
- LAAS, K. (1985). Inimene maal (Rural people). In: I. RAIG, ed., *Maaelu. Maa sotsiaalse arengu probleeme Eestis*, pp. 5–9. Tallinn: Valgus.
- LAAS, K. (1987), Rahvastiku ränded Eestis (Population migration in Estonia). In: *Geograafia Seltsi Aastaraamat* 22, pp. 81–97. Tallinn: Eesti Entsüklopeedia-kirjastus.
- LAAS, K. (1992), Eesti linnastumine (Urbanisation in Estonia). In: *Akadeemia* 4, 1896–1915.
- LAPPO, G.M. & F.W. HÖNSCH (2000), *Urbanisierung Russlands*. Berlin, Stuttgart: Borntraeger.
- LEETMAA, K. (2002). *Suvilapiirkonnad Harjumaal* (Summer home areas in Harju county) (Study report, Harju County Government).
- LEETMAA, K. (2003), Tallinna linnaregiooni ränne (Migration related to Tallinn urban region). In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 104–120. Tallinn: Estonian Statistical Office.
- LEETMAA, K. (2004), Eeslinnastumine Tallinna linnaregioonis sotsialismijärgsel perioodil (Suburbanisation in the Tallinn metropolitan area after socialism) (MSc thesis. University of Tartu, Department of Geography). Tartu: Tartu University.
- LEETMAA, K. (2005), Eeslinnastumine Tallinna linnaregioonis üleminekuajal: eluasemetüübid ja sihtkohad tagamaal (Suburbanisation in the Tallinn metropolitan area during the transition period: dwelling types and destinations). In: H. KULU & T. TAMMARU, eds., *Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.
- LEETMAA, K., P. METSPALU & T. TAMMARU (2006), Suburbanisation and Commuting Modes in the Tallinn Metropolitan Area. In: Ü. MANDER, C.A. BREBBIA & E. TIEZZI, eds., *The Sustainable City IV. Urban Regeneration and Sustainability*, pp. 127–135. Southampton, Boston: WIT Press.

- LEETMAA, K. & T. TAMMARU (2007), Suburbanisation in Countries in Transition: Destinations of Suburbanizers in the Tallinn Metropolitan Area. *Geografiska Annaler, Series B: Human Geography* 89, pp. 127–146.
- LEETMAA, K., T. TAMMARU & K. ANNISTE (forthcoming), Urban Actors and Residential Suburbanisation in the Tallinn Metropolitan Area. *Tijdschrift voor Economische en Sociale Geografie (special issue: Neighborhood Change in European Cities: New Developments in the Context of the Changing Role of the State)*.
- LE GALÈS, P. (2005), Elusive Urban Policies in Europe. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 235–254. Malden, Oxford, Carlton: Blackwell Publishing.
- LICHTENBERGER, E. (1998), The Geography of Transition in East-Central Europe: Society and Settlement System. In: F. CARTER, P. JORDAN & V. REY, eds., *Central Europe After the Fall of Iron Curtain: Geopolitical Perspectives, Spatial Patterns and Trends*, pp. 137–152. Frankfurt: Peter Lang.
- LISTENGURT, F., J. PORTJANSKII & G. JUSIN (1987), *Programno-tselovoe planirovanije sistem naseleennyh mest*. Moskva: Ekonomika.
- LÕHMUS, L. (2006), *Nõmme ajalugu* (The history of Nõmme). Tallinn: Koolibri.
- LOOGMA, K. (1997), Socio-economic stratification in Tallinn and spatial patterns. In: M. ÅBERG & M. PETERSON, eds., *Baltic Cities: Perspectives on Urban and Regional Change in the Baltic Area*, pp. 168–183. Lund: Nordic Academic Press.
- MACIONIS, J.J. & K. PLUMMER (1998), *Sociology: A Global Introduction*. New York: Prentice Hall Europe.
- MALI, B.Č. (2005), *Large Housing Estates in Ljubljana and Koper, Slovenia* (Research project: RESTATE Restructuring Large-scale Housing Estates in European Cities: Good Practices and New Visions for Sustainable Neighbourhoods and Cities). Utrecht: Faculty of Geosciences, Utrecht University.
- MARCUSE, P. & R. VAN KEMPEN (2000), Conclusion: A Changed Spatial Order. In: P. MARCUSE & R. VAN KEMPEN, eds., *Globalizing Cities: a New Spatial Order?* pp. 22–36. Malden, Oxford, Carlton: Blackwell Publishing.
- MARKSOO, A. (1984a), *Changes in the Regional Migration Model at the Advanced Stage of Urbanization*. (Paper presented at the 25th International Geographical Congress, Symposium on “Migration and Cities”. Rouen, 23–26 August, 1984). Department of Geography, University of Tartu.
- MARKSOO, A. (1984b), Regularities of Urbanisation and Demographical Processes in the Estonian ESSR. In: *Tartu Riikliku Ülikooli Toimetised: geograafia-alaseid töid* (Proceedings of the University of Tartu. Studies on geography) 676, pp. 32–56.
- MARKSOO, A. 1985. Rahvastiku rändest (Population migration), In: I. RAIG, ed., *Maaelu: maa sotsiaalse arengu probleeme Eestis*, pp. 28–34. Tallinn: Valgus.
- MARKSOO, A. (1990), Tallinn Eesti rahvarände süsteemis. In: *Eesti Geograafia Seltsi Aastaraamat* 25, pp. 53–66. Tallinn: Eesti Entsüklopeediakirjastus.
- MARKSOO, A. (1992), Dynamics of Rural Population in Estonia in the 1980s. In: J.-M. PUNNING, ed., *Estonia: Man and Nature*, pp. 129–153. Tallinn: Estonian Science Academy.
- MARKSOO, A. (1995), Estonian Urban System in Transition. In: M. PALOMÄKI & J. KARUNARATNE, eds., *Urban Development and Urban Life*, pp. 179–192. Vaasa: University of Vaasa Press.
- MARKSOO, A. (1999), Restructuring of Urban and Rural Settlement in Estonia. In: F. CARTER & W. MAIK, eds., *Shock-Shift in an Enlarged Europe: the Geography*

- of Socio-economic Change in East-Central Europe after 1989*, pp. 81–102. Aldershot: Ashgate.
- MARKSOO, A. (2005), Linnastumine nõukogude Eestis (Urbanisation in Soviet Estonia), In: H. KULU & T. TAMMARU, eds., *Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.
- MARKSOO, A., H. KALJULAI, I. KASK, U. KAUP, K. RULL & T. RÕIVAS (1983), *Tööjõu territoriaalse mobiilsuse seaduspärasused Eesti NSVs* (Regularities of territorial mobility of labour in Estonian SSR) (Unpublished applied research project, grant T-045). Tartu: University of Tartu, Department of Geography.
- MASSEY, D. (1979), In What Sense a Regional Problem? *Regional Studies* 13, pp. 233–243.
- MEDVEDKOV, O. (1990), *Soviet Urbanisation*. New York: Routledge.
- METSPALU, P. (2005), *Uuselumuehitus ja planeerimispraktika areng Harjumaa näitel* (Housing construction and planning in the Tallinn metropolitan area) (Master thesis, Institute of Geography, University of Tartu).
- MINISTRY OF ECONOMIC AFFAIRS AND COMMUNICATIONS. *Eesti elamumajanduse arengukava aastateks 2003 – 2008* (Development plan of housing sector for the years 2003–2008).  
[http://www.mkm.ee/dokumendid/elamumajanduse\\_arengukava\\_2003-2008.pdf](http://www.mkm.ee/dokumendid/elamumajanduse_arengukava_2003-2008.pdf) – 15.11.2004.
- MINISTRY OF THE ENVIRONMENT. INFO- JA TEHNOKESKUS (1996), *Endise NSVL sõjaväe objektide paiknemine Eestis, kaart* (Military objects of USSR army in Estonia, map). Copy in Department of Geography, university of Tartu.
- MINISTRY OF FINANCE (2000), *Eesti majanduse arengukava 1999–2003* (Development plan of Estonian economy 1999–2003).  
<http://www.mkm.ee/dokumendid/Eesti%20majanduse%20arengukava%201999-2003.pdf> – 15.11.2004.
- MULÍČEK, O. & L. SÝKORA (2007), *Functional Urban Regions in the Czech Republic*. Paper presented at 2<sup>nd</sup> International Urban Geographies of Post-Communist States workshop, Stockholm-Tallinn-Baltic Sea, 7–10 December 2007.
- MUSIL, J. (1980), *Urbanization in Socialist Countries*. White Plains, NY: Sharpe.
- MUST, A. & V. LÕO (1985), Inimene põllumajanduses (People in agriculture). In: I. RAIG, ed., *Maaelu: maa sotsiaalse arengu probleeme Eestis*, pp. 9–24. Tallinn: Valgus.
- MUSTERD, S. (2006), Segregation, Urban Space and Resurgent City. *Urban Studies* 43, pp. 1325–1340.
- MUSTERD, S., H. PRIEMUS & R. VAN KEMPEN (1999), Towards Undivided Cities: Potential of Economic Revitalisation and Housing Redifferentiation. *Housing Studies* 14, pp. 573–584.
- MÜLLER, W. & R. ROHR-ZÄNKER (2001), Amerikanisierung der “Peripherie” in Deutschland? In: K. BRAKE, J.S. DANGSCHAT & G. HERFERT, eds., *Suburbanisierung in Deutschland: aktuelle Tendenzen*, pp. 27–39. Opladen: Leske+Budrich.
- NEW RESIDENTIAL AREA SURVEY (2006), Database available: Department of Geography, University of Tartu.
- NUISSE, H., D. RINK, C. COUCH & J. KARECHA (2007), Decline and Sprawl: Urban Sprawl is not Confined to Expanding City Regions. In: C. COUCH, L. LEONTIDOU & G. PETSCHHEL-HELD eds., *Urban Sprawl in Europe: Landscapes, Land-Use Change & Policy*, pp. 136–162. Oxford: Blackwell Publishing Ltd.

- NYSTRÖM, J. (1989), From the City to the City's Countryside. *Geografiska Annaler, Series B: Human Geography* 71, pp. 183–200.
- OFER, G. (1980), Industrial Structure, Urbanization, and Socialist Growth Strategy: a Historical Analysis, 1940 – 1970. In: S. ROSEFIELDE, ed., *World Communism at the Crossroads: Military Ascendancy, Political Economy, and Human Welfare*, pp. 131–159.
- OGDEN, P.E. & R. HALL (2004), The Second Demographic Transition, New Household Forms and the Urban Population of France during the 1990s. *Transactions of the British Geographers* 29, pp. 88–105.
- OTT, T. (2001), From Concentration to Deconcentration: Migration patterns in the Post-Socialist City. *Cities* 18, pp. 403–412.
- OUŘEDNÍČEK, M. (2007), New Suburban Development in the Post-Socialist City: the Case of Prague. *Geografiska Annaler, Series B: Human Geography* 89, pp. 111–126.
- PAIDA, H. (1962), Transpordi areng Eestis kapitalismi tingimustes (The development of the transport system in Estonia during the capitalist period). In: *Geograafia Seltsi Aastaraamat*, pp. 140–154. Tallinn: Eesti Entsüklopeediakirjastus.
- PALACIN, J. & R. SHELBURNE (2005), *The private housing market in Eastern Europe and the CIS*. Geneva: United Nations Economic Commission for Europe, Economic Analysis Division (Discussion Paper Series No 6).
- PARR, J. (1999), The Metropolitan Area in Its Wider Setting. In: A. SUMMERS, P. CHESHIRE & L. SENN, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 215–242. Washington: The Urban Institute Press.
- PICHLER-MILANOVIČ, N., M. GUTRY-KORYCKA & D. RINK (2007), Sprawl in the Post-Socialist City: The Changing Economic and Institutional Context of Central and Eastern European Cities. In: C. COUCH, L. LEONTIDOU & G. PETSCHHEL-HELD eds., *Urban Sprawl in Europe: Landscapes, Land-Use Change & Policy*, pp. 102–135. Oxford: Blackwell Publishing Ltd.
- PTAČEK, P. (2002), Development of Second Housing in the Olomouc Region. *Geographica, Acta Universitatis Palackianae Olomucensis* 37, pp. 69–75.
- PULLAT, R. (1966), *Tallinnast ja tallinlastest. Nihked elanikkonna sotsiaalses koosseisus 1871–1917* (Tallinn and Tallinners. Changes in social composition 1871–1917). Tallinn: Eesti raamat.
- PULLAT, R. (1968), Eesti linnarahvastiku dünaamika aastail 1917 – 1949 (Dynamics of the urban population in Estonia, 1917–1949). In: *ENSV Teaduste Akadeemia Toimetised* 17, pp. 360–373.
- PULLAT, R. 1972. *Eesti linnad ja linlased XVIII sajandi lõpust 1917. aastani* (Estonian cities and urbanites from the end of XVIII century until 1917). Tallinn: Eesti Raamat.
- PULLAT, R. (1978), *Linnad kodanlikus Eestis. Ajaloolis-demograafiline käsitus* (Cities in bourgeois Estonia: historical-demographic approach). Tallinn: Eesti Raamat.
- PUUR, A. (1997), Emergence of Unemployment: Evidence from Estonia 1989–1995. *Trames* 3, pp. 247–277.
- PÕDER, A. & M. TITMA (2001), Kodukeskkond ja seda mõjutanud tegurid (Determinants of housing interior). In: M. TITMA, ed., *Sõjajärgse põlvkonna elutee ja seda kujundanud faktorid*, pp. 97–122. Tartu: Tartu University Press.

- RAAGMAA, G. (1996), Shifts in regional development of Estonia during the transition. *European Planning Studies* 4, pp. 679–699.
- RAAGMAA G. & K. KROON (2005), The Future of Collective Farms' Built Social Infrastructure: Choosing Between Central Place and Network Theories. *Geografiska Annaler, Series B: Human Geography* 87B, pp. 205–224.
- RAUKAS, A., ed. (1999), *Endise Nõukogude Liidu sõjaväe jääkreostus ja selle likvideerimine* (Contamination of former military forces of the Soviet Union and its liquidation). Tallinn: Keskkonnaministeerium.
- RAVBAR, M. (1997), Slovene Cities and Suburbs in Transformation. *Acta Geographica Slovenica* 37, pp. 65–109.
- REIMAN, H. (1935), Rahvastiku elukohavahetus 1922. ja 1934. a. vahel (Migration between 1922 and 1934). In: *Eesti Statistika* 166, pp. 421–426.
- RENAUD, B. (1992), The Housing Systems of the Former Soviet Union: Why Do the Soviets Need Housing Markets? *Housing Policy Debate* 3, pp. 877–899.
- RUDOLPH, R. & I. BRADE (2005), Moscow: Processes of Restructuring in the Post-Soviet Metropolitan Periphery. *Cities* 22, pp. 135–150.
- RUOPPILA, S. (2005), Housing Policy and Residential Differentiation in Post-Socialist Tallinn. *European Journal of Housing Policy* 5, pp. 279–300.
- SAKKEUS, L. 1991. *Post-war Migration Trends in Estonia*. Tallinn: EKDK Rahvastiku-uuringud seeria B:15.
- SALUKVADZE, J. (2007), *Market versus Planning? Mechanisms of Spatial Changes in the Post-Soviet Tbilisi*. Paper presented at 2<sup>nd</sup> International Urban Geographies of Post-Communist States workshop, Stockholm-Tallinn-Baltic Sea, 7–10 December 2007.
- SALUVEER, R. (2001), *Suvilate geograafiast* (Geography of summer homes) (Bachelor's thesis, Department of Geography, University of Tartu).
- SASSEN, S. (1991), *The Global City: New York, London, Tokyo*. Princeton, NJ: Princeton University Press.
- SASSEN, S. (2001), Impacts of Information Technologies on Urban Economies and Politics. *International Journal of Urban and Regional Research* 25, pp. 411–418.
- SCHOLLMEIER, A. (1990), *Gartenstädte in Deutschland: Ihre Geschichte, städtebauliche Entwicklung und Architektur zu Beginn des 20. Jahrhunderts*. Münster: Lit.
- SCHÖNERT, M. (2003), 20 Jahre Suburbanisierung der Bevölkerung: zur Stadt-Umland-Wanderungen in westdeutschen Großstadregionen. *Raumforschung und Raumordnung* 61, pp. 457–471.
- SHABAD, T. (1986), Urban Issues in the Soviet Union. In: M. CONZEN, ed., *World Patterns of Modern Urban Change: Essays in Honour of Chauncy D. Harris*, pp. 101–128. Chicago: University of Chicago.
- SHAW, D. (1983), The Soviet Urban General Plan and Recent Advantage in Soviet Urban Planning. *Urban Studies* 20, pp. 393–403.
- SCHÖNERT, M. (2003), 20 Jahre Suburbanisierung der Bevölkerung: zur Stadt-Umland-Wanderungen in westdeutschen Großstadregionen. *Raumforschung und Raumordnung* 61, pp. 457–471.
- SILLASTE, J. (1985), Elutarbeline teenindus (Personal services). In: I. RAIG, ed., *Maaelu. Maa sotsiaalse arengu probleeme Eestis*, pp. 94–101. Tallinn: Valgus.
- SILM, S., R. AHAS & M. NUGA (forthcoming), Gender Differences in Space-Time Mobility of Dwellers from New Residential Areas in the Suburbs of Tallinn. *Europe-Asia Studies*.

- SJÖBERG, Ö. (1999), Shortage, Priority and Urban Growth: Towards a Theory of Urbanisation under Central Planning. *Urban Studies* 36(13), pp. 2217–2236.
- SJÖBERG, Ö. & T. TAMMARU (1999). Transitional Statistics: Internal Migration Patterns and Urban Growth in Post-Soviet Estonia. *Europe-Asia Studies* 51, pp. 821–842.
- SMITH, D. (1996), The Socialist City, In: G. ANDRUSZ, M. HARLOE & I. SZELÉNYI, eds., *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, pp. 70–99. Oxford: Blackwell Publishers.
- SMITH, A. & J. PICKLES (1997), Introduction: Theorising Transition and the Political Economy of Transformation. In: J. PICKLES & A. SMITH, eds., *Theorising Transition: the Political Economy of Post-Communist Transformations*, pp. 1–22. London: Routledge.
- STEINACKER, A. (2003), Infill Development and Affordable Housing: Patterns from 1996 to 2000. *Urban Affairs Review* 38, pp. 492–509.
- STEINFÜHRER, A. & A. HAASE (2007), Demographic Change as a Future Challenge for Cities in East Central Europe. *Geografiska Annaler, Series B: Human Geography* 89, pp. 183–195.
- SZELÉNYI, I. (1996), Cities under Socialism – and After. In: G. ANDRUSZ, M. HARLOE & I. SZELÉNYI, eds., *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, pp. 286–317. Oxford: Blackwell Publishers.
- SUMMER HOME AREAS SURVEY (2002), Data available: Harju County Government, Estonia.
- SUMMER HOME AREAS SURVEY (2007), Database available: Department of Geography, University of Tartu.
- SÝKORA, L. (1999), Process of Socio-spatial Differentiation in Post-communist Prague. *Housing Studies* 14, pp. 679–701.
- SÝKORA, L. & D. CERMÁK (1998), City Growth and Migration Patterns in the Context of “Communist” and “Transitory” Periods in Prague’s Urban Development. *Espace. Population. Societies* 3, pp. 405–416.
- TALLINNA LINNA STATISTILINE AASTARAAMAT 1924 (Statistical yearbook of Tallinn 1924) (1925), Tallinn. Cit. in: Bruns, D. 1993. *Tallinn. Linnaehituslik kujunemine*. Tallinn: Valgus.
- TALLINNA LINNA STATISTILINE AASTARAAMAT 1940 (Statistical yearbook of Tallinn 1940) (1941). Tallinn. Cit. in: Bruns, D. 1993. *Tallinn. Linnaehituslik kujunemine*. Tallinn: Valgus.
- TALLINN CITY GOVERNMENT (2000), *Tallinna üldplaneering* (Master plan of the city of Tallinn). Tallinn: Tallinn City Government, Department of Sustainable Development and Planning.
- TALLINN CITY GOVERNMENT (2002), *Tallinna elamuehitusprogramm “5000 eluaset Tallinna”* (Housing program “5000 dwellings to Tallinn”).
- TAMMARU, T. (2000), Suburbanisatsioon Eesti linnastumises (Suburbanisation in the urbanisation of Estonia). In: J. JAUHAINEN & H. KULU, eds., *Inimesed, ühiskonnad ja ruumid. Inimgeograafia Eestis*, pp. 77–88. Tartu: Publications Instituti Geographici Universitatis Tartuensis 87.
- TAMMARU, T. (2001a), *Linnastumine ja linnade kasv Eestis nõukogude aastatel* (Urbanisation and urban growth in Estonia in the Soviet period) (PhD dissertation. University of Tartu). Tartu: Tartu University Press.

- TAMMARU, T. (2001b), Suburban Growth and Suburbanisation Under Central Planning: the Case of Soviet Estonia. *Urban Studies* 38, pp. 1314–1357.
- TAMMARU, T. (2003), Urban and Rural Population Change in Estonia: Patterns of Differentiated and Undifferentiated Urbanisation. *Tijdschrift voor Economische en Sociale Geografie* 94, pp. 112–123.
- TAMMARU, T. (2005), Suburbanisation, Employment Change, and Commuting in the Tallinn Metropolitan Area. *Environment and Planning A* 37, pp. 1669–1687.
- TAMMARU, T., H. KULU & I. KASK (2003), Siserände üldsuunad (The main directions of internal migration). In: T. TAMMARU & H. KULU, eds., *Ränne üleminekuaja Eestis*, pp. 5–27. Tallinn: Estonian Statistical Office.
- TAMMARU, T., H. KULU & I. KASK (2004), Urbanization, Suburbanization, and Counterurbanization in Estonia. *Eurasian Geography and Economics* 45, pp. 212–229.
- TAMMARU, T. & K. LEETMAA (2007), Suburbanisation in Relation to Education in the Tallinn Metropolitan Area. *Population, Space and Place* 13, pp. 279–292.
- TAMMARU, T., K. LEETMAA, S. SILM & R. AHAS (forthcoming) (a), Temporal and Spatial Dynamics of the New Residential Areas around Tallinn. *European Planning Studies*.
- TAMMARU, T., K. LEETMAA, A. KÄHRIK & M. NUGA (forthcoming) (b), Living in a Nevereverland: New Suburban Settlements on Previous Farmlands around Tallinn. In: L. SÝKORA & K. STANILOV, eds., *Confronting Suburbanization: Urban Decentralization in Post-Socialist Central and Eastern Europe*, Oxford: Blackwell Publishing Ltd.
- TAMMARU, T. 2003. Siserände rahvuserisused üleminekuaja Eestis (Ethnic differences in internal migration of Estonia in the transition period) . In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 66–82. Tallinn: Estonian Statistical Office.
- TAYLOR, P.J. (1994), *Political Geography: World-Economy, Nation-State and Locality*. New York: Longman Scientific & Technical.
- TIJDSCHRIFT VOOR ECONOMISCHE EN SOCIALE GEOGRAFIE 94(1) (2003), Special issue: Testing the Differential Urbanisation Model in Developed and Less Developed Countries. Eds. T. Kontuly & H.S. Geyer
- TIMÁR, J. & VÁRADI, D. (2001), The Uneven Development of Suburbanisation during Transition in Hungary. *European Urban and Regional Studies* 8, pp. 349–360.
- TOSICS, I. (2003), City Development in Central and Eastern Europe since 1990: The Impacts of Internal Forces. In: F.E.I. HAMILTON, K. DIMITROWSKA-ANDREWS & N. Pichler-Milanovic, eds., *Transformation of Cities in Central and Eastern Europe: towards Globalization*, pp. 44–78. Tokyo: United Nations University Press.
- TOSICS, I., É. GERŐHÁZI & H. SZEMZŐ (2005), *Large Housing Estates in Budapest and Nyíregyháza* (Research project: RESTATE Restructuring Large-scale Housing Estates in European Cities: Good Practices and New Visions for Sustainable Neighbourhoods and Cities). Utrecht: Faculty of Geosciences, Utrecht University.
- UIBOUPIN, M. 2003. Siserände hariduserisused üleminekuaja Eestis (Education differences in internal migration of Estonia in the transition period) . In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 83–103. Tallinn: Estonian Statistical Office.

- UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, POPULATION DIVISION (2006), *World Urbanization Prospects: the 2005 Revision*. New York: United Nations.
- VAN DEN BERG, L. (1999), The urban life-cycle and the role of market-oriented revitalization policy in Western Europe. In: A. SUMMERS, P. CHESHIRE & L. SENN, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 539–558. Washington: The Urban Institute Press.
- VAN DEN BERG, L., R. DREWETT, L. KLAASSEN, A. ROSSI & C. VIJVERBERG (1982), *A Study of Urban Growth and Decline*. Oxford: Pergamon Press.
- VAN DEN BERG, L., L. BRUNS & L. KLAASSEN (eds.) (1987), *Spatial Cycles*. Brookfield: Gower Publishing Company.
- VAN DER BURG, A.J. & DIELEMAN, F.M. (2004), Dutch Urbanisation Policies: from “Compact City” to “Urban Network”. *Tijdschrift voor Economische en Sociale Geografie* 95, pp. 108–116.
- VELDI, S. (1998), Hundilaanest raudteekülaks, külast aleviks, alevist linnaks (From wolves forest to railway village, from villages to a borough, from borough to a town). *Elva Postipoiss* 03.05.2008. pp. 4–5.
- VINING, D. & A. STRAUSS (1977), A Demonstration That the Current Deconcentration of Population in the United States is a Clean Break with the Past. *Environment and Planning A* 9, pp. 751–758.
- WEŃCŁAWOWICZ, G. (1998), Social Polarization in Postsocialist Cities: Budapest, Prague and Warsaw. In: G. ENYEDI, ed., *Social Change and Urban Restructuring in Central Europe*, pp. 55–56. Budapest: Akadémiai Kiadó.
- WEŃCŁAWOWICZ, G., A. GUSZCZA, S. KOZŁOWSKI, A. BIELEWSKA, A. ADAMIĄK, M. KRASOWSKA, A. FADER & A. BIERZYŃSKY (2005), *Large Housing Estates in Warsaw, Poland* (Research project: RESTATE Restructuring Large-scale Housing Estates in European Cities: Good Practices and New Visions for Sustainable Neighbourhoods and Cities). Utrecht: Faculty of Geosciences, Utrecht University.
- WIEGANDT, C.-C. (2000), Urban Development in Germany – Perspectives for the Future. *GeoJournal* 50, pp. 5–15.



