

**CENTRE FOR REGIONAL STUDIES
OF HUNGARIAN ACADEMY OF SCIENCES**

DISCUSSION PAPERS
Special

**Social Inequalities in Urban Areas
and Globalization
The Case of Central Europe**

Based on the results of the project “Urban Areas, Socio-spatial Inequalities
and Conflicts – The Socio-spatial Factors of European Competitiveness”

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Series editor

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Pécs
2007

ISSN 0238–2008
ISBN 978 963 9052 86 4

2007 by Centre for Regional Studies of the Hungarian Academy of Sciences
Technical editor: Ilona Csapó
Printed in Hungary by Sümegi Nyomdaipari, Kereskedelmi és Szolgáltató
Ltd., Pécs

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PREFACE

This paper has been prepared for the presentation of the research results of the project titled 'Urban Areas, Socio-spatial Inequalities and Conflicts – The Socio-spatial Factors of European Competitiveness'. The project was performed between 2004 and 2007 and funded by the Hungarian National Research-Development Programmes¹ in consortia cooperation (the participants were as follows: Institute of Sociology Hungarian Academy of Sciences, as consortium leader, and Centre for Regional Studies HAS, Pestterv Ltd., János Kodolányi University College, Fejér Enterprise Agency as consortia members).

The project's basic research tasks were as follows: to analyse the socio-spatial inequalities manifesting in social conflicts in the metropolitan regions of Hungary and to prepare a comparative analysis between the socio-spatial inequalities and conflicts in the metropolitan areas of Hungary and Central Europe. The investigation of the major social factors of the competitiveness of urban areas was another key target of basic research. On the basis of primary research results a research concept has been prepared on the practical implementation of research objectives i.e. reducing socio-spatial inequalities in urban areas, finding solutions for the management of local social conflicts improving the socio-economic competitiveness of urban areas. This paper 'Social Inequalities in Urban Areas and Globalization' is going to summarize the major research results of the problems of social inequalities in metropolitan areas as a basic theoretical study illustrating it with case studies from Hungary, Austria and the Czech Republic and provide a general summary on findings. The remaining results of the project will be published in another paper in Hungarian language.

¹The Project has been registered by the ID of 5/083/2004.

SOCIAL INEQUALITIES IN URBAN AREAS AND GLOBALISATION – AN INTRODUCTION

The strategic importance of big cities

Very few researches have investigated the current characteristic features of the social structure of Hungarian metropolitan areas and the socio-spatial impacts of transition, globalization and European integration. Since the 1980s only a few comprehensive urban analyses have been prepared for interpreting urban space not only as a unit of economy and infrastructure but as a complex social phenomenon and for viewing urban space in a social context. Albeit there is an increasing need for being aware of the social processes of metropolitan spaces. The future of Hungarian society and its accelerating modernisation in the context of European integration also depends on what processes are undergoing in big cities, what kind of social processes are formulating the urban space, how the integration into the European urban network is progressing and what the relationship is between the Hungarian and European urban development processes and between the international and Hungarian trends.

In West-European countries the scientific and political awareness of urban affairs has recently increased and the number of scientific debates in this field has also grown. The central problem of these debates is what the metropolis means for the 21st century what kind of favourable and unfavourable processes the metropolitan space is facing who benefit from their positive and who are hit by their negative impacts? How can the threat of socio-spatial problems be reduced?

The number of professional debates about these issues is not accidentally increasing. In the globalization era the future of big cities with the management of urban problems and eliminating contradictions have strategic importance. In economically advanced countries big cities play key role in economic dynamism, global cities provide a basis for competitive advantages for the preservation of their power and economic positions, for the welfare of urban societies and of increasing urban population.

It is a well-known fact revealed by social and economic geographical analyses that global economy can most efficiently operate in a metropolitan environment. It is the metropolitan space that can best ensure the necessary infrastructure for the competitiveness of multinational and transnational firms, the major actors of global economy. Metropolises can provide all the necessary financial and other facilities with their institutional background needed for accommodating international capital and the necessary labour force and social groups attached (on a varying level) to global economy by their social positions and professional skills.

Modern urban networks created by global economy are serving as a basis not only for the economic success and participation of business actors in global economy but they are also facilitating the integration of these economy-driven social groups into global processes and urban networks. These urban networks are manufacturing the finest products; they are embedded into global and local economy and provide high living standards and successful living strategies for the (consumer) social groups. This is achieved practically by creating jobs (easily accessible, having high social reputation, offering high salaries and good career chances) with facilities of culture, lifelong education, leisure, amusement, social contact building and self-fulfilment chances and by building political and social institutions and management centres for gaining political power as well.

However, modern metropolitan space is full of contradictions. Big cities are concentrating not only modernisation, the abundance of socio-economic development chances, the heritage of accumulated knowledge from the past, the buildings of old architecture, the amenities of welfare and comfort and the availability of high-tech infrastructure. They are due partially to historical reasons and partially to the consequences of global development, facing a series of social problems: the traditional and new structures of residential social inequalities, the old and new forms of poverty, the traditional and new forms of crime, the damages of natural environment with their negative impacts for health, the various symptoms of socio-economic conflicts and now terrorism as a new, recently emerged urban phenomenon. Although due to the specific social structure of the metropolitan space the deepest social conflicts are concentrated in the peripheral zones of metropolises located outside the city centre (*Hamer-Linn, 1987*) but the social problems of urban peripheries more or less affect urban centres as well. The presence of these problems is manifested either by the emergence of peripheral zone population in metropolitan labour markets or by the usage of the metropolitan space as a buffering zone in the clashing of interests and conflicts between the society of city centres and the society of urban peripheries.

Several researchers are on the opinion that social problems are questioning even the future of our current metropolitan system (*Bagnasco, Le Gales 1997, Ascher 1995*). Since the 1980s in West-Europe there is a growing awareness that the long-term dynamism of advanced economies and the metropolitan quality of life depends on the management of social problems as well. During the 1990s a great emphasis was laid on governmental and urban policy fighting against the spread of regional disparities, segregation and the formation of ghettos (*Sueur 1999; Helluin, 2001*).

The future of big cities became an issue of strategic importance in post-socialist cities as well. Big cities were considered as means of recovery from the crisis to find a way of integration into modern world economy and global politics. The city in Hungarian professional, scientific and public debates has emerged as a

complex economic, social and political problem during the past few years only. There are several reasons why so few issues have been discussed on the economic and social aspects of cities including socio-spatial issues such as social inequalities, conflicts and the obstacles of social participation. Today's modernisation processes, the demands of European integration are (apparently) attaching importance to other factors. Social policy rather more focuses on the issues of economic development (a rather short-term interest), of European accession, of the acceleration of economic modernisation, of public administration reforms and regionalisation than on the issues of complex socio-economic development on the development of urban strategies concentrating on the easing of socio-economic problems.

The current political powers of Hungarian big cities have insufficient competence for discussing urban problems in the broad public. Occasionally some big cities are raising their voice at different local public or political debates but in the arena of national-level politics only those big cities can participate that are representing the traditional major political powers (this is because the members of governmental parties but even a part of the opposition are urban citizens. For example one fourth of the active wage earners of Budapest are employed in the public administration sector (*Izsák*, 2003, 133). Moreover, those political powers considered as key economic and political agents due to their key positions in international economy or politics and to their extensive relational system are merely new actors (trying) to enforce their own interests against the state. But these cities are entering into the political arena still for safeguarding the state's economic interests because they are trying to get some extra funding sources from the state or from the European Union for their own development. However the majority of Hungarian cities (including Budapest as well) have not yet achieved a key position in global economy therefore so far they have won no or very few resources from this situation. The key decision-makers of these cities have no such strategic relations in local and regional economy and society that could provide a sufficient influential power to enable them for building significant positions in international economy.

Hungarian cities have not yet recognized their potentials for improving their positions neither in domestic nor in international economy. They do not see or know how to develop an urban policy for increasing their competitiveness. This would certainly need such a long-term economic and social planning practice which would be based on local, urban agglomerational and regional level cooperation and on improving relations between political actors and urban societies. Although urban policy concepts in general call the attention for the necessity of formulating a concept for the management of social problems, of establishing a microregional cooperation system but they do not go into the details of their practical implementation. The latest aspects of the EU's cohesion policy, the new

priorities in the management of the problems of urban society and urban poverty are forecasting a definite change in this field.

Strengthening the position of cities would require more and more basic researches. Current settlement development researches (due to the government's limited resources of science funding, the limited alternatives of local development policy and the restricted directions of planning concepts, market-based determinations and the researchers' orientation towards other fields of science) do not cover the complex socio-economic and natural environmental context of cities in their full details. For this reason we consider very important that our research titled '*Urban Areas, Socio-spatial Inequalities and Conflicts – The Socio-spatial Factors of European Competitiveness*' having implemented within the framework of National Research Development Programmes could perform a differentiated survey on the problems of urban areas.²

²The research was based on primary and secondary research methods: for the adult population a representative questionnaire interview of 5248 persons which was followed by an elite deep interview of 108 persons and a statistical data analysis. Nine big cities of Hungary were selected as the sample areas of survey namely Budapest and its agglomeration zone and eight Hungarian cities with over 100 thousand inhabitants: Debrecen, Győr, Kecskemét, Miskolc, Nyíregyháza, Pécs, Szeged, Székesfehérvár and their urban areas.

