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**THE ROLE OF THE RESIDENTIAL
SUBURBANIZATION IN THE TRANSFORMATION
OF OUTSKIRTS OF HUNGARIAN
AGGLOMERATIONS**

Theses of the Ph.D. dissertation

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I. Introduction

Because of the special settlement system in Hungary, a municipality can be divided into three parts, the central inner area (core city), other inner areas (incorporated settlements) and outskirts. The outskirts are mostly scattered around interim habitations within the administrative limits of a city or village but these are usually separated from the main built-up areas and almost all of them are characterised as remote-rural-like infrastructures and way of life. The farm-like „tanyas” have received the most attention by the geographic literature, but the winehills, manors and garden zones also have significant roles in the spatial processes of the Hungarian cities and towns.

The settlement system of Hungary, as it can be defined in the terminology of human geography, does not completely match the system of local administrative units. Besides the officially delineated, densely built-up central inner area (the historical core and its expansions), we can often find other inhabited “settlements” within the administrative border of the city: officially distinguished other inner areas and different type of inhabited outskirts. The other inner areas are mostly former villages which had been incorporated into the administrative area of the larger settlements but did not merge into it in the physical sense. Due to the unique development of the Hungarian settlement system, we can also identify different types of inhabited outskirts (like tanyas, wine hills, garden zones, manors, industrial or Roma settlements) which can provide home for a significant number of dwellers.

As a result, the demographic development of these areas after the transition is significantly different from the previous decades. The communist period brought a sharp decline in the population of the outskirts: they lost more than 70% of their inhabitants between 1960 and 1990. After 1990, the population decline of the outskirts stopped, and we can even see a moderate increase in their population, while the population of the other inner parts started to increase rapidly after 1990, first of all because of the suburbanisation. The demographic processes and following differentiation of the outskirts were in fact similar to the post-socialist development of the small villages (BALOGH A. 2008). After 1990, this process was replaced by the opposite migration form. The population of numerous outskirts in the vicinity of the cities has significantly increased, while some have been repopulated and a few new have been formed. However, we know little about the recent processes at outskirts because the geographical surveys and the national censuses examine the level of administratively sovereign settlements predominantly (VASÁRUS, G. – MAKRA, ZS. 2015, VASÁRUS, G. 2016b).

While suburbanisation received special attention in the literature of post-communist settlement geography, some of its subprocesses have been disregarded by large-scale scientific interest. This is especially true for the transformation and emerging problems of other inner areas and outskirts within

the administrative borders of the city, which areas have drawn only limited attention so far, compared to the suburbanisation of sovereign settlements. As PÁL BELUSZKY (1982, 325. p.) formulated, the outskirt stock in the development of the cities and their agglomerations, is a „hardly known settlement-structural element”.

From 1990 to 2010, 55,1 % of suburban growth (outside of the Agglomeration of Budapest) took place in the outskirts (29%) and other inner areas(26,1%). The outskirts and other inner areas can attract urban out-migrants, because they are mostly interested in the landscape, the condition of infrastructure and the reputation of the place, not in the administrative status of the location (BAJMÓCY P. 2014). Thus, their role in suburbanisation is more significant than the previous examinations estimated (VASÁRUS, G. 2016a, VASÁRUS, G. – BAJMÓCY, P. – LENNERT, J. 2018).

The „tanya” is the most distinctive form of outskirts. It is a scattered farm-like habitat, which emerged in the Great Hungarian Plain in order to cultivate the inner frontiers of the Great Hungarian Plain. Though it is a scattered settlement, it was formed as an integral part of the city, because its inhabitants were traditionally urban citizens with a house in the inner area (BECSEI, J. 2010). The other parts of the country are dominated by manors and wine hills. The manor is a hamlet-like small-scale settlement (Figure 2.) without administrative sovereignty which was originally established around a landlord’s property (BALOGH, A. 2012a). The estate consisted of a castle or mansion, some poorly constructed rowhouses for the workers and numerous large agricultural structures, but most of them are now in ruined condition. The vineyards form a system similar to tanyas, but the houses much more densely located along ridges due to the characteristics of the grape cultivation. Buildings typically form a street-like line, but similarly to the manors, this is a transition type between scattered and nucleated settlements, with no enclosed settlement core (ÉGETŐ, M. 2003).

Garden zones are traditional appendices of the core inner area since centuries in Hungary. Unlike other outskirts, they are not separated from the inner areas by physical distance but by function and morphological characteristics. While originally built for small-scale agricultural purposes, during the development of the Hungarian towns of the past 100 years, these zones also provided habitat for the underclass, people dislocated from the city, and the unemployed migrating toward the centres from peripheries due to cheap plots, additional income from garden work and loose building regulations, they were especially attractive for the least well-off people.