## **CHAPTER II: PUBLICATIONS**



## **2.1. Studies on residential suburbanisation in the Tallinn metropolitan area in the 1990s**



**2.1.1.**

**Leetmaa, K. & T. Tammaru (2007), Suburbanisation  
in Countries in Transition: Destinations of Suburbanizers  
in the Tallinn Metropolitan Area. *Geografiska Annaler*,  
Series B: Human Geography 89, pp. 127–146**

**2.1.2.**

**Tammaru, T. & K. Leetmaa (2007), Suburbanisation  
in Relation to Education in the Tallinn Metropolitan Area.  
Population, Space and Place 13, pp. 279–292**



## **2.2. Studies on new housing construction since 1991**



**2.2.1.**

**Tammaru, T., K. Leetmaa, S. Silm & R. Ahas  
(forthcoming) (a), Temporal and Spatial Dynamics  
of the New Residential Areas around Tallinn.  
European Planning Studies**

## **Temporal and spatial dynamics of the new residential areas around Tallinn**

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### **ABSTRACT**

New housing construction is the most visible manifestation of the rapid suburbanisation process taking place in the former centrally planned countries of Central Eastern Europe. This paper analyses residential housing construction around Tallinn, the capital city of Estonia, in the period 1991–2005. Our data comes from the New Residential Area Survey that was carried out in 2006. The main results of the study reveal that housing construction was modest in the 1990s, but grew rapidly in the 2000s. In comparison to the Soviet period, private interest led new housing construction takes place in areas that are closer to Tallinn and were earlier reserved for other functions; i.e. former agricultural and coastal (often military) areas. Instead of the sprawl of detached housing further away from the capital city over time, we find increasing in-fills and multifamily housing construction in the 2000s around Tallinn. This leads to changes both in the internal structure (small but merging settlements close to Tallinn are different from the Soviet time compact settlements located all over the rural areas) and functioning (increase in daily commuting) of the metropolitan area. We argue that the transition period ends in the housing market

when a new and better balance between public and private interests emerges in Estonia like in Western Europe.

**Keywords:** suburbanisation, new residential areas, urban sprawl, Central Eastern Europe, Tallinn

## INTRODUCTION

Suburbanisation, i.e. population migration from the central cities to the suburbs, is one of the most important features of spatial population change in many countries in Central Eastern Europe (Brown and Schafft, 2002; Krisjane, 2005; Kupiszewski et al., 1998; Ouředníček, 2007; Ravbar, 1997), including Estonia (Tammaru et al., 2004). The construction of new residential areas is the most visible manifestation of the residential differentiation that suburbanisation causes. However, this dimension of suburbanisation has not been thoroughly studied in Central Eastern European countries in transition. The aim of the paper is to analyze the temporal and spatial dynamics of new housing construction around Tallinn, the capital city of Estonia, and to compare these changes to the earlier settlement pattern. More precisely, we seek answers to the following research questions: What temporal changes are taking place in housing construction since 1991<sup>1</sup>? What is the share of detached houses in the new housing stock? What are the regularities in the spatial distribution of the housing construction? To which extent are the post-1991 residential areas related to the existing built-up areas and social infrastructure? Finally, we ask whether the conventional explanation of the suburbanisation phenomenon — the migration of better-off people to fulfil their dream of having a detached house in a pleasant suburban environment — is applicable to the new residential areas around Tallinn.

We focus on the Tallinn metropolitan area in the current study as previous analyses reveal that suburban<sup>2</sup> population growth is fastest in the capital city region (Tammaru et al., 2004). 2000 census data indicates that most of the in-migrants settled in the existing housing stock on the one hand, but new housing construction was also most intense compared to other areas in Estonia (Leetmaa and Tammaru, 2007; Tammaru and Leetmaa, 2007). The paper proceeds as follows. We start with a discussion on changes in the main

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<sup>1</sup> The start year for the analysis is 1991 when Estonia regained independence.

<sup>2</sup> We defined the suburban area of Tallinn as follows: All municipalities from which at least 15% of the working population commuted daily to Tallinn according to census 2000 belong to the metropolitan area (Tammaru et al., 2004). The suburban area of Tallinn include all the municipalities of Harju county (with the exception of Padise), based on this definition. We also included in our study those new residential areas of the city of Tallinn that are located in the previous agricultural areas on the western edge of the city, as their evolution is similar to suburban housing development.

determinants of the spatial and temporal distribution of the new residential areas, which will lead us to the hypotheses for the subsequent data analysis. Then we will introduce the methods of data collection and data analysis, followed by a chapter that presents the main results of the study, by presenting a detailed picture of the number, composition and location of the new residential areas built in the years 1991–2005 or during our study period. We conclude with a discussion of the key factors influencing the temporal and spatial dynamics of the new housing construction.

## **1 MAIN DETERMINANTS OF THE SPATIAL AND TEMPORAL DISTRIBUTION OF THE NEW RESIDENTIAL AREAS**

The societies of Central Eastern Europe have been rapidly changing since the collapse of the Soviet Union (Bunce, 1999; Korhonen, 2001). The positive changes taking place in the overall neo-liberal atmosphere (Bockman and Eyal, 2002) also increased social and spatial polarization in these societies (Weclawowicz, 1998). Furthermore, some authors argue that suburbanisation itself is an important dimension in the post-socialist stratification order (Kostinskiy, 2001; Timár and Váradi, 2001). There are two major explanations for suburbanisation during the transition period. First, people with lower socio-economic status leave the cities to find cheaper housing elsewhere, including in the suburbs (Kulu and Billari, 2006; Ladányi and Szelényi, 1998). Second, people with higher socio-economic status seek better living conditions outside the big housing estates of major cities and try to achieve their dream of having a detached house (Kostinskiy, 2001; Sýkora and Cermák, 1998). The latter increases demand for new housing construction around the major cities as well.

Our previous research shows that migration from Tallinn to the surrounding municipalities was modest in the 1990s compared to the late Soviet period agriculture based suburban population growth, and the majority of the immigrants settled in the already existing and typically cheaper pre-transition period housing stock (Leetmaa and Tammaru, 2007). Housing construction was also modest in the 1990s compared to the late Soviet period according to the 2000 census returns. This means that the suburbanisation in the early transition years was at least to some extent related to economic hardships (increased living costs in the major cities; difficulties adjusting to changes in the labour market, etc); i.e. it had a distinctively post-socialist character and did not match the traditional image of suburbanisation in the western societies of the post-War decades, when people with higher socio-economic status began to seek a better environment and housing in the suburbs (Dieleman and Wallet, 2003; Mieszkowski and Mills, 1993; Prud'homme and Nicot, 2004; Thomas, 1974).

Despite modest housing construction in the 1990s, two important changes took place at that time that started to determine the location of the new housing construction, namely land reform, and the revision of planning principles. Land

reform in the form of restitution created preconditions for the scattered spatial distribution of the new residential areas. First of all, developers were able to buy only small plots of land due to the large number of owners that emerged as a result of the restitution. Secondly, the land available for housing development entered the housing market only step-wise. The speed of restitution depended on several factors, starting from individual differences in paper processing abilities of gainful owners, and ending with the disputes between the descendants of the previous pre-war owners. Only 2% of the land was recorded in the cadastre by the end of 1995 in Estonia. The respective figure was 37% by the end of 2000 and 75% by the end of 2005 (Estonian Land Board, 2006). Thus, in its spatial expression, restitution and privatization of land took place in patches — only the land with legally clear ownership moved into the housing market, and this did not follow any rational order from the perspective of land use planning. Such scattered nature housing development could be followed also elsewhere in Central Eastern Europe (Ouředníček, 2007).

The scattered nature of housing development is also directly linked to the establishment of the new principles for spatial planning. As a reaction to the Soviet time central planning, the opposing very liberal atmosphere in countries in transition started to prevail (Bockman and Eyal, 2002), which brought along a shift from public led to private led spatial planning. Estonia is a good example where the cornerstone of the housing policy states that the vast majority of the population should be able to improve their living conditions in the private housing market. This means that that the preferences of people, the activities of housing developers and the lending policy of commercial banks should determine the size and location of housing construction (Ruoppila, 2005). The detailed plans for small parcels of land initiated by private housing developers rather than the comprehensive strategic land use plans of the municipalities guide the housing construction in Estonia (Metspalu, 2005).

Suburbanisation is also closely related to overall economic growth and the related increase in personal incomes (Manson et al., 1984; Margo, 1992). Estonia is known as a country of early, radical and successful reforms (Bunce, 1999). Economic growth and personal wealth grew rapidly in Estonia since the end of the 1990s as a result of the reforms. This was paralleled by the lowering of the interest rates as economic growth accelerated also in Western Europe. The combination of those internal and external factors led to the extremely quick growth of the real estate and mortgage markets in the first half of the 2000s in Estonia, and the mortgage debt as a percentage of GDP reached to the level of Greece and Italy by the mid-2000s (Palacin and Shelburne, 2005).



## 2 HYPOTHESES

Together with regaining of independence in 1991, large-scale standardized housing construction that prevailed both in Tallinn and neighbouring urban and rural municipalities during the Soviet period came to an end. Based on the discussion in previous section, we expect rapid growth in housing construction in the 2000s in comparison to the 1990s. The Estonian economy began to quickly improve since the end of the 1990s, and the household consumption increased considerably between 1995 and 2005 (Eurostat, 2006). By the mid-1990s the privatization of land and apartments had also reached the stage that began to support new housing construction. The activities from commercial banks and private housing developers intensified in the late 1990s, and the number of mortgages started to increase quickly (Uusmaa, 2007). This, together with the push factors in the city — the shortage of high-quality dwellings and the living environment inherited from the Soviet era — allows us to formulate the first hypothesis:

*Hypothesis 1: New housing construction intensified considerably around Tallinn since the late 1990s.*

Suburban population growth was strongly linked to multifamily housing construction of the wealthy collective farms that were in need of labour during the Soviet period (Tammaru, 2001). We presume that major changes in housing composition took place during the transition period. As a significant share of the urban population lived in the tight Soviet-built or even older apartments at the beginning of the transition period (Ruoppila and Kährik, 2003), and the housing career of people with higher socio-economic status took place within the cities during the Soviet period ((Kulu, 2003; Pöder and Titma, 2001), we expect that together with the new emerging opportunities, wealthy people began to improve their living conditions by exchanging their apartment in the city for a more spacious detached house in the suburbs.

*Hypothesis 2: The share of detached houses increased in housing construction in comparison to the Soviet period.*

Population growth occurred across all suburban municipalities around Tallinn, but in a form of compact settlements during the Soviet period, with the key actors shaping the settlement pattern and restricting urban sprawl being agricultural farms and Soviet military troops. Vast areas — fields and coastal areas — were to a large extent closed to residential use (Marksoo, 2005; Jauhiainen, 1997). Both of these factors lost their importance by 1994, when the last Russian troops left Estonia and agricultural production became insignificant (Puur, 1997), and private housing developers and commercial banks became the new key actors in housing construction (Leetmaa and Tammaru, 2007). At the

same time, the importance of Tallinn as the economic growth centre increased, and the majority of the new well-paid jobs in the growing economic sectors are concentrated into the capital city (Antons, 2003). Wealthy people leaving for the suburbs therefore need to maintain strong ties with Tallinn and to commute daily to the city (Tammaru, 2005). It follows that a short distance from the city is much more significant in guiding housing construction today compared to the Soviet period, when both people and jobs left the city. We can formulate two hypotheses based on the above:

*Hypothesis 3: Proximity to the city became a decisive factor influencing the location of new suburban housing in 1991–2005 compared to the Soviet period.*

*Hypothesis 4: New housing construction mainly takes place in areas to a large extent closed previously to other land use functions; i.e. former fields and military areas in coastal districts.*

This means that the settlement structure of the Tallinn metropolitan area is gradually changing, and suburban settlements are spreading on the former closed areas. Land restitution and privatization processes that placed land in private ownership piece by piece (i.e. in small units belonging to the families of farmers) in the context of liberal attitude towards land use planning have important impact on the spatial form of urban sprawl. These factors hinder the development of compact settlements. When we add the increasing activities of the real estate and financial sectors, in combination with the tight competition of local municipalities, we expect a random and unplanned settlement structure emerging around Tallinn. This leads to our last hypothesis:

*Hypothesis 5: The spatial pattern of new residential areas is random and fragmented, scattered on the previous agricultural lands around Tallinn and in the coastal areas.*

Provided that the following analysis supports the scattering hypothesis, the main issue from the perspective of sound urban planning is how to provide the new poorly planned settlements with adequate local infrastructure (public transport, electricity, water and sewage systems, schools, kindergartens etc.) and how to handle the rapidly growing traffic demand (Ahas et al., 2006). Therefore we will also study the availability of infrastructure in the new suburban settlements around Tallinn.

### **3 DATA AND METHODS**

The study is based on the New Residential Areas Survey 2006 in the suburban municipalities around Tallinn (footnote 2, see also Roose, 2006). As a first step

in building the database, we mapped all new residential areas built in 1991 through 2005, using available datasets. We consider settlements with at least five households (counted on the bases of main entrances/front doors) built since 1991 with a minimum distance between the centric points of the houses being 200 meters as new residential areas. The 200m criterion is used by Nordic countries in defining urban settlements (Falk, 1976). The five household criteria was the best compromise between research interests and financial opportunities. Namely, the number of new freestanding detached houses is small, but their location is scattered, and it would have been very time-consuming to include those in the inventory. As a final restriction, we excluded Soviet-era summer cottage areas from the data analysis.

In this study, the elementary spatial units are front doors that represent the number of households. This means that unlike freestanding detached houses, freestanding new multifamily houses containing at least five households are also considered to be new residential areas. We selected doors rather than houses as the elementary research unit to maintain the true distribution of households over the housing types. However, as the freestanding detached houses and Soviet-era summer cottage areas (where new housing construction also takes place) are excluded, we should note that there is a slight over-representation of multifamily houses in our data. Using those definitions, we began to build our research database. The basis for the dataset is the 2000 census (the map of houses built since 1991). For additional data on post-census housing construction, we used data from the Estonian Building Registry and Estonia's leading map company, Regio Ltd. As a final step, we performed fieldwork to control the pooled dataset based on the three sources.

In addition to locating the new residential areas, we filled in an inventory card for every settlement, which included questions about the number of houses and front doors/households, the construction stage of the settlements (i.e. the number of buildings completed and under construction, and free plots of land were also mapped), existing infrastructure within and near the settlements, etc. Data on infrastructure outside the settlements also comes from the other existing datasets. Finally, photos of typical and untypical views in the new settlements were also taken during the fieldwork. The initial inventory resulted in 178 residential areas built since 1991. We excluded seven settlements from the final analyses, because these were mainly typical Soviet-era apartment blocks completed in 1991. Thus our final database includes information about 171 new settlements in the suburbs around Tallinn (figure 1). This is a house-level GIS dataset, which is linked to pre-transition-period settlements, transport routes and social infrastructure.

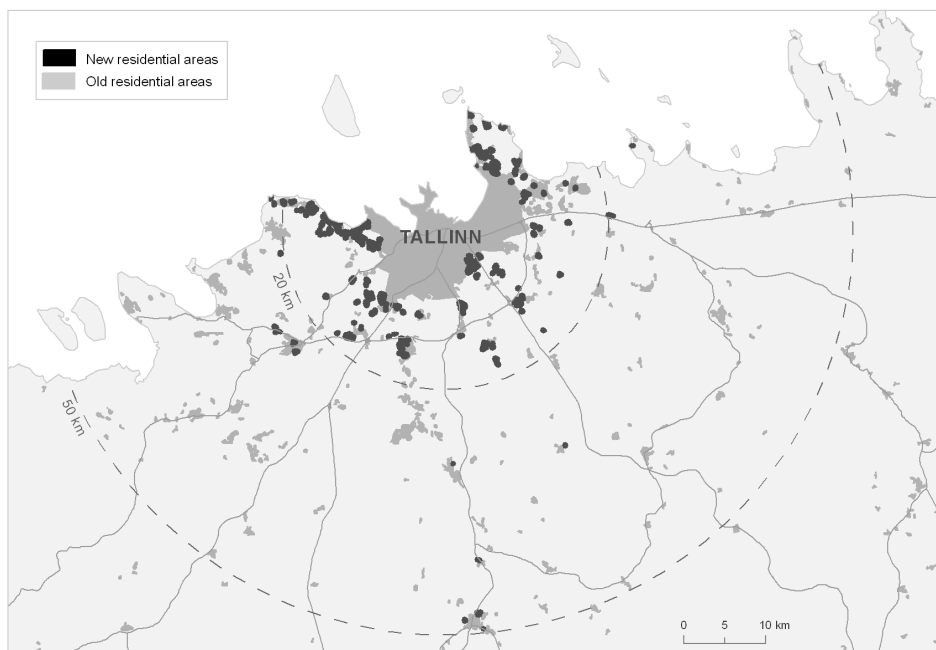


Figure 1. New residential areas in the suburban municipalities around Tallinn.

Data on the new residential areas forms the backbone of the current paper. But we also use some data from the follow-up sample survey performed among residents of new settlements, which was carried out in spring 2006. There are 3426 houses and 5589 front doors/households in the 171 research settlements. The sample consisted of 600 families, and all households had an equal opportunity to be interviewed. As there is no register of the inhabitants of the new settlements, the sample was taken from the dataset of our new residential areas, with the basic selection units once again being front doors/households, in order to maintain the true distribution of households over dwelling types. A minimum of five interviews were completed in one settlement (but more in larger settlements). The fieldwork was carried out by the leading survey company in Estonia, TNS Emor.

#### **4 RESULTS: SPATIAL AND TEMPORAL DYNAMICS OF NEW HOUSING CONSTRUCTION IN 1991–2005**

Approximately 5,600 households and 17,200 inhabitants live in the 3,400 houses in the 171 new post-1991 settlements in the suburban municipalities around Tallinn (table 1). Our first research question concerned the temporal dynamics of housing construction. Housing construction in the form of

standardized apartment blocks almost ended, and the building of detached houses was relatively modest too during the major reforms and economic downturn in the beginning of the 1990s. Only a few houses, including castle-size villas, were built by the so-called new rich at the beginning of the 1990s (figure 2). Housing construction was self-financed, as mortgages were not yet available at that time. New housing construction began to increase again in the mid-1990s (figure 3), but it halted to some extent due to the Russian economic crisis in 1998. Since 2001 one can observe a dramatic increase in housing construction — one third of all the households living in the new suburban settlements live in buildings completed in 2005. This confirms the first hypothesis of our analysis — although the demand for better housing existed from the very beginning of the transition period (Loogma, 1997), the growth in housing construction was not possible before the favourable combination of inner mainly Estonia related (economic growth and related improvement of the living standard of people following the radical reforms) and mainly outer (favourable mortgages as a result of the lowering of interest rates in Europe) factors emerged for housing development. The financing pattern of purchasing a new house changed compared to the first half of the 1990s and became similar to the advanced market economies, where most people buy their dwellings with loans.

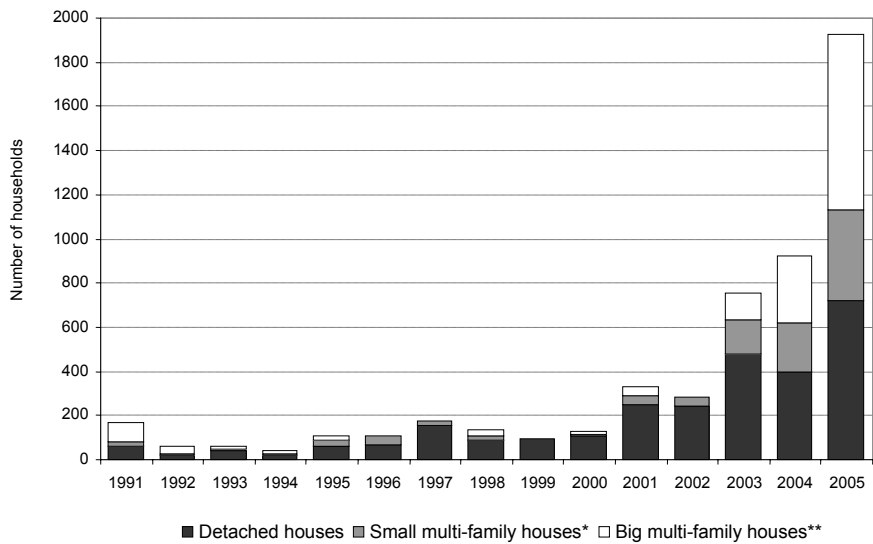
**Table 1.** Distribution of settlements, households and inhabitants by settlement type.

	Detached housing settlements		Multifamily housing settlements		Mixed housing settlements		Total	
	Number	Share	Number	Share	Number	Share	Number	Share
Settlements	79	46	19	11	73	43	171	100
Doors/ Households	1 129	20	908	16	3 552	64	5 589	100
Inhabitants*	3 861	22	2 466	14	10 897	63	17 224	100

\* Mean household size in detached houses is 3.4 and in households living in multifamily houses is 2.7.



**Figure 2.** Example of the self-financed villa construction of the early 1990s in Harku.



\* includes semi-detached houses, row houses, and apartment houses with less than 10 households  
 \*\* includes apartment houses with 10 and more households

**Figure 3.** Temporal dynamics of housing construction in the suburbs of Tallinn.

Our second research question focused on the changes in housing types compared to the Soviet period, when the building of standardized multifamily houses both in urban and rural settings prevailed. We use two dwelling types in our analysis: detached houses are inhabited by one family only, and multifamily houses comprise all other housing types that are home to more than one family (semi-detached houses, terraced houses and smaller or larger new apartment buildings). We distinguish three settlement types according to their dwelling composition: settlements with only detached houses, settlements with only multifamily buildings and mixed settlements including both housing types. Settlement type is a key variable in our analyses, as it has the strongest discriminating effect on other research variables in the study. Nearly half of the settlements consist of only detached houses, but only 20% of households live in such settlements. The majority, i.e. two thirds of households (64%), live in mixed settlements comprising 43% of the settlements under study.

Detached houses constitute also the vast majority (89%) of all residential buildings built since 1991 (table 2). The opposite was true during the last three decades of the Soviet period, when the proportion of households living in multifamily houses was close to 80% in rural municipalities around Tallinn, and close to 90% in the satellite towns. Thus unlike the Soviet period, the construction of detached houses prevailed in 1991–2005 (figure 4), which confirms our second hypothesis. But we can also follow changes in housing types during the transition period. The share of multifamily houses, including dwellings with 10 apartments and more, increased considerably in the new housing stock in the very last years of the study period (figures 3 and 5). These results are somewhat surprising, as we assumed that people’s main strategy for improving their living conditions is to exchange their Soviet-era tight apartment for a detached or semi-detached house in a quieter and more comfortable suburban environment. What we see instead is that people long for modern houses and move to new suburban dwellings even if they do not fit the detached house ideal.

**Table 2.** Distribution of houses, households and inhabitants by dwelling type.

	Detached houses		Multifamily houses		Total	
	Number	Share	Number	Share	Number	Share
Dwellings	3 048	89	378	11	3 426	100
Doors/Households	3 048	55	2 541	45	5 589	100
Inhabitants*	10 363	60	6 861	40	17 224	100

\* Mean household size in detached houses is 3.4 and in households living in multifamily houses is 2.7.



**Figure 4.** Example of the mortgage-financed detached housing construction taking place on previous agricultural land in Rae parish.



**Figure 5.** Example of a modern multifamily housing complex in Viimsi.



Our third research question addressed the topic of the spatial distribution of the new residential areas, both as concerns distance from Tallinn, areas available for housing development, and urban sprawl. According to our third hypothesis, we expected that a closer location to Tallinn would be more important than the Soviet-era agriculture-based suburban development. Our data confirm this hypothesis, but we were surprised by the strength of the results; new housing construction was concentrated almost exclusively in the very nearest areas of Tallinn (figure 1). We were unable to trace any sprawl further away from Tallinn over time, and new residential areas built in the 2000s are situated even closer to the capital city than those built in the 1990s. Furthermore, the results of the sample survey confirm that distance from Tallinn was the most important single factor for the inhabitants of the new residential areas in choosing settlements. The only interpretation we can make is that distance from Tallinn is the most important factor influencing new residential development in the suburban municipalities. People are ready to make compromises concerning environment and housing types in order to remain close to the capital city. A total of two thirds of all new suburban settlements are located within a 15-kilometre radius of the Town Hall Square of Tallinn (table 3). We can conclude that the suburbanisation of the 1990s and 2000s brought about important changes in the internal functioning of the metropolitan area. Whereas people who left Tallinn for the surrounding rural areas changed both their job and their place of residence in the 1980s, today the jobs remain in the city (Tammaru, 2005), and the move to the new suburban housing is primarily a strategy to improve living conditions. The distance between offices in the city and suburban homes must remain reasonable, and this sets restrictions concerning how far from the city the new residential districts could be located.

Our fourth hypothesis assumed that the new settlements were built on areas that were used for other purposes and were therefore closed to housing construction during the Soviet period. The dramatic losses of jobs in agriculture at the very beginning of the 1990s (Puur, 1997) due to the collapse of large and influential collective farms removed the major obstacle to urban sprawl around Tallinn. Even at the end of the Soviet era, the fields ended at the very border of Tallinn, and these areas became especially attractive plots for housing development. About half of the new settlements built since 1991 are located on previous farmlands (table 3). There is also a clear distant decay dimension evident in the use of former fields for new residential development. The further away from Tallinn, the smaller the share of new settlements on farmlands, and the greater the share of settlements built within the existing residential or forest areas (table 4). This means that the greatest pressure to abandon the agricultural land use function for housing development occurred in the areas nearest Tallinn.