THEORETICAL BACKGROUND: GLOBALISATION AND SOCIO-SPATIAL STRUCTURE

International trends

In the economically advanced countries of West-Europe (as well as in the USA and Japan) since the 1960s and 70s an economic and social centralization process has been going on with the urban concentration of skilled labour, the domination of multiregional, interregional and later on multinational and transnational firms with an intensive development of cities and their urban peripheries as an impact (Veltz, 1996, 33).

The development of global economy, global economic integration and accelerating metropolitan development have shaped new urban spaces and urban systems (Enyedi 2003). The global economy created metropolitan spaces and urban regions have been analysed by several researchers. Hall in the 1960s (Hall, 1996), Castells and Godard in the 1970s (Castells–Godard, 1974), Friedmann, Wolff and Enyedi described the economic processes playing key role in the formation of global cities in the 1980s (Freidmann–Wolff, 1982; Enyedi, 1988). In his comprehensive study published in the early 1990s Sassen investigated the intensive urban and metropolitan concentration of global capital and its institutional system as well as their fragmentation as an outcome of evolving peripheral areas (Sassen, 1991, 17–35).

The world's more than 300 metropolises with over one million inhabitants are not only oversized urban settlements but they are rather more multifunctional, multi-centered and new-structured urbanized regions. One of their important features is that they are representing a diversity of urban forms (Enyedi, 2001). By Castell's interpretation global cities are the special urbanisational forms of our age (Castells–Godard, 1974, 442). By now it has become clear that metropolitan regions and global cities are getting more and more important for world economy by their functioning as innovation, manufacturing and service centres (Hall, 1996, 19–31). It is mostly big metropolises that can guarantee the dynamic operation of post-fordist economy, the growth of services, the quaternary sector. These growth poles are the steering wheels of economic development. They are the main locations of international capital, of skilled labour force, of the development of informatics, of organising international relations and of the diversity of social cultures (Sassen, 2000, 152). It is also metropolises that can offer real competitive advantages for global firms.

Our researches have revealed the dark sides of metropolitan life as well. The growth of metropolises increased regional disparities everywhere in the economi-

cally advanced industrial societies. According to the relevant analyses in France, in the United Kingdom and in Japan regional income differences due to the decentralized industrial development have decreased in the 1950s and 60s but they increased again from the mid-1970s due to the globalisation of economy, to the concentration of multinational firms in metropolitan areas and to the concentrated presence of the top-manager classes of the leading global firms (Veltz, 1996, 51).

In the USA, Japan and the countries of Europe increasing spatial differences as a result of the concentration of metropolitan regions have become a general trend. Veltz is of the opinion that the French urban space having been formulated by the metropolitan concentration of global economy is bipolar: it is characterised by strong regional inequalities between the region of Paris and the other regions (especially the southern parts of France (Veltz, 1996, 33). Philippe Cadene says that the 117 settlement groups with over two million inhabitants are concentrating the biggest organisations, the richest families as well as a part of the poverty that is characteristic for the given countries (Cadene, 2000, 139).

Mollenkopf és Castells used the term of dual society for labelling inequality problems (Mollenkopf–Castells, 1993). By this term they mean globalization generated socio-spatial inequalities; the advantages of territories and social groups involved in global economy and the disadvantages of those having been excluded. The term „société duale,” or „dual city” expresses the economic and social discrepancies between the world of groups linked to global economy in big metropolises, urban agglomerations and the world of old industrial towns, urban areas suffering from crisis, big urban residential areas inhabited by poor classes and the world of small towns and declining small rural areas (Ascher, 1995, 126).

However the concept of dual society is criticised from several sides as dynamic urban spaces are also structured and high classes are available in declining areas as well. Starting from this assumption Ascher for example proposes to introduce the term of three grouped society on the basis of positioning it into the post-fordist wage structure. By this interpretation the first group covers those who are employed in the public sphere or those having a secure job and consolidated social positions at big private sector companies. The other group covers those having uncertain career perspectives or being excluded from the labour market. The first group could further be differentiated from security aspects. Thus, people with uncertain existence would create the third group. The members of these three groups are living three different manners of life leading different urban lifestyles (Ascher, 1995, 130).

Inequalities occur not only between metropolises, global urban regions and the remaining regions but also within the internal structure of metropolises and big cities: there are spatial and economic disparities between the city centre and its surrounding urban peripheries as well. Veltz for example is demonstrating the

relationship between the core Paris region and its environment by a pyramid of spatial hierarchy (*Veltz, 1996, 33*).

The development chances of urban networks created by globalising world economy and of cities and their environment (and of their involved societies) are strongly differing from each other. Social polarization with gradually increasing social inequalities manifesting in space has increased between core areas and peripheries and within settlements themselves. In global cities – defined simply as ‘shop-window cities’ by Boltanski and Chiapello – social tensions have become more and more apparent. The differences between the urban quarters populated by the elite – i.e. the management and expertise of multinational firms, economic and political decision-makers and skilled middle classes – and the residential areas of socially handicapped and unemployed classes became quite apparent (*Boltanski–Chiapello, 1999*).

Sassen’s analyses are also confirming the spatial disparities of inner city areas, the differences between urban core areas and peripheries originating partially from historical reasons, partially from the spatial features of the corporate location of global capital and partially from the social background and lifestyles of the local residents of urban areas. In this way really the top global corporations (and their new classes top managers, high-qualified professionals, stakeholder employees) are located in central urban quarters while standard national-level companies (mostly national-level middle classes) are rather located in the peripheral parts of urban areas (*Sassen 2000*). The investigations of Savitch and Kantor for ten big cities ended with similar results. West-European (covering such cities as Paris, Marseille, Napoli, Milan, Liverpool and Glasgow) and North-American (covering such cities as Toronto, Detroit, Houston, New York) comparative researches show a very low rate of active elite groups (professionals and managers) compared to the total number of economically active wage earners (except in Napoli with a rate between 40–80%) (*Savitch–Kantor, 2004*).

In economically advanced industrial societies the growing concentration of economy and population in big cities and global cities has produced an increasing spatial separation between the location of residential and work areas and a quicker expansion of residential areas than workplaces towards urban peripheries. It determines the spatial direction of capital investments, infrastructure development projects, the siting of commercial and other services from city core areas towards urban peripheries (*Hall, 1996*). This will generate a quick spatial expansion of urban peripheries consuming up free territories with the increasing trend of short- and long-distance commuting, an increasing demand and capacities of transport, the expansion of environmental damages, decreasing territories of green areas and the transformation of urban socio-spatial structure. The out-migration of urban middle classes from the city centre into the urban periphery is already a part of this trend.

During the past 15 years OECD countries have faced a dramatically accelerated economic and social suburbanization process. As a result – although in a varying amount by countries – the number of city centre residents only slightly but the population of urban peripheries has significantly increased. For example in the USA according to the 1990 census data more than half of the total population lives in 39 metropolitan regions having over one million residents each. The growth rate of the suburbs of these 39 metropolitan regions was 55 % between 1970 and 90 while the population growth rate in their inner quarters was 2 % only (Innovative Policies... 1996, 26).

Suburbanisation was accompanied by a ‘structural deficit’ i.e. wealthy social classes moved out to the peripheral areas of the city while social classes with moderate or low income remained in the central parts of the city (Innovative Policies... 1996, Territorial Development...1999). This trend was further intensified by the fact that due to the suburbanisation of middle classes the poor classes of certain suburbs are back-migrating into slumming inner city quarters (*Caldeira*, 1996, 71).

This is all accompanied by a rising European segregation trend with the growth of ‘underclass’, i.e the socially excluded groups living in low quality urban districts in residential areas of social housing. In West-European global cities and metropolises the number of declining urban centres and deteriorated urban quarters providing handicapped living prospects, concentrating poor social classes with marginal and deviant lifestyle, accumulating social problems and conflicts unable to provide any facilities for social integration is growing everywhere (*Berger*, 1998).

There exists another segregation trend which is called as ‘enbourgeoisement’, or gentrification: this is the growth of middle-classes in central urban quarters, the cocentration of high social classes. Researches in France have pointed out that in the early 1980s in the region of Paris the residents’ social polarization was much weaker than in the 1990s the period of intensifying residential segregation (*Tabard*, 1990). These changes have been generated by urbanisation processes, residential and urban housing policies and international labour market trends. The latest analyses have also revealed that aristocracy and upper middle classes (just like in the historic past) live in Paris in the city centre, in the western urban quarters and in the southern and southwestern suburbs (*Rhein*, 1995, 54). The wealthy households are located in the so-called ‘Beaux Quartiers’, i.e. in the elegant parts of the city with manager or highly qualified or skilled free-lancing family heads. The elite suburbs are different from the social content of city centres as they have more old-aged inactive and less immigrant family heads. (This is true for American suburbs as well having fewer immigrants (*Alba et al.* 1999). French workers (since the beginning of the 20th century) have been living in the eastern and north-eastern quarters of Paris and in its eastern, north-eastern and south-eastern

industrial outskirts (*Rhein*, 1995, 57). Unskilled workers live in cheap housing estates while skilled workers in private houses in the suburban villa zones or in the new cities (having been built in the 1960s and '70s) of Paris region (*Szirmai*, 1998, *Haumont*, 1996).

