Spatial Pattern of Post-Socialist Urbanisation in Hungary

Project closing report

General overview

The main objective of this project was to investigate the post-1990 urban development in Hungary and put the research findings into a wider theoretical context. Basic preconditions of the project were: i.) the relatively long time-span (25 years) since the beginning of the systemic transformations, which enabled us to critically evaluate long term urban processes, and ii.) the 2011 census, which provided us a solid basis for the quantitative part of the analysis. The main research questions of the project focused on two geographical scales. On the *macro-level* we wanted to find answers to the following questions:

- What are the regional variations of concentration versus deconcentration of population and workplaces within Hungary? Which are the shrinking and which are the growing urban regions, and how has the urban hierarchy been transformed since 1990?
- Has the main phase of suburbanisation finished by now, as it is implied in the literature? Is there any region within Hungary that has been affected by dezurbanisation?
- How does the Hungarian pattern of urbanisation fit into the global model of urban development? How have the different waves of urbanisation (suburbanisation, dezurbanisation, reurbanisation) affected different parts of the country?

On the *micro-level* we were interested in the following questions:

- What are the new and economically more efficient uses of urban space in Hungarian cities? Is the general model of post-socialist urban change and new spatial pattern applicable to all cities?
- How have the processes of urban decay and revitalisation taken place in cities at different levels of urban hierarchy? Who are the actors of urban renewal, and what are their main interests?
- What are the main fields of conflicts among residents and stakeholders as an outcome of post-socialist urban transformation? What are the future challenges of urban development and planning in Hungary?

The research project was originally planned for 36 months (01.01.2013-31.12.2015), however, it had to be extended by nine months (until 30.09.2016) because the acquisition of statistical data from different organisations (e.g. Global Footprint Network, Hungarian Central Statistical Office) as well as the planned questionnaire surveys took longer time than expected. Also, the final conference was organised in the format of an international seminar, with foreign participants, hence its organisation needed longer time.

The group of participating researchers also changed in time. On the one hand, Zoltán Dövényi has left the institute of the principal investigator; therefore, he could contribute less to the actual research than it was originally expected. On the other hand, two young researchers joined the project consortium during the life-span of the project, both of them were granted MTA post-doc scholarship. Sassné Eszter Berényi joined the project on 1st September 2014, and her main task was to contribute to WP 3.1. focusing on urban spaces affected by upgrading. She carried our research regarding gentrification and other socio-economic effects of urban regeneration. Attila Kondor joined the project one year later (01.09.2015) and his

main task was to contribute to WP 2.2. and 2.4. investigating the consequences of urban sprawl in the metropolitan region of Budapest and related conflicts. Changes among the participants did not endanger the successful accomplishment of the project, even the publication and dissemination activities became smoother after the entry of the two young colleagues.

Workflow and research results

In the proposal we elaborated 4 broad work packages (WPs) with concrete goals and responsible researchers. Due to the personal changes the circle of contributing researchers slightly changed compared to the plans, however, the expected outcomes were fully achieved. In the following we briefly summarize the main results and research findings.

WP 1 – Literature review

At the beginning of the project the existing literature on the post-socialist urbanisation and urban development in Hungary was critically reviewed. In this review the main gaps in knowledge were explored in order to specify further research questions. On the basis of the review we could define the main differences and similarities between Hungary and other parts of East Central Europe regarding urbanisation and urban restructuring, the existing differences among Hungarian urban regions and their possible development scenarios. As it was revealed there were gaps in the existing literature regarding the environmental impacts of urban sprawl (i.e. suburbanisation), the social and cultural aspects of gentrification at different levels of urban hierarchy, the planning conflicts of suburbanisation, the general attitude of local municipalities regarding urban development. Therefore, in the research we put more emphasis on these issues and widened the scope of the project accordingly.

WP 2 – Macro-level analysis of urbanisation

In this work package first we investigated the regional variations of concentration versus deconcentration of population and workplaces in Hungary. Based on the literature we assumed that the deconcentration of population (i.e. suburbanisation) has been coupled by a steady concentration of workplaces in Hungary since 1990 mainly due to globalisation. We also assumed that the growing geographical separation of people and jobs might result new flows of labour. The applied research method was quantitative based on commuting data of the 1990-2001-2011 censuses.