By the mid-20th century, some other types of outskirts have been formed, like miners and industrial housing estates at outskirts, with romani people’s

settlements also gaining ground. Most of them are similar to hamlets; their main role was to provide housing for the workforce of agricultural, mining or industrial projects in the outskirts, while the Roma groups' housing was based on strong segregation.

The historical, spatial and demographical characteristics of outskirts are quite varied and the various effects of changes after 1990, resulted in even more dynamic differentiation. (BAJMÓCY P. – MAKRA ZS. 2016, BALOGH A. 2012a). A significant number of families moved into outskirts have low-income and disadvantages, because low utility costs and cheap plots are attractive for them. The repeated expansion of modest houses resulted in a chaotic townscape that creates conflicts within neighbourhoods. The situation of women requires special attention at these locations, because the management of the households demands significant sacrifices from them (GRANT, J. L. et. al. 2014, HIRT, S. A. 2008, VÁRADIM. M. 1999).

The spatial distribution of various functions and different identities is almost random, thus incompatible functions (retirement homes and clubs, family houses and factories) lay in the immediate neighborhood of each other. This holds the population under constant pressure and increases the segregation based on financial situation. The significant separation leads to the formation of closed groups with strong opposites (BOROS L. 2010, DUNAY, A. et. al. 2001, IZSÁK É. 2003, SZIRMAI V. 2011b, THEOBALD, D. M. 2005, TÓZSA I. 2002).

In our research, we used the following definition of suburbanisation: the process of decentralization of urban population and activities, perceived as a part of the population, the productive and non-productive activities, the capital and the investments concentrated into the settlements around the cities instead of the urban centres, regardless of administrative borders (BAJMÓCY, P. 2014, TIMÁR, J. 1999).

This definition implies that the interpretation of settlements can deeply influence the perception of suburbanisation. For example, the settlement system of Hungary, as it can be defined in the terminology of human geography, does not completely match the system of local administrative units. Besides the officially delineated, densely built-up central inner area (the historical core and its expansions), we can often find other inhabited "settlements" within the administrative border of the city: officially distinguished other inner areas and different type of inhabited outskirts (BAJMÓCY, P. 2014). The other inner areas are mostly former villages which had been incorporated into the administrative area of the larger settlements but did not merge into it in the physical sense. Due to the unique development of the Hungarian settlement system, we can also identify different types of inhabited outskirts (like tanyas, wine hills, garden zones, manors, industrial or Roma settlements) which can provide home for a significant number of dwellers (OUREDNICEK, M. 2007).

Another unique trait of suburbanisation in Hungary is that a significant share of people moving from urban to more rural neighbourhoods does not leave the administrative borders of the core city (HARDI, T. 2002). Their migration targets include former villages previously attached to the cities and inhabited scattered settlements at the outskirts of the city (BAJMÓCY, P. 2000). A particularly high proportion of former countryside dwellers are involved in this process (BALOGH, A. – CSAPÓ, T. 2013), because they usually want to return to their rural lifestyle (SZIRMAI, V. 2011). These formerly incorporated villages and inhabited outskirts can also be considered part of the rural-urban fringe and can be identified as conflict zones (PÓCSI, G. 2009, PRYOR, R. J. 1968).

This approach does not link the interpretation of suburbanisation to the public administrative and statistical boundaries of cities, as they do not necessarily determine the spatial nature of the urban-rural area and do not correlate with the daily spatial paths. In the Hungarian settlement policy, village merging and incorporating into towns have a large role traditionally. Accordingly, the various villages and suburban areas incorporated into cities may also be a part of the suburban belt, so some suburban areas are within the city's statistical boundaries (BAJMÓCY P. 2004, CSATÁRI B. et. al. 2013, CZENE ZS. 2007, TIMÁR J. 1999).

The phenomenon also fits well in the line of recent geographic researches dealing with settlements about the characteristics of the outskirts and their strong differentiation after 1990, as well as the unique features of suburbanisation of the Hungarian medium sized cities. The examination of this topic could significantly advance the solution of the many social problems of today's Hungarian rural urban areas. Especially since the handicapped social groups that have moved to the outskirts country can make the least to turn their own fate to better.

II. Questions and objectives

Therefore, in my dissertation I want to examine the demographic and settlement geographical changes of the outskirts during residential suburbanisation in the area of the agglomerations of the domestic rural medium sized cities. I came to the following hypotheses based on the literature of Hungarian rural suburbanisation and the the outskirts.