The rapid concentration of economy and high classes with their spatial segregation can very easily be recognized in the Paris Region. The signs of poverty are less spectacular there. The poorest social classes are not concentrated in the economically most advanced Paris region (*Preteceille*, 1997, 107). The French researcher is on the opinion that several other important French cities such as Marseille, Lyon and Strasbourg have similar trends (*Preteceille*, 1997, 107).

In his book comparing New York, London and Tokio Sassen claims that by the impact of globalisation the so-called 'new class' i.e. elite qualified professionals, rich and young managers have articulated their new demands for changing the traditional patterns of their living habits and creating new forms of urban lifestyle. These new demands are associated with global cities functioning as organisational units of consumer society manifesting in buying fancy goods, the costly spending of leisure time, going to elegant restaurants, theatres and visiting exclusive cultural and entertainment programmes. These lifestyle attitudes have not 'suburban' or 'periurban' but rather 'ultraurban' character and closely associated with city centres. The consumer demands of the global economic elite are attracting artists into the city centre with those groups of the cultural elite who by the traditional features of the urban social structure would not live there and would have no contacts with the actors of economy. These trends are also contributing to the formation of elite social structure of global cities (*Sassen*, 1991, 250–283).

Other researches are also confirming the existence of the high social classes' new residential attitudes. According to a representative survey in France a growing number of urban citizens give up their private car based suburban or periurban lifestyle and formulate their demand for the development of core city areas (including the application of new architectural solutions for a more community targeted life with two or three-storey buildings instead of living in isolated gated communities). They are also urging for elaborating a sustainable public transport development concept. 60–70% of the suburban citizens and 30–45% of periurban citizens of the total participants of research (investigating the differences between flat property and rental forms) claimed that they would prefer living in cities than in suburban or periurban environment (*Kaufmann*, 2002, 56–62).

Although American and European socio-spatial location and the segregational models were always differing from each other the latest trends show changes both in the European and the American segregation models. In the American model the well-off classes had greater inclination for living in suburbs and the poor classes tend much more to living in the slums or 'derelict' sites of inner urban zones. In European cities the out-migration rate of middle classes was never as high as in

America; historic city centres were always preserving their high reputational values for middle classes.

Preteceille denies the assumption that segregation would be more intensive in American cities. He is on the opinion that ethnic segregation is stronger and more spectacular in the United States than for example in France. But comparing it with London, Madrid, New York and Paris, he found that the degree of the segregation of elite classes is higher in European cities. At the same time the concentration of working classes is lower in Paris than in New York (*Preteceille, 1997, 104–105*).

The increasing social prestige of inner city quarters, the gentrification process can be perceived in the central parts of North-American cities as well (see Sassen's description). New York's example also proves it as Manhattan also has elegant urban quarters. The intensive office building boom in the city centres of the USA between 1960 and 1990 the regeneration of metropolitan city centres the building of new hotels, commercial centres, the recreation and congress centre development projects halted the deterioration process of city centres. All these filled up the inner parts of American metropolises with new content (*Ascher, 1995, 30*). Despite these changes American high classes still assign much higher social value to suburban settlements.

The increasing appreciation of suburban zones is perceivable in European cities as well. In the suburbs of London, Paris (south-east and west) high social classes have settled down (*Rhein, 1995; Preteceille, 1997, 105*). It was already seen in the 1982 census that 60% of high class intellectuals were living in suburbs (*Haumont, 1996, 55*). Of the eighty urban quarters of Paris twenty-seven are inhabited by high social classes as well, and eighty four satellite settlements of Paris have high class residents in high percentage (*Preteceille, 1997, 105*).

Segregation schemes have several origins such as historical background, the spatial structure of economy, the periods of global urbanization, social demands and possibilities, socio-ecological processes, changes in societal structures. According to international literature the different data sets (statistical analyses, incomes, life perspectives, summer holiday spending habits, leisure time and sporting patterns) are showing a homogenization process on a long-term period, indicating decreasing differences among different profession categories. Lower social differences have been manifested in a lower polarisation degree of residential areas during the 1980s.

However we are facing now a new kind of socio-spatial disparities (*Fitoussi-Rosanvallon, 1996, Galland-Lemel, 1998*). Globalization, global economy, macro- and micro-economic impacts, the everyday fights for defending our interests in the global economy, the economic impacts of success or failure have revealed several contradictions having been hidden so far, such as massive unemployment, the defencelessness of individuals, new dependencies and they have completely reshaped traditional structures. They have halted the processes facili-

tating the homogenisation of middle classes having been a typical phenomenon in the welfare societies of the past. And all these questioned the hopes of social equalisation as well (*Fitoussi–Rosanvallon*, 1996, 71). Compared to the earlier differences among social and employment status categories today the differences are much greater but limited to certain profession categories only with special regard to their spatial location (*Fitoussi–Rosanvallon*, 1996, 67). The differences in the quantity and quality of goods and fancy goods consumption are serving as a providing a new basis for social differentiation (*Ascher*, 1995. 125).

CASE STUDIES: THE SOCIAL STRUCTURE OF URBAN AREAS: KEY FACTORS AND CHARACTERISTIC FEATURES

The social structure of Hungarian urban areas: key factors and characteristic features

The impacts of globalization on urban areas in Hungary

The socio-economic restructuring of Hungary in the 1990s, its integration into global economy fostered the (regionally differentiated) development of major urban areas only. This has been originated partially from the historic past and partially from the mechanisms of global economy. The spatial structure of the Hungarian economy was historically big city oriented, although in the state socialist regime the development of big cities – by various instruments according to the changing interests of the political system – was restricted by political interventions (administrative regulations, regional policy). Following the political and economic reforms of the 1960s the socio-economic positions and the influential power of major cities and county seats have significantly strengthened. A governmental decree issued in 1970 turned large and medium-sized cities into the driving forces of economic development and in this way the industrial plants with modern technology and requiring highly trained labour were sited in these central places. The decisional centres of industrial companies having strategic importance in economic development were located in urban and metropolitan sites, while their different branches and affiliates were settled in small towns and rural areas (*Barta, 2002, 64–65*). As a result of these economic development projects large cities after a successful political lobbying process won significant financial funding resources and planning support for their development.

The inflowing foreign direct investments from West-Europe in the 1990s were almost exclusively targeted at joint ventures, stock companies and even small enterprises seated – by regional determinations – in core areas (*Barta, 1992*). These core areas (their management and societies) received them not only with a warm welcome but granted several (including tax) benefits, and provided them with labour culture of historical traditions, good infrastructure and skilled labour force. Global economy initiated quick growth in the Budapest region, on the Budapest-Vienna axis, in the cities of West-Hungary (Győr, Tatabánya, Székesfehérvár and their environment). The development of other big cities of Hungary (Pécs, Szeged, Debrecen) was less spectacular but still continuous (*Enyedi, 1996*).

North-Hungary, the eastern regions, the rural areas of the Hungarian Great Plain and urban regions with strong energetic sector (coal mining, metallurgy) and the settlements of the East Hungarian border zone once prospering from the benefits of Hungarian-East-European economic relations were facing a socio-economic crisis. The crisis was an outcome of the collapse of East-European markets, of the bankruptcy of plants having sold their products on these markets, of the massive redundancy of workers, of high unemployment and of the absence of capital resources standing in the way of economic restructuring. However there were some cities even in the crisis areas that were able to attract and settle down private businesses and industrial plants that albeit were unable to save them from the crisis but at least could stabilize their economy to a certain extent. In some cases this could be achieved by the foreign direct investments of Eastern or West-European firms.

The spatial demands of global economy polarized the interaction between cities and their environment in a specific way. On the one hand – by breaking up the hierarchical structures of the past – they changed and equalized the historically asymmetrical relationship between cities and rural areas and between core and peripheral areas. One of the reasons of changes is that global economy reached not only city centres but urban peripheries as well. During the mid-1990s for example industrial plants having been built as green field investment projects in the urban area of Budapest and in Pest County preferably selected the agglomeration zone or the satellite cities of Budapest such as Budaörs, Gödöllő and Dunaharaszti for their site (*Dicházi–Matolcsi*, 1997, 38). The site selection strategies of transnational and multinational firms increased the land value of the urban peripheries of big cities and Budapest as well (*Izsák*, 2003).

The spatial demands of global economy create new dependencies as well in the interaction between cities and their urban peripheries. The competitive, top firms and financial centres with global positions and their regional (including Central European) branches are favouring urban centres, capital cities and major cities in their site selection policies while companies engaged rather in regional or national markets are more inclined to site their headquarters in the urban periphery of big cities or in small towns (*Sassen*, 2000, 26). The site selection policy of foreign companies is determined by their economic importance and this trend can clearly be seen in Hungary as well. The new researches are verifying that corporate management, the organisation of production and decisional functions are rather linked to big cities of central role, while the routine and physical processes of manufacturing are concentrated in their affiliates located in small towns and rural settlements (*Barta*, 2002, 64–69). *This* kind of spatial division regenerates the economic disparities between core areas and peripheries as well.