With this analysis we could figure out the changing geographical pattern of economic activities and workplaces in Hungary, and the shifts in urban hierarchy. As it was pointed out the intensity of commuting has clearly increased since the change of regime in Hungary, the workforce has become more mobile than earlier and commuting flows have become also more complex. Due to the increasing spatial concentration of jobs generated by the post-Fordist transition of the country the role of larger cities and their agglomerations has gradually increased. At the same time the relative spatial deconcentration of jobs within larger metropolitan areas has been also taking place. Several service activities settled to suburban locations instead of city centres, mobilising a growing share of the workforce to commute. Besides the former rural-urban commuting new, more complex forms of commuting like city→city and city →agglomeration migration appeared within the settlement network. The weight of transverse (reciprocal) commuting has also strengthened that predicts a slow polycentric rearrangement of the urban structure in Hungary. Shrinking commuting in some part of the countryside (especially in peripheral small and micro villages), however, generated an irreversible marginalisation of the rural population on the labour market. The role of

micro-centres (i.e. small towns with 3-5 thousand inhabitants) in daily commuting has substantially decreased, which hints at the weakening economic role of the lowest level of urban hierarchy.

Another objective of the macro-scale analysis was to detect the effects of suburbanisation, with special attention to the spatial distribution of new housing and new economic activities. For the sake of analysis we delimited the most dynamically expanding urban region of Hungary, around Budapest. For that purpose we used the 2001 census data on commuting (i.e. the interim census between 1990 and 2011). In this process the so-called Budapest Metropolitan Region was delimited using the threshold of 15 percent of commuters to the core city from the economically active population on the eve of the 2001 census. After territorial consolidation Budapest and 185 surrounding municipalities were understood as metropolitan region and it was used in the subsequent analysis. This metropolitan region occupies 6.5 per cent of the territory of Hungary, it is the home of nearly 30 per cent of the country's population, and in 2011 56 per cent of the jobs in Hungary concentrated here. Without any doubt this is the economically most dynamic part of the country, where a robust urban sprawl has completely rearranged the spatial structure since 1990.

Our main goal was to detect the spatial pattern of artificial land cover and to identify the main land use changes around Budapest before and after 1990. As a starting point a military-surveyed topographic map from the period of 1953-1959 has been interpreted and transformed into GIS vector data with on-screen digitizing in ArcGIS software. For 1990, the EEA's Corine Land Cover (CLC 90) was used, while for 2012, we decided to use the Urban Atlas, in order to maximize the compatibility with the digitized topographic map. Research results confirmed that despite the continuous efforts of the communist regime to moderate the growth of Budapest and its urban zone the extension of artificial surfaces in the Budapest Metropolitan Region increased from 718,8 km^2 to 941,6 km^2 i.e. from 11,8% to 15,5% between 1959 and 1990. The increase was geographically fairly uneven. New housing construction concentrated mostly to the inner-ring of settlements and in the south-eastern zone around Budapest. This process was less the outcome of urban sprawl, but more the result of a continuous migration of labour from the countryside towards Budapest. Hence, the process could be labelled as 'rural urbanisation' rather than suburbanisation, as it was also described around other major cities in East Central Europe (e.g. Warsaw, Prague). The communist period was also characterised by large non-residential expansions like the refinery in Százhalombatta, or the enlargement of Ferihegy Airport.

The post-socialist transition did not disrupt the former tendencies of land cover changes, but even exacerbated. Between 1990 and 2012 the share of artificial surfaces in the investigated metropolitan area increased from 941,6 km^2 to 1173,4 km^2, reaching almost 20% of the total area by 2012. The growth of artificial surfaces was very uneven both in space and time. The first decade of transition was characterised by the rapid extension of residential areas due to residential suburbanisation. In accordance to this, residential areas contributed most significantly to the increase (almost 100 km^2), while the artificial areas of Budapest only moderately increased (from 340,3 km^2 to 366,3 km^2). It is also notable that the growth rate of the artificial surfaces in the outer settlement ring around Budapest became more dynamic, thus, residential suburbanisation shifted further out from the compact city. After the turn of the new millennium urban sprawl also manifested in the form of commercial suburbanisation and greenfield investments – mainly near the M0 and M1-M7 motorways. Moreover, our research findings also showed that a significant part of the residential areas also underwent notable densification.