- I.** The role of outskirts is significant in the development of domestic suburbanisation, but it remains partly hidden in statistics, because the spatial characteristics of Hungarian settlements.
- II.** Since outskirts have quite different characteristics in different areas, the residential suburbanisation has some unique subprocesses adapted to the local settlement geographic features. There are significant differences in the development of outskirts at both regional, national and agglomerational levels.

III. The residential suburbanisation of outskirts, due to its unregulated nature, results in numerous conflicts which have a negative impact on local communities.

In order to evaluate the hypotheses, I have elaborated several research questions and objectives, bearing in mind the practical applicability of the results. The dissertation has five broad questions, related to specific research goals:

1. *How do the general motivations of the residential suburbanisation of the outskirts differ from the suburbanisation towards general settlements?*

1/I. What kinds of social and land-use changes occur during suburbanisation at outskirts?

To answer this question, I intend to explore the demographical and land-use contexts of suburbanisation in the relevant international and domestic literature, with particular regard to the differences and similarities of the suburbanisation processes in Central and Eastern Europe and Hungary. Then, I would like to compare theoretical results with the statistical database of the population and demographic indicators of the outskirts.

1. *How can the outskirts be typified? Are there significant differences between the subprocesses of the suburbanisation of these types?*

2/I. How do the attributes of the various outskirts attract the different social groups?

2/II. As a consequence, has a specific social stratification emerged, and how have the specific demographic features been changed?

The aim of my research is to create a uniform and coherent outskirts typology by synthesizing the historical literature. I would like to explore the practical problems of this subject by analyzing empirical analytical methods. In this research, I will put emphasis on the social, economic and lifestyle factors affecting the migrational intentions, and the settlement geographic characteristics that determine the quality of life of each outskirts.

2. *How did the suburbanisation processes affect the composition of communities and the system of social relations of local residents?*

3/I. How did the emerging conflicts affect the quality of life, what criticisms can be made about the socio-economic effects of the transformation?

3/II. How well provided are the existence of the local infrastructure, the landscape and the survival of local agriculture? Do the dynamic changes or inherited deficiencies of infrastructure due to dynamic transformation have an impact on local society?

I would like to explore this question by qualitative analysis of my questionnaire, and I want to explore which of the factors have the most important influence on the functionality of the communities and the resilience of the place of residence.

I made a property cadastre and I surveyed the geographic features of settlements in order to determine the most significant changes that have worsened the natural and constructed environmental conditions of the inhabited areas.

I want to explore the possibility of easing the conflict of practical reality experience based on the analysis of successful projects in pilot areas.

3. ***How does suburbanisation of suburbanisation affect the spatial structure of urban areas, and is there any difference between the migration to central inner areas and other inner areas?***

My goal is to present the differences between the various outskirts and the possible differentiation of their development paths through an example of an agglomeration. My main theoretical aim is also to set up a schematic spatial structure model with the help of which the specific fragmentation of the city-region's periphery in the Hungarian metropolitan areas can be demonstrated. My practical goal is to formulate the recommendations that take into account the spatial structure of outskirts for the development projects.

III. Methodology

This research is based on a statistical analysis that used conventional social geographical methodology on the data from the general population censuses and additional HCSO (Hungarian Central Statistical Office) data. Based on the examination of population data and internal migration, we selected four Hungarian cities as our case studies (Figure 3). Basic conditions of the selection of sample areas were that there are significant suburbanisation in the agglomeration of the city, and the core settlement and the village contain several different types of outskirts with increasing population.

Győr and Szeged are regional centres with a large number of outskirts and with some incorporated settlements, thus a significant part of suburbanisation remains within city limits. Hódmezővásárhely and Zalaegerszeg are cities with county rights, they have many outskirts with significant population, and suburbanisation has remained almost entirely within the administrative borders. The selection of these four municipalities is also justified by some geographical features. The "tanya" type outskirts are common in Szeged and Hódmezővásárhely, the manors and wine hills are well preserved in Zalaegerszeg and Győr, which are typical features of the Transdanubian region. Moreover, two of the four cities are smaller and two have larger population, thus our results can be more generally valid for the city stock of the country. The sample areas include all other inner areas and outskirts of the selected four case studies. Settlements of agglomerations which have at least one outskirt with more than 10 residents, have become the areas of investigation (Figure 1).

The detailed analysis of the sample areas consisted of three steps: survey, field examination and interviews. During a detailed fieldwork, I created a cadastre of

9290 plots in order to evaluate the infrastructural supply, traffic situation, the quality of the property distribution and the land use distribution of the individual sites and the geographic characteristics of the outskirts. Then I conducted a stratified systematic survey that involved 1112 households in the outskirts, and another 598 in the other inner areas and central inner areas. With this method, every fifth household of the sample areas was asked in the survey. The first third of the questionnaires was used to obtain data about housing and migration-related questions. It was followed by questions about the various difficulties and social characteristics of the living space. In the last part, we requested details about the demographic characteristic of the household. The participants also had the opportunity to formulate their own problems and expectations in the open-ended questions.