The spatial impacts of global economy are reflected by the new trends of urban growth in Hungary such as urban sprawl, the dynamic growth of suburbanization,

the decreasing population of city centres and the increasing of suburban population as their consequences. (The population of the urban areas involved in our research decreased by 5% between 1993 and 2003. This ratio of decrease was higher than the national average (1.6%). The greater part of decrease seems to take place in cities. The growth of suburban population was 15.7% within the same period culminating between 1998 and 2003 [Balázsne Varga, 2005]. 66% of the Hungarian population lives in cities. The majority of Hungarian citizens – following the major trends of Central-European urban societies – are not living in big cities. For example 16% of the Czech, 14% of the Polish and 31% of the total Hungarian citizens are living in big cities [Stenning, 2004]). The spreading of urban lifestyle raises new issues of social problems that are linked to urban sprawl and suburbanization as well: such as car traffic and its environmental impacts, with their damages for health, the physical and social erosion of central urban quarters, the lessening of green areas, the social exclusion and the segregation of urban societies, the increasing gap of socio-spatial differences. The further parts of this paper are going to discuss these issues.

The characteristic features of the infrastructural and institutional provision of urban areas in Hungary and their changes in time

Regional development was always heavily influenced by the availability of physical infrastructure and by the characteristics and potentials of regional and local systems and networks of different services. Their major spatial differences always played and are still playing a major role in increasing and maintaining spatial disparities and in regional and local competitiveness (Abonyiné Palotás, 2007). The development and characteristic features of society and economy have vital role in them but they are further influenced by several additional factors.

The networks of infrastructure and services are integrated into major nodes in the vicinity of big cities but some of their elements have major impacts on regional integrations, spatial and regional cohesion. Physical accessibility, the development level of communication networks, higher education and health services all belong to the category of key elements.

In our analysis we tried to assess those further elements and those socio-economic aspects that are mostly responsible for the socio-economic disparities in Hungary's urban areas.

To accomplish this task we investigated how urban areas with their infrastructural and institutional characteristics and with their spatial disparities, as an outcome of certain outstanding socio-economic features, and the differences be-

tween big cities and their background settlements have been changed and what further changes they are facing during the regime change.³

Physical accessibility

Railway services connecting Hungarian urban areas with their peripheries seem to be the most suitable mode of transport. The average travel time between cities and their nearest railway stations is eight minutes. The better than national average travel time is explained by the fact that all Hungarian big cities are intersected by a main railway route connecting them with some of their background settlements as well. The city of Debrecen enjoys the most favourable location from this aspect having good connections with the majority of its neighbour settlements. This is accountable for the fact that the city is positioned at the meeting point of several major railway routes; therefore the network provides connections to all directions.

The 36 minute average travel time from cities to their regional airports also seems to be fairly short. From this aspect the airports of Nyíregyháza, Szeged and Debrecen have the most favourable location as they are falling into their own urban area's territory. Their utilization ratio (except the airport of Debrecen) is low yet but they have bright prospects for economic development. The airports of Kecskemét, Székesfehérvár and Miskolc are situated at unfavourable geographical locations with much longer travel time than the national average. Of them Székesfehérvár can the most easily tackle this problem but due to the financial shortages of its investors the city has been trapped into a handicapped situation during the competition of regional airports. Generally speaking after all the shorter than ninety minutes travel time to regional airports from any points of all urban areas seems to be appropriate.

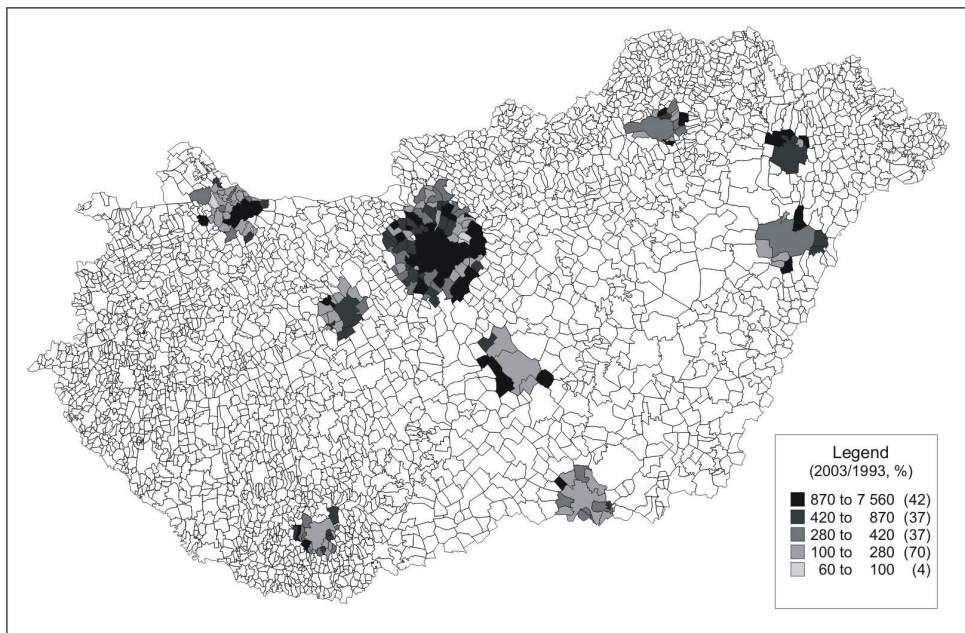
There are greater differences between urban areas from the point of motorway accessibility. The average travel time to motorways is 34 minutes in Hungary which is much longer than the West-European average values but much better than in East-Europe. The better than East-European results are resulting from the motorway building projects of the past 4–5 years. The travel time values to motorways are much better in the urban areas of Budapest, Győr, Kecskemét and Székesfehérvár, because all these cities are accessible by motorway and several of their background settlements have also direct connections to these motorways. This means that not only big cities but also several of their background settlements are easily accessible by motorway. Recently the physical accessibility of the urban areas of Szeged, Nyíregyháza and Debrecen has significantly improved by cutting down the distance of these cities from motorways. In 2006 both Debrecen and Szeged joined the Hungarian motorway network

³For tracking changes we defined three sampling dates. They were years 1993, 1998 and 2003.

We consider telecommunication services another determining factor of spatial disparities. The average provision level of urban areas by telecommunication services has tripled between 1993 and 2003 but it is a bit worrying trend that the average provision coverage of urban areas by fixed phone services is lagging behind the national average by 15% (*Figure 1*).

Figure 1

The changing provision coverage of urban areas by fixed phone services (2003/1993, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

The reason behind this is that the provision coverage of urban agglomerations by fixed phone services is still lagging behind the national average (by 30%). However an equalization process seems to shape up in this field as the value of this lag-behind indicator was 120% in 1993. This is explained by the fact that in the late 1990s the leading Hungarian fixed phone service provider (formerly Matáv Rt today Magyar Telekom Távközlési Nyrt a part of Deutsche Telekom) could accomplish its concession projects only by connecting a great number of small settlements into its telecommunication network. Differences between urban areas can be well-demonstrated by the fact that the coverage ratio of Budapest by telecommunication services was by 60% higher than the national average in 2003 but the coverage ratio of big cities by telecommunication services is also exceed-

ing the national average. The reducing differences between Budapest and provincial big cities in the coverage of telecommunication services is an indicator of the quicker growth of telecommunication service in small and medium-sized towns and in rural settlements.

The role of public Internet access points has significantly increased by the recent improvement of e-administration services during the past two years. These services are concentrated in urban areas and are available in all the settlements involved in our research. Therefore they can be eliminated as factors of spatial disparities. However only 53% of Hungary's total settlements have such Internet access facilities and just those settlements are suffering from the inadequate coverage of public Internet services that would need them the most due to their low accessibility of Internet services at home.

Demography and housing

The 9 urban areas involved in our research are inhabited by 38% of Hungary's total population in 2003 (3.8 million people), but their population concentrating force has significantly weakened between 1993 and 2003. This can be accounted for the quickly dropping population of Budapest as a partial result of the outmigration of residents from the central parts into the agglomeration zone, albeit a minor part of outmigrants settle down in other parts than the agglomeration zone. The population drop rate of provincial urban areas is also exceeding the national average but still moderate, due to the increasing population of their background settlements.

The population changes of urban areas between 1993 and 2003 created a huge downfall in their core cities but a dynamic increase in their background settlements (*Figure 2*).