As a next step the analysis of quantitative data was extended by in-depth interviews with local stakeholders and analysis of policy-documents. We found that due to the lack of control and a metropolitan government, decision makers were interested personally in local planning and re-zoning. This interlocking was appreciated after January 2000, when a very favourable housing loan system came into force in Hungary. This measure made the access of the middle class to housing easier and resulted in an upswing in the construction of new housing, especially in the high quality segment, concerning mainly re-zoned land. It was also pointed out that the development of the suburban zone around Budapest, and changes in land use followed the interplaying interests of local governments and investors, the formal legal background of regional development and spatial planning served mostly the EU's regulatory requirements. Due to uncontrolled re-zoning and suburbanisation processes a lot of land use conflicts emerged in the metropolitan zone of Budapest, therefore some kind of new spatial regulation was unavoidable. After several years of political negotiations, the Spatial Development Concept and Strategic Programme for the Budapest Agglomeration entered into force in 2005. In this document, the borders of the settlement areas, which could be built in the future, were designated precisely. Although the fact of legal regulation seemed to be a significant achievement, the plan legalized only the existed situation and it had little effect on the real processes. Due to fear of new legal rules, a plethora of local governments around Budapest hastily rezoned vast, mainly agricultural lands into potential settlement area before 2005, and this rezoning was incorporated into the concept. Although the size of the potentially buildable area was slightly reduced in the amended concept in 2011, ca. an additional 250 km^2, still vacant land can be built in the future.

Finally, we made a comparison of the post-1990 features of Hungarian urbanisation with neighbouring post-socialist countries, and other Western European countries in order to detect similarities (i.e. convergence) and differences (i.e. divergence). As it was already pointed out earlier, perhaps the most spectacular features of the post-socialist transition at least in geographical sense was the excessive growth of suburbs. Hungary, and most notably the metropolitan zone of Budapest, entered the phase of suburbanisation relatively early and followed the pathway of western countries. The process of suburbanization was fuelled both by residential mobility and the relocation of business functions from the city core to the periphery. In this process two stages of suburban development could be observed after 1990. First residential suburbanization commenced from the early 1990s which was followed a dynamic suburbanisation of businesses coupled by globalisation phenomena. As a general trend suburbanisation gradually slowed down in the first decade of the new millennium, and it has been replaced by reurbanisati-on tendencies. The regeneration of city-centres, the growing popularity of urban lifestyle, the negative consequences of suburban living (e.g. growing average time of commuting) jointly contributed to the revival of core cities. Re-urbanisation, however, does not affect the entire core city only those pockets that are easily accessible and/or provide high-quality environment for residential function and leisure activities.

WP 3 – Micro-level analysis of urban development

This work package focused on the local dynamics of urban change and post-socialist pattern of urban transition in Hungarian cities of different size. For the sake of analysis we selected case study cities from two hierarchical levels: metropolis (Budapest); regional centres with very different historical pathways (Miskolc, Debrecen, Szeged, Pécs). Originally, we also planned to involve medium sized cities in the research but in the preparatory phase we came to the conclusion that urban processes like gentrification, commercialisation or slum-formation differ so much at the lower levels of urban hierarchy that it would have been very

difficult to compare them with larger cities. Instead we increased the number of selected neighbourhoods and the size of the sample during our questionnaire survey.

We used a common methodology in each city to study the dynamics of different neighbourhoods. First, we delimited neighbourhoods in our case-study cities that had been affected by downgrading. Altogether 12 neighbourhoods were selected, 4 in Budapest and 2 in the regional centres respectively. Secondly, we delimited neighbourhoods in the case-study cities that had been affected by physical and social upgrading. Altogether 8 neighbourhoods were selected, 4 in Budapest and 1 in the regional centres respectively. The size of the selected neighbourhoods (i.e. number of inhabitants) was very similar. For the selected neighbourhoods census data reflecting the socio-demographic profile of the local society as well as the qualitative aspects of the housing stock were acquired from the Hungarian Central Statistical Office. As a next step, in each neighbourhood household questionnaire surveys were carried out with the employment of student labour. Target was roughly 15 percent of the households residing the neighbourhoods. The final target was achieved, we collected, coded and analysed data of 5524 households, out of which 3541 were living in declining, whereas 1983 were living in upgrading neighbourhoods. Finally, we made expert interviews in each city (altogether 24) who were key informants in the field of urban development (i.e. chief architects, real estate agents).