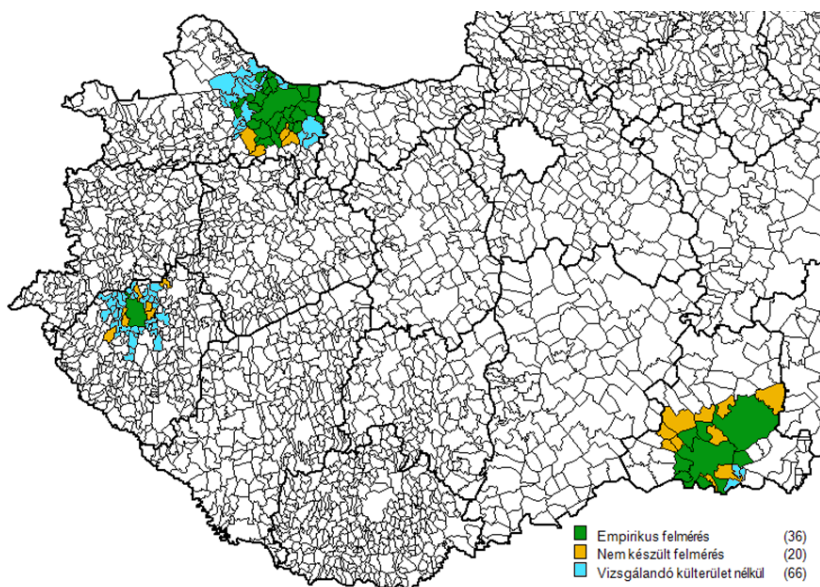


Figure 1: The sample areas according to the survey level (edited by the author).

Finally, we prepared some interviews with local government leaders and other professionals in the sample area in order to examine their attitude toward development planning, supply tasks and daily routine, in connection with outskirts and other inner areas.

The results were quantified by grouping the answers with emphasis on preserving subjective opinions. We have analyzed the frequency and the correlations of the answers using basic statistical techniques and simple r^2 method. With the

combination of these methods, we were able to get a detailed picture of the demographic processes, social structure, problems and conflicts of the sample areas and these case studies can contribute to the wider understanding of the transformation processes of the rural-urban fringes of Hungary. Statistical analyses were done using Microsoft Excel and IBM SPSS, analyzing the database of 1990, 2001 and 2011 censuses are available in VÁTI TeIR, and Bajmócy, P.'s data collection. GIS (MapInfo) and graphics (GIMP, Real Draw, Adobe Photoshop CS) software was used to represent the results.

IV. Summary of the main results

The outskirts attracted a significant proportion of suburban migration in the Hungarian agglomerations of large and medium-sized townships, resulting in a steady increase in their share of the population since 1990. Compared to 1990, the average value of the growth of the outer areas was 35.61% in the 21 agglomerations and settlements defined by the HCSO and in the case of 55 settlements the total population growth occurred in outskirts.

The main driving force of suburbanisation on the outskirts is that it allows many lifestyles of households that would not be able to realize this on the real estate market of the suburban ring. They are able to achieve or maintain a rural, quieter lifestyle as opposed to the prospect of moving to remote, cheaper settlements of the suburban ring with smaller costs and commuting time losses. Nevertheless, many of the advantages of rural communities (including strong reciprocity, traditional values) are available here, even if they have to deal with certain conflicts and difficulties. These areas had the most significant population growth at the peripheries of cities with a large dynamic suburban ring.

Suburbanisation within city limits is the determining factor for the cities where little to no migration started to the surrounding villages, thus the outskirts and other inner areas adopted the population flow. In these settlements, the majority of the movers willing to move (and able to afford such a move) were able to find suitable and rural homes at well-accessible outskirts of the towns.

This process fits into the general suburbanisation trend of the post-socialist countries, but it has some unique characteristics, such as the unplanned, chaotic and mosaic spatial structure and the high proportion of disadvantaged groups displaced from the city. This process is typical in the cases of Zalaegerszeg, Tatabánya, Nagykanizsa, Kaposvár and partly Miskolc, where the displacement of romani people increased the population.