**Table 3.** Characteristics of residential areas, by settlement type (%).

		Single- family	Multif amily	Mixed	Total
<b>Construction</b>					
stage of settlements	Completed	29	82	16	30
	75–99% houses completed	34	0	34	30
	50–74% houses completed	19	9	39	26
	less than 50% houses completed	18	9	11	14
<b>Street cover</b>					
Street cover	Most of the streets with asphalt	32	100	46	46
	Some of the streets with asphalt	13	0	23	15
	No streets with asphalt	56	0	31	39
<b>Street lights</b>					
Street lights	Good (one per house)	39	91	36	44
	Satisfactory (one per 2–5 houses)	13	9	24	17
	No street lights	48	0	40	39
<b>Settlement size</b>					
classes by number of families	1–9 families	46	14	10	27
	10–19 families	35	27	24	30
	20 and more	19	59	66	43
<b>Distance from</b>					
Tallinn (Town Hall Square)	0–9,9 km	10	23	23	17
	10–14,9 km	48	41	59	51
	15–19,9 km	25	14	17	20
	20 km and more	16	23	1	11
<b>Distance from</b>					
the coast	0–4,9 km	53	41	57	53
	5–9,9 km	18	14	29	22
	10–14,9 km	20	36	13	19
	15 km and more	9	9	1	6
<b>Previous land- use type</b>					
Previous land- use type	Field, meadow	43	18	56	45
	Forest	28	5	17	20
	Residential	25	77	17	29
	Mixed	4	0	10	6

**Table 3.** Continued ...

		Single- family	Multif amily	Mixed	Total
Municipality type	Rural	96	90	96	95
	Urban	4	10	4	5
Distance from previous residential areas	Common border	62	95	54	63
	Within 200 m distance range	15	5	11	12
	Further away	23	0	34	25
Number of service facilities	No local services	84	45	79	77
	1 facility	5	23	9	9
	2 and more facilities	11	32	13	15
Distance from bus stop	0–199 m	9	16	11	11
	200–499 m	41	74	49	48
	500–999 m	41	5	25	30
	1000+ m	10	5	15	12
Distance from pre- school	0–0,49 km	13	53	15	18
	0,5–0,99 km	24	32	22	24
	1+ km	63	16	63	58
Distance from elementary school	0–0,49 km	8	37	11	12
	0,5–0,99 km	14	32	10	14
	1+ km	78	32	79	74
Distance from primary school	0–0,49 km	8	26	10	11
	0,5–0,99 km	11	37	10	13
	1+ km	81	37	81	76
Distance from secondary school	0–0,49 km	4	16	8	7
	0,5–0,99 km	10	37	8	12
	1+ km	86	47	84	81

This allows us to conclude that residential areas replaced agricultural lands. The replacement thesis also applies to the coastal areas. Soviet military facilities were mainly located along the coastline, and most of the coastal areas were also “border-zones” under permanent military surveillance during the Soviet period, and residential housing construction was therefore limited there as well. According to our study, the new suburban settlements built since 1991 are situated very close to the sea. Approximately half of the new residential areas are located within 5 km of the coast, and 3/4 within a 10 km band from the seashore (table 3, figure 1). The vicinity of Tallinn is of primary importance here too. Of all the new settlements located close to the sea (in a 5 km band), 85% are located in two neighbouring municipalities of Tallinn, Viimsi municipality in the east and Harku municipality in the west. It follows that, all in all, 45% of all of the new residential areas are located in those two municipalities and within a 5 km band from the coastline, which allows us to argue that environmental preferences are important in new suburban housing construction despite the major role of distance from Tallinn.

**Table 4.** Distribution of new residential areas across previous land use types.

	Less than 10 km	10–14 km	15–19 km	20 km and more	Total
Field, meadow	66	48	37	16	45
Forest	14	17	20	47	20
Residential	14	28	37	37	29
Mixed	7	7	6	0	6
	100	100	100	100	100

The fifth hypothesis of the study assumed that the new settlements around Tallinn were spatially fragmented and random due to the nature of land restitution and privatization. The fragmentation hypothesis was confirmed as we can follow changes in the internal structure of the Tallinn metropolitan area. Whereas the new housing was located all over the hinterland of Tallinn during the Soviet period on the one hand, but concentrated spatially into the agricultural centres and into the satellite towns on the other, then the new housing construction of the 1990s and 2000s is located closer to the capital city on the one hand, but is quite spread out on the other. Housing in urban municipalities or satellite towns is dense and leaves few areas for new residential development. As much as 95% of new residential areas are located in rural municipalities (table 3). In addition, the new settlements of the 1990s and 2000s are scattered and therefore relatively small; 60% of the settlements have less than 20 households. Concerning infrastructure, people living in the new residential areas often have to tolerate an uncompleted building environment (many streets have no asphalt yet, poor street lighting etc.). The situation is

somewhat better in the multifamily housing areas, as they are more likely located in existing dense residential areas.

Despite the scattering and sprawl of small settlements in the areas nearest to Tallinn, our analysis did not entirely support the hypothesis of the spatially random development of new housing construction. As housing construction should be profitable for private developers, the new residential areas are located relatively close to existing residential areas. This also leads to the merging of separately developed new settlements, as new lands open up to housing construction. No multifamily houses were located further than 200 metres from existing settlements. The respective figure was 23% for areas with only detached houses, and 32% for mixed areas (table 3, figure 1). The location of new settlements close to Tallinn and in environmentally attractive coastal areas also runs against their random distribution hypothesis. Thus the new residential areas should also theoretically be relatively well supplied by social infrastructure as they are located close to the existing settlements. Indeed, the analysis reveals that the distances to the nearest school and public transport stops are reasonable. Most of the new residential areas are located within 3 km from the school, and 1 km from the nearest bus stop (table 4). This does not, however, necessarily reflect the sufficiency of these services, as the volumes and qualities of the services in the local municipalities do not go hand in hand with population growth. And even if new settlements merge, they are planned to be small and there is a lack of master development plans for the merging areas to solve traffic issues and aspects of public services and infrastructure.

## **CONCLUSIONS AND DISCUSSION**

We can draw the following conclusions from our data analysis. Firstly, housing construction was modest during the last fifteen years. If one compares housing construction from the years 1960 through 1990 or during the Soviet period of standardized housing development (based on census 2000) with housing construction in 1991–2005 (based on new residential areas survey), we can conclude that the building of new dwellings in the 1990s and 2000s was modest. There was, however, a remarkable increase in new residential housing construction in the 2000s when compared to the standstill in construction activities in the 1990s. One third of the new houses built in the period 1991–2005 were completed in 2005. Spatially, this growth is mainly concentrated near Tallinn, and takes place on the former free areas along the seashore (previously controlled by the Soviet military forces) and on the previous fields (agricultural land). There are numerous scattered settlements unlike the building of compact garden towns during the interwar period and compact satellite towns and centres of agricultural production during the Soviet period (cf. Tammaru, 2001). At the same time, the spatial pattern of new residential areas follows the previous settlement structure — settlements situated very far from the pre-

existing residential areas are rare, and they also tend to merge over time. Thirdly, the most common dwelling type is the detached house, but the importance of multifamily houses has increased considerably in the end of the study period.

In general, these results support our initial hypotheses. Although the need for new dwellings and a contemporary living environment existed since the very beginning of the transition period, the growth in housing construction was not possible before the increase of personal wealth and emergence of favourable mortgages. An interesting result from the analysis is related to the fact that multifamily housing construction (even the construction of the very big apartment blocks, which are comparable in size with Soviet-era apartment houses) began to dominate again in the housing scene in the end of the study period. Instead of the outward sprawl of detached houses over time, we see in-fills of vacant lands around Tallinn, and the growth of dwellings into heights. While agriculture-based suburban growth led to compact settlement during the Soviet period, the rapid increase in land values due to the crucial role of distance from Tallinn has the same effect today for housing composition. But we can follow changes in the location of new settlements; similarly to the interwar period and in contrast to the Soviet period, proximity to Tallinn became the key factor in suburban housing construction, as the jobs of suburbanizers remain in the city; our survey data indicates that 77% of the residents of the new suburban settlements work in Tallinn.

Private developers play a key role in shaping the spatial evolution of new settlements in the suburbs in the context of available land, but the individual demand to stay close to Tallinn and naturally attractive seashores also shapes the location of new settlements. Coastal areas and farmlands were closed for other land use functions during the Soviet period, and became the main construction sites during the transition period. At this point we should recall the main principle of the frequently cited urban life cycle theory (Berg et al. 1982), which claims that the development of an urban region is influenced by the interaction of three actors — public sector, enterprises and people. The role of the public sector was disproportionately great in the Tallinn metropolitan housing market in the Soviet era. After Estonia regained its independence in 1991, the balance of these three actors' groups changed considerably; the neo-liberal environment cherished private initiative of people and enterprises. Now the peoples' preferences and the profit maximization of the private sector (read: the real estate and financial sector) shape housing construction. We argue that the transition period ends in the housing market when a new and better balance between public and private interests emerges in Estonia like in Western Europe.

However, somewhat surprisingly, we did not find support for our hypothesis that the new developing settlement structure is unrelated to the pre-existing settlements. The results demonstrated that the presence of key infrastructure (possibly electricity and other more expensive technical facilities) is an important factor for the profit-maximizing private sector in making location

decisions. In addition, the new settlement pattern matches the public transport and school network quite well. Even if the capacities of the local infrastructure still need to be upgraded in order to respond to the growing demand, the resulting new settlement pattern (even when private sector led) is not altogether random, and offers good possibilities to rearrange public services under new circumstances. Therefore, we are not able to claim that the new housing development is entirely random. But this does not mean a lack of planning problems. The most serious issue is related to the fact that the settlements are planned to be small, but the merging processes create larger built up areas that lack master plans to solve, e.g., traffic problems.

Finally, the results of our study partly question the prevailing explanation of suburbanisation in countries in transition, which states that people with higher socio-economic status seek better living conditions outside large housing estates in major cities, and try to fulfil their dream of having a detached house in attractive, rapidly sprawling suburban settlements (Kostinskiy, 2001; Sýkora and Cermák, 1998). This means that we should provide new explanations for new suburban developments in countries in transition. It seems that the interaction between three variables: distance from the workplace, a pleasant environment and the desire to live in a modern home determines the spatial evolution of the new settlements in the suburbs in the context of liberal attitude towards planning, and patch-wise entering of land on the market. Distance from the workplace (most often in Tallinn) is crucial. There has also been some suburbanisation of jobs in the Tallinn metropolitan area in the 2000s (shopping centres, industries, warehouses), but it does not provide employment for people with higher socio-economic status moving to the new suburban settlements. To remain close to Tallinn, people are ready to make compromises regarding both environment and dwelling type. This leads to in-fills of vacant land close to Tallinn, and rising land values lead to increasingly urban-like dwelling composition, with growing proportions of multifamily houses in the total housing stock, or to the urbanisation of the formerly agricultural areas around Tallinn.

## REFERENCES

- AHAS, R., MARK, Ü., JÄRV, O. and NUGA, M. (2006) Mobile positioning in sustainability studies: Social positioning method in studying commuter's activity spaces in Tallinn, in Ü. MANDER, C.A. BREBBIA, and E. TIEZZI (Eds) **The Sustainable City IV. Urban Regeneration and Sustainability**, pp. 127–135. Southampton, Boston: WIT Press.
- ANTONS, P. 2003. Hõivemuutused ja ränne [Employment change and migration], in T. TAMMARU and H. KULU **Ränne üleminekuaja Eestis**, pp. 121–141. Tallinn: Estonian Statistical Office.
- BERG, L., DREWETT, R., KLAASSEN, L., ROSSI, A. and VIJVERBERG, C. (1982) **A Study of Urban Growth and Decline**. Oxford: Pergamon Press.

- BOCKMAN, J. and EYAL, G. (2002) East Europe as a laboratory for economic knowledge: The transnational roots of neoliberalism, **American Journal of Sociology**, 108, pp. 310–352.
- BROWN, D. and SCHAFFT, K. A. (2002) Population deconcentration in Hungary during the post-socialist transition, **Journal of Rural Studies**, 18, pp. 233–244.
- BUNCE, V. (1999) The political economy of postsocialism, **Slavic Review**, 58, pp. 756–793.
- DIELEMAN, F. and WALLET, C. (2003) Income differences between central cities and suburbs in Dutch urban regions, **Tijdschrift voor Economische en Sociale Geografie**, 94, pp. 265–275.
- ESTONIAN LAND BOARD (2006) **Land transactions database**. Tallinn: Estonian Land Board.
- ESTONIAN STATISTICAL OFFICE (1937) **Rahvastikuprobleeme Eestis. II rahvaloenduse tulemusi**. [Population of Estonia. The returns of the 2<sup>nd</sup> census]. Tallinn: Estonian Statistical Office.
- EUROSTAT 2006. <http://epp.eurostat.ec.europa.eu>.
- FALK, T. (1976) **Urban Sweden. Changes in the Distribution of Population — the 1960s in Focus**. Stockholm: Stockholm School of Economics.
- JAUHIAINEN, J. (1997) Militarization, demilitarization and re-use of military areas. The case of Estonia, **Geography**, 82, pp. 118–126.
- KORHONEN, I. (2001) Progress in economic transition in the Baltic states, **Post-Soviet Geography and Economics**, 42, pp. 440–463.
- KOSTINSKIY, G. (2001) Post-socialist cities in flux, in R. PADDISON (Ed) **Handbook of Urban Studies**, pp. 451–465. London: Sage Publication.
- KRISJANE, Z. (2005) The trends of urban concentration and suburbanization. The case of Riga. Paper presented at the **The Inaugural Nordic Geographers Meeting**, May 2005, Lund, Sweden.
- KULU, H. (2003) Housing differences in the late Soviet city: The case of Tartu, Estonia, **International Journal of Urban and Regional Research**, 27, pp. 897–911.
- KULU, H. and BILLARI, F. (2006) Migration to urban and rural destinations in post-Soviet Estonia: A multilevel event-history analysis, **Environment and Planning A**, 38, pp. 749–764.
- KUPISZEWSKI, M., DURHAM, H. and REES, P. (1998) Internal migration and urban change in Poland, **European Journal of Population**, 14, pp. 265–290.
- LADÁNYI, J. and SZELÉNYI, I. (1998) Class, ethnicity and urban restructuring in postcommunist Hungary, in G. ENYEDI (Ed) **Social Change and Urban Restructuring in Central Europe**, pp. 67–86. Budapest: Akadémiai Kiadó.
- LEETMAA, K. and TAMMARU, T. (2007) Suburbanisation in countries in transition: Destinations of suburbanisers in the Tallinn metropolitan area, **Geografiska Annaler. Series B: Human Geography**, 89, 127–146.
- LOOGMA, K. 1997. Socio-economic stratification in Tallinn and spatial patterns, in M. ÅBERG and M. PETERSON (Eds) **Baltic Cities: Perspectives on Urban and Regional Change in the Baltic Area**, pp. 168–183. Lund: Nordic Academic Press.
- MANSON, D., HOWLAND M. and PETERSON, G. (1984) The effect of business cycles on metropolitan suburbanization, **Economic Geography**, 60, pp. 71–80.
- MARGO, R. 1992. Explaining the postwar suburbanization of population in the United States: The role of income, **Journal of Urban Economics**, 31, pp. 301–310.



- MARKSOO, A. (2005) Linnastumine nõukogude Eestis [Urbanisation in Soviet Estonia], in H. KULU and T. TAMMARU (Eds) **Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks**, pp. 59–81. Tartu: Tartu University Press.
- METSPALU, P. (2005) **Uuslamuehitus ja planeerimispraktika areng Harjumaa näitel** [Housing Construction and Planning in the Tallinn Metropolitan Area]. Master thesis in Institute of Geography University of Tartu.
- MIESZKOWSKI, P. and MILLS, S. (1993) The causes of metropolitan suburbanization, **Journal of Economic Perspectives**, 7, pp. 135–147.
- OUŘEDNÍČEK, M. (2007) New suburban development in the post-socialist city: The case of Prague, **Geografiska Annaler. Series B: Human Geography**, 89, 111–126.
- PALACIN, J. and SHELBURNE, R. (2005) **The private housing market in Eastern Europe and the CIS**. Geneva: United Nations Economic Commission for Europe, Economic Analysis Division (Discussion Paper Series No 6).
- PRUD'HOMME, R. and NICOT, B.-H. (2004) Urban sprawl in Rennes and 77 urban areas in France, 1982–1999, in H. W. RICHARDSON and C.-H. C. BAE (Eds) **Urban Sprawl in Western Europe and the United States**, pp. 93–114. Aldershot: Ashgate.
- PUUR, A. (1997) Emergence of unemployment: Evidence from Estonia 1989–1995, **Trames**, 3, pp. 247–277.
- PÕDER, A. and TITMA, M. (2001) Kodukeskkond ja seda mõjutanud tegurid [Determinants of housing interior], in M. TITMA (Ed) **Sõjajärgse põlvkonna elutee ja seda kujundanud faktorid**, pp. 97–122. Tartu: Tartu University Press.
- RAVBAR, M. (1997) Slovene cities and suburbs in transformation. **Acta Geographica Slovenica**, 37, pp. 65–109.
- ROOSE, A. (2006) Sustainable planning and construction 2. **Publicationes Instituti Geographici Universitas Tartuensis**, 100, Tartu: Tartu University Press.
- RUOPPILA, S. (2005) Housing policy and residential differentiation in post-socialist Tallinn, **European Journal of Housing Policy**, 5, pp. 279–300.
- RUOPPILA, S. and KÄHRIK, A. 2003. Socio-economic residential differentiation in post-socialist Tallinn, **Journal of Housing and the Built Environment**, 18, pp. 49–73.
- SÝKORA, L. and CERMÁK, D. (1998) City growth and migration patterns in the context of “communist” and “transitory” periods in Prague’s urban development, **Space. Population. Societies**, 3, pp. 405–416.
- TAMMARU, T. (2001) Suburban growth and suburbanisation under central planning: The case of Soviet Estonia, **Urban Studies**, 38, pp. 1314–1357.
- TAMMARU, T. (2005) Suburbanisation, employment change, and commuting in the Tallinn metropolitan area, **Environment and Planning A**, 37, pp. 1669–1687.
- TAMMARU, T. and LEETMAA, K. (2007) Suburbanisation in relation to education in the Tallinn metropolitan area, **Population, Space and Place**, 13, 279–292.
- TAMMARU, T., KULU, H. and KASK, I. (2004) Urbanization, suburbanization, and counterurbanization in Estonia, **Eurasian Geography and Economics**, 45, pp. 212–229.
- TIMÁR, J. and VÁRADI, D. (2001) The uneven development of suburbanisation during transition in Hungary, **European Urban and Regional Studies**, 8, pp. 349–360.

- THOMAS, D. 1974. The urban fringe: Approaches and attitudes, in J. JOHNSTON (Ed) **Suburban Growth: Geographical Processes at the Edge of the Western City**, pp. 17–30. London, New York: John Wiley & Sons.
- UUSMAA 2007. *Eesti kinnisvaraturu trendid* [Trends on Estonia real estate market]. Unpublished report by the largest real estate company of Estonia, Uusmaa, electronically available at [http://www.uusmaa.ee/files//2007\\_I\\_kv\\_turuanalyyis\\_webiks.pdf](http://www.uusmaa.ee/files//2007_I_kv_turuanalyyis_webiks.pdf)
- WECLAWOWICZ, G. (1998) Social polarization in postsocialist cities: Budapest, Prague and Warsaw, in G, ENYEDI (Ed) **Social Change and Urban Restructuring in Central Europe**, pp. 55–56. Budapest: Akadémiai Kiadó.

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# **Living in a nevereverland: new suburban settlements on previous farmlands around tallinn**

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**Abstract:** Suburban areas are transforming into modern residential areas in formerly centrally-planned countries. The most important residential construction sites around Tallinn are the previous farmlands of the Soviet era, where residential developments have considerably intensified during the last 15 years. Many problems with modern residential suburbanisation manifest themselves most clearly in these particular sites as well. Thus, the aim of the paper is to clarify who the people are who live in those new post-1991 suburban field settlements, what the factors behind their migration decision were, and how satisfied they are with their residential choice. The main results indicate a high socio-economic status of the inhabitants of these settlements. Compared to other new suburbanites, they are more strongly connected to Tallinn, desire a spacious, modern house that is ready to move in to, but in reality they are less satisfied with their housing situation.

**Keywords:** new housing construction, suburbanisation, migration motives, residential satisfaction, Tallinn metropolitan area

## **INTRODUCTION**

Suburban areas are undergoing significant transformations in formerly centrally planned economies; former agricultural and industrial areas with modest daily mobility change into modern residential areas, separating places of work and residence in metropolitan space. According to a classical model of suburbanisation, it is a first stage of the residential preference-led process when the new housing developments emerge as “bedroom communities” for the people who aim to combine both rural (housing and environment) and urban (jobs, social

infrastructure and leisure time amenities) attractions (Hartshorne and Muller 1989; Van den Berg et al 1982). In the later phases the suburbanisation of jobs takes place as services follow consumers and the cheaper suburban land close to the potential workforce and with good transport accessibility attracts the businesses into the suburban fringe as well (Van den Berg 1999; Hartshorne and Muller 1989; Garreau 1991). At this stage the process often becomes self-generating, diversifying the population, housing and employment compositions in suburban areas, leading to the urbanisation of the suburbs (Gober 1989).

The 1990s was labelled as a suburbanisation-decade in the formerly centrally planned countries in central and eastern Europe (Aring and Herfert 2001; Brown and Schafft 2002; Krisjane 2005; Kupiszewski et al 1998; Ladányi and Szelényi 1998; Sýkora and Cermák 1998; Ravbar 1997; Tosics 2003; Tammaru et al 2004) as the suburban population grew faster compared to the central cities. But the Estonian case shows that the suburbanisation phenomenon in the sense of profound changes in the suburban built environment had to wait for more favourable socio-economic conditions, and the driving forces of suburban growth were strongly related to Soviet inertia effects. This also makes a difference between the former Soviet Republics and other former centrally planned countries in Europe. Namely, the suburbanisation in the 1990s was closely related to the relaxation of the housing market due to the emigration of part of the Russian-speaking population in Estonia (Leetmaa and Tammaru 2007). Emigration of Russians also took place in other former Soviet republics (Heleniak 2004). The other mechanism that brought people to suburban areas was related to the transformation of Soviet-era summer homes into places of permanent residence, while new housing construction was still very modest in the 1990s in the Tallinn metropolitan area. Some movement towards rural areas in the hinterland of the capital city also took place as a result of the restitution of former farms to their pre-socialist owners.

Suburban housing construction increased in the 2000s in Estonia, and it was paralleled by the classical factors contributing to suburbanisation in the Western economies (Bourne 1997; Champion 2001; Hall 2001; Van den Berg 1982), including preferences of some of the population groups, increase in personal wealth, and emerging of a functioning and affordable mortgage market (Downs 1999; Palacin and Shelburne 2005). Estonian economy started to recover after the crisis of the early transition years and since 1995 the purchasing power of people has started to grow. Economic shock related to the Russian crisis in 1998 reduced the speed of change for some years, but was followed by uninterrupted economic growth. The banking sector stabilised and the interest rates for long-term housing loans decreased to a level that brought the housing sector on similar grounds with western countries; mortgages were taken by relatively large population groups compared to the 1990s (cf. Palacin and Shelburne 2005; Égert and Mihaljek 2007). The existing housing conditions in the capital city of Tallinn contributed to the demand side for new and modern residences; typical to a post-communist city almost two-thirds of the urban population lived in

large Soviet-era housing estates in the end of the 1980s (Tallinna üldplaneering 2000) and these apartments do not correspond to the contemporary housing ideal of a large share of urban families.

As there were no influential constraining factors (e.g. lack of vacant land, restrictive regulation of public authorities), we can observe a small residential housing boom in the 2000s both in Tallinn and in the suburban areas (Tammaru et al 2008). There is no reliable data that would allow a detailed analysis of residential changes inside the city borders, but we can observe a relative shift in favour of suburbs in housing construction; while 25 percent of the metropolitan population lives in suburban areas, 40 percent of new housing construction has taken place in suburbs according to the Census 2000, and 30 percent according to the Estonian Building Register since 1991. The mechanisms behind metropolitan population redistribution changed as well; market-led mechanisms increasingly replace the vacancy-led suburbanisation and other Soviet inertia effects in the 2000s compared to the 1990s. The location of suburban housing construction also changed. Soviet-era agricultural lands at the immediate border of the capital city still in the end of the 1980s became important construction sites with the increase in the scale of suburban housing construction in the 2000s. The housing development projects in these areas are more intense and in addition to single-family homes we find various semi-detached, terraced, and multifamily houses.

However, these field settlements close to the border of Tallinn which became major suburban construction sites seem to attract most of the problems related to contemporary residential suburbanisation. The problems have also made their way to public discussions and found critics in the media, where these settlements have been labelled as “real estate villages” depicted as symbols of poor infrastructure and housing quality, unfriendly living environment, etc. (e.g. *Äripäev Online* 2007; *Pealinn* 2007; *Tarbija24* 2007). Despite the critical public discourse towards these field settlements, the people who move into these “real estate villages” mostly have higher education levels and represent the wealthiest part of the population (Kährik and Tammaru 2008). Therefore, the municipalities where such residential developments take place are also labelled as a “Golden Circle” surrounding Tallinn (*Postimees* 2005). In this contradictory context, the aim of the paper is to clarify who the people who have moved to the new post-1991 suburban field settlements are, what the factors behind their decision were, and how satisfied they are with their residential choice. We start our discussion with an historical review of the population development trends in the Tallinn metropolitan area. Then we specify the research questions and introduce our data that comes from the New Residential Area Survey 2006 carried out in the suburbs of Tallinn. We proceed with the statistical analysis by comparing the population composition, residential choice factors and satisfaction of people living in the field settlements with people living in all other new suburban settlements. This leads us to a summary and discussion over the possible spatial future of the suburban housing construction in the Tallinn

metropolitan area in general, and over the role of the field settlements in the metropolitan housing structure in particular.