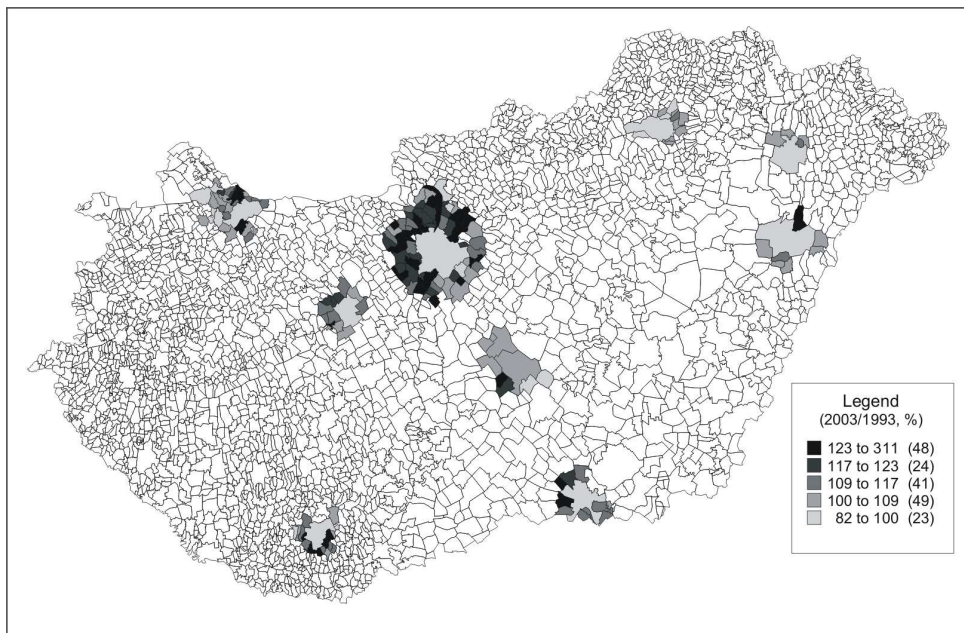
Kecskemét was the only urban area increasing its population due to its special structure of background settlements consisting of farmsteads⁴ and also to the immigration of their residents into the city's central urban quarters. (Living conditions in farmsteads are lagging behind the average level and the faster urban development of the nearby city makes these differences more spectacular between the city and its environment). This was also a partial explanation in case of Nyíregyháza why it could maintain its population decrease on minimal level and the higher than the average natural birth-rate index was another counterbalancing factor against their decreasing population tendencies. On the basis of the radically dropping population in Budapest, Miskolc and Székesfehérvár and of the increasing population in their background settlements we assume that the spatial expansion of such a high number of inhabitants involves a wider circle of

⁴They are villages having a significant number of peasant houses with a farm in their peripheral zone but within their administrative boundaries

settlements than their background ones. The population growth in background settlements is highly sporadic, which is an indirect proof of increasing socio-spatial inequalities – both on local level and between core-periphery relations. The highest population growth was seen in the physically most easily accessible settlements that do not necessarily mean the nearest geographical location to the core city.

Figure 2

The changing number of permnent residents (2003/1993, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

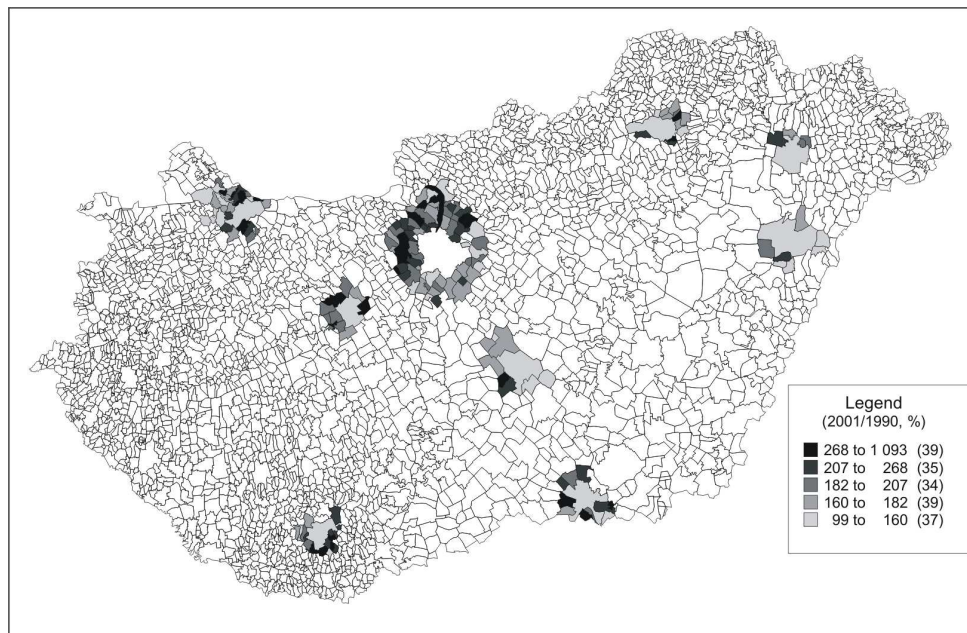
The spatial distribution of people with university or college degree shows a similar pattern to population changes but the differences in the intensity of these changes between core and background settlements are even greater indicating growing socio-economic inequalities between and within them (*Figure 3*). The overall rate of residents with university or college degree within the group of residents aged over 7 in urban areas was by far below the national average in year 2001 (7,9 – 9,8%).⁵ The values by settlements varied between the extreme values

⁵It is very important to clear that this does not mean that inhabitants with university or college degree are not concentrated in metropolitan areas. This is true only in the sense of their absolute number values, albeit their ratio within the total number of population not in these areas is the

of 1.5 and 29.5. The settlements with the highest ratio of high-educated inhabitants were located in the agglomeration zone of Budapest (Telki, Nagykovácsi, Budakeszi, Solymár, Szentendre, Leányfalu, Budaörs, Budajenő, Budapest), while the least educated people – except for Nyíregyháza – are living in the background settlements of nearly all provincial big cities (mostly in Debrecen and Pécs).

Figure 3

The changing ratio of citizens with university or college degree (2001/1990, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

This means that high-educated people are outmigrating from city centres in a higher proportion than other social classes. The heterogeneity of changes in agglomeration settlements shows that the intensity of social changes may be much differentiated depending on the local resources and living conditions they can offer to local people. The growth rate of inhabitants with university or college

highest. Their higher than national average ratio in urban areas is the consequence of the higher ratio of high-educated citizens living in provincial medium-sized and small towns and their environment. This is particularly true for provincial university or college cities and their environment (for example Veszprém, Sopron, Keszthely, Mosonmagyaróvár, Gyöngyös, Szombathely, Békéscsaba, Zalaegerszeg, etc.). Another point is that very many jobs that big cities and their peripheries can provide are attractive mostly for low-trained or unskilled labourers only.

degree is the most moderate in the urban areas of Kecskemét, Miskolc, Debrecen and Nyíregyháza, possibly due to the moderate development progress of local institutes of higher education.

Housing differences, especially differences in the quantitative and qualitative features of the newly built homes are very important indicators of social inequalities. In *urban areas* the average – in relation to the total number of inhabitants – number of newly built homes exceeded the national average in all the three sampling years of our research. These development tendencies indicate that the above-described differences also increased as in 1993 as 1.9 times more new homes were built in urban areas than on national level while in year 2003 the value of this multiplier was 2.1. This difference value in some urban areas is positive with more than double values of the national average such as in the urban areas of Budapest, Győr and Pécs in 2003 but even in the urban areas of Székesfehérvár, Debrecen and Nyíregyháza they are still exceeding the national average. The lowest figures of housing provision (showing a falling tendency during the past ten years) have been registered in Miskolc, as a consequence of the city's lagging – and still ongoing – economic restructuring process.

In big cities housing indicators were below the national average in 1993 but since 1998 they have been exceeding it. The most spectacular growth in housing took place during the past five years which probably may have resulted from building new gated residential communities. This increased the 10% housing advantage of big cities to 50%. Of the big cities we registered significant below average values only in Székesfehérvár and Miskolc. In Miskolc as well as in its urban area low residential incomes are the most responsible for low housing values. In Székesfehérvár the late start of building gated residential communities and the delay of social housing programme are the main reasons of low housing indicators (in 2004 and 2005 the local government built new homes in high number).

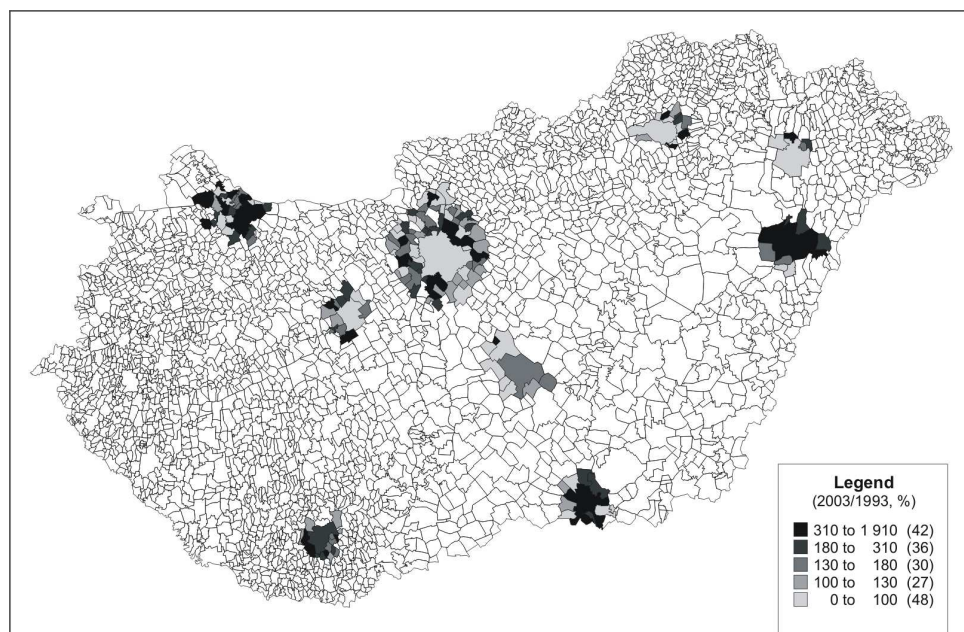
In background settlements the ratio of new homes exceeded the national average in all the three sampling years. Of the background settlements of urban areas the values registered in the urban areas of Budapest, Győr and Pécs are exceeding the national average by 250–300% indicating an increasing tendency of suburbanization processes (our researches are indicating significant differences among background settlements and some settlements have outstanding importance in each urban area). But the housing values in the background settlements of the urban area of Miskolc and Kecskemét, with the ratio of newly built homes are below the national average.