2. Based on empirical results, the differentiated transformation of the outskirts is one of the main factors in the fragmentation of urban areas. The results show, that suburbanisation in the outskirts is significantly different from that of the central inner areas. Because of the loose regulation and illegal constructions, as well as the poor spatial structure inherited from the period of socialism, the process has been unplanned and uncontrolled. Thus an extremely fragmented

spatial structure has been formed and groups living there have markedly different socio-economic statuses and land use patterns. Due to this, there is no coherent settlement image, the infrastructure is also significantly different within a habitated outskirts

Spatial development in the outskirts is a very difficult process, due to the previous construction of infrastructure without adequate plans. Local governments currently have no adequate routines nor legal preconditions or funds. Another problem is the high number of non-licensed buildings and the illegal home occupations and the proliferation of double-residence-lifestyle (during summer they are at the outskirts), thus the HCSO's census data often contain significantly less population number than the real values.

3. Using my outskirts-typing-framework prepared by the synthesis of the geographical literature of outskirts, I distinguished the significantly different groups of outskirts. Tanyas (scattered farms) differ noticeably from the manors, vineyards, which are transitional settlement types, while garden zones have village-like settlement images. Therefore, it is necessary to compare the various types of outskirts.

Every type of outskirts attracts different social groups, with the availability and the state of the infrastructure playing a decisive factor. As the various features of the various areas attract different social groups, households with significantly different socioeconomic status migrate to the neighborhood of the aging local-born population. The decisive factor is the availability, the infrastructural condition, the spatial structure (sprawl or street image) resulting from the typology of the outskirts, the composition of the property stock and the beauty of the landscape.

The gardenzones, winehills, resorts and tanyacenters have the greatest influence in suburbanisation (Figure 2). These areas can meet the needs of many groups of movers due to low real estate prices and a relatively closed, village-like settlement image. From the point of view of local governments, these types are also beneficial because they can be developed by concentrated projects due to the higher residential density, and these interventions are also more cost effective.

Garden zones, vineyards, recreational areas and periurban streets with adequate building stock attracted the most out of households wanting to improve their lifestyle, so younger, educated and richer groups have moved into these areas. Their main attraction force was that they could provide a kind of quiet, ruralic idyll for those who move out to relatively small real estate prices. These areas started transforming into gardenzones and in the most favorable places a village-like settlement-structure also began to form. That is why today, these types of outskirts do not sharply differ from each other.

4. In the case of manors, garden zones and vineyards with less favorable accessibility, good environment is the main attractiveness after cheapness of real

estate and the low utility cost. The smallest manors are the least attractive because of the lack of street structure and multi-dwelling rowhouses, but these cheap homes can provide new opportunities for socio-economically handicapped people, especially where a local community based on reciprocity has been developed. In the tanya-areas there is a heterogeneous mosaic landscape, in which a strong differentiating factor is the availability of bus stops and major transport nodes, and several environmental problems, such as the inland water issue. So these types of housing are favorable for the lower half of the middle-class, while also providing opportunities for lifestyle converters who specifically want to live at a quiet, remote place.

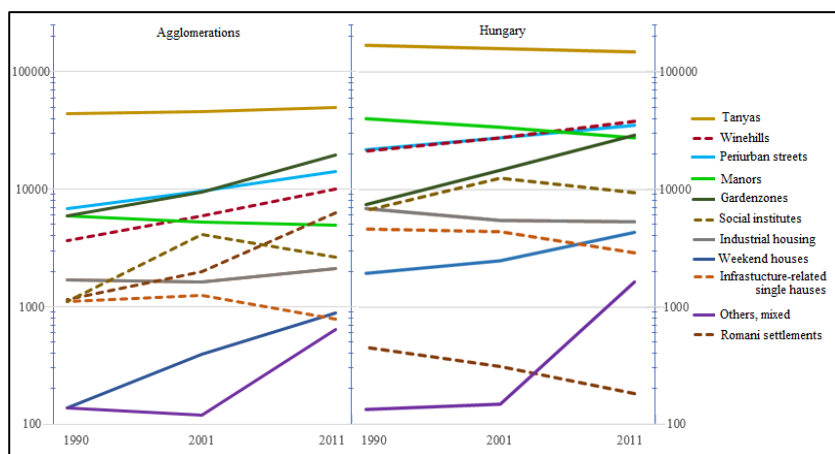


Figure 2. The dynamics of the different types of outskirts in the country and in agglomerations on logarithmic scale (Source: own calculations based on HCSO census data)

Deteriorating outskirts usually suffer from the lack of services, such as waste collecting or public lighting, their population and property stock are aging, additionally these areas have poorly built infrastructure in general. Particularly because of the enclosed life, the families that choose the place of residence do not favor tanyas. The tanyas and manors that are away from the main traffic routes often provide a closed life-style, thus inhabitants feel trapped there.