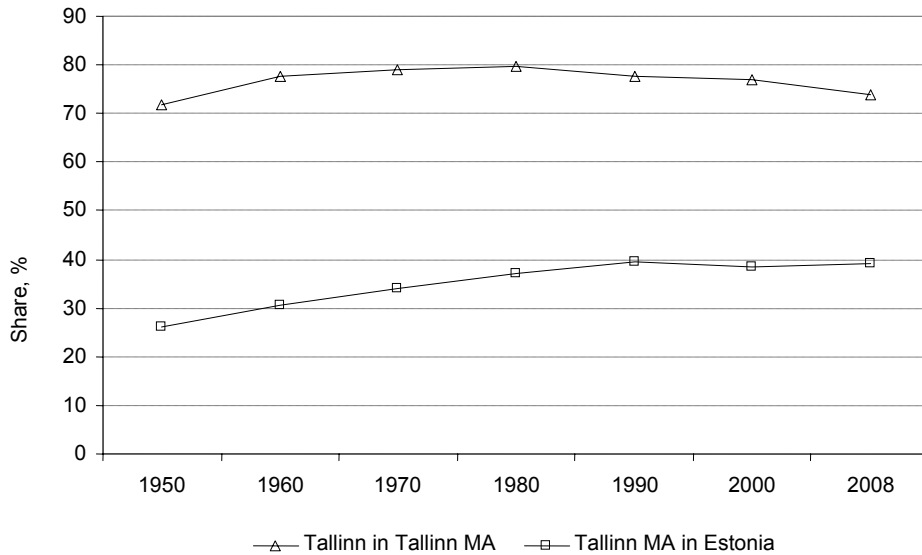
## **METROPOLITAN POPULATION CHANGE IN AN HISTORICAL PERSPECTIVE**

The population of Tallinn began to increase rapidly in the mid-19<sup>th</sup> century, when Estonia was part of the Russian Empire. Demographic transition in Estonia, coupled with massive industrialisation that created huge exporting industrial enterprises, led to urban growth based both on rural-to-urban migration, and immigration from Russia (Marksoo 1990). The number of inhabitants living in Tallinn increased by almost ten times between 1825 and 1913, from 12,875 to 116,132 (Tammaru 2001a). This rapid population growth ended after World War I, when Estonia became independent and lost its vast migration hinterland (Russia). At the same time the modern suburbanisation started and redistributed the population from the multifamily houses of Tallinn proper to the new detached houses in naturally attractive areas (former summer resorts) around the capital city (Bruns 1993; Lõhmus 2004). According to the 1934 census, the population of Tallinn stood at 122,700 people (there was some population concentration going on within the country), while 15,100 people lived in the biggest new suburban settlement, Nõmme, as a result of population deconcentration within the metropolitan area (Estonian ... 1935). In comparison, only 1500 permanent residents lived in Nõmme in 1913 (Bruns 1993). Nõmme was mainly populated by white collar workers from Tallinn who commuted daily to the capital by train (Pullat 1978). Other smaller new suburban detached housing settlements emerged on the borders around Tallinn as well during the inter-war period. Altogether Tallinn lost about 10 percent of its inhabitants to the new suburban settlements in about 15 years, and this intra-metropolitan population redistribution continued well till World War II; the estimated population number of Nõmme stood at 21,700 by the year 1939 (Pullat 1978; Tammaru 2001a).

After WW II and in connection with the start of the Soviet occupation in 1944, Tallinn as the capital and a harbour city once again became an important centre for industrial growth and in-migration, both from the rest of country (the destruction of the long established farm-based agriculture and Stalinist collectivisation in agriculture coupled by repressions had a huge impact on rural areas, and due to the growth of new jobs in Tallinn) and as a result of immigration from Russia. The population of Tallinn increased to 190,000 in 1950 and to 280,000 in 1959, when the first post-war census took place. The total population of the Tallinn metropolitan area stood at 370,000 at that time, leaving 90,000 for suburban areas (Tammaru 2001a). The share of Estonia's population living in the Tallinn metropolitan area was 27 percent in 1950, and 72 percent of the metropolitan population lived in Tallinn. The share of the



Tallinn metropolitan area continued to increase in the total population throughout the Soviet period, and 40 percent of Estonia’s population, 617,000 people, lived in the Tallinn metropolitan area by 1990 (Figure 1).



**Figure 1.** Population share of Tallinn in Tallinn MA, and population share of Tallinn MA in Estonia (%), 1950–2008.

*Sources:* Tammaru 2001a, Census 2000, Population register.

Internal migration within Estonia contributed to the national population concentration only till the 1970s; migration turnaround took place in the Tallinn metropolitan area in the 1970s and this led to national reversal of migration trends in the beginning of the 1980s (Marksoo 2005). The share of people living in Tallinn metropolitan area has almost not changed since then. In absolute terms, the metropolitan population decreased considerably due to the emigration of a part of the Russian-speaking population in the beginning of the 1990s (including the departure of the Soviet Army), and 543,000 inhabitants lived in the Tallinn metropolitan area in 2008. The intra-metropolitan population change has been somewhat different since the 1950s. The share of Tallinn in metropolitan population increased till the end of the 1960s when it reached the 79 percent level, then as a result of the migration turnaround, it stabilised in the 1970s and started to decrease thereafter. Thus, the suburban population has increased over the past three decades (although the reasons have changed) and has elevated to a 26 percent level which is comparable to the situation in the beginning of the Soviet period. According to the 2008 data, 142,000 people lived in suburban areas and 401,000 people in Tallinn tenure in 2008.

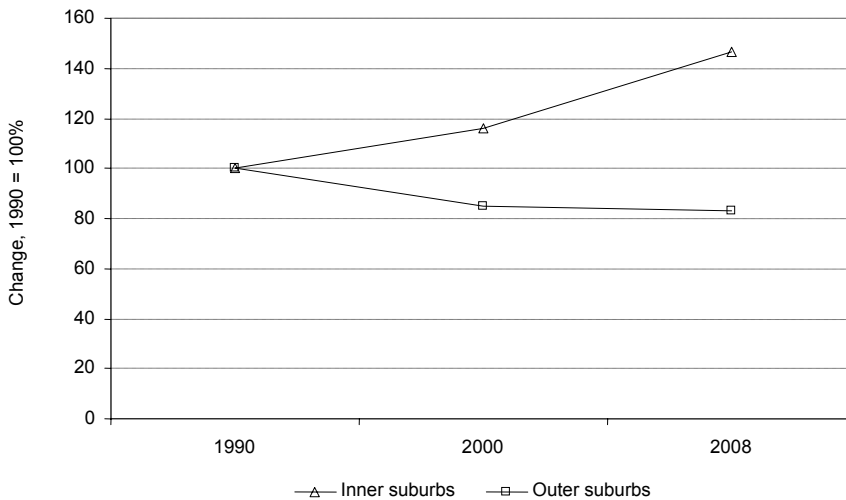
Similarly to other republics of the former Soviet Union and unlike central and eastern Europe, both internal and external migration significantly shaped the population trends in the Tallinn metropolitan area. Immigration contributed to the population concentration throughout the Soviet period (Kulu 2001; Sakkeus 1991), while changes occurred in internal migration. This change in internal migration was 1) due to increased prioritisation of agriculture where incomes started to exceed salaries in urban industrial sector in the 1980s, redistributing less educated blue collar workers to suburban areas (Tammaru and Leetmaa 2007); 2) due to the policy to curb capital city growth by relocating industrial investments to satellite towns (Tammaru 2001b; Bruns 1993); 3) as a result of changing ethnic composition in the cities (ethnic minorities formed 50 percent of the population of Tallinn by the end of the Soviet period) that made Estonians to leave cities (Raagmaa 1996); 4) and due to the universal process of population aging with older people moving away from major cities (Katus and Puur 2005). All these factors contributed to the migration reversal and they also had significant implications on migration destinations. Suburban growth took place in a form of compact settlements in the centres of agricultural production and in the industrial or military satellite towns that were scattered both to the closer as well as remoter hinterland of Tallinn as people were housed close to jobs (Raagmaa and Kroon 2005). Sprawl of suburban housing construction was modest as vast areas of land were needed for other purposes, for mighty agricultural producers and for Soviet military forces in coastal areas (Jauhiainen 1997; Tammaru et al 2008, Leetmaa et al 2009).

National internal migration trends reversed once again after Estonia regained independence in 1991, and capital city metropolitan area became the most important destination (Tammaru et al 2004). The return migration of Russians also facilitated the migration towards the capital city metropolitan area since many residences remained uninhabited, relaxing the metropolitan housing situation. The vacancies emerged not only in Tallinn, but also in the suburbs that contributed to the intensification of the urban-to-suburban migration in the Tallinn metropolitan area. Due to cheaper living costs in the hinterland this trend, and also the conversion of Soviet cottage-areas into permanent residences, rather attracted lower social status groups – people with lower education and the unemployed (Kulu and Billari 2004; 2006; Tammaru and Leetmaa 2007).

Instead of the employment redistribution that was prevalent in the late Soviet decades (agriculture in rural areas and industry in satellite towns), residential suburbanisation became the major engine of suburban population growth (Kährik and Tammaru 2008; Leetmaa and Tammaru 2007). Both jobs and people were redistributed to suburbs in the 1980s, whereas today's suburbanisation separates places of residence and jobs (Tammaru 2005). The changed causes of suburban growth have a clear spatial manifestation. Similarly to the inter-war period, new housing construction concentrates in the immediate vicinity of Tallinn rather than across the suburban area as it was in the Soviet era (Figures 2 and 3). As the land available for housing development was

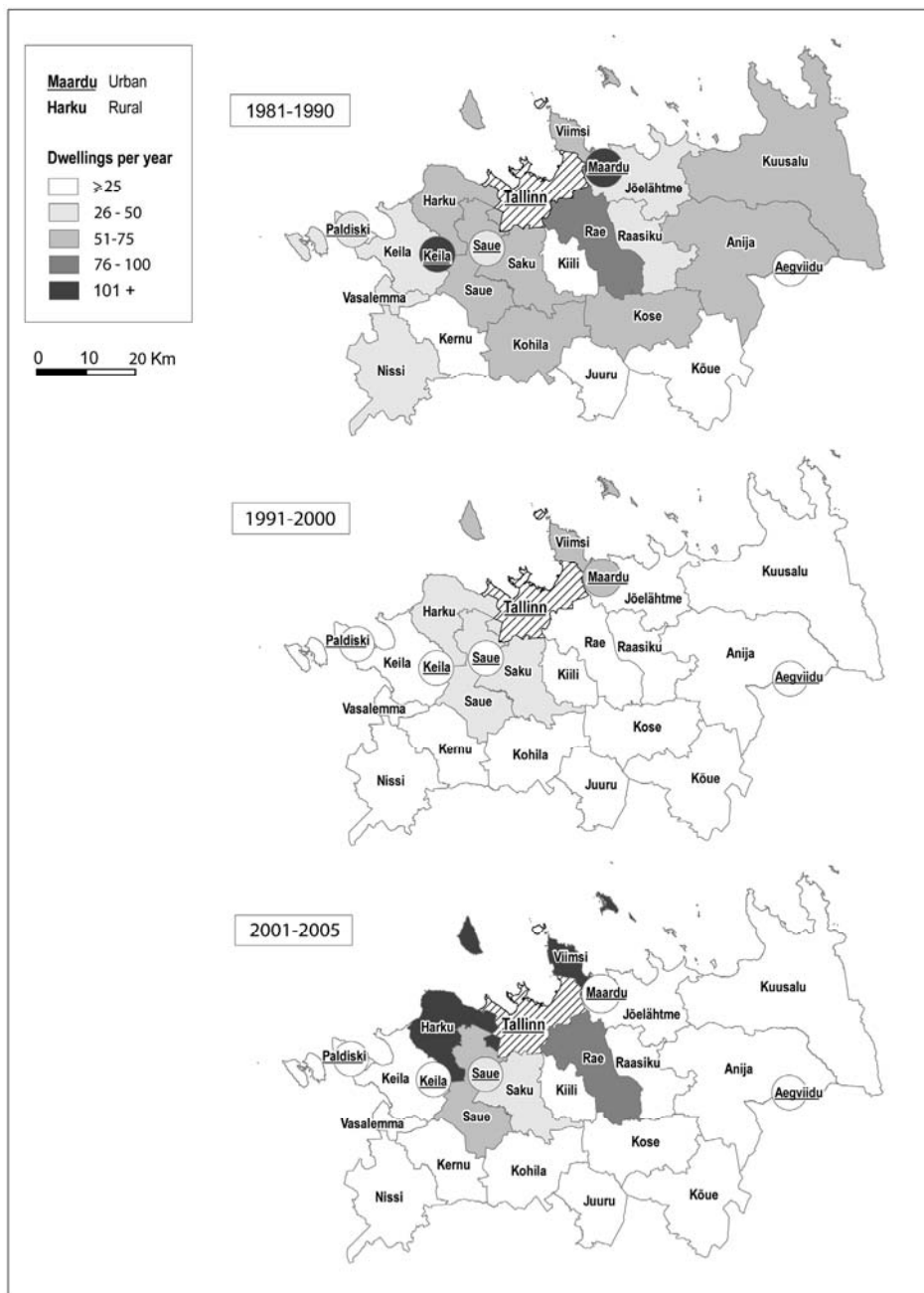
modest in the 1990s, the first new suburban settlements were scattered to those few places where the land was on market or where the land was restituted to the gainful owners. Later the areas available for housing construction increased, and we can observe new residential development projects moving closer back to Tallinn (Tammaru et al 2008). Still, the new suburban settlements are more sprawled compared to the inter-war period, reflecting not only the impact of the land market developments, but also the fact that today's suburbanisation is car-shaped rather than train/public transport shaped like it was between the wars.

Like spatial patterning of the settlements, the housing composition underwent changes as well. First of all the share of apartment houses decreased considerably compared to the Soviet period (Figure 4). Multifamily housing construction decreased significantly (data for the first half of the 1990s include the completion of the housing projects that were started in the late Soviet years), and was very modest between 1992 and 2000; since then its share started to increase again, but similarly to the inter-war period, apartment houses are much less common compared to the Soviet period. This intensification of the land use just on the borders of the city means interesting changes in housing composition; the sparse single-family housing areas of the 1990s started to merge with the more diverse residence types of the 2000s. As a result the suburban housing stock just around Tallinn is an increasing mix of urban apartment houses, a variety of semi-detached houses (double-family houses, townhouses, etc.) and single-family houses (including the castle-like villas of the first transition years).



**Figure 2.** Population change in inner and outer suburbs 1990–2008, 1990=100%.

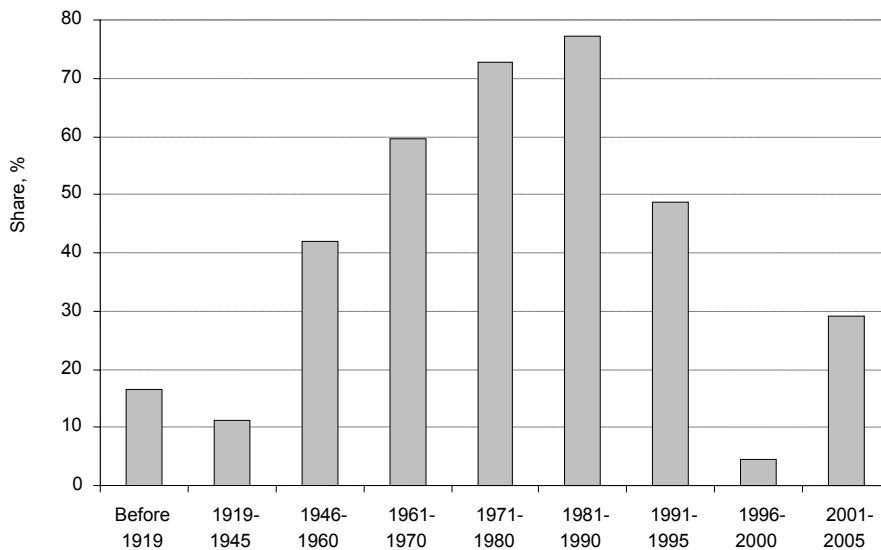
Sources: Census 2000, Population register.



**Figure 3.** Distribution of new housing construction in the suburban area of Tallinn in the 1980s, 1990s and 2000s.

Sources: Census 2000, New Residential Areas Survey 2006.

Notwithstanding the spatial outcome, we may conclude that the attraction of Tallinn is strong and people are ready to make compromises with regard to dwelling types and housing densities remaining close to Tallinn. Moreover, as most of the new housing construction took place in Tallinn, we may argue that the residential processes at the borders of the city resemble the spill-over effect of the densification of the urban housing and the replacement of the out-of-date Soviet-era urban housing stock in the residential choices of metropolitan residents. Alternatively, we may explain the ongoing suburban growth at the immediate border of Tallinn that takes place in a form of dense residential developments as a classical process of urbanisation of suburbs (Gober 1989). These areas develop initially as “bedroom communities,” but they also become diversified with services and jobs that change their initial rural outlook and transform them into urban-like suburban centres (cf. Hartshorne and Muller 1989; Garreau 1991). The migration into these settlements is motivated not merely by the rural amenities, but also by the closeness to jobs, services, urban social and technical infrastructure, i.e. urban amenities.



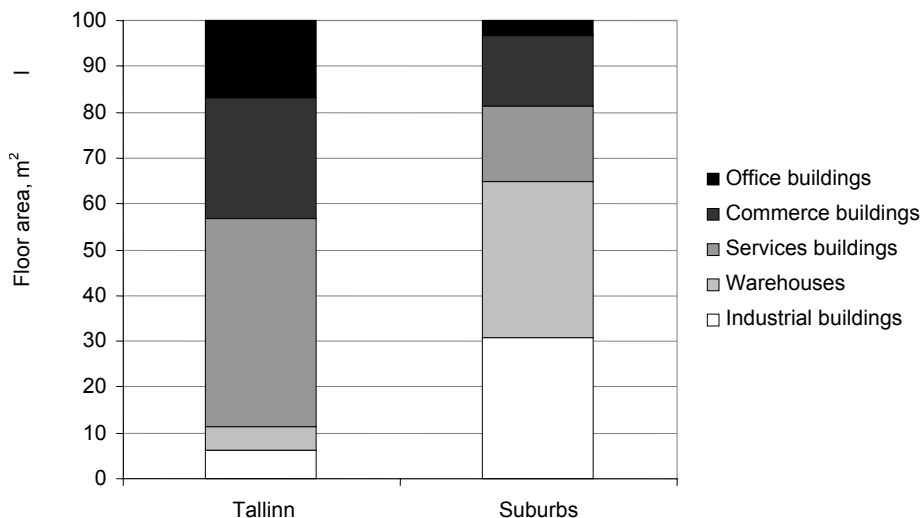
**Figure 4.** Share of apartment houses in housing construction in the Tallinn metropolitan area, 1919–2005.

*Sources:* Census 2000, New Residential Areas Survey 2006.

Residential suburbanisation has significantly increased commuting within the Tallinn metropolitan area. Commuting was modest till the end of the Soviet period as both jobs and people redistributed to suburban areas in the 1980s. Only 7,000 people living in the hinterland worked in Tallinn in 1982, and the

opposite commuting flows were similar in size. This Tallinn-to-suburbs commuting was taking place due to the labour needs of agricultural enterprises (Marksoo et al 1983). The major change in the 1990s related to the increase of suburbs-to-Tallinn commuting as a result of residential suburbanisation and to some extent also due to the loss of employment function of the suburbs after the collapse of the Soviet agriculture and industry (Tammaru 2005). As the suburbanisation process intensified considerably in the 2000s, we find a dramatic growth in the number of commuters to Tallinn in the next decade. Already 38,500 suburban residents worked in Tallinn in 2007 (Ahas et al 2008), and the majority of commuters use a car (Tammaru 2005).

But an important change occurred in job-related commuting in the 2000s – namely we can witness a significant increase (from 6,100 people in 2000 to 21,500 in 2007) in the commuting from Tallinn-to-suburbs. This change in commuting clearly manifests the intra-metropolitan employment redistribution towards the hinterland of the capital city, very visible in the suburban landscape. According to the Estonian Buildings Register, nearly half a million square meters of new industrial and warehouse space was developed in 2003–2007 in the hinterland, which exceeds the respective figure for Tallinn by almost three times. While the office and service sector remains largely in Tallinn, we find industrial enterprises and warehouses moving out to the suburbs (Figure 5). High cost of land and urban congestions push warehouse, logistic and industrial activities out from the city, but the enterprises prefer to stay within a 15 km radius from the city border or close to the labour pool of Tallinn, generating commuting from Tallinn (Uusmaa 2007). The new emerging business activities cluster into established suburban settlements, along the major road arteries and into specially designed industrial parks that provide new buildings with modern technical infrastructure, and enable the enterprises to capitalise on networking and other beneficial effects (Arco Vara 2007). The rate of building of the new services and commerce buildings as well as offices in the suburbs has remained significantly lower compared to the capital city. But we can expect further changes in metropolitan employment redistribution in the near future as the first office parks following the white collar suburbanites and escaping high prices of the capital city are already in a planning stage in the bordering municipalities of Tallinn (*Postimees Kinnisvara* 2008). According to the focus-group survey conducted in October and November 2007 among the officials of the municipalities bordering Tallinn, the development of the entrepreneurship and business sector for white collar workers was considered as the most important task along improving transportation networks that would help to alleviate problems related to daily commuting and resulting congestions.



**Figure 5.** New enterprises in Tallinn and suburbs, 2003–2007.

*Sources:* Estonian Building Register.

This significant increase in commuting means a greater sharing of people between the municipalities of the metropolitan area. This sharing is not only related to the separation of places of residence and job, but also to the continued importance of urban infrastructure and amenities of Tallinn for new suburbanites, a typical situation to the initial stages of suburban growth (Hartshorne and Muller 1989). This challenges the capability of the metropolitan municipalities to cooperate in strategic issues. There is a lack of rooted collaborative planning culture in the Tallinn metropolitan area and the efficient cooperative coalitions among metropolitan municipalities still have to be created. The obstacle for the cooperation is also the size and power-differences between the municipalities. Tallinn as a primary city dominates the metropolitan space as it has three times more inhabitants as the entire suburban area. But the area also has notable wealth differences between suburban municipalities.

According to the focus-group survey conducted in October and November 2007 with the officials of 26 suburban local municipalities in the Tallinn metropolitan area (Table 1) the most acute problems to be solved by inter-municipality cooperation relate to the inefficient metropolitan public transportation system, dramatic growth of car-based commuting, and the lack of places in nursery schools. The majority of the municipalities bordering Tallinn acknowledge a need for the metropolitan-level governance to effectively solve these problems. Although many formal and informal inter-municipality networks exist, and even strategic metropolitan-level planning does take place at the Harju County level that spatially almost coincides with the functional metro-

politan territory, it is not enough. The main problem is that the county administration represents the central government and does not form a second tier local government in Estonia. The county planning office acts as a coordinator and implementer of central government tasks and has little decision-making power in the most acute metropolitan-level issues. Although some county-level strategic topics have been incorporated into the municipality plans (e.g. the nation-wide green network plan enforced in 2003 (Harju maakonna-planeeringu ... 2003), municipalities still have relatively great freedom to change the metropolitan land use plan through the municipality master (and also detailed) plans. This applies to the planning of the metropolitan settlement structure as well with the result that municipalities have not followed the proposed areas for dense settlement as outlined in the 1999 Harju County master plan (Harju maakonnaplaneering ... 1999).

**Table 1.** Important topics of inter-municipality cooperation in Tallinn metropolitan area, 2007.

	Mentioned	Did not mention
Transportation	26	0
Schools and nursery schools	26	0
Road construction and maintenance	25	1
Strategic planning	25	1
Nature protection	24	2
Quality of social services	24	2

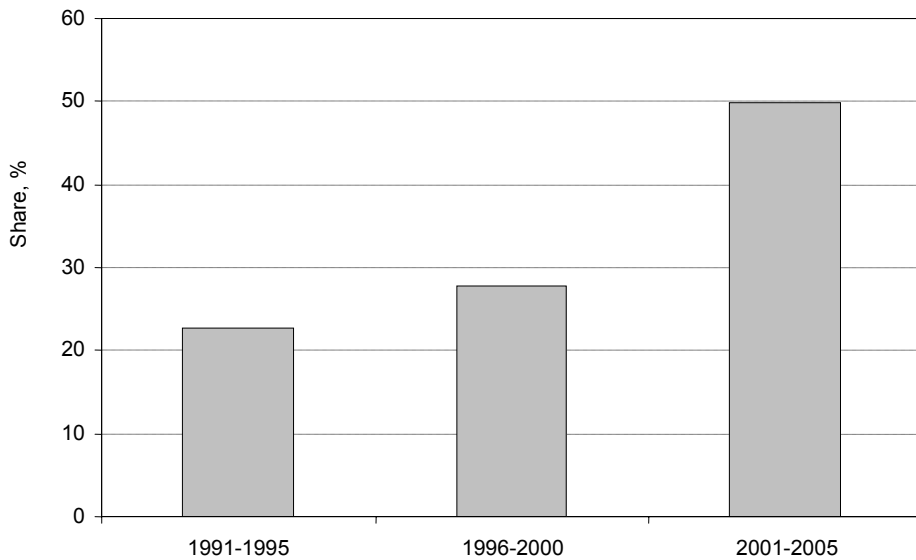
*Source:* Interviews with key informants in all of the metropolitan municipalities.