Due to the above-described processes the changes in the number of new homes were varying between urban areas and inside their territory as well between 1993 and 2003 (*Figure 4*). With the intensification of suburbanization, with the growth of construction industry and with the increasing territory of local homebuilding sites a significant overall growth has been registered in the number of new homes

in the urban areas of Győr, Pécs, Szeged and Debrecen (over 300% in their total territory), while this growth was moderate (150%) in the urban area and urban environment of Kecskemét. Pécs is the only urban area with a lower growth rate of new homes in the core city than in its environment. At the same time in the urban areas of Budapest, Miskolc, Nyíregyháza and Székesfehérvár new home buildings are more spectacular and more concentrated into agglomeration zones. The impact of new home buildings on the growth of socio-spatial inequalities is rather indirect as it is influenced by several other factors, such as incomes, infrastructure, transport services and the changes and outcomes of other socio-economic factors.

Figure 4

The changing number of newly built homes (2003/1993, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

Employment and businesses

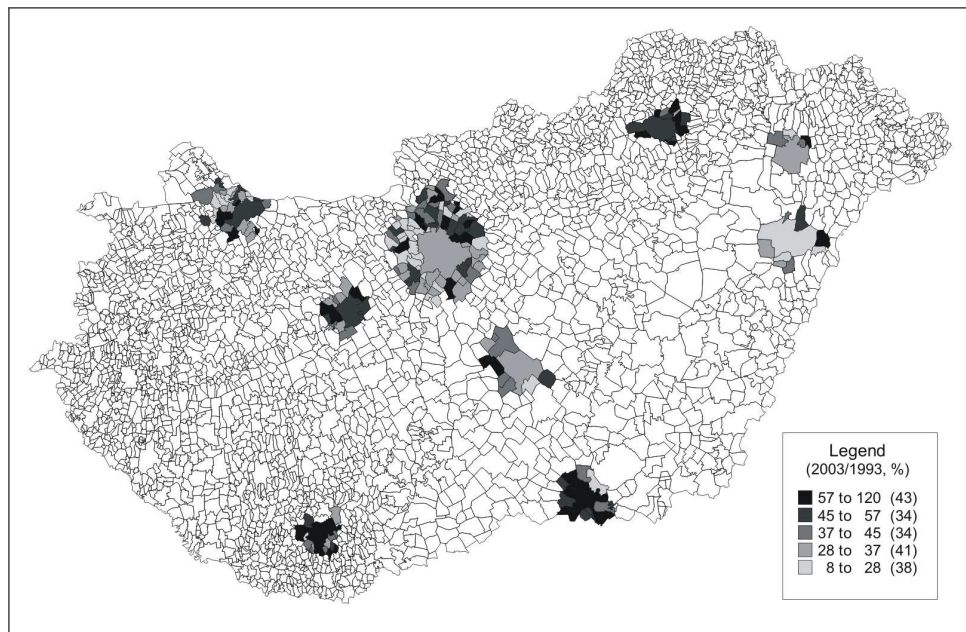
Unemployment, after the full employment system of the socialist era, was a new phenomenon in Hungary emerging after the regime change. It was in the deepest crisis – amidst the economic transition – affecting settlements in varying scale and size between 1992 and 1993. Since that time the employment indicators of

Hungarian urban areas and their environment have significantly improved. Between 1993 and 2003 this was well illustrated by the positively changing figures of unemployment and persistent unemployment data among active wage earners (*Figure 5*; Csabina et al. 2005), and by the increasing ratio of active wage earners in the age group of 15–74. (*Figure 6*). Since the late 1990s the unemployment /employment ratio has positively shifted in favour of employment among active wage earners and within the same age group the ratio of inactive population dropped, while that of the active wage earners increased. By all means these tendencies are equalising socio-economic differences in macroregions and in urban areas but on the other hand as a result of some special social circumstances socio-spatial differences between core areas and peripheries may further increase.

At present Budapest with its agglomeration zone, Győr, Székesfehérvár and their peripheries are in the most advantageous situation regarding employment prospects as it is seen from the majority of absolute employment indicators as a consequence of the high inflow of foreign direct investments. Miskolc, Szeged and Nyíregyháza are in less favourable regarding employment due to the slow progress of their economic restructuring process.

Figure 5

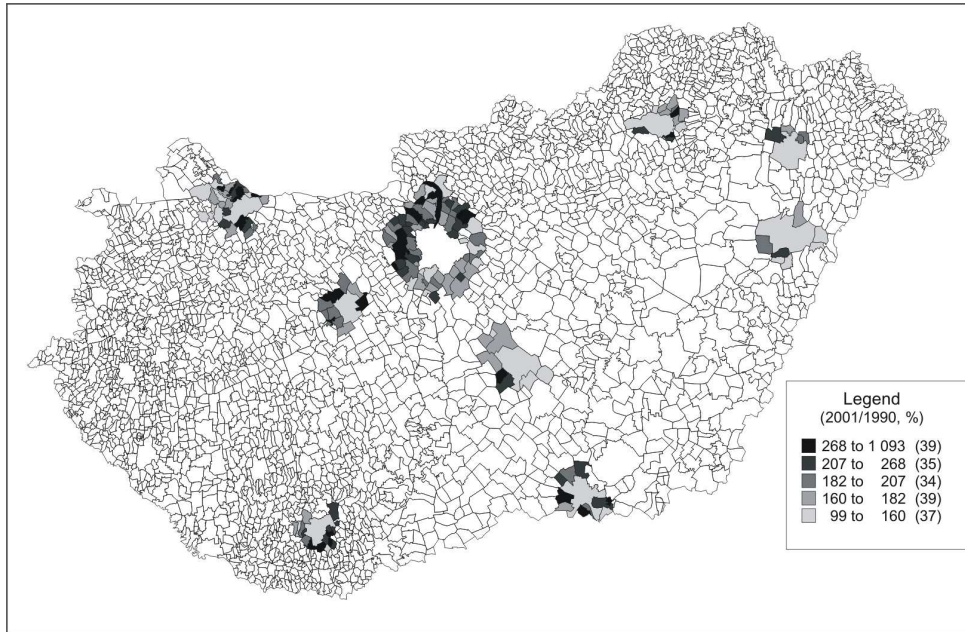
The changing unemployemen rate (2003/1993, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

Figure 6

*The changing ratio of unemployed citizens with university or college degree
(2001/1990, %)*



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

The changing unemployment rates are indicating the relative positions of urban areas between 1993 and 2003. As it can be seen only one background settlement in the urban area of Miskolc and Pécs show negative unemployment tendencies (*Figure 5*).

Unemployment indicators have been improved the most spectacularly in the core cities of urban areas particularly in Budapest, Kecskemét, Debrecen and Nyíregyháza (with decreasing to one-fourth, one-fifth of their initial values) as the earlier very high unemployment dropped thanks to several businesses immigrating since the late 1990s with an increasing speed. In background settlements unemployment situation is showing a rather heterogenous picture as it has improved only in places with good transport connections. In the urban areas of Győr, Székesfehérvár, Pécs and Szeged having very good unemployment indicators since the beginning of economic restructuring the improvement progress was less spectacular but in their background settlements the drop rate of unemployment depended on the degree of their physical accessibility. However Miskolc and its background settlements are still facing heavy unemployment.