Other types of outskirts are characterized by slow decline and strong aging of the population. Social institutions operating at outskirts can significantly increase the population, but local residents usually cannot work in them, due to the lack of proper qualification areas, thus these institutions have only superficial relationships with people living there. The fate of infrastructure- or industry-

related residences are mixed. Most of them were abandoned because the technological development rendered them unnecessary, on the other hand however, many of them is still a part of the infrastructural networks and they are in good state. Significant changes are not expected in these cases.

5. According to the empirical results, each outskirts attract different social groups, depending on distance from the city and the state of the infrastructure. The distance can be interpreted as a relative distance representing the hierarchical (vertical) moving from urban to rural lifestyle. Each outskirt can be compared to the average condition of a village on a certain distance from the city.

The operation of the heterogeneous, but reciprocity-based communities of outskirts could be degraded by the considerable fluctuation. The lifestyle of the movers differs from the interests of local residents, thus strong conflicts are emerging and are strengthening the separation of social groups. Segregation is enhanced by the large number of movers with urban roots, moreover moving-in dwellers usually have strong lobby power and they easily reshape the local community and lifestyle. Similarly to gentrification, immigration increases real estate prices and utility costs, thus the less wealthy households tend to lose ground there. These contradictions make spatial planning difficult, while also slowing down the spontaneous development of outskirts, so both groups will suffer from numerous difficulties if this process is not handled by the local government.

However, segregation at outskirt areas shows a significant duality. Within an outskirt, different social groups are usually forming an almost random sample during moving in, due to the fact that they can only buy vacant houses. In contrast, when certain outskirts become popular for a certain type of household, it is typical for people of similar or same social status to move into them. In such cases, the local population is displaced from the area or remains in the worst state buildings, which creates a permanent source of conflict. Thus, typical outskirts will not be segregated, but segregated zones will develop from the ones with the best attributes.

6. The accessibility of the individual areas and the geographic features of the settlements have been determined by the specificities of their historical heritage, in addition to the current processes, so the spatial structure is mosaic and a coherent concentrating ring of suburbanised outskirts does not evolve. Not only outskirts are different, but within each inhabited outskirt the population, the rate of inflow and infrastructure (concrete road, lack of public lighting, fragmentation of plot-structure) is also diverse.

Selection of successful and unsuccessful or renewable and degrading outskirts is not clear, even if we know the exact epographic changes, and the quantitative and qualitative characteristics of the infrastructure. During the changes of recent decades, the role of agriculture has diminished in the life of the outskirts. In the

most dynamically-reshaped suburbs a significant part of the estate stock and the population have been exchanged, the former land use forms are transformed, so the outskirts and the historically established settlement ceased to exist and only its place will be re-utilized.

The less accessible but environmentally beautiful areas are characterized by a mixed transformation. Lifestyle-changer people of wealthy households, uneducated handicapped people and job seekers move here from the periphery of the country. The place of well-accessible outskirts with unfavorable landscape and/or poor conditioned house-stock usually have been taken over by industrial function, or are reborn as greenfield real estate developments.

In the least attractive areas the concentration of the poor population or depopulation leads to a rapid decline, which is often compounded by environmental pollutions (noise, chemicals, dust, illegal waste dumping, etc.) caused by industry or large-scale agricultural plants.

As the internal structure of larger outskirts (garden zones, vinehills, and most of the tanya-zones over 100 people) is diversified, the most developing ones will be mixed in the terms of building-stock, infrastructure status and accessibility.

In their more distant and inferior parts (inland water, nearby plants) usually low-income households and one-parent-families settle down, while the most prosperous groups move to the most valuable sections. The more mosaic structure of the outskirt may cause more conflicting interactions between different social groups, so these areas shall be seen as the negative social consequences of suburbanisation.

7. Elders and women living there have outstanding difficulties in maintaining their daily routine due to bad accessibility and lack of services. At the same time, one should bear in mind, that this low-cost lifestyle for low-income people is part of the survival strategy, since these outskirts are still attracting for various groups. Further population growth is expected in their case and local governments at sample areas are also counting on this.

Less wealthy households base their cheap lifestyle on women's high-intensity but low-tech work at home. Their strained, yet inexpensive way of life in the periphery of the outskirts results in being trapped in the outskirt and they suffer from an overwrought, but poor in stimuli lifestyle. For these people, the lack of shop or its poor inventory is disadvantageous, but most of these stores sell a lot of alcohol, which is the source of further troubles, thus households are forced to travel to a nearby settlement in order to buy adequate food, medications and household goods.