Still, not all municipalities and settlements face equally the challenges of rapid suburban population growth in the 2000s (two-thirds of the total new housing constructions between 1991 and 2006 took place in the housing boom years from 2003 till 2006). New housing construction was concentrated in a couple of neighbouring suburban municipalities of Tallinn (Figure 3), and we can observe a considerable growth in residential development in the former agricultural lands (Figure 6). The emergence of new suburban field settlements is also responsible for the movement of housing construction back at the borders of Tallinn in the 2000s relative to the 1990s (Figures 7 and 8), and in the growth of housing densities due to increase of multifamily housing construction in those areas (Figures 4). To summarise, housing construction intensified in these particular sites – field settlements close to the border of Tallinn – in the 2000s, also attracting most of the problems related to contemporary residential suburbanisation. These problems have also made their way to the public discussions and found critics in the media, where we can observe an especially negative discourse around the settlements built on those previous farmlands or the so-called “real estate villages” as they area now labelled in the media. The main



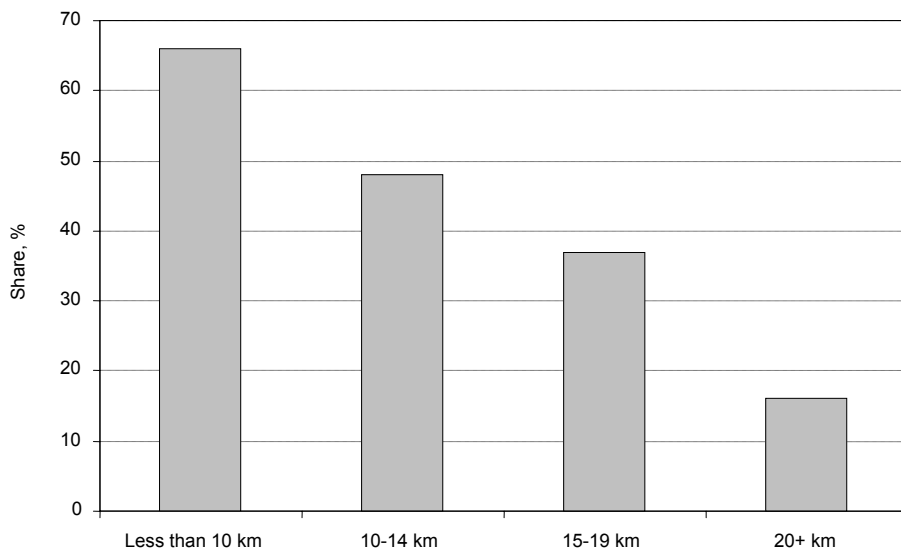
points of critique towards these settlements are as follows (e.g. *Äripäev Online* 2007; *Pealinn* 2007; *Tarbija24* 2007).

- There is a lack of public transport in new suburban field settlements that has transformed parents into taxi drivers for their kids.
- The architectural outlook is less than desirable and building quality of the houses is poor.
- These settlements lack street lights, asphalt roads and sidewalks for pedestrians.
- The amount of public space (recreational areas, parks, playgrounds, etc.) is missing as all of the available land was sold as residential land or is limited and its quality is less than desirable.
- These residential areas are poorly equipped with modern centralised water and sewage systems.
- New suburban field settlements lack social infrastructure, including schools and nursery schools.



**Figure 6.** Share of inhabitants in new suburban field settlements in total suburban housing construction, 1991–2005.

*Source:* New Residential Areas Survey 2006.



**Figure 7.** Share of new suburban field settlement inhabitants in total new suburbanites with distance from Tallinn, 2005.

*Source:* New Residential Areas Survey 2006.



**Figure 8.** New modern semi-detached houses in a Peetri field settlement in Rae municipality at the border of Tallinn.

*Photo:* Anneli Kährik (2008)

According to Raivo Uukkivi, the head of Rae municipality bordering Tallinn (see Figure 3), the issues of supporting technical infrastructure for the new settlements are easier to solve in cooperation with private developers (public sector contracts the private developer for the development process of the area), but establishing of sufficient social infrastructure or extending the existing facilities is the most difficult task, especially with regard to nursery schools (Pealinn 2007). The lack of places in the nursery schools is most acute in the settlements bordering Tallinn due to the rapid growth of young families in these areas (Kährik and Tammaru 2008). To summarise, public discourse does not consider plain field settlements as attractive residential destinations, making Viljar Arakas, former CEO of Arco Vara (real estate company listed on the Tallinn Stock Market) to conclude that many new homeowners in those field settlements are considering selling their home as a solution (*Äripäev Online* 2007). Despite the critical public discourse towards these field settlements, the people who move into these “real estate villages” are mostly with higher education levels and represent the wealthiest part of the population (Kährik and Tammaru 2008), including many urban politicians and opinion leaders. An article titled “A home in a never-everland” is the story of the Tsahkna family (Margus Tsahkna is a member of the Estonian Parliament) on how they ended up in a field settlement despite the fact that they considered this as a never-ever choice at the start of their housing search (Kuldbek 2008). All this facilitates us to take a more analytical view towards the motives that have led people into these field settlements, the most important new residential development areas in the suburbs of Tallinn. In our empirical analysis we therefore ask the following research questions.

1. What differentiates (socio-demographic profile) the inhabitants of new suburban field settlements from other new suburbanites?
2. What are the factors that make homebuyers choose field settlements instead of staying in Tallinn or choosing other new suburban settlements with more attractive natural/living environments?
3. Are the inhabitants of settlements less satisfied with their living conditions compared to other new suburbanites?

## RESEARCH DATA

There is no reliable national data for studying suburban housing construction since 2000 when the last census took place in Estonia, and therefore, data for the current study comes from the New Residential Areas Survey 2006 carried out in the suburbs of Tallinn (see also Tammaru et al 2008; Kährik and Tammaru 2008). The survey consisted of two parts. As a first step, we mapped all new residential areas built since 1991 in the suburbs of Tallinn, based on available datasets and followed by extensive fieldwork. We define new suburban settlements as follows. They include at least five residential units/households counted

on the bases of front doors and built since 1991, with a minimum distance between the centric points of houses being 200 metres. The construction activities in the Soviet-era summer home areas are not included in this study. Likewise, we excluded new freestanding detached houses as their number is small on the one hand, and their location is too scattered on the other. But new freestanding multifamily houses with at least five households are included in the study. The selection of residential units as the elementary research unit enables us to maintain the true distribution of households across housing types. However, there is a slight over-representation of multi-family houses in our data since freestanding detached houses are excluded from the study. Our final GIS level database includes 171 settlements, 3,400 houses and 5,600 residential units that house 17,000 people (12 percent of the suburban population); the respective figure for Tallinn is 25,000 (6 percent of the population) for the same period (Kährik and Tammaru 2008), which enables us to estimate a total of 42,000 people (8 percent) of the metropolitan population living in the new residences (built 1991–2005). Unfortunately we do not have any data on the population composition of the inhabitants living in the new houses of Tallinn.

The mapping of settlements and houses was followed by a sample survey among the inhabitants of the new suburban settlements. The fieldwork was carried through by the leading survey company of Estonia, TNS Emor, and our sample aim was 600 people representing 10 percent of the new suburban households. As there is no register with accurate information on new suburbanites, the sample was drawn from our settlement dataset, with the basic selection units again being the residential units/households obtained from the settlement database. A minimum of five interviews were conducted in one settlement to save survey costs, which means that we needed 120 random starting points ( $120 \times 5 = 600$ ) from a range of 5589 doors/households. To locate the random starting points of interviews to settlements, we attached a random ID number (first column in the dataset) ranging from 1 to 171 to each settlement. Next, we added a second column indicating the cumulative number of doors/households in the settlements. The settlements were included in the study based on how the 120 random numbers (between 1 to 5589) were distributed in the cumulative doors/households column. Our final sample size that is used for the following analysis includes 576 people.

The comparison between people living in the post-1991 field and other suburban settlements does not reveal any major differences in their socio-demographic profile (Table 2). There are many young Estonian families among the new suburbanites who are well educated white-collar workers and earn higher than average incomes. Thus, they are younger and socio-economically better advanced compared to the people living in Tallinn and older suburban settlements (Kährik and Tammaru 2008). This has a significant impact on the metropolitan wealth distribution. The Soviet-era differences in the socio-economic status between Tallinn and suburbs decrease as a result of new residential developments around Tallinn. But the socio-economic polarisation

within suburban areas, i.e. between old and new suburban settlements, increases considerably (Tammaru and Leetmaa 2007). Spatially, it means that municipalities bordering the capital city gain the most in this intra-metropolitan wealth redistribution. But this does not mean that these municipalities enjoy a strong financial position, as growing population elevates local investment needs (financed by loans) for building costly technical and especially social infrastructure objects as was mentioned by the head of Rae municipality, Mr. Uukivi.

**Table 2.** Living conditions and selected socio-demographic characteristics of the inhabitants of the new suburban settlements (%), 2005.

		Field settlements	Other settlements	Total
Gender	Male	49	47	48
	Female	51	53	52
Age	<35	36	43	39
	35–49	44	37	41
	50–64	15	15	15
	≥65	5	5	5
Children	Yes	53	57	55
	No	47	43	45
Household and housing characteristics	Mean household size	2.9	3.3	3.1
	Mean residence size (m <sup>2</sup> )	128	142	136
	Residence size per household member	44	44	44
Ethnic origin	Estonian	86	89	88
	Minority	14	11	12
Level of education	Primary	3	4	4
	Secondary	44	45	44
	Tertiary	52	52	52
Income per household member	Less than 6000 EEK	28	34	31
	6000–9999 EEK	29	34	32
	10,000 EEK and more	26	14	19
	No answer	17	18	18

**Table 2.** Continuation

		Field settlements	Other settlements	Total
Occupation	Manager	28	26	27
	Senior specialist	26	28	27
	Specialist/clerk	32	29	31
	Worker	14	16	15
Place of residence in 1991	Tallinn	38	56	47
	Elsewhere	62	44	53
Residence type	Single-family	48	58	53
	Semi-detached	22	14	18
	Multifamily	30	28	29
Sewage system	Local	7	26	18
	Central	93	74	82
Way of construction	Self organised	30	54	43
	Developer	70	46	57
Job location	Tallinn	70	57	63
	Elsewhere	30	43	37
Considers migration in two years	Yes	19	14	16
	No	81	86	84

*Sources:* LEU 2004; New Residential Areas Survey 2006.

The statistically significant distinction between the field and other new suburban inhabitants runs along other than socio-demographic variables. First of all, it is interesting to note that people who lived in Tallinn (or similarly, whose previous residence before the move was in the capital city) are over-represented in the field settlements. People from both older suburban settlements and the rest of the country prefer other new settlements. This phenomenon is interesting and needs future clarifications. But we find expectedly that in field settlements, a higher share of people lives in multifamily and semi-detached houses. The dwellings in field settlements are smaller compared to other new residential areas, but as the families are smaller as well, the average 44 m<sup>2</sup> residential size per household member is equal. This figure is also considerably higher compared to pre-1991 residential areas in the suburbs (24 m<sup>2</sup>) and Tallinn (20 m<sup>2</sup>, Kõre at al 1996). About half of the population of the capital city lives in one and two-room (less than 50 m<sup>2</sup>) apartments, half of the inhabitants of the old suburban areas reside in three-room (50–99 m<sup>2</sup>) flats,

while the living space is bigger than 100 m<sup>2</sup> for 70 percent of the people living in the new suburban homes (Figure 9). We can conclude that opting for a new suburban home enables people to move into considerably more spacious living conditions that are suitable for families with children; despite somewhat smaller residential units, floor space per person does not differ in the field and other new suburban settlements.

Contrary to the picture that opens in media, we can observe better equipment of field settlements with technical infrastructure (e.g. central sewage systems) compared to all other new residential areas. Similar results hold with regard to street surface and street lights. What we can also observe is that the field settlement inhabitants work more likely in Tallinn, and they prefer to buy a home from a developer rather than going through a painful self-organisation of construction-works. Self-organisation of housing construction (i.e. a household buys a plot of land and finds a company to build a house) is still very common as only 57 percent of the new residences have been built by private development companies and there is no public (state/municipality) housing construction going on outside Tallinn. Inhabitants of the field settlement have fewer cars in a household, and they do not show statistically significant elevated onward migration intentions.

## **NEW SUBURBAN FIELD SETTLEMENTS: CHOICE CRITERIA AND SATISFACTION**

There were no statistically significant differences in the socio-demographic profile of the inhabitants of the field and other new suburban settlements. Next we will explore in greater detail what the considerations are behind moving to the field settlements and whether people living in these residential areas are less satisfied with their living conditions compared to the rest of the new suburbanites. We asked several questions on a 10-point scale to clarify these issues, and performed, first, the one-way analysis of variance to test the significance of the mean difference between the variables ( $p = 0,05$ ). Second, we ran a logistic regression model with those variables, measuring the socio-demographic characteristics of the people as well. The results of the data analysis are as follows: people living in the new field settlements are more sensitive towards the negative factors related to the urban environment of the capital city (Table 3). Two of these are also statistically significant: dissatisfaction with one's old house and insecure urban environment. Although crime levels are not high in Tallinn, it is a problem in certain neighbourhoods. Also recent police reports show an increase in minor crimes against children (*Äripäev* 2008). The most important factors that bring people to new suburban areas are the desire to live in a house of your own and to have a private backyard. However, people who move to new field settlements are willing to make compromises with regard to these factors more often compared to other new suburbanites.

**Table 3.** Analysis of variance in the factors behind the decision to move to a new suburban settlement (mean)<sup>1</sup>.

	Field settlement	Other settlement	Difference
<i>Statistically significant positive mean difference</i>			
Living in an old house before a move	4.63	3.78	0.85
Insecure urban environment	5.78	4.97	0.81
<i>Statistically insignificant mean difference</i>			
Polluted urban environment	5.72	5.26	0.46
Noise of neighbours in previous residence	4.76	4.38	0.38
Neighbour background	4.38	4.05	0.33
Unfriendly urban environment for children <sup>2</sup>	5.49	5.17	0.32
Noisy urban environment	5.46	5.16	0.30
Birth of a child	3.46	3.30	0.16
Start of co-habitation	2.44	2.38	0.06
Better environment for children in a suburb	6.18	6.47	-0.31
Change of job location	1.86	2.07	-0.21
Change of spouse's job location	1.51	1.91	-0.40
<i>Statistically significant negative mean difference</i>			
Desire to live in a house of your own	7.59	8.19	-0.60
Desire to have a private backyard	6.90	7.56	-0.66

<sup>1</sup> "Do not know" answers (less than 5 percent for each variable) are excluded

<sup>2</sup> Computed only for families with children

Source: New Residential Areas Survey 2006.

There are also interesting differences in the factors that lead people to a particular new suburban settlement. The inhabitants of the field settlements prefer those residential areas that are better equipped with technical infrastructure (Table 4), which runs again against the public media discourse. Remaining close to Tallinn is the most important single factor in picking up a particular settlement for all new suburbanites, but the inhabitants of the field settlements attach particularly high importance to it. Again, people in these settlements are ready to make compromises with regard to backyard size and distance from schools and nursery schools. Next, we included all the statistically significant choice variables into a binary logistic regression model to find out the most important ones. The variables are coded as follows. All choice factors could be evaluated in a 10-point scale by the respondents, which were categorised into two variables in the regression model; values ranging from eight to ten are coded with one, all other values are coded as zero<sup>1</sup>. This

<sup>1</sup> We tried also two other modelling strategies. First, we used the original linear variables of the 10-point scale. But as the relationship between dependent and independent variables is not always linear (there is some clustering towards higher values), the results were less significant. Second, we also created three categories from the



means that we compare people who consider a respective factor as being very important (values eight to ten) to all other people (values one to seven). We present odds ratios in the tables that should be interpreted as follows. If the ratio is bigger than one, it is more important for the inhabitants living in the new suburban field settlements (coded with one) relative to all other suburbanites (coded with zero); if the ratio is smaller than one, it is less important for the inhabitants living in the new suburban field settlements relative to all other new suburbanites.

**Table 4.** Analysis of variance in the factors behind the choice of particular new suburban settlement (mean)<sup>1</sup>.

	Field settlements	Other settlements	Difference
<i>Statistically significant positive mean difference</i>			
Availability of central water	8.06	6.68	1.38
Availability of street lights	5.54	4.66	0.88
Asphalt covered streets	5.71	4.91	0.80
Availability of sidewalks	4.47	3.67	0.80
Staying close to Tallinn	8.73	7.96	0.77
Neighbourhood security	7.49	6.88	0.61
Good price	7.34	6.75	0.59
Image of the settlement	6.70	6.25	0.45
<i>Statistically insignificant mean difference</i>			
Architectural outlook	4.07	3.79	0.28
Natural environment	7.96	7.87	0.09
Close to friends/relatives	3.78	3.83	-0.05
Close to shopping centres	3.82	3.90	-0.08
Availability of public transport	4.61	4.73	-0.12
Earlier ties with the area	4.08	4.36	-0.28
<i>Statistically significant negative mean difference</i>			
Large backyards	4.35	5.36	-1.01
Close to nursery schools/schools	3.21	4.24	-1.03

<sup>1</sup> “Do not know” answers (less than 5 percent for each variable) are excluded

Source: New Residential Areas Survey 2006.

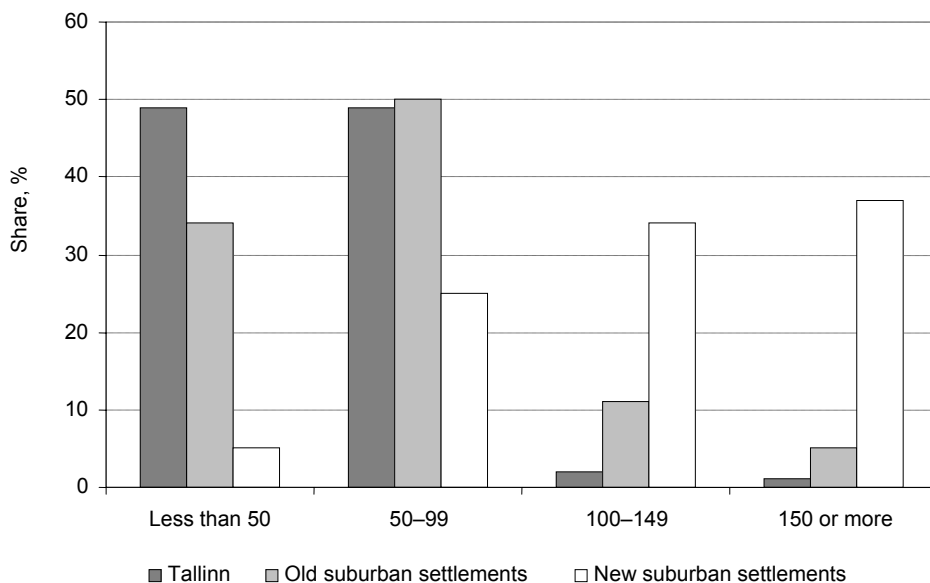
initial 10-point scale, unimportant (values 1–3), neutral (values 4–7), important (values 8–10). The results were largely same as in the presented model, and therefore we decided to go for a simpler model with fewer categories.

What we can learn from the results is that the more general factors (i.e. factors behind a decision to move new residential areas) lose their importance, while the more specific factors related to picking a particular settlement remain statistically significant. The results show that the availability of technical infrastructure (central water and sewage) and closeness to Tallinn make the most important differences between people living in the new suburban versus all other new suburban settlements. None of the socio-demographic variables is statistically significant, i.e. neither age, education, income, household composition, etc., discriminates between the inhabitants of new field and other settlements (result not shown in regression tables). But some other interesting variables turned out to be significant. Most importantly, buying a home from a developer distinguishes field settlements inhabitants from all others. Thus, rather than the socio-demographic characteristics of people, willingness to invest time in housing construction makes a difference in residential outcomes. The two other variables are related to the capital city. First, living in Tallinn in 1991<sup>2</sup> is the most important discriminating variable. We carried out many controls to learn whether this has something to do with living in a large housing estate in 1991/before move (which is also important), but the single most important variable was residence in Tallinn in particular, either in 1991 or before a move. The only way we can interpret it is that the variable now represents the dissatisfaction with the urban environment of Tallinn in general, which is, as we already know, clearly more important for people living in the new field settlements. Second, the jobs of the field settlement inhabitants are more likely located in the capital city, i.e. they contribute more strongly to the growth of commuting to Tallinn. However, they have fewer cars per household compared to other new suburbanites, which means that sharing a car by family members is more common among them.

There was a clear difference in choice factors and next we will address the question whether this is also related to the residential satisfaction factors. The results are interesting. First of all we should mention that people living in the field settlements are really considerably less satisfied by almost all of the variables used in the study (Table 6). In line with both media discussion and the opinions of the municipality officials, distance from schools and nursery schools is the most acute problem for the inhabitants of the field settlements. Although these settlements are close to Tallinn, the surrounding social infrastructure needs improvements. But they are also considerably less satisfied with greenery, playgrounds, public transport and settlement density, and these variables remain significant in the regression model as well (Table 7). The results by other variables are also consistent with the previous regression model.

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<sup>2</sup> But also living in Tallinn before a move, which is not included in the final model due to its high correlation with place of residence in 1991



**Figure 9.** Residence size distribution in Tallinn, old and new suburban settlements (m<sup>2</sup>).

Sources: LEU 2004; New Residential Areas Survey 2006.

**Table 5.** Differences in choice factors between inhabitants in new field (1) vs new other (0) suburban settlement (odds ratios).

	Exp(B)	Sig.
<i>Factors behind the choice to move to new suburban settlement</i>		
Unsatisfied with previous residence quality	1.206	
Large plot of land important	0.960	
Unsatisfied with urban environment	1.259	
Desire for a single-family house	1.144	
<i>Factors behind the choice of a particular new suburban settlement</i>		
Central water and sewage	1.781	***
Close to Tallinn	1.577	**
Security	0.902	
Good price	1.333	
Image of a neighbourhood	0.965	
<i>Job location (Reference = Elsewhere)</i>		
In Tallinn	1.590	**
<i>Income category (Reference = Low)</i>		
High	1.005	
<i>Residence type (Reference = Other)</i>		
Single-family	0.886	

**Table 5.** Continuation

	Exp(B)	Sig.
<i>Responsible for construction work (Reference = Owner)</i>		
Developer	2.422	***
<i>Number of cars in household (Reference = 0–1 cars)</i>		
2 cars	0.613	***
<i>Place of residence in 1991 (Reference = Elsewhere)</i>		
Tallinn	2.099	***
<i>Migration intentions in two years (Reference = No)</i>		
Considers to move	0.935	
Nagelkerke R Square	0.216	

Note: Socio-demographic controls are included in the model but not shown in table: age, gender, partnership, children, ethnic origin, education, employment.

Source: New Residential Areas Survey 2006.

**Table 6.** Analysis of variance in the satisfaction factors with current place of residence (mean)<sup>1</sup>.

	Field settlements	Other settlements	Difference
<i>Statistically significant positive mean difference</i>			
Room layout of a home	8.79	8.44	0.36
<i>Statistically insignificant mean difference</i>			
Size of a home	8.83	8.60	0.23
Relations with neighbours	8.08	8.10	-0.02
Security in a settlement	7.60	7.63	-0.03
Distance from job location	7.08	7.15	-0.07
Inner room climate	8.60	8.76	-0.16
Distance from spouse's job location	6.66	6.97	-0.31
Distance from shopping malls	6.44	6.76	-0.32
<i>Statistically significant negative mean difference</i>			
Image of the settlement	8.10	8.49	-0.38
Construction quality of a house	6.85	7.22	-0.37
Architectural outlook of a settlement	6.16	6.71	-0.55
Nearby free time activity options	5.51	6.29	-0.78
Settlement density	5.60	6.96	-1.36
Public transport	4.64	6.01	-1.37
Playgrounds	4.32	5.93	-1.61
Greenery in a settlement	5.38	7.15	-1.77
Distance from school/nursery school <sup>2</sup>	5.83	8.39	-2.56

<sup>1</sup> "Do not know" answers (less than 5 percent for each variable) are excluded

<sup>2</sup> Computed only for families with children

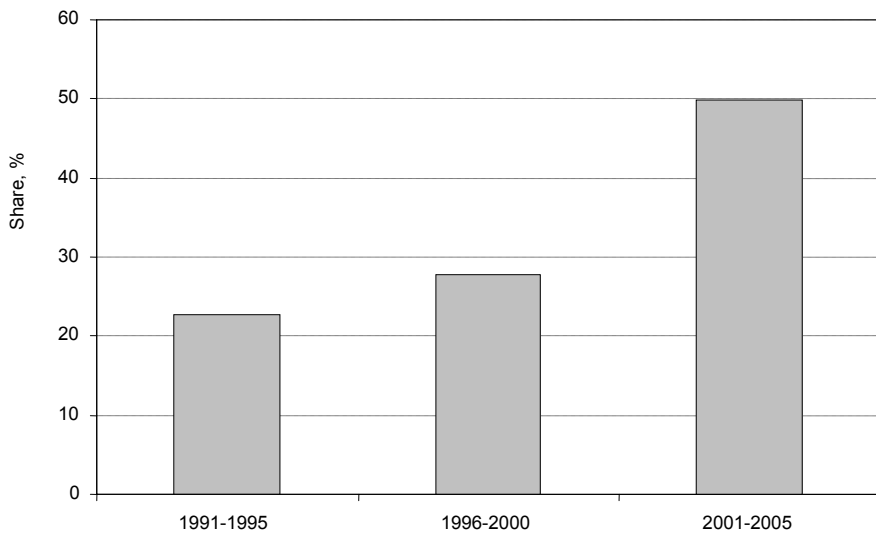
Source: New Residential Areas Survey 2006.

**Table 7.** Differences in satisfaction factors between inhabitants of new field (1) vs new other (0) suburban settlements (odds ratios).