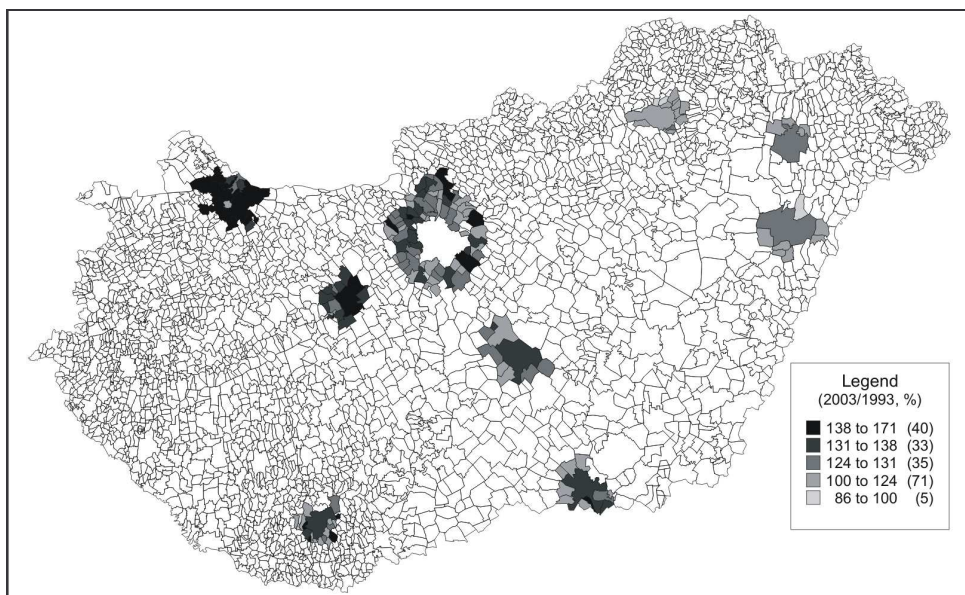
Figure 6 is showing the changing relative positions of high-educated people among the unemployed in urban areas between 1990 and 2001. The spatial patterns of these changes are directly correlating with the progress of suburbanization process.

This is also true for the majority of settlements in the Budapest agglomeration zone. However in the urban agglomeration areas of Kecskemét, Székesfehérvár and Pécs this situation has greatly improved due to the increasing ratio of new jobs requiring high professional skills and qualifications.

Figure 7 is showing three totally differing tendencies in the changing ratio of active wage earners. There are positive changes in the urban zones of Győr, Székesfehérvár and Budapest (with higher than 33% increase ratio). In the peripheral zones of the first two cities a moderate growth can be observed but in Budapest and its agglomeration zone the growth rate of active wage earners is very high with a similarly high drop rate of active wage earners in the core cities. Also negative tendencies can be observed in the urban environment of Nyíregyháza, Debrecen and Miskolc while the situation in their core cities has changed positively (with 20% growth rate during eleven years). The urban areas of Kecskemét, Szeged and Pécs have almost the same growth rate as their peripheries and from spatial aspects the intensity of these changes can be described as homogenous.

Figure 7

The changing ratio of active wage earners (2003/1993, %)

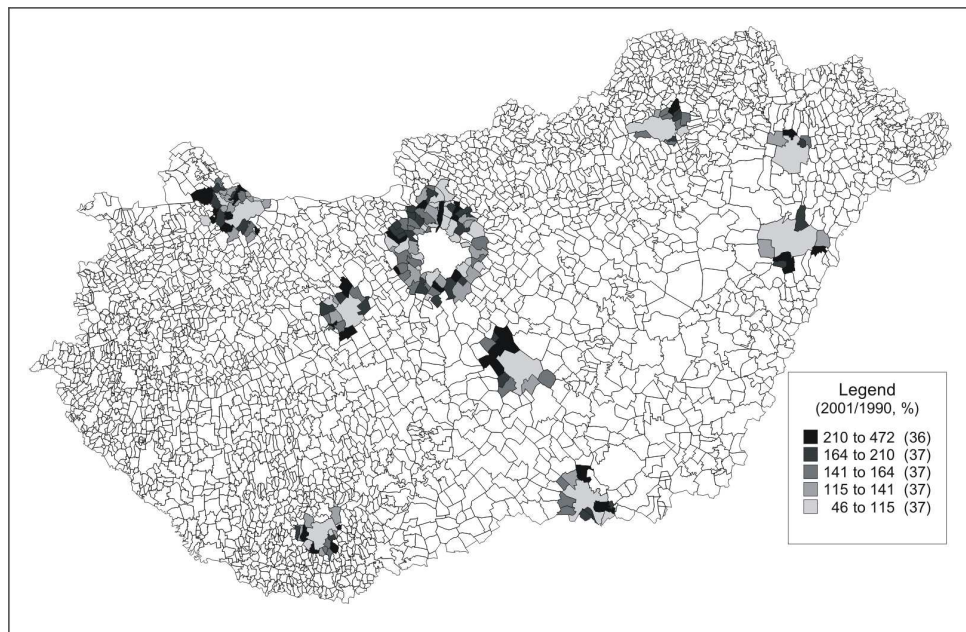


Source: Edited by Szépvölgyi Á. on the basis of KSH data.

Figure 8 is presenting the changing ratio of brain workers of the total employment data between the last two censuses. As it can be seen the situation has much more improved in background settlements than in core cities. This is explained by the over-representation of brain workers among the outmigrants of city centres during the suburbanization process. The data are also indicating this social group's changing attitudes to the job system and job issues of its residential environment (e.g. mobility, transport and other socio-economic impacts). This group's better adaptation to changing circumstances can be explained by the brain workers' traditionally higher qualifications and earnings. In city centres the drop rates are dramatic, only Székesfehérvár seems to be the only exception from this trend where brain workers had an opportunity for changing their place of residence within the city centre with improving employment circumstances (e.g. a new college was built). The improvement of the employment indicators in background settlements is very spectacular indicating their definite preference during the residential site selection of high-educated people. Although their selection criteria are varying by urban areas but the settlements they select have similar geographical and socio-economic features.

Figure 8

The changing ratio of brain workers (2001/1990, %)

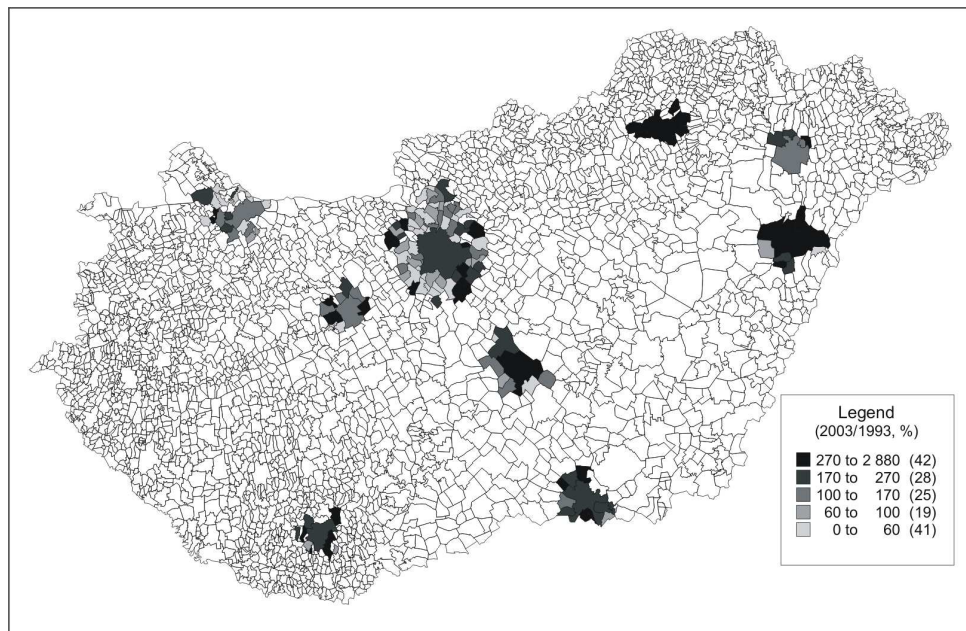


Source: Edited by Szépvölgyi Á. on the basis of KSH data.

People permanently living on regular social benefit are a specific group within inactive social classes. Their number drastically increased between 1993 and 2003 (Figure 9) even despite that the ratio of inactive groups has decreased during the past few years (although the reactivation rate of other inactive groups was higher). However there are plenty of tasks left in the field of reactivating this group in Hungary and its urban areas (in comparison with Western democracies Hungary is lagging behind them by 10% in employment rate). A further improvement in this field would be one of the most desirable ways of easing socio-economic differences.

Figure 9

*The changing number of people living on regular social benefit
(2003/1993, %)*



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

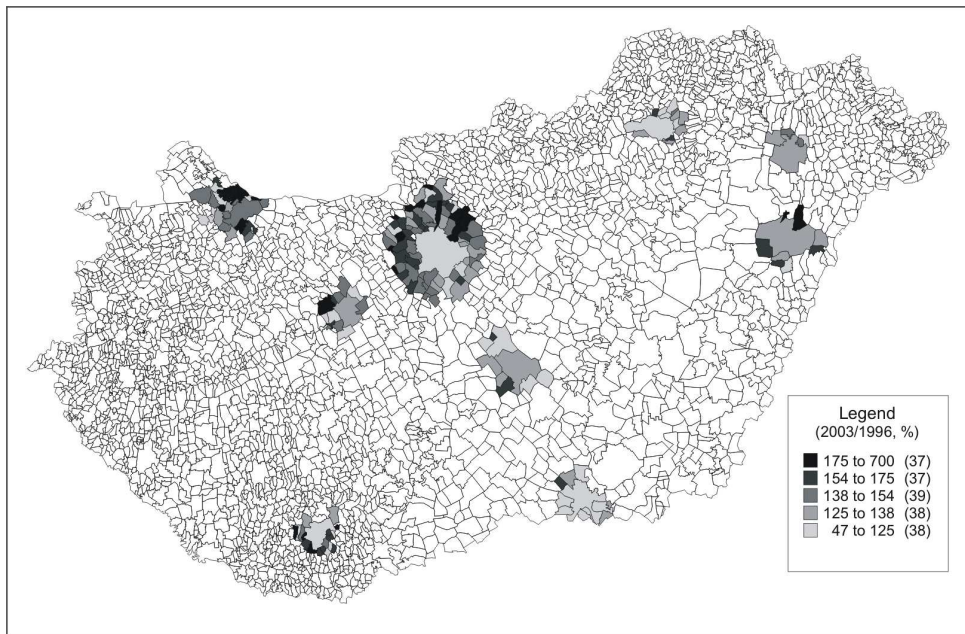
The number of people (partially) living on regular social benefit is showing an increasing trend chiefly in city centres (except in Győr, Székesfehérvár and Nyíregyháza). In the cities of Miskolc, Debrecen, Pécs and Szeged the number of people living on benefits has significantly increased due to the restructuring or other problems of local economy. The slightest growth in the number of socially handicapped people can be observed in the agglomerational settlements of Győr, Kecskemét and Budapest. The highest increase has been registered in the back-

ground settlements of Miskolc, Szeged and Debrecen, which can be explained by the higher than average representation of active wage earners among outmigrants from city centres to urban peripheries and partially by the improvement of employment chances.