As our research findings showed there are substantial differences among the investigated upgrading neighbourhoods in terms of the actors of upgrading, its forms and the socio-economic outcomes of the upgrading. These differences can be explained partly by size (i.e. level in the urban hierarchy) and partly by path dependency. Classic forms of gentrification were typical mainly in Budapest, where the process of regeneration and displacement was most advanced among the investigated cities. In the regional centres studentification was more prevalent. Altogether we found great diversity of newcomers (gentrifiers) in upgrading neighbourhoods, among them couples with children (family gentrification), students (studentification), young professionals (→‚transitory urbanites' (Haase et al)). Young couples without children (classic gentrification) had higher shares only in Budapest. In the provincial towns differences among these groups (e.g. age, income) were clearly smaller than in Budapest. In these cities stronger social networks also prevented displacement of long-term residents, and social conflicts were less common than in the Budapest case-study areas.

Neighbourhoods with downgrading process showed also great variations. Common features of these neighbourhoods were the obsolete housing stock, bad accessibility, high concentration of low status households, run-down public spaces and lack of services. Residents of such neighbourhoods are very much trapped in their dwelling. 76 per cent of households of run-down neighbourhoods do not plan any relocation in the future, 27 per cent of them because of lack of finances. These neighbourhoods are also targets of marginal groups (extreme poor) from other parts of the city or the country-side. The arrival of marginal groups generally exacerbates the problems of social segregation and exclusion. The potentials to halt the downward spiral differed very much among these neighbourhoods and the attitude of local politics towards them also varied.

As part of the micro-level studies we were also interested how the level of segregation of different socio-economic groups has changed since the systemic changes. Our study area was Budapest. To detect changes in the pattern of social segregation in Budapest we use occupational data from the three post-socialist censuses of 1990, 2001 and 2011. For the sake of fine geographical resolution Budapest was divided into discrete territorial units (ca. 1600) on the basis of functional and morphological attributes. The spatial units chosen for

segregation analysis were compact and small, and similar population-wise (ca. 1000 inhabitants) in the three censuses. Occupational data were available for these small-scale units for each censuses which made fine spatial resolution possible. According to our findings growing income differences have been only slowly translated to new patterns of social segregation in Budapest. One important aspect of the new segregation pattern is that lower socio-economic groups became more segregated while upper occupational categories, especially professionals, became more evenly dispersed in the city.

WP 4 – Dissemination of knowledge

During the life-cycle of the project versatile dissemination activities were carried out in order to inform domestic and international academic circles about the most important results of the project. First and foremost a project website (www.usp.mtafki.hu) was designed and launched at the very beginning which has been an important platform for communication with all interested in the project's progress and results. Major milestones as well as publications have been stored on the website.

Participants of the project have published their research results in English and in Hungarian excessively (see Közlemények). In addition to research articles in peer-reviewed academic journals chapters in edited volumes and conference proceedings have also been published. As by-products of statistical data analysis great number of thematic maps have been produced that will be published in the new National Atlas of Hungary. Obviously, the present list of publications will substantially increase in the next couple of years, as many papers are currently under preparation or just before submission.

Next to articles and book chapters members of the consortium attended great number of conferences and seminars, and held the following lectures:

- Berényi, B. E. – Kovács, Z.: Upward trajectories in Hungarian cities in the context of gentrification. 5th EUGEO Congress on the Geography of Europe. Budapest, 30 August – 2 September 2015.

- Berényi, B. E.: The role of different stakeholders in upgrading neighbourhoods of Hungarian cities. Building Bridges: Cities and Regions in a Transnational World. RSA Annual Conference. Graz, 3-6 April 2016.

- Berényi, B. E.: Upward trajectories and the impact of housing preferences of students on local housing markets – experiences from Hungarian cities and Leipzig. Internal Colloquium, Leibniz Institut für Länderkunde. Leipzig, 8th August 2016.

- Berényi B. E.: Lakóhelyi mobilitás a hazai nagyvárosi negyedekben. XIII. Településföldrajzi Konferencia. Bük, 2016. április 14-15.