	Exp(B)	Sig.
<i>Satisfaction factors with current residence</i>		
Image of a neighbourhood	0.707	
Architecture of a neighbourhood	1.544	*
Room layout	1.551	*
Construction quality	1.415	
Settlement density	0.734	
Public transport	0.675	
Distance from nursery school/school	0.438	**
Nearby outdoor sports activities	2.048	***
Playgrounds	0.349	***
Greenery	0.387	***
<i>Job location (Reference = Not in Tallinn)</i>		
In Tallinn	1.589	**
<i>Income category (Reference = Low)</i>		
High	0.919	
<i>Residence type (Reference = Other)</i>		
Single-family	0.704	*
<i>Responsible for construction work (Reference = Owner)</i>		
Developer	2.864	***
<i>Number of cars in household (Reference = 0–1 cars)</i>		
2 cars	0.657	**
<i>Place of residence in 1991 (Reference = Elsewhere)</i>		
Tallinn	2.429	***
<i>Migration intentions in two years (Reference = No)</i>		
Considers to move	0.934	
Nagelkerke R Square	0.313	

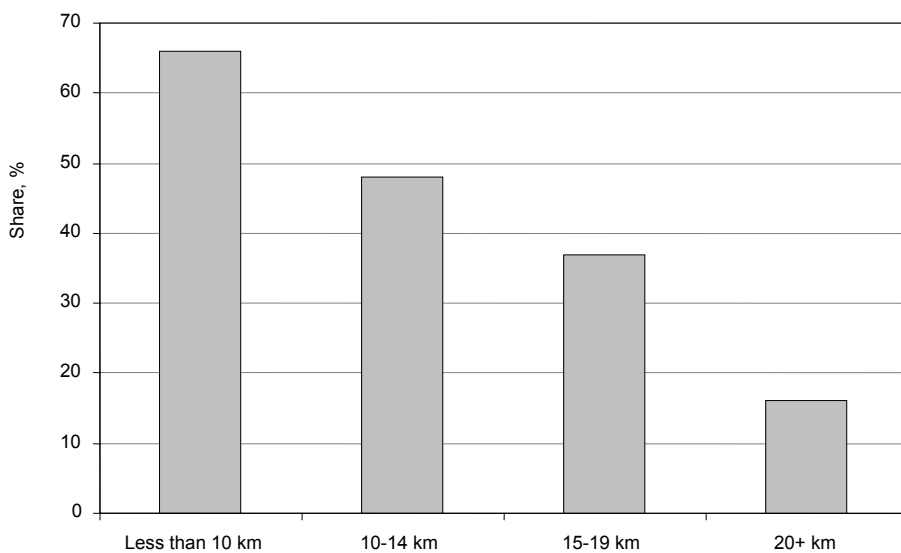
Note: Socio-demographic controls included in the model but not shown in table: age, gender, partnership, children, ethnic origin, education, employment.

\*\*\* p < 0.001, \*\* p < 0.05 \* p < 0.010



**Figure 6.** Share of inhabitants in new suburban field settlements in total suburban housing construction, 1991–2005.

*Source:* New Residential Areas Survey 2006.



**Figure 7.** Share of new suburban field settlement inhabitants in total new suburbanites with distance from Tallinn, 2005.

*Source:* New Residential Areas Survey 2006.

## SUMMARY AND DISCUSSION

The most important results of the study are as follows. Suburban areas started to gain migrants in the 1980s as a result of population redistribution in the Tallinn metropolitan area, and this trend continued through the 1990s and 2000s. However, the nature and spatial form of the process changed during the transition period, as did the composition of suburbanites. Both jobs and people left Tallinn in the 1980s, moving all across the hinterland, but to the very compact settlements, industrial satellite towns and centres of agricultural production where people were housed close to jobs. Residential suburbanisation started in the 1990s, and this separated places of work and residence, bringing along a considerable increase in commuting. New housing construction concentrates at the very borders of the capital city which is different from the Soviet period and similar to the inter-war period. New housing construction increased exponentially in the 2000s compared to the 1990s, and as the major vacant lands around Tallinn are previous farmlands, we find an increase in residential development in these areas. Thus, the former fields have become the focus of both residential growth, but also of the problems related to new residential developments. Public media discourse is therefore quite negative towards these development projects that facilitated us to take a closer look at these areas.

In contrast to earlier migrants, new suburbanites are young, well educated white-collar workers who earn considerably higher than average incomes, and there are no statistically significant differences in the socio-demographic composition between new suburban fields and other settlements. But there are some other important factors that help us to understand who the people who move there are and what the motivation behind such choices is. First of all, these are people who do not have time or willingness to organise housing construction themselves. Buying a plot of land and organising construction works is quite a popular way of improving one's living conditions in the Tallinn metropolitan area, but it takes more effort (e.g. personal time) and these people end up more likely living elsewhere than in field settlements. Second, inhabitants of the field settlements are sensitive to the urban push factors, and they desire a spacious, modern, ready-to-move-in house equipped with modern technical infrastructure, and to get all this at a reasonable price. Third, these people have very strong connections with Tallinn which makes them search for housing as close to Tallinn as possible. Therefore, the inhabitants of the field settlements are ready to make compromises with regard to housing types, backyard sizes and settlement densities, and even with distance from social infrastructure (schools and nursery schools).

All this does not mean that these people are satisfied with their residential outcomes; the satisfaction levels are lower compared to all other new suburbanites, especially with regard to social infrastructure, greenery, playgrounds, public transport and settlement density. But as concludes Mr. Tsahkna, typically people consider the new suburban field settlements as a

never-ever residential choice, but many young families with children who scan through all the residential options available within the metropolitan area, also inside Tallinn, finally end up exactly in these areas (Kuldbek 2008). In these areas they can easily continue their daily lives in the city. The residences in new suburban field settlements are modern and the living conditions are notably more spacious than old pre-1991 residences both in Tallinn and the suburbs, and the houses are better priced compared to the new residences in Tallinn or elsewhere in the new suburban settlements in the vicinity of Tallinn. Therefore, inhabitants of the new suburban field settlements do not have elevated onward migration intentions as well, despite the fact that they are not fully satisfied with their living conditions. This leads us to many important points of discussion with regard to the role of the new suburban field settlements in the metropolitan housing market more generally, and in new suburban residential construction more specifically.

First, there is a strong need for modern housing in the Tallinn metropolitan area like elsewhere in previously centrally planned countries, as the majority of the metropolitan population lives in the small flats of the large Soviet-era housing estates. Although the mid-2000s increase in housing construction is sometimes titled as a housing boom, in a comparative perspective with other countries (e.g. with EU-15 countries) the amount of newly completed residences per 1000 inhabitants in central and eastern European countries was still modest even in 2005 (Égert and Mihaljek 2007). The possible options for the people searching for alternatives to Soviet-era apartments range from in-fills in Tallinn and older pre-1991 suburban settlements to residential development in forested areas or former fields. Pre-1991 settlements in the suburbs are already dense and therefore offer only limited development potential and very high new housing densities in the Tallinn metropolitan context. Forested areas are not a good option as well as there are planning restrictions that make these areas less available for real estate development purposes, and it would also be more reasonable to keep them as public recreational areas. There is still enough land for development in Tallinn, but prices are much higher in the capital city compared to suburbs (Estonian Land Board 2006). Any further increases in housing construction in Tallinn pushes up land prices there, and as the major way of buying a home is by using the long-term mortgage through Swedish banks, this also has a negative effect on the national balance sheet. All this means that spreading residential development in metropolitan space contributes to the housing choice set, and the former field areas also form an important segment for future residential development in the metropolitan area. Furthermore, it should be noted that the Tallinn metropolitan area is one of the least densely populated metropolitan area in Europe (Kasanko et al 2005) due to vast vacant areas around the city.

Second, an important discussion is going on regarding new suburban developments as related to the negative effects of urban sprawl and the ecological footprint of new suburbanites. But new field settlements are much



denser, more compact and offer a greater variety of housing types compared to the other new suburban settlements, thus producing less such negative effects. Although field settlements produce higher commuting flows to Tallinn than other new residential areas, we find also fewer cars and higher levels of dissatisfaction with public transport in these areas. Therefore, the emphasis should change from criticism to better planning of these areas to create a more satisfactory living environment in the field settlements. Due to their density and location, these areas should be considered as natural extensions of the capital city. This calls for better planning of these areas. Although the field areas are vast, they are developed patch-style, guided by detailed plans of specific development projects, rather than general master plans. This is so due to two reasons. First, by law, only individuals and agricultural enterprises are allowed to buy more than ten hectares of agricultural land (*Äripäev* 2008). Second, the purchasing power of developers is not enough for buying up an entire field. Both of these reasons lead to the patch-style development of the former agricultural lands that finally merge into a single residential area.

Thus, better planning of the field areas on the municipality level is needed to achieve well functioning residential areas on former agricultural lands. Linked to this is the issue of connecting field settlements better with the public transport system of Tallinn. As fields are developed by many small projects that finally merge, the road system (main and local roads) are often poorly planned, not taking into account the final merging of the separately developed residential projects. Finally, our study confirms that field settlements should be better connected to social infrastructure (schools and nursery schools) and greater emphasis needs to shift to the planning of parks, green areas and playgrounds which are the most acute problems both for municipalities and inhabitants of the new suburban field settlements.

## REFERENCES

- Ahas, R., Jauhiainen, J. Silm, S., Nuga, M., Tähepõld, A., Saluveer, E., Kivi, K. 2008. *Tallinna ja ümbritsevate omavalitsuste koostöövõimalused ja perspektiivid valglinnastumise kontekstis* [Urban sprawl and inter-municipality cooperation in the Tallinn metropolitan area]. Manuscript electronically available at <http://www.tallinn.ee/est/g2402s38094>. Last accessed 10 April 2008.
- Arco Vara 2007. *Eesti kinnisvaaturu ülevaade 2007* [Estonian real estate market 2007]. Tallinn: Arco Vara. Electronically available at <http://www.arcovara.ee/?id=15>. Last accessed 10 April 2008.
- Aring, J., Herfert, G. 2001. Neue Muster der Wohnsuburbanisierung. In: K. Brake, J.S. Dangschat, G. Herfert, eds., *Suburbanisierung in Deutschland: aktuelle Tendenzen*, pp. 43–56. Opladen: Leske+Budrich.
- Bourne, L.S. 1997. Reinventing the suburbs: Old myths and new realities. *Progress in Planning* 46:3, 163–184.
- Brown, D., Schafft, K. A. 2002. Population deconcentration in Hungary during the post-socialist transition. *Journal of Rural Studies* 18, 233–244.

- Bruns, D. 1993. *Tallinn. Linnaehituslik kujunemine* [Tallinn. Overview of an urban development]. Tallinn: Valgus.
- Champion, T. 2001. Urbanisation, suburbanisation, counterurbanisation and reurbanisation. In: R. Paddison, ed., *Handbook of Urban Studies*, pp. 134–161. London: Sage Publications.
- Downs, A. 1999. Contrasting strategies for the economic development of metropolitan areas in the United States and Western Europe. In: A. Summers, P. Cheshire, L. Senn, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 15–56. Washington: The Urban Institute Press.
- Ėgert, B., Mihaljek, D. 2007. *Determinants of Housing Prices in Central and Eastern Europe*. Bank for International Settlements Working Papers 236 (<http://www.bis.org/list/wpapers/index.htm>. Last accessed 10 April 2008).
- Estonian Land Board 2006. *Land Transactions Database*. Tallinn: Estonian Land Board.
- Estonian Statistical Office 1935. *Rahvastikuprobleeme Eestis. II rahvaloenduse tulemusi*. Vihk IV [Population of Estonia. Returns of the 2<sup>nd</sup> population census. Series IV]. Tallinn: Riigi Statistika Keskbüroo.
- Garreau, J. 1991. *Edge City: Life of the New Frontier*. New York: Doubleday.
- Gober, P. 1989. The Urbanisation of suburbs. *Urban Geography* 10:4, 311–315.
- Hall, P. 2001. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, Massachusetts: Blackwell Publishers Ltd.
- Harju maakonnaplaneering 1999. *Harju maakonnaplaneering I etapp* [Master plan of Harju County. 1<sup>st</sup> phase.]. Tallinn: Harju County Government.
- Harju maakonnaplaneeringu teemaplaneering 2003. *Harju maakonnaplaneeringu teemaplaneering. Asustust ja maakasutust suunavad keskkonnatingimused* [Master plan of Harju County. Environmental conditions guiding the development of settlement and land use patterns]. Tallinn: Harju County Government.
- Hartshorne, T., Muller, P. 1989. Suburban downtowns and the transformation of metropolitan Atlanta 's business landscape. *Urban Geography* 10:4, 375–395.
- Heleniak, T. 2004. Migration of the Russian diaspora after the breakup of the Soviet Union. *Journal of International Affairs* 3:22.
- Jauhiainen, J.S. 1997. Militarisation, demilitarisation and re-use of military areas. The case of Estonia. *Geography* 89:2, 110–121.
- Kasanko, M., Barredo, J.I., Lavalle, C., McCormik, N., Demichelli, L., Sagris, V., Brezger, A. 2005. Are European cities becoming dispersed? A comparative analysis of 15 European urban areas. *Landscape and Urban Planning* 77, 111–130.
- Katus, K., Puur, A. 2005. Siseränne põlvkonnavaates [Generation perspective for interanal migration]. *Asustus ja ränne Eestis. Uurimusi Ann Marsksoo 75 sünnipäevaks* (ed by H. Kulu, T. Tammaru). Tartu: Tartu University Press, 117–149.
- Krisjane, Z. 2005. The trends of urban concentration and suburbanisation. The case of Riga. Presentation at *The Inaugural Nordic Geographers Meeting*, Lund, Sweden, May, 10–14.
- Kuldbek, K.-K. 2008. Kodu eikunagimaal [A home in never-everland]. *Kroonika. Kodu-eri* spring special issue, 30–37.
- Kulu, H. 2001. Sõjajärgne siseränne Eestisse võrdlevas perspektiivis [Post-War immigration to Estonia in a comparative perspective]. *Akadeemia* 11, 2379–2395.
- Kulu, H., Billari, F. 2004. Multilevel analysis of internal migration in a transitional country: The case of Estonia. *Regional Studies* 38, 679–696.

- Kulu, H., Billari, F. 2006. Migration to urban and rural destinations in post-Soviet Estonia: A multilevel event-history analysis. *Environment and Planning A* 38, 749–764.
- Kupiszewski, M., Durham, H., Rees, P. 1998. Internal migration and urban change in Poland, *European Journal of Population* 14, 265–290.
- Kõre, J., Ainsaar, M., Hendrikson, M. 1997. Eluasemepoliitika Eestis 1918–1995 [Housing policy in Estonia 1918–1995]. *Akadeemia* 10, 2133–2163.
- Kährik, A., Tammaru T. 2008. Population composition in new suburban settlements of the Tallinn metropolitan area. *Urban Studies* 45:5, 1055–1078.
- Ladányi, J., Szelényi, I. 1998. Class, ethnicity and urban restructuring in postcommunist Hungary. In: G. Enyedi, ed., *Social Change and Urban Restructuring in Central Europe*, pp. 67–86. Budapest: Akadémiai Kiadó.
- Leetmaa, K., Tammaru, T. 2007. Suburbanisation in countries in transition: Destinations of suburbanisers in the Tallinn metropolitan area. *Geografiska Annaler Series B-Human Geography*, 89B:2, 127–146.
- LEU 2004. *Leibkonna pere-eelarve uuring* [Household Budget Survey]. Tallinn: Estonian Statistical Office.
- Lõhmus, L. 2004. *Nõmme*. Tallinn: Koolibri.
- Marksoo, A. 1990. Tallinn Eesti rahvarände süsteemis [Tallinn in Estonia's migration system]. *Eesti Geograafia Seltsi Aastaraamat*, 53–66.
- Marksoo, A. 2005. Linnastumine ja ränne nõukogude perioodil [Urbanisation and migration during the Soviet period]. In: H. Kulu, T. Tammaru, eds., *Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.
- Marksoo, A., Kaljulaid, H., Kask, I., Kaup, U., Rull, K., Rõivas, T. 1983, *Tööjõu territoriaalse mobiilsuse seaduspärasused Eesti NSVs*. [Regularities of territorial mobility of labour in Estonian SSR]. Unpublished applied research project, grant T-045 Tartu: University of Tartu, Department of Geography
- Palacin, J., Shelburne, R. 2005. *The private housing market in Eastern Europe and the CIS*. Geneva: United Nations Economic Commission for Europe, Economic Analysis Division (Discussion Paper Series No 6).
- Pealinn 2007. Newspaper article in *Pealinn* 24 January 2007.
- Postimees 2005. Newspaper article in *Postimees* 20 January 2005.f
- Pullat, R. 1978. *Linnad kodanlikus Eestis. Ajaloolis-demograafiline käsitus* [Urban areas in independent Estonia. An historical-demographic overview]. Tallinn: Eesti raamat.
- Raagmaa, G. 1996. Siirdeaeg ja Eesti regionaalne areng [Regional development in Estonia during the transition period]. *Eesti Geograafia Seltsi Aastaraamat*, 114–143.
- Raagmaa, G., Kroon, K. 2005. The future of collective farms' built social infrastructure: Choosing between central placen and network theories. *Geografiska Annaler. Series B: Human Geography*, 87B:3, 205–224.
- Ravbar, M. 1997. Slovene cities and suburbs in transformation. *Acta Geographica Slovenica* 37, 65–109.
- Sakkeus, L. 1991. Post-war migration trends in Estonia. *EKDK Rahvastiku-uuringud seeria B:15*.
- Sýkora, L., Cermák, D. 1998. City growth and migration patterns in the context of “communist” and “transitory” periods in Prague's urban development. *Espace. Population. Societies* 3, 405–416.

- Tallinna üldplaneering 2000. Tallinna üldplaneering [Urban areas in independent Estonia. An historical-demographic overview]. Tallinna City Government: Sustainable Development and Planning Board.
- Tammaru, T. 2001a. *Linnastumine ja linnade kasv Eestis nõukogude aastatel* [Urbanisation in Estonia during the Soviet period]. Tartu: Tartu University Press.
- Tammaru, T. 2001b. Differential urbanisation and primate city growth in Soviet and post-Soviet Estonia. *Tijdschrift voor Economische en Sociale Geografie* 91:1, 20–30
- Tammaru, T. 2005. Suburbanisation, employment change, and commuting in the Tallinn metropolitan area. *Environment and Planning A* 37:9, 1669–1687.
- Tammaru, T., Kulu, H., Kask, I. 2004. Urbanisation, suburbanisation, and counter-urbanisation in Estonia. *Eurasian Geography and Economics* 45:3, 212–229.
- Tammaru, T., Leetmaa, K. 2007. Suburbanisation in relation to education in the Tallinn metropolitan area. *Population, Space and Place* 13:4, 279–292.
- Tammaru, T., Leetmaa, K., Ahas, R., Silm, S. 2008. Temporal and spatial dynamics of the new residential areas around Tallinn. *European Planning Studies* (in press).
- Tosics, I. 2003. City development in central and Eastern Europe since 1990: The impacts of internal forces. In: F.E.I. Hamilton, K. Dimitrowska-Andrews, N. Pichler-Milanovic, eds., *Transformation of Cities in Central and Eastern Europe: towards Globalisation*, pp. 44–78. Tokyo: United Nations University Press.
- Uusmaa 2007. *Tallinn kinnisvaraturu trendid IV kvartal* [Tallinn real estate market in the 4<sup>th</sup> quarter]. Tallinn: Uusmaa. Electronically available at <http://www.uusmaa.ee/?&m1=107&m2=109&m3=110&language=1>. Last accessed 10 April 2008.
- Tarbija24 2007. Newspaper article in *Tarbija24* 05 December 2007.
- Van Den Berg, L., Drewett, R., Klaassen, L., Rossi, A., Vijverberg, C. 1982. *A Study of Urban Growth and Decline*. Oxford: Pergomon Press.
- Äripäev 2008. Newspaper article in *Äripäev* 04 April 2008.
- Äripäev Online 2008. Newspaper article in *Äripäev Online* 28 May 2007.

### **2.3. Theoretical review of studies on post-communist suburbanisation in the Tallinn metropolitan area**



**2.3.1.**

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# Urban actors shaping residential suburbanisation in the Tallinn metropolitan area

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## ABSTRACT

Recently, Sjöberg (1999), and Gentile and Sjöberg (2006) generalized the priority-mechanisms that shaped the settlement systems and individual cities in the formerly centrally planned countries. The current article adds the metropolitan level to those macro and micro level approaches, and links priority approach to a more general urban life cycle theory (Van den Berg et al 1982) for understanding the processes of population change in this group of countries. The empirical content of the paper comes from the Tallinn metropolitan area (TMA), Estonia. We demonstrate how the key actors — families, companies and public sector — have guided the metropolitan residential change in the course of the three last decades. First, the priorities of the communist regime shaped the spatial structure of the TMA and therefore post-communist transition period (especially the 1990s) was strongly related to Soviet-era suburban housing stock and free areas available for new developments around the city. Second, the passive attitude of the public authorities since 1991 increased the role of business sector actors in metropolitan dynamics (especially in the 2000s). We exemplify how these two factors shape the residential choice set for families through the progression from priorities-led (late Soviet) to vacancies-led (1990s) to market-led (2000s) suburban housing structure in the TMA.

**Key words:** suburbanisation, urban actors, historical legacy, post-Soviet period, Tallinn metropolitan area

## INTRODUCTION

This article focuses on residential suburbanisation in the Tallinn metropolitan area in Estonia in the late-Soviet (1980s), transition (1990s) and the post-transition (2000s) periods. The suburbanisation debate in the post-communist world often leans its arguments on the suburbanisation discussions in the former Western world (Van den Berg et al 1982; Hall & Hay 1980; Champion 2001). There is a general agreement in the literature that the social context changed after the collapse of the communist regimes in Central and Eastern European (CEE) countries and therefore favourable conditions emerged for people to realise their dreams for better housing. Indeed, several studies demonstrate that residential suburbanisation has been the dominant migration process in the metropolitan areas of the CEE countries (Aring & Herfert 2001; Brown & Schafft 2002; Krisjane 2005; Kupiszewski et al 1998; Ladányi & Szelényi 1998; Sýkora & Cermák, 1998; Ravbar 1997; Tosics 2003), including Estonia in the 1990s (Tammaru et al 2004). Some studies go further and demonstrate that the concept of “Western suburbanisation” (migration of the more well-off urban families in search of better living environments (Dieleman & Wallet 2003; Bourne 1997; Van den Berg et al 1982; Hall 2001)) is not sufficient to understand post-communist intra-metropolitan migration, as migration towards suburbs has been a socially manifold process (Leetmaa & Tammaru 2007; Ouředníček 2007; Kok & Kovács 1999).

We claim that neither the traditional model of “Western suburbanisation” nor the belief that the logic behind the “post-communist” urban change is different on principle is informative enough to explain the post-communist residential changes. Instead, there is a need to look towards some general discussions that explain the divergent trends in metropolitan change, also inside the former Western world. For instance the extent of public sector intervention (e.g. housing policy, the traditions for regional planning) seems to be one of the decisive factors shaping suburbanisation patterns (Downs 1999; Bourne 1997; Müller & Rohr-Zänker 2001; Hall 2001). Also, the existing spatial structure of the metropolitan area (e.g. the housing stock) influences residential changes (Bourne 1997; Aring & Herfert 2001; Heitkamp 2002). These discussions could also be informative for post-communist studies. In this article we aim to further open the institutional as well as spatial context of post-communist suburbanisation. We argue that instead of making a clear split between communist and post-communist periods there is a need to understand the *continuities* in urban development. To this end we brought the late-Soviet decade as a period of reference into our analysis. In addition, while talking about post-communist metropolitan development, there is a need to keep in mind the notion of *change*. There were many important milestones (not only the collapse of the communist regime) during the last decades that decisively impacted on migration processes.

We employ one of the most well known theories in urban research, the urban life-cycle theory (Van den Berg et al 1982, Van den Berg 1999), and we

demonstrate how its concept of urban dynamics<sup>1</sup> can be equally applied for the entire period under study to better grasp both the continuities and changes in residential suburbanisation in the TMA. We start our analysis with a theoretical chapter to explain the initial idea of metropolitan dynamics and to apply this concept in the communist context as well. In the second chapter we demonstrate how communist-era urban actors shaped the spatial structure of the metropolitan area. Then we proceed with analysis of residential suburbanisation in the 1990s and 2000s and we discuss how the role of the three main actors changed over time. The empirical content of the paper comes from 1) Soviet time research on TMA (Bruns 1993; Jauhiainen 1997; Kulu 2003; Kõre et al 1996; Marksoo 1984, 1992, 1995, 2005; Raagmaa & Kliimask 2005; Tammaru 2001a, b); 2) Census 2000 for the 1990s (Leetmaa & Tammaru 2007); and 3) the New Residential Areas Survey 2006 (Tammaru et al 2008) and Summer Home Areas Survey 2007 (Anniste 2007) for the 2000s.

We define the TMA as consisting of the city of Tallinn and the surrounding municipalities from where at least 15% of the workers commuted daily to Tallinn according to the Census 2000 (figure 1). With its 530,000 inhabitants the capital city metropolitan area is the largest urban region in Estonia, containing 40% of the country's population. The former studies reveal that the suburbanisation phenomenon and housing construction are the most intensive in the TMA (Tammaru et al 2004; Estonian Land Board 2007). We define the process of suburbanisation in this article as the migration of people from Tallinn to the suburban municipalities. Although people from other parts of the country also settled in the suburban area of Tallinn; the majority of new suburban residents originate from the capital cities both in Estonia (Leetmaa 2003) and elsewhere in the CEE countries (for Czech Republic, see Ouředníček 2007).

## **THE BALANCE OF ACTORS IN WESTERN AND SOCIALIST CITIES**

In urban and population geography there are several attempts to find a common theoretical ground to explain urban development in countries under different political systems (Hall & Hay 1980; Van den Berg et al 1982; Geyer & Kontuly 1993) and these studies have triggered much comparative research in many countries (e.g. Champions 2001; Tammaru 2003; Tosics 2003; Marksoo 1984a, Tammaru 2000). One of the most well known is the urban life-cycle theory (Van den Berg et al 1982, Van den Berg 1999), which also included communist countries in its initial analyses. The logic of urban development phases (urbanisation, suburbanisation, counter-urbanisation and re-urbanisation) is the most frequently tested and probably also overexploited part of the theory. It is

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<sup>1</sup> We prefer a term metropolitan dynamics (also metropolitan actors) that captures better the concepts of original idea to analyse changes across the whole metropolitan area/urban region (central city/core city as linked to suburban area/hinterland delineated based on job-related commuting).

also the most criticised part of the theory with references to natural determinism (Nyström 1992).