Despite the difficulties and conflicts, most people like to live in the outskirts and they do not want to move. The reason for this is that subgroups of communities are able to organize their lifestyles thus certain disadvantages have

been less burdensome, actually some residents deem this situation less stressful than the problems of urban life.

In a few cases, voluntarily closed communities have been formed in the remote outskirts. People living here are usually in the periphery of society, but because of the interdependence, communities formed there commonly activate the local population while also strengthening the *genus loci*, but it depends on external financial sources.

8. OTT, T.'s (2001) model of the specific spatial structure of post-socialist suburbanisation supplemented with OUREDNICEK, M.'s (2007) typology of different forms of migrations during suburban development is suitable to outline a complex suburban development scheme. This can be adapted to the geographic characteristics of the suburbs and to the subprocesses discovered during my empirical investigation, so it is possible to draw a schematic model for the mosaic patterned spatial structure of the Hungarian agglomerations (Figure 3).

This model illustrates the sub-processes of suburban development and the mosaic structure that differ even on a sub-municipal level. The main consequence of this is that migration to outskirts can be divided into several different subprocesses which are divided by different motivations therefore they have different spatial nature.

- The most significant subprocess is the outmigration from the city. It is analogous to "classical" suburbanisation, i.e. groups with higher status migrate to the suburbs and in parallel elderly people move to their second homes at outskirts. The second subgroup is the arriving of the households displaced from the center due to high utility costs and the people are coming from the country's peripheries in order to look for workplaces. This migration concentrates on the cheaper areas of the agglomeration, which allows for access to jobs and low-cost housing, furthermore the horticulture is a secondary earnings there. This process is forming a kind of social suburbanisation.
- Local people are excluded from the most attractive areas due to the more and more expensive real estate market of suburban settlements. The immigration of the wealthy households increases the cost of plots and services this way opening up a sort of rural gentrification as the less educated or handicapped local people are unable to keep up with the cost increase.
- A significant part of migrations does not coincide with the quality change of the place of residence, nor lifestyle modifications. These movings may be linked to family or other private life (e.g. marriage, divorce) causes, which is why the motivations and impacts of this short-term tangential migration differ from suburbanisation.

Since a number of specific spatial units are located within every certain outskirts and other inner areas, the functions and social groups with different statuses are concentrated, and land-use will be more mosaic and fragmented than

in suburbanisation in central inner areas. Developing, decreasing and depopulating areas and industrial zones form a fragmented spatial structure and it shows the characteristics of the rural-urban fringe.

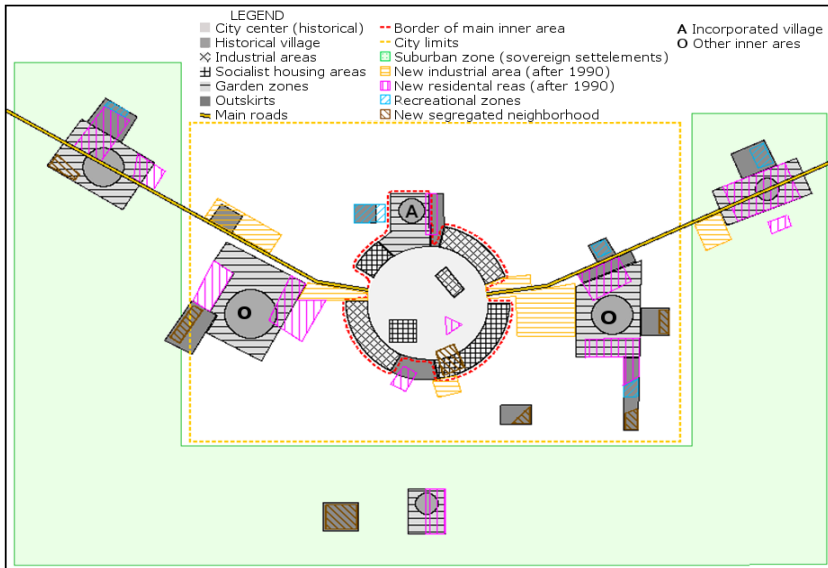


Figure 3: The mosaic model of rural suburbanisation, and the impact of migration into outskirts and other inner areas on the spatial structure of suburbs of Hungarian agglomerations, outside of Budapest (edited by the author).

9. Outskirts and other inner areas created therefrom present the processes of the whole suburban belt, however, due to their particular situation and their abilities, the relative distance from the city is represented by the vertical motion in the development hierarchy of the settlements from the more urban to the more rural direction instead of the geographical distance. Thus every outskirts along the administrative boundary of the city can be interpreted as a rural inclusion, and the settlement geographic characteristics of them can be compared to the attributes of a village at some distance from the city.