- Berényi B. E. – Kovács Z.: Városaink jövője: Hanyatló és megújuló városrészek kihívásai hazánkban. MTA Földtudományok Osztálya Előadóülése. Budapest, 2016. január 10.

- Berényi B. E.: New-built gentrification a hazai nagyvárosok megújuló városrészeiben. VIII. Magyar Földrajzi Konferencia. Eger, 2016. augusztus 25-27.

- Egedy, T.: An emerging creative hub vs commercial gentrification? – the case of Jewish quarter in Budapest. IGU Regional Conference. Krakow, 18-22 August 2014.

- Egedy, T.: A gazdasági válság hatása a nagyvárosok versenyképességére és a városlakók életminőségére Magyarországon. XIX. Országos Hild János Urbanisztikai Konferencia. Budapest, 2013. április 17-19.

- Egedy T. – Kovács Z. – Szabó B.: Az ingázás aktuális trendjei Magyarországon a policentrikus térfejlődési modell tükrében. XIII. Településföldrajzi Konferencia. Bük, 2016. április 14-15.

- Erőss, Á.: How should I call you? Conflicts over street names and public spaces in CEE. IRG "Urban Spaces and Networks", International seminar on „Challenges of urban governance in Europe". Budapest, 22 – 24 May 2014.

- Erőss, Á. – Azaryahu, M.: "In memory of victims": monument and anti-monument in Freedom Square, Budapest. 5th EUGEO Congress on the Geography of Europe. Budapest, 30 August – 2 September 2015.

- Kondor A.: Budapest környéki települések helyi konfliktusai: a beruházás-ösztönzés és az állami környezetvédelmi vállalások közti ellentmondások. XIII. Településföldrajzi Konferencia. Bük, 2016. április 14-15.

- Kondor A.: A Budapest környéki szuburbán zóna helyi konfliktusai: az állam és a jog szerepe. VIII. Magyar Földrajzi Konferencia. Eger, 2016. augusztus 25-27.

- Kovács, Z.: Challenges of Comparative Urban Research in East Central Europe (Plenary lecture). Mobility, Segregation and Neighbourhood's Change International Conference. Tartu, 13-15 March 2013.

- Kovács, Z.: Neighbourhood Dynamics and Socio-spatial Change in Post-socialist Cities: A Comparative Perspective. 4th EUGEO Congress. Rome, 5-7. September 2013.

- Kovács, Z.: New pattern of social segregation in post-socialist cities: the case of Budapest. IGU Regional Conference. Krakow, 18-22 August 2014.

- Kovács, Z.: Measuring urban diversity: lessons from Budapest. AAG Annual Meeting. Tampa, 8-12 April 2014.

- Kovács Z.: Guba gubához, suba subához: avagy a poszt-szocialista szegregáció természetrajza Budapesten. XI. Településföldrajzi konferencia. Bük, 2014. április 17-18.

- Kovács Z.: A településközi kapcsolatok változása Magyarországon az ingázási adatok tükrében. VII. Magyar Földrajzi Konferencia. Miskolc-Lillafüred, 2014. szeptember 2-4.

- Kovács Z. – Szabó B.: A szegregáció, illetve a társadalmi diverzitás mérési lehetőségei Budapesten. Területi problémák Magyarországon statisztikai megközelítésben konferencia. Pécs, 2014. október 17.

- Szabó, B.: Social change and residential mobility in the downgrading areas of Budapest. Cities after Transition Conference: 25 years of urban change. Prague, 23-26 September 2015.

- Szabó, B.: Housing development in the agglomeration zone of Budapest after the crisis. Beregszász, 2016. március 31.–április 1.

- Szabó B.: Lakáspiaci folyamatok Budapest külső kerületeiben és agglomerációjában. VIII. Magyar Földrajzi Konferencia. Eger, 2016. augusztus 25-27.

One of the most important outcomes of the project was the final conference which was held in Budapest, 5-6 May 2016. This was organised as an international seminar with invited guests. During the two day event 16 papers were presented (6 by members of the consortium) and intensely discussed. The total number of participants was ca. 40. Lively discussion and friendly atmosphere characterised the event, where similarities and differences of urban development in the post-socialist countries were discussed and further plans for international

collaboration were formulated. We plan to publish some of the presentations in the form of one or two thematic issues of renowned academic journals.