We would like to argue that many of the valuable contributions of the theory have been neglected. One of the central ideas of the theory is the notion of “urban dynamics,” which refers to the interplay between the key actors in an urban region — families, companies, and public authorities (Van den Berg 1982, p. 8–23). Families try to maximise their welfare and companies want to ensure profits. The public authorities aim to improve general social welfare and act accordingly. Actions and responses emerge as a result of the interplay between these actors and this keeps metropolitan dynamics in motion.

Interestingly, though not referred to the life-cycle theory, there is a great deal of literature concerning the interplay of metropolitan actors. For instance, contemporary urban debate agrees that urban planners face with a more and more complicated networks of actors (Beauregard & Haila 2000; Stone 2005; Amin & Graham 1997), including global business interests (Sassen 1991, 2001; Castells 2004; Heeg 2003). The institutional context is central to explaining divergent trends in the residential patterns in the US and in Western Europe. In general, private corporations have relatively greater freedom to decide over the future of the city in North America compared to the “average” European city (Downs 1999; Bourne 1997; Müller & Rohr-Zänker 2001; Marcuse & van Kempen 2000; Kazepov 2005; Le Galès 2005). Transport and housing policies favour new housing construction and urban sprawl in the US whereas the public housing construction, public transport and compact settlement structure are usual in many Western European countries (Downs 1999; Bourne 1997; Hall 2001; Van den Burg & Dieleman 2004). Still, the notions of American and European cities are also not coherent enough to shed light upon the diversity in the institutional contexts in Western societies (Bourne 2007; Kazepov 2005; Le Galès 2005; Salet & Thornley 2007; Crouch 1999).

Van den Berg et al (1982) tested the metropolitan development phases in the context of communist regimes, but we will elaborate it further by including communist-era urban actors into the model to better understand the mechanisms of metropolitan change. Interestingly, although public authorities (central planners) possessed remarkable power in communist countries, in general the identified three actors’ groups have surprisingly similar ambitions. A useful explanation that might elucidate the special features of the public-sector-led urban development in countries under central planning is the “priority approach” (Kornai 1992). This stresses the important role of socialist priorities in shaping economic and social structures.

The most powerful priority recognisable throughout the communist period was the economic priority given to industry. The prioritisation of economy led to a permanent shortage of resources and the priority sectors were in general better supplied with resources (e.g. raw materials, labour) (Kornai 1992). Although the enterprises were state-owned, their behaviour resembled in many ways that of their private counterparts in capitalist countries. Even when they

could not directly decide on their location, they struggled for other resources. The enterprises with higher priority enjoyed softer budget constraints and were able to provide better housing and services (e.g. cultural, child care) to their workers (Shabad 1986). Indeed, many communist-era enterprises became major “real estate developers”. This led to opposition between sectoral and spatial policies (Shaw 1983).

Although the people’s decisions depended on the activities of two other actors (migration control to the major cities or labour needs of the enterprises), people also had opportunities to evade the restrictions or to benefit from the system of the shortage economy (Tammaru 2001a). The extensive industrialisation led, first, to full employment and, next, to a shortage of labour (Kornai 1992). As seen from the perspective of individual migration this served an interesting change. As finding a job was no problem and labour became a resource that was constantly in high demand, it made movement of people easier. As the state housing construction programmes (Konrad and Szelényi 1974; Kornai 1992) were not able to solve the enormous housing needs, the possibility to acquire a better apartment with a new job became an additional opportunity. These factors made some of the authors argue about the “myth of managed migration” in countries under central planning (Buckley 1995). Consequently, we can recognise the struggle between metropolitan actors also in countries with a totalitarian power structure.

## **SUBURBAN DEVELOPMENT IN THE LATE-SOVIET PERIOD**

As follows we describe how the economic and social preferences in a communist country left its imprints on the spatial structure of the metropolitan area. There are two excellent contributions in this topic; Sjöberg (1999) analyses how the socialist priorities shaped the settlement systems, and Gentile and Sjöberg (2006) exemplify the impact of the priority economy on the “intra-urban priority landscape.” The first paper focuses, thus, on macro level, and the second paper on micro level processes with little attention on the metropolitan level spatial population change. The current article fills this gap and contributes to the understanding of the relationships between the institutional context of the period and spatial arrangements shaping the formation of the “suburban priority landscape” (table 1).

**Table 1.** Soviet priority areas and their implication on suburban settlement structure in the TMA.

<b>SOVIET PRIORITY AREAS</b>	<b>IMPLI-CATIONS ON SUBURBAN LAND USE</b>	<b>TRENDS IN HOUSING CONST-RUCTION</b>	<b>LOCATION OF NEW SUBURBAN HOUSING</b>	<b>RESULTING SETTLEMENT STRUCTURE</b>
INDUSTRY  (throughout the communist period)	Need to restrict the growth of capital city, establishing and growth of industrial satellite towns		Satellite towns	COMPACT SETTLEMENTS ALL OVER THE SUBURBAN AREA  LARGE UNUSED AREAS AROUND THE CITY
AGRI-CULTURE  (since mid-1970s)	Agricultural land as an important resource, not available for construction	Standardised housing construction, equalitarian ideology and cheapest way of construction	Agricultural centres  Summer home areas	
MILITARY FORCES  (throughout the communist period)	Coastal areas engaged by military facilities and border zones, not available for construction	(compact new summer home areas)	New settlements close to military facilities  Housing for military personnel in old settlements	

First we summarize the results of the studies that analyze the suburban population development in the late Soviet period. Since the beginning of the 1980s the population of the suburban areas of Tallinn started to grow faster compared to the capital city (Tammaru 2001b; Marksoo 1992). In fact, the satellite towns (urban areas) around Tallinn grew faster than Tallinn since the very beginning of the Soviet period (Tammaru 2001b); in the 1980s the so-called rural-urban migration turnaround (net migration of Tallinn with rural areas became negative) emerged as well. Despite of strengthening of the decentralisation processes 79 percent of the metropolitan population still lived in Tallinn in the end of the Soviet period (table 2). The suburban population

growth in the Soviet period was strongly related to the activities of the actors described above.

What concerns the industry as a priority economic branch, the most well known argumentation about its impact on the suburban settlement structure is the “under-urbanisation” thesis (Szelényi 1996) according to which part of the industrial workforce did not have access to urban housing and was therefore forced to commute from the peri-urban zones to central cities. However, according to Tammaru (2001a, b) in Estonia and in other former republics of the USSR the policies to restrict the expansion of large cities and the development of industrial satellite towns were more important phenomena (see also: Bruns 1993). Nevertheless, industrial growth was not the only priority of the system that was related to the emerging suburban settlement structure in Estonia. Two other socialist priority areas that shaped the rural areas were the agriculture since the late Soviet decades and the need to locate military forces in Estonia.

As food shortage was part of the shortage economy and the role of Estonia as a strategic producer of agricultural products in the Soviet economy increased over time, especially since the mid-1970s, collective farms in rural areas also became powerful actors (Marksoo 1992). Wealthy collective farms, often located around bigger cities, enjoyed the softening of their budget constraints and similarly to the industrial enterprises they also became active in building housing and infrastructure (Kõre et al 1996; Must & Lõo 1985; Sillaste 1985). An additional scheme that helped to encourage subsistence agriculture and to mitigate in this way food shortages was to establish the so-called *dacha* or summer home settlements around the cities. Interestingly these plots were also often distributed by the enterprises or the state offices and the quality of the plots depended on the priority level of the particular employer. The Soviet army shaped the suburban landscape through its inevitable need for land. The presence of military forces was important as Estonia was a strategic military area for the Soviet regime, and numerous military objects were located in the capital city region, especially on the coastal areas (Jauhiainen 1997; Marksoo 1995).

These priority areas had a direct impact on the evolution of the suburban spatial structures. Industrial intra-metropolitan decentralisation produced new satellite towns and contributed to the growth of the existing settlements. The priority of agriculture increased the value of agricultural land and the collective farms could not afford to use it for other purposes, including housing construction (Marksoo 2005). In the same way the Soviet army “closed” an essential part of suburban land for military purposes. Even if not all coastal areas were closed for people the construction activities were restricted in the areas that were under permanent military surveillance.

Limited space for suburban residential expansion and egalitarian housing ideals led to the replication of compact urban housing structures in the suburban areas. Standardised large-scale apartment blocks constituted the dominant new suburban housing type both in the satellite towns and in the centres of

agricultural production (figure 2). Military personnel were also housed into the new and compact settlements close to the military objects or into other existing settlements. Dacha-settlements were the only remarkable low-rise new settlements in the suburban zone. We can conclude that the metropolitan dynamics during the Soviet-era in Estonia worked in favour of compact suburban settlement structure and as a result the Tallinn urban region inherited large free areas around the city for potential residential development in the post-Soviet period (also compared to other European cities: Kasanko et al 2005). We also should not forget that the majority of families in Tallinn lived in large Soviet-built housing estates in classical 45 m<sup>2</sup> or 64 m<sup>2</sup> apartments in the end of the Soviet period (Loogma 1996; Kõre et al 1996). Thus, considerable demand for residential suburbanisation also accumulated in the city. Next we will analyse the changes in the urban dynamics and the residential patterns in the TMA during the two post-Soviet decades.

## **FROM VACANCIES TO MARKET-LED SUBURBANISATION**

Although it was already possible to observe some features of market economy in the end of the communist period (Bodnár & Böröcz 1998; Raig 1988), in very general terms we could conclude that after the demise of the Soviet Union the market-led metropolitan dynamics replaced the former public-sector-led dynamics. However, instead of a total turnaround, we can observe some actors leaving the arena, some making through a profound transformation and some new actors being added into the dynamics.

Both the industrial and agricultural enterprises lost their real estate developers' function in the beginning of the transition period when the large-scale public housing construction programs ceased (Kõre et al 1996). Due to restructuring of the economy many enterprises went into liquidation and others acquired a new form after the privatisation. The Soviet state apparatus was transformed to the new public authorities in the transition period. We should again not assume a clear break as the individuals (e.g. working for the planning offices) often remained the same, but the ideology behind their everyday activities changed. The main role of new public authorities in the first half of the transition decade was setting up the general regulations for privatisation and restitution (Kährik 2000). Neither the state nor municipalities remarkably interrupted the unfolding intra-metropolitan residential processes. This was probably a combination of the overall neo-liberal change that started to prevail (Bockman and Eyal 2002), increased private interests and pressures, and knowledge gaps for working in this new situation.

What concerns the households an important change was the departure of Soviet troops and the emigration of Russians back to Russia. The last troops left the country in August 1994 and this freed up a remarkable amount of apartments in Tallinn and in other settlements (included suburban) where



military forces were present (Kulu 2003; Jauhiainen 1997) (table 2). In addition, many people lost their jobs and their purchasing power during the system change, and the large-scale privatisation of previously highly subsidised housing made people responsible for managing with the growing housing maintenance costs. Although the privatisation increased individual freedom to decide over the suitable housing strategies, the beginning of the 1990s was in general marked by the shrinkage of the migration flows in Estonia (the so-called wait-and-see attitude (Marksoo 1992) concerning migration). But the classical factors that enable the people to improve their housing situation in the developed countries (mortgage loans) (Palacin & Shelburne 2005) were not available yet until the end of the transition decade.

**Table 2.** Components of population change, 1989–2000.

	Popu- lation, 1989	Popu- lation, 2000	Popu- lation change, 1989– 2000	Natural change, 1989– 2000	Net internal migration, 1989– 2000	Net external migration, 1989– 2000
Tallinn metropolitan area	606 766	527 987	–78 779	–15 104	16 036	–79 711
Tallinn city	478 974	400 378	–78 596	–14 499	–4 228	–59 869
Suburban area	127 792	127 609	–183	–605	20 264	–19 842
Satellite towns	46 952	42 915	–4 037	178	6 117	–10 332
Rural municipalities	80 840	84 694	3 854	–783	14 147	–9 510

*Source:* Estonian Statistical Office.

**Table 3.** Destination of the suburbanisers by dwelling type in the TMA, 1989–2000.

Housing type in the suburban area	Number of suburbanisers	Share (%)
New single-family houses (built in the 1990s)	4 306	21
Summer homes (built 1960–1990)	1 602	8
Other older single-family houses (built before the 1990s)	4 953	24
Multi-family houses (built 1960–1990)	9 108	45
Other / unknown dwelling type	357	2
Total	20 326	100

*Source:* 2000 Census, Estonian Statistical Office.

“Suburbaniser” is a person who lived in Tallinn in 1989 and in the suburban area in 2000.

**Table 4.** Number of households who moved to the new residential areas in the suburban area of Tallinn in the period of 1991–2005.

Year of moving	Number of households	Share of households in ...			Total
		... detached houses	... small multi-family houses	... big multi-family houses	
1991–1993	282	41	14	45	100
1994–1996	252	57	31	12	100
1997–1999	408	83	10	7	100
2000–2002	738	81	12	7	100
2003–2005	3609	44	22	34	100
Total	5289	53	20	28	100

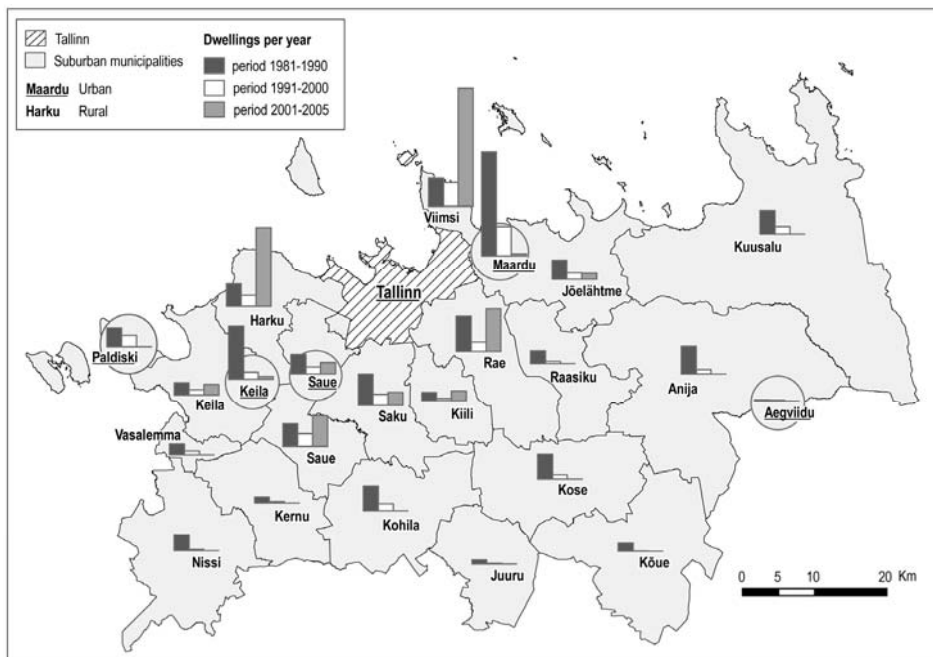
*Source:* New Residential Area Survey 2006, University of Tartu.

Small multi-family houses include semi-detached houses, row houses, and apartment buildings with less than 10 households. Big multi-family houses include apartment buildings with 10 and more households.

**Table 5.** Share of summer homes with observed signs of permanent living in the suburban area of Tallinn, 2007.

Observation categories	Share (%)
Signs of permanent living observable (N=9138)	35
Signs of permanent living not observable (N=16970)	65
Total (N=26108)	100
Share of summer homes with signs of permanent living by the technical condition of a summer home	Share (%)
... Not renovated (not suitable for permanent living) (N=10517)	8
... Partly renovated (N=5886)	33
... Entirely renovated or replaced by a new house (N=6659)	75
... Renovation unfinished (N=1682)	26
... Houses built initially for permanent living (N=1364)	68
Total (N=26108)	100

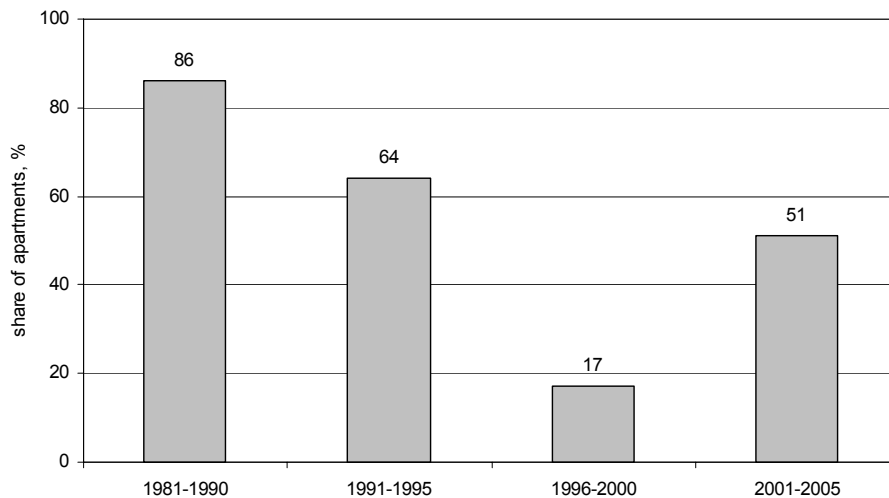
*Source:* Summer Home Areas Survey 2007, University of Tartu.



**Figure 1.** Distribution of new housing construction in the suburban area of Tallinn in the late-Soviet, transition and post-transition periods.

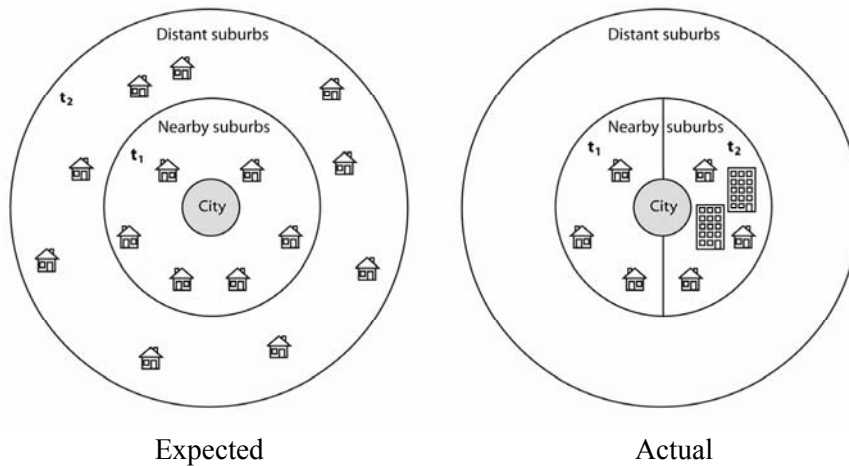
Source: Census 2000 (1980s and 1990s), New Residential Areas Survey 2006 (2000s).

As the separately locating new houses in the rural environment are not included in the NRAS, the figures of the 2000s may be slightly underestimated.



**Figure 2.** Share of apartments in new housing construction in the suburban area of Tallinn.

Source: Census 2000 (1980s and 1990s), New Residential Areas Survey 2006 (2000s).



**Figure 3.** Generalised spatial and time changes in the new housing construction in the TMA.

t1 refers to time 1 (broadly the 1990s)

t2 refers to time 2 (broadly the 2000s)

The Census 2000 data in Estonia enables to analyze the implications of these changes on the metropolitan housing market<sup>2</sup>. What concerns the urban-suburban migration, the data reveals that the suburbanisation in the 1990s in the Tallinn metropolitan area (TMA) was a diverse process both with regards to population sub-groups and their spatial outcomes (details in: Leetmaa & Tammaru 2007). Despite the highly visible mushrooming of the new detached housing, only one-fifth of the suburbanisers (table 3) moved to new single-family suburban houses in the 1990s. True, by their socio-economic status these were the most affluent migrants, but they were a clear minority. The majority of the suburbanisers moved into Soviet-era and cheaper housing. Smaller and younger households with a relatively lower social status chose a home in Soviet-era apartments in satellite towns and agricultural centres, while older people were more likely to move to older houses and dacha-settlements.

This proves that post-Soviet suburbanisation, at least in the 1990s, was a mix of different housing strategies varying by different population groups. While it was the opportunity to improve their living conditions in accordance with the idea of ‘Western suburbanisation’ for some people, it was rather a strategy to adjust with the decreased incomes and growing costs for others. These movements were made possible by the considerable amount of vacancies in the suburban areas. First, apartments were left free after the emigration of many

<sup>2</sup> We should keep in mind that about half of the new residential construction took place within Tallinn proper during the study period. However, it is not possible to analyze the composition of these people based on census or other existing national data sources.

Russians. Second, the summer home areas around the city constituted additional potential housing stock. Altogether almost every fifth urban family in Tallinn had dachas in the surrounding dacha-settlements. Third, the restitution of land motivated some people to re-migrate to the countryside into the areas of their origin. However, the land-reform was carried through step by step and often the clarification of ownership took time. For that reason the suburban land left free by the former collective farms or by the military forces also entered on the suburban land market in a patchwork fashion (Tammaru et al 2008), and the real effect of the large unused areas did not appear before the end of the 1990s.

Interestingly, although the economic and societal conditions stabilised by the end of the 1990s and the public authorities also became more experienced, the housing market in the TMA continues to be dominated by the supply side; however, with increased importance of the new market actors (see also Timár & Váradi 2001). The cornerstone of the housing policy is that the vast majority of the population should be able to improve their living conditions in the private housing market (Ruoppila 2005).

In this environment the vacancy-led suburbanisation developed into a fully market-led suburbanisation by the end of the 1990s. The final decisive factor behind the change was the emergence of an affordable mortgage market. While in the beginning of the 1990s the new housing construction (mostly castle-type villas) was self-financed, in the end of the 1990s mortgages became the dominant financial instrument (Palacin and Shelburne 2005) and this brought along diversification of the new housing (multifamily houses along to single family homes). The New Residential Areas Survey carried out in the TMA in the beginning of 2006 reveals (details in: Tammaru et al 2008) that since the economic stabilisation in the mid-1990s the housing construction started to increase and it intensified with an exponential rate in the 2000s (table 4). Altogether 5300 households moved into the new suburban dwellings during the period from 1991 until 2005 (approximately 4% of the population of Tallinn).

Although some pre-housing boom analyses (Loogma 1997) show the general preferences for the detached houses, more and more new suburban dwellings are built in the form of apartment buildings. The analysis also reveals the change in the housing patterns in the 2000s compared to the 1990s. When in the 1990s the share of dwellings in multifamily houses decreased, in the 2000s, instead of sprawl of residential development away from Tallinn, the new housing “moved” back closer to the city in the 2000s and we see increasing number of multifamily houses close to the city (figure 3). This would call to emphasise more the push-factors inside the city. One might argue that in fact, there is a need for urban housing (closeness of urban jobs, infrastructure and amenities) but the lack of sufficient supply of (spacious but affordable family friendly) new houses inside the city makes people to look for alternatives in the surrounding areas of Tallinn.

Such spatial form is also different compared to the Soviet period. Figure 1 illustrates the distribution of new housing construction in the suburban area of

Tallinn in the three decades under study. Compared to the late-Soviet decade the housing construction in the transition decade was only modest and it started to recover somewhat in the post-transition period. Spatially due to the intensive housing construction in the 1980s some building activity also took place in the more distant parts of the suburban area. In the 1990s housing construction mainly remained in the neighbouring areas of the city and in the 2000s it clearly concentrated in the two nearby coastal municipalities of Tallinn. What concerns the composition of dwellings, the share of apartments was minimal in the second half of the transition decade (in the first half the projects started in the end of the Soviet period were finished) and the apartments became dominant again in the post-transition period (figures 2).

In addition to the new residential areas, dacha areas became an important destination of suburbanisers as well. A Summer Home Area Survey (details in: Anniste 2007) was carried out in the suburban area of Tallinn in 2007. This fieldwork evaluated two indicators: observable signs of permanent living in the winter period and the technical conditions of the summer homes. Signs of permanent living were found in one-third of the former dachas in the suburban area of Tallinn (approximately 9000 households) (table 5). Many dachas have been torn down and replaced with new single-family houses; some have undergone major renovations, but there are also inhabitable 'houses' with only minor technical adjustments (theoretically not suitable for permanent living). In addition, we also found fully renovated houses that are still used only as summer or weekend homes.

Therefore, the free areas next to the city border previously closed for other activities have gradually moved to the housing market. Also, the majority of the stock of dachas is still in reserve, which allows predicting further growth in the number of their permanent inhabitants. While the inherited spatial structure from the previous period created the favourable precondition for blooming housing construction, the emerging metropolitan dynamics contributes to the final residential outcome. The key actors behind the suburban development (especially in the new residential areas, but also in the dacha settlements) in the 2000s are the real estate development enterprises and banks. In the 2000s the steep fall in the interest rates for the housing loans took place (Estonian Central Bank 2008) and the new homes are increasingly financed by the mortgages (Égert & Mihaljek 2007), which is also the common model for financing housing in advanced economies. However, such growth of housing construction could not be possible as a result of the growth of wealth and the evolution of the market structures in Estonia alone. The fact that the housing boom in the middle of the 2000s took place at the time of the global decline of the interest rates bringing along a global housing boom also proves that in the Estonia and in the TMA powerful global actors are part of the urban interplay.

The peculiarity of Estonia and other post-communist countries is the passive attitude of the public authorities in balancing the desire of households for contemporary good-quality housing and the profit-seeking interests of business

actors (Ruoppila 2007). The regional planning in Estonia and in the TMA is weak (Metspalu 2005; Leetmaa et al 2006) and many municipalities did not have a functioning municipal-level strategic land use plan for the beginning of the housing boom (and even not for now). This is paralleled by the lack of experience and know-how to balance the intensive development pressure from the business sector. Consequently, one could argue that the main actors causing the changes in residential patterns in the TMA in the 2000s similarly to the 1980s are again the enterprises guided by their ambitions to ensure profits. When in the late-Soviet decade their role as real estate developers was a strategy to ensure their profits in their main branch, in the 2000s it has turned out to be the most profitable economic activity.