This model also helps to solve the paradox of talking about suburbanisation within a city. Administrative boundaries are not sharp dividing lines, outskirts and other inner areas within the perimeter areas of the cities shall be considered as transitional areas between the countryside and the suburban belt and urban areas.

Other inner areas are between the outskirts and administratively sovereign suburban villages in terms of quality of their infrastructure and settlement image. The demographic composition of the most developed other inner areas formerly transformed from outskirts or villages is highly similar to the average of settlements of the suburban ring, while ones created by reclassification of smaller, less developed outskirts are significantly lagging behind. The composition of the population migration into other inner areas is a transitory step between administratively sovereign settlements and the outskirts.

Accordingly, there is a high proportion of displaced households leaving the city and life-style changers due to the satisfying settlement image, but the percentage of hobby-gardenists are relatively low compared to the outskirts because of an increasing building density.

A significant part of these processes cannot be unconditionally detected in researches, which did not look under the level of statistical municipalities, thus my results highlighted the importance of micro-level analyses of suburbanisation in the applied geographic examinations. Furthermore, it must be taken into account during evaluating this process that the outskirts-stock itself is dynamically changing and local governments are continually incorporating outskirts into central inner areas, thus the role of the migration into outskirts is probably more significant than the presented values.

V. The practical applications of the results

The results can be applied in some ways for the administrative government and local governments and researchers. The most important of the practical experiences and recommendations outlined are the following:

- We have little information on the current processes of outskirts and the statistical databases are inadequate, especially in the light of the anomalies discovered. It is necessary to have a nationwide outskirts survey which is assessing the territorial differences and identifies the particularities of each outskirts type. From this point of view, the results of the research are relevant and fit into the outer-research trends of recent years. From this point of view, the results of my research are relevant and fit into the trends of the recent surveys of outskirts.
- Based on the results and the experience of the organizations and municipalities asked during interviews, it is essential to review the law of land acquisition and land protection. A simplified procedure should be introduced for residential properties that have been maintained by the HCSO and in non-agricultural land.
- According to my results and experiences of the organizations and municipalities participated in interviews, it is essential to review the highly complex and prominently strict laws of land acquisition and soil protection. A simplified procedure should be introduced in the case of inhabited outskirts

listed by HCSO's Gazeteer and even among the tanyas without agricultural plots too. This progress would also significantly accelerate the implementation of municipal developments. It would be advisable to revise the administrative division of the outskirts and to relocate the ones which are clearly belonging to an other settlement.

- According to practical experiences of sample areas, short-term projects are effective if the local community is involved in planning and implementation. The experience of being involved and the „genus loci” in such case can increase the residents' commitment to sustained maintenance of results and they are willing to invest their free time and money too. Bottom-up planning also makes possible the more specific satisfaction of the local needs of the population of fragmented outskirts. Therefore, it is advantageous to involve the local community in planning and construction or organizing the developments and tackling their most pressing difficulties rather than investing in costly infrastructure developments. For example, arranging unusable road sections, optimizing public transport and building public lighting in the main nodes.
- Due to fragmented spatial patterns and buildings without proper plan and legal permission, the streetscape is chaotic, thus spatial development is difficult and formal stakeholders are currently lacking proper methodology and legal background. Nonetheless, difficulties could be alleviated by street widening, creation of detours and forced demolition of abandoned and ruined real estates. Current building regulations correlate with the needs and opportunities of people living in the outskirts and no statutory amendment is necessary, but local governments need to be provided with the necessary support.
- In the preparation of national and local development plans, more emphasis should be placed on evaluating differences under the level of statistical municipates. In urban development plans, it would be desirable to make a specific problem-analysis and development plan for outskirts of the agglomeration. However, in the absence of a necessary database, there is currently no technical background for such an action.

VI. Publications related to the topic of the dissertation

- VASÁRUS, G. – MAKRA, ZS. 2015: Az agglomerációk lehatárolásának néhány kérdése Győr példáján. – Településföldrajzi Tanulmányok. 1. pp. 84-94.
- VASÁRUS, G. 2016a: Szuburbanizáció külterületeken és egyéb belterületeken, Győr példáján. – Településföldrajzi Tanulmányok. 2. pp. 22-37.
- VASÁRUS, G. 2016b: Külterületi szuburbanizáció és szegregáció: Példák vidéki agglomerációk konfliktusaira. – Településföldrajzi Tanulmányok. 1. pp. 84-94.
- VASÁRUS, G. – BAJMÓCY, P. – LENNERT, J. 2018: In the shadow of the city: demographic processes and emerging conflicts in the rural-urban fringe of the Hungarian agglomerations. – Geographica Pannonica. 22.1. pp. 14-29.