## **SUMMARY AND DISCUSSION**

In this article we have analysed residential suburbanisation in Estonia in the TMA in the late-Soviet (1980s), transition (1990s) and post-transition (2000s) decades with the broader aim to contribute to the understanding of the mechanisms behind metropolitan change in previously centrally planned countries. As a result of the changed balance of the activities of the three main metropolitan actors — families, companies and public sector —, we can distinguish three stages of suburban growth in the course of the last three decades: Soviet priorities shaped (1980s), vacancies shaped (1990s) and market shaped (2000s) suburban growth. In the 1980s the TMA started to lose population to their suburban areas and satellite towns around Tallinn were growing faster than the capital city throughout the communist period. Rather than being the movement of metropolitan people motivated by the environmental preferences this was related to the movement of people towards jobs in agricultural collective farms or in industrial satellite towns. This process was caused by the aim of the Soviet economy to restrict the growth of major industrial cities and the economic priority given to agriculture in the context of the Soviet shortage economy. The suburban movers of that time settled mostly into apartment buildings in compactly built settlements across the whole suburban area.

In the 1990s Tallinn lost population to its hinterland but the suburbs also lost their agricultural and industrial employment function (Tammaru 2005). Migration towards suburban areas turned out to be a socially mixed process. While to a certain extent migration due to environmental motives (to suburban single-family houses) was already observable, especially in the end of the transition decade (Raagmaa & Kliimask 2005; Leetmaa 2005), the majority of the people who migrated to the suburbs moved into existing and mostly cheaper dwellings (Soviet-era apartments, older single-family houses, dachas). This allows arguing that for many people the moving out from the city was a strategy to cope with the economic hardships in the first transition years or alternatively, also the

older suburban residential areas were considered to be more pleasant living environments compared to the large Soviet time housing estates in the city.

Since the end of the 1990s new housing construction has increased at an exponential rate. However, while in the 1990s the new dwellings were mainly built in the form of detached houses and some housing sprawl was observable, in the 2000s apartment buildings became proportionally more important again (similarly to the 1980s) and new housing construction concentrated in the immediate vicinity of Tallinn. In addition to the new housing construction in unused areas the former summer home areas originating from the Soviet period also played an important role in suburbanisation. The new housing construction was partly directed to those areas in the post-Soviet decades.

These changes in residential suburbanisation call for theorising about the notion of “post-communist suburbanisation”, and link it better also to suburban developments found elsewhere. As the preconditions for migration have been fundamentally different for example in the beginning of the 1990s and in the middle of the 2000s one might argue that “post-communist suburbanisation” is not a coherent phenomenon. We have chosen the framework of the urban life-cycle theory (Van den Berg et al 1982; Van den Berg 1999), and its concept of metropolitan dynamics to explain the changes in migration and settlement patterns, and institutional context for urban development in the last three decades in the TMA. Although theoretically public authorities were supposed to be the key actors in the communist-era metropolitan dynamics the ambitions of two other actors (enterprises and households) were similar to their counterparts in Western societies (to ensure profit and to have better jobs and housing). Moreover, in the context of the Soviet shortage economy urban and rural enterprises became powerful “real estate developers.” In the beginning of the transition period the public sector created the regulatory framework for privatisation and powerful Soviet-era enterprises lost their influence. Since the end of the 1990s new business interests and the real estate development and financial sectors (incl. global business actors) have entered the dynamics and this was especially evident in the mid-2000s housing boom. At the same time the public authorities kept the position of onlooker. The lack of public strategies for the long-term development of the urban region as a whole characterised the entire transition and post-transition period. From people’s side their housing preferences and increasing purchasing power shaped the process.

Employing the case of Soviet-era metropolitan dynamics, we demonstrated how the powerful urban actors of the time left decisive imprints on the spatial structure of the metropolitan area, so that the inherited space layer (see also Beauregard & Haila 2000; Kesteloot 2000) itself becomes an active participator in the urban dynamics of the coming decades, or expressed in the words of C.-C. Wiegandt “a large part of the city of tomorrow already exists” (Wiegandt 2000). In the case of TMA the compact settlement structure and large free undeveloped areas around Tallinn created favourable conditions for housing construction in areas that were formerly used for other purposes (military and



agricultural land use). This was complemented with the housing stock that the leaving Soviet army left free and with the former summer homes.

It is important to understand that the supply of housing inevitably shapes people's dwelling choices. The experience of countries with a long suburbanisation history (e.g. Schönert 2003) might be useful to understand this relationship. The supply of housing sets a context for the number and composition of suburbanisers in those countries as well. For instance, people with relatively lower social status can opt for suburban residence when public authorities locate social housing outside the city (Bourne 1997). Vacancies play this role in the TMA, as municipality housing construction is almost non-existent. The maturation of the suburban areas also diversifies the suburbanisation process as the older and cheaper suburban housing stock gradually moves back to the housing market (Aring & Herfert 2001; Heitkamp 2002). There are also several examples of the transformation of the former recreational areas into permanent living both to mitigate the housing shortage (e.g. post-war period), or to offer an attractive suburban environment to families who cannot afford a new detached house (Nystrom 1989; Clout 1989) in Western and Northern Europe. Also the parallels with the main principles of the classical filtering theory (Kaplan et al 2004; Friedrichs 1995) might be informative, according to which new housing construction creates the vacancy chain and frees housing for the population groups with relatively lower incomes. In the TMA an enormous amount of both older and new housing has moved to the market in the transition and in the post-transition periods and this has enabled people to adjust their housing conditions.

To conclude, this analysis has indicated to the need to enrich the traditional "post-communist" research framework for the analyses of the urban development trends in the formerly centrally planned countries with other and more generally applied explanations in the urban research that bring out the urban continuities. We claim that the split that has often been made between the analyses concerning the communist and post-communist periods is to certain extent arbitrary. Instead, we have demonstrated how the inevitable inertness of metropolitan space has brought along continuities in the metropolitan development. Besides, the ambitions of the metropolitan actors are remarkably similar under the different societal systems.

## REFERENCES

- AMIN, A. & S. GRAHAM (1997), The Ordinary City. *Transactions of the Institute of British Geographers NS 22*, pp. 411–429.
- ANNISTE, K. (2007), *Eeslinnastumine Tallinna tagamaa suvilapiirkondadesse* (Suburbanisation into the summer home areas in the suburban area of Tallinn) (Study report, Institute of Geography, University of Tartu).
- ARING, J. & G. HERFERT (2001), Neue Muster der Wohnsuburbanisierung. In: K. BRAKE, J.S. DANGSCHAT & G. HERFERT, eds., *Suburbanisierung in Deutschland: aktuelle Tendenzen*, pp. 43–56. Opladen: Leske+Budrich.

- BEAUREGARD, R.A. & A. HAILA (2000), The Unavoidable Continuities of the City. In: P. MARCUSE & R. VAN KEMPEN, eds., *Globalizing Cities: a New Spatial Order?* pp. 22–36. Malden, Oxford, Carlton: Blackwell Publishing.
- BOCKMAN, J. & EYAL, G. (2002), East Europe as a laboratory for economic knowledge: The transnational roots of neoliberalism. *American Journal of Sociology* 108, pp. 310–352.
- BODNÁR, J. & J. BÖRÖCZ (1998), Housing Advantages for the Better Connected? Institutional Segmentation, Settlement Type and Social Network Effects in Hungary's Late State-Socialist Housing Inequalities. *Social Forces* (76)4, pp. 1275–1304.
- BOURNE, L.S. (1997), Reinventing the Suburbs: Old Myths and New Realities. *Progress in Planning* 46, pp. 163–184.
- BOURNE, L.S. (2007), Understanding change in cities: a personal research path. *The Canadian Geographer* 51, pp. 121–138.
- BROWN, D. & SCHAFFT, K. A. (2002), Population Deconcentration in Hungary during the Post-Socialist Transition. *Journal of Rural Studies* 18, pp. 233–244.
- BRUNS, D. (1993), *Tallinn: linnaehituslik kujunemine* (Tallinn: architectural formation). Tallinn: Valgus.
- BUCKLEY, C. (1995), The Myth of Managed Migration: Migration Control and Market in the Soviet Union. *Slavic Review* 54, pp. 896–916.
- CASTELLS, M. (2004), An Introduction to the Information Age. In: G. BRIDGE & S. WATSON, eds., *The Blackwell City Reader*, pp. 125–134. Malden, Mass.: Blackwell Publishing.
- CHAMPION, T. (2001), Urbanization, Suburbanization, Counterurbanization and Reurbanization. In: R. PADDISON, ed., *Handbook of Urban Studies*, pp. 134–161. London: Sage Publications.
- CLOUT, H., M. BLACKSELL, R. KING & D. PINDER (1989), *Western Europe: Geographical Perspectives*. Harlow UK: Longman Scientific & Technical.
- CROUCH, C. (1999), *Social Change in Western Europe*. Oxford: Oxford University Press.
- DIELEMAN, F. & C. WALLET (2003), Income Differences Between Central Cities and Suburbs in Dutch Urban Regions. *Tijdschrift voor Economische en Sociale Geografie* 94, pp. 265–275.
- DOWNS, A. (1999), Contrasting Strategies for the Economic Development of Metropolitan Areas in the United States and Western Europe. In: A. SUMMERS, P. CHESHIRE & L. SENN, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 15–56. Washington: The Urban Institute Press.
- ÉGERT, B. & D. MIHALJEK (2007), *Determinants of Housing Prices in Central and Eastern Europe*. Bank for International Settlements Working Papers 236 (<http://www.bis.org/list/wpapers/index.htm> – 28.03.2008).
- ESTONIAN CENTRAL BANK (2008), *Statistical indicators. Weighted average annual interest rates of loans granted to individuals* ([www.eestipank.info](http://www.eestipank.info) – 28.03.2008).
- ESTONIAN LAND BOARD (2008), *Eesti kinnisvaraturg 2007. aastal* (Estonian real estate market in 2007) ([www.maaamet.ee](http://www.maaamet.ee) – 28.03.2008).
- FRIEDRICH, J. (1995), *Stadtsoziologie*. Opladen: Leske + Budrich.
- GENTILE, M. & Ö. SJÖBERG (2006), Intra-Urban Landscapes of Priority: the Soviet Legacy. *Europe-Asia Studies* 58, pp. 701–729.

- GEYER, H. & T. KONTULY (1993), A Theoretical Foundation for the Concept of Differential Urbanization. *International Regional Science Review* 17, pp. 157–177.
- HALL, P. (2001), *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, Massachusetts: Blackwell Publishers Ltd.
- HALL, P. & D. HAY (1980), *Growth Centres in the European Urban System*. Los Angeles: University of California Press.
- HEEG, S. (2003), Städtische Flächenentwicklung vor dem Hintergrund von Veränderungen in der Immobilienwirtschaft. *Raumforschung und Raumordnung* 61, pp. 334–344.
- HEITKAMP, T. (2002), Motivlagen der Stadt-Umland-Wanderung und Tendenzen der zukünftigen Wohnungsnachfrage. *Informationen zur Raumentwicklung* 3, pp. 163–171.
- JAUHIAINEN, J. (1997), Militarization, Demilitarization and Re-Use of Military Areas: the Case of Estonia. *Geography* 82, pp. 118–126.
- KALLAS, K. (2007), *Linnastumine ja vastulinnastumine Eestis 2000.a. rahva ja eluruumide loenduse elamufondi andmete põhjal* (Urbanisation and counter-urbanisation in Estonia. Dwelling data of the census 2000) (Bachelor's thesis, Department of Geography, University of Tartu).
- KAPLAN, D.H., J.O. WHEELER, S.R. HOLLOWAY & T.W. HODLER (2004), *Urban Geography*. Hoboken, NJ: John Wiley & Sons.
- KASANKO, M., J.I. BARREDO, C. LAVALLE, N. McCORMIK, L. DEMICHELLI, V. SAGRIS & A. BREZGER (2005), Are European Cities Becoming Dispersed? A Comparative Analysis of 15 European Urban Areas. *Landscape and Urban Planning* 77, pp. 111–130.
- KAZEPOV, Y. (2005), Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 3–42. Malden, Oxford, Carlton: Blackwell Publishing.
- KESTELOOT C. (2000), Urban Socio-Spatial Configurations and the Future of European Cities. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 123–148. Malden, Oxford, Carlton: Blackwell Publishing.
- KOK H. & Z. KOVÁCS (1999), The Process of Suburbanisation in the Metropolitan Area of Budapest. *Netherlands Journal of Housing and Built Environment* 14, pp. 119–141.
- KONRAD, G. & I. SZELÉNYI (1974), Social Conflicts and Urbanisation. In: A. BROWN, J. LICARI & E. NEY'UBERGER, eds., *Urban and Social Economics in Market and Planned Economies: Policy, Planning and Development*, pp. 206–226. New York: Praeger.
- KORNAI, J. (1992), *The Socialist System: the Political Economy of Socialism*. Princeton: Princeton University Press.
- KRISJANE, Z. (2005), The Trends of Urban Concentration and Suburbanization: the case of Riga (Paper presented at the Inaugural Nordic Geographers Meeting, May 2005, Lund, Sweden).
- KULU, H. (2003), Housing Differences in the Late Soviet City: the Case of Tartu, Estonia. *International Journal of Urban and Regional Research* 27, pp. 897–911.
- KUPISZEWSKI, M., H. DURHAM, H. & P. REES (1998), Internal Migration and Urban Change in Poland, *European Journal of Population* 14, pp. 265–290.

- KÕRE, J., M. AINSAAR & M. HENDRIKSON (1997), Eluasemepoliitika Eestis 1918–1995 (Housing policy in Estonia 1918–1995). *Akadeemia* 10, pp. 2133–2163.
- KÄHRIK, A. (2000), Housin Privatisation in the Transformation of the Housin System: the Case of Tartu, Estonia. *Norsk Geografisk Tidsskrift* 54, pp. 2–11.
- LADÁNYI, J. & I. SZELÉNYI (1998), Class, Ethnicity and Urban Restructuring in Postcommunist Hungary. In: G. ENYEDI, ed., *Social Change and Urban Restructuring in Central Europe*, pp. 67–86. Budapest: Akadémiai Kiadó.
- LEETMAA, K. (2003), Tallinna linnaregiooni ränne (Migration related to Tallinn urban region). In: H. KULU & T. TAMMARU, eds., *Ränne üleminekuaja Eestis*, pp. 104–120. Tallinn: Estonian Statistical Office.
- LEETMAA, K. (2005), Eeslinnastumine Tallinna linnaregioonis üleminekuajal: eluasemetüübid ja sihtkohad tagamaal (Suburbanisation in the Tallinn metropolitan area during the transition period: dwelling types and destinations). In: H. KULU & T. TAMMARU, eds., *Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.
- LEETMAA, K., P. METSPALU & T. TAMMARU (2006), Suburbanisation and Commuting Modes in the Tallinn Metropolitan Area. In: Ü. MANDER, C.A. BREBBIA & E. TIEZZI, eds., *The Sustainable City IV. Urban Regeneration and Sustainability*, pp. 127–135. Southampton, Boston: WIT Press.
- LEETMAA, K. & T. TAMMARU (2007), Suburbanisation in Countries in Transition: Destinations of Suburbanizers in the Tallinn Metropolitan Area. *Geografiska Annaler, Series B: Human Geography* 89, pp. 127–146.
- LE GALÈS, P. (2005), Elusive Urban Policies in Europe. In: Y. KAZEPOV, ed., *Cities of Europe: Changing Contexts, Local Arrangements, and the Challenge to Social Cohesion*, pp. 235–254. Malden, Oxford, Carlton: Blackwell Publishing.
- LOGGMA, K. (1997), Socio-economic stratification in Tallinn and spatial patterns. In: M. ÅBERG & M. PETERSON, eds., *Baltic Cities: Perspectives on Urban and Regional Change in the Baltic Area*, pp. 168–183. Lund: Nordic Academic Press.
- MARCUSE, P. & R. VAN KEMPEN (2000), Conclusion: A Changed Spatial Order. In: P. MARCUSE & R. VAN KEMPEN, eds., *Globalizing Cities: a New Spatial Order?* pp. 22–36. Malden, Oxford, Carlton: Blackwell Publishing.
- MARKSOO, A. (1984), *Changes in the Regional Migration Model at the Advanced Stage of Urbanization*. (Paper presented at the 25th International Geographical Congress, Symposium on “Migration and Cities”. Rouen, 23–26 August, 1984). Department of Geography, University of Tartu.
- MARKSOO, A. (1992), Dynamics of Rural Population in Estonia in the 1980s. In: J.-M. PUNNING, ed., *Estonia: Man and Nature*, pp. 129–153. Tallinn: Estonian Science Academy.
- MARKSOO, A. (1995), Estonian Urban System in Transition. In: M. PALOMÄKI & J. KARUNARATNE, eds., *Urban Development and Urban Life*, pp. 179–192. Vaasa: University of Vaasa Press.
- MARKSOO, A. (2005), Linnastumine nõukogude Eestis (Urbanisation in Soviet Estonia), In: H. KULU & T. TAMMARU, eds., *Asustus ja ränne Eestis. Uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 59–81. Tartu: Tartu University Press.
- METSPALU, P. (2005), *Uuselumuehitus ja planeerimispraktika areng Harjumaa näitel* (Housing construction and planning in the Tallinn metropolitan area) (Master thesis, Institute of Geography, University of Tartu).

- MUST, A. & V. LÕO (1985), Inimene põllumajanduses (People in agriculture). In: I. RAIG, ed., *Maaelu: maa sotsiaalse arengu probleeme Eestis*, pp. 9–24. Tallinn: Valgus.
- MÜLLER, W. & R. ROHR-ZÄNKER (2001), Amerikanisierung der “Peripherie” in Deutschland? In: K. BRAKE, J.S. DANGSCHAT & G. HERFERT, eds., *Suburbanisierung in Deutschland: aktuelle Tendenzen*, pp. 27–39. Opladen: Leske+Budrich.
- NEW RESIDENTIAL AREA SURVEY (2006), Database available: Department of Geography, University of Tartu.
- NYSTRÖM, J. (1989), From the City to the City’s Countryside. *Geografiska Annaler, Series B: Human Geography* (71)3, pp. 183–200.
- OUŘEDNÍČEK, M. (2007), New Suburban Development in the Post-Socialist City: the Case of Prague. *Geografiska Annaler, Series B: Human Geography* 89, pp. 111–126.
- PALACIN, J. & R. SHELBURNE (2005), *The private housing market in Eastern Europe and the CIS*. Geneva: United Nations Economic Commission for Europe, Economic Analysis Division (Discussion Paper Series No 6).
- RAAGMAA G. & J. KLIIMASK (2005), Elamuehituse lained asustussüsteemis (Housing construction waves in settlement system). In: H. KULU & T. TAMMARU, eds., *Asustus ja ränne Eestis: uurimusi Ann Marksoo 75. sünnipäevaks*, pp. 82–116. Tartu: Tartu University Press.
- RAIG, I. (1988), *Teisene majandus* (Secondary economy). Tallinn: Valgus.
- RAVBAR, M. (1997), Slovene Cities and Suburbs in Transformation. *Acta Geographica Slovenica* 37, pp. 65–109.
- RUOPPILA, S. (2005), Housing Policy and Residential Differentiation in Post-Socialist Tallinn. *European Journal of Housing Policy* 5, pp. 279–300.
- RUOPPILA, S. (2007), Establishing a Market-Oriented Urban Planning System after State Socialism: the Case of Tallinn. *European Planning Studies* 15(3), pp. 405–427.
- SALET, W. & A. THORNLEY (2007), Institutional Influences on the Integration of Multilevel Governance and Spatial Policy in European City-Regions. *Journal of Planning Education and Research* 27, pp. 188–198.
- SASSEN, S. (1991), *The Global City: New York, London, Tokyo*. Princeton, NJ: Princeton University Press.
- SASSEN, S. (2001), Impacts of Information Technologies on Urban Economies and Politics. *International Journal of Urban and Regional Research* 25, pp. 411–418.
- SCHÖNERT, M. (2003), 20 Jahre Suburbanisierung der Bevölkerung: zur Stadt-Umland-Wanderungen in westdeutschen Großstadregionen. *Raumforschung und Raumordnung* 61, pp. 457–471.
- SHABAD, T. (1986), Urban Issues in the Soviet Union. In: M. CONZEN, ed., *World Patterns of Modern Urban Change: Essays in Honour of Chauncy D. Harris*, pp. 101–128. Chicago: University of Chicago.
- SHAW, D. (1983), The Soviet Urban General Plan and Recent Advantage in Soviet Urban Planning. *Urban Studies* 20, pp. 393–403.
- SILLASTE, J. (1985), Elutarbeline teenindus (Personal services). In: I. RAIG, ed., *Maaelu. Maa sotsiaalse arengu probleeme Eestis*, pp. 94–101. Tallinn: Valgus.
- SJÖBERG, Ö. (1999), Shortage, Priority and Urban Growth: Towards a Theory of Urbanisation under Central Planning. *Urban Studies* 36(13), pp. 2217–2236.

- STONE, C.N. (2005), Looking Back to Look Forward: Reflections on Urban Regime Analysis. *Urban Affairs Review*, pp. 309–340.
- SZELÉNYI, I. (1996), Cities under Socialism – and After. In: G. ANDRUSZ, M. HARLOE & I. SZELÉNYI, eds., *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, pp. 286–317. Oxford: Blackwell Publishers.
- SUMMER HOME AREAS SURVEY (2007), Database available: Department of Geography, University of Tartu.
- SÝKORA, L. & D. CERMÁK (1998), City Growth and Migration Patterns in the Context of “Communist” and “Transitory” Periods in Prague’s Urban Development. *Espace. Population. Sociétés* 3, pp. 405–416.
- TAMMARU, T. (2000), Suburbanisatsioon Eesti linnastumises (Suburbanisation in the urbanisation of Estonia). In: J. JAUHAINEN & H. KULU, eds., *Inimesed, ühiskonnad ja ruumid. Inimgeograafia Eestis*, pp. 77–88. Tartu: Publicationes Instituti Geographici Universitatis Tartuensis 87.
- TAMMARU, T. (2001a), *Linnastumine ja linnade kasv Eestis nõukogude aastatel* (Urbanisation and urban growth in Estonia in the Soviet period) (PhD dissertation. University of Tartu). Tartu: Tartu University Press.
- TAMMARU, T. (2001b), Suburban Growth and Suburbanisation Under Central Planning: the Case of Soviet Estonia. *Urban Studies* 38, pp. 1314–1357.
- TAMMARU, T. (2003), Urban and Rural Population Change in Estonia: Patterns of Differentiated and Undifferentiated Urbanisation. *Tijdschrift voor Economische en Sociale Geografie* 94, pp. 112–123.
- TAMMARU, T. (2005), Suburbanisation, Employment Change, and Commuting in the Tallinn Metropolitan Area. *Environment and Planning A* 37, pp. 1669–1687.
- TAMMARU, T., H. KULU & I. KASK (2004), Urbanization, Suburbanization, and Counterurbanization in Estonia. *Eurasian Geography and Economics* 45, pp. 212–229.
- TAMMARU, T., K. LEETMAA, S. SILM & R. AHAS (2008), Temporal and Spatial Dynamics of the New Residential Areas around Tallinn. Submitted to and accepted by *European Planning Studies*.
- TIMÁR, J. & VÁRADI, D. (2001), The Uneven Development of Suburbanisation during Transition in Hungary. *European Urban and Regional Studies* 8, pp. 349–360.
- TOSICS, I. (2003), City Development in Central and Eastern Europe since 1990: The Impacts of Internal Forces. In: F.E.I. HAMILTON, K. DIMITROWSKA-ANDREWS & N. Pichler-Milanovic, eds., *Transformation of Cities in Central and Eastern Europe: towards Globalization*, pp. 44–78. Tokyo: United Nations University Press.
- VAN DEN BERG, L., R. DREWETT, L. KLAASSEN, A. ROSSI & C. VIJVERBERG (1982), *A Study of Urban Growth and Decline*. Oxford: Pergamon Press.
- VAN DEN BERG, L. (1999), The urban life-cycle and the role of market-oriented revitalization policy in Western Europe. In: A. SUMMERS, P. CHESHIRE & L. SENN, eds., *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp. 539–558. Washington: The Urban Institute Press.
- VAN DER BURG, A.J. & DIELEMAN, F.M. (2004), Dutch Urbanisation Policies: from “Compact City” to “Urban Network”. *Tijdschrift voor Economische en Sociale Geografie* 95, pp. 108–116.
- WIEGANDT, C.-C. (2000), Urban Development in Germany – Perspectives for the Future. *GeoJournal* 50, pp. 5–15.

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## Education

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1993–1997 Bachelor degree in human geography, University of Tartu, Estonia  
1990–1993 Secondary education, with gold medal, Misso Secondary School, Estonia  
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## Main fields of research

migration studies, urban and regional planning, urban change in post-communist countries

## Training

(2008) Scholarship programme, Leibniz-Institut für Länderkunde, Germany  
(2002) Central European University, Summer University, Budapest, Hungary; course “The Future Role of Cities in a Globalizing World: Challenges for New Public Strategies and Innovative Urban Governance”  
(1998) Institute of Public Administration, Ireland; Estonian Institute of Public Administration, course “Training of trainers” (methodology of adult teaching)

## Languages

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## **Work experience**

Since 2005	Assistant. European Parliament, DG Translation and Publishing, Estonian Translation Unit, Luxembourg
2001–2002	Senior specialist. Department of Planning and Development, Harju County Government (Tallinn urban region), Estonia
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### Peamised uurimisvaldkonnad

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### Keeleoskus

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## **Töökogemus**

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1. Вийви Руссак. Солнечная радиация в Тыравере. Тарту, 1991.
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