Employment chances are chiefly determined by the number of active businesses and their demands for labour, therefore they are primary factors of socio-economic inequalities. Between 1996 and 2003 the number of active businesses increased dynamically in the background settlements of West-Hungarian urban areas and in the Budapest agglomeration zone (*Figure 10*). In the core cities of all urban areas a moderate growth can be observed by taking a glance at the number of active businesses. Due to their different dynamism all these are reducing socio-spatial differences between city centres and their urban peripheries but at the same time they are increasing differences in employment on macroregional level. The increase in the number of active businesses in background settlements was rather differentiated, showing strong correlation with the outmigration destinations of brain workers and high-educated professionals which seemed largely determined by the physical accessibility and the socio-economic characteristics of settlements.

Figure 10

The changing number of active businesses (2003/1996, %)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

Health services

Our research data show significant differences in the institutional supply of health, education and cultural services between urban areas. These differences are strongly increasing socio-spatial differences. Concentration is the most dominant feature of the changes in the institutional supply of these services i.e. the increasing role of big cities in public services which is just contradicting to the new trends of residential functions weakening in city centres and getting stronger in background settlements.

The number of general practitioners in settlements is a quantitative indicator of primary health services. It shows how crowded the general practitioners' waiting rooms are and how wide is the selection palette of local practitioners.

On the scale of urban areas there are no great differences in the quantitative indicators of primary health services. The urban areas of Nyíregyháza and Budapest have the worst indicators in this field, due to their relative shortages of general practitioners. Here the average patient/doctor ratio was 2400 in year 2003 (the average patient/doctor ratio in urban areas is 2080) while in the urban area of Pécs it is 1500 only (the national level of patient/doctor ratio is 1980). Pécs is in a unique position, as the health service indicators of its background settlements are better than of the core city due to their lower number of inhabitants. (Although, regarding this field, a strong equalization process has been going on since 1993 and some minor settlements in the urban areas of Pécs, Győr and Székesfehérvár have been left without any general practitioner services. Their number sorted in descending order is 13, 8 and 3. The inhabitants of these settlements have no other choice than visiting the neighbour city's or village's general practitioner as they neither have doctor on duty services) (*Figure 11*).

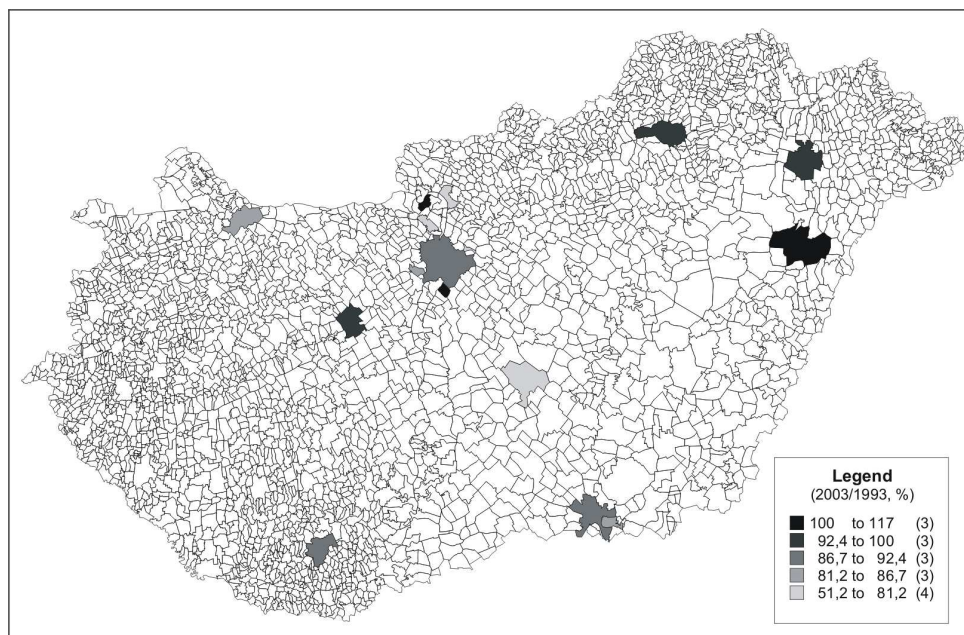
Figure 11 is showing the changing 'utilization ratio' of general practitioners between 1993 and 2003. The tendency of changes is varying by urban areas between 1993 and 2003: on national level the quantitative health service indicators have improved. A higher than national average improvement was registered in the urban area of Miskolc only. The quantitative indicators of health service also improved in the background settlements of Kecskemét and Miskolc but in all the other urban areas they have deteriorated (mostly in Budapest and Pécs and in their urban agglomeration). Thus, national level improvement is mainly the consequence of increasing quantitative health service indicators in small towns and villages excluded from urban areas and a dual tendency may be observed in urban areas: worsening indicators in background settlements falling behind and improving indicators in core cities exceeding the national average.

Deteriorating indicators are explained by the changing situation of background settlements. In urban areas core cities are in a better position than their peripheries but this dichotomy can be eliminated by the assumption that a great part of citizens living in urban peripheries – on the basis of free choice of general practitio-

ners – uses their services in the nearby cities. This hypothesis can be verified by the fact that quantitative health service indicators worsened mostly in background settlements (especially in the agglomeration zone of Budapest, Szeged, Székesfehérvár and Pécs), which *can be interpreted as a kind of rationalization, cooperation creating a balanced spatial division of health services in urban areas as in all core cities without exception the situation has significantly improved.*

Figure 11

The changing average patient/doctor ratio between 1993 and 2003 (%)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

There are wide differences among patient/doctor ratios among background settlements (the two extremes are Orfű and Győrújbarát with 770 and 5053 patient/doctor ratio. This is greater than a sevenfold difference) and even within urban areas (the largest 6.5 fold difference has been registered in Győr agglomeration zone between Kisbajcs and Győrújbarát and the smallest 1.8 fold difference between Nyírtura and Nyírpazony in the Nyíregyháza agglomeration zone). The results have verified our assumption that although differences in the institutional supply of public services (especially the health segment) – are not primary but they – do facilitate the increase of social differences in urban areas and they do have some role in sustaining them as well.

In-patient services are an important part of health services where the availability (and utilization ratio) of hospital beds is an important statistical indicator. The value of hospital bed supply per 1,000 inhabitants informs us about the possibilities and limits of health services and the differences of this value are one of the major indicators of social differences. All these data are relevant to cities only but some city hospitals – the majority of hospitals involved in our research are operating in big cities are performing county level services as well (their service territory is inhabited by 150–200 thousand people). Of Hungarian urban areas Szeged, Budapest and Nyíregyháza had the highest value of hospital bed supply per 1,000 inhabitants indicators (between 6 and 3.6), while the lowest values have been registered in the urban areas of Pécs and Székesfehérvár (between 0.7 and 1.1, the national average is 2.6). Thus, the difference between hospital bed supplies is almost ninefold among the different urban areas.

Between 1993 and 2003 the number of hospital beds increased in Debrecen only (113%) while higher than the national average reduction of hospital beds was carried out in the urban areas of Győr and Kecskemét (76–83%). There were almost no hospital bed reductions in the urban areas of Székesfehérvár and Budapest.

Outside the territory of urban areas only the background settlements of Szeged and Budapest (Deszk, Pomáz, Kistarcsa, Vác, Visegrád, Dunaharaszti and Törökbalint) have available hospital beds. The cutdown ratio of hospital beds was below the average in the urban area of Szeged and exceeded the national average in the urban area of Budapest. Cities with the highest hospital bed supply per 1,000 inhabitant indicator (18–20) are located in East-Hungary: (Miskolc, Nyíregyháza and Debrecen), while Szeged, Győr and Budapest have the lowest indicators (12–13). The national level hospital bed supply per 1,000 inhabitants indicator is 2.5, while this average figure is 1.5 for big cities. The reduction ratio of hospital beds was the lowest in Debrecen, Székesfehérvár and Nyíregyháza and the highest was in the cities of Kecskemét and Győr (*Figure 12*).

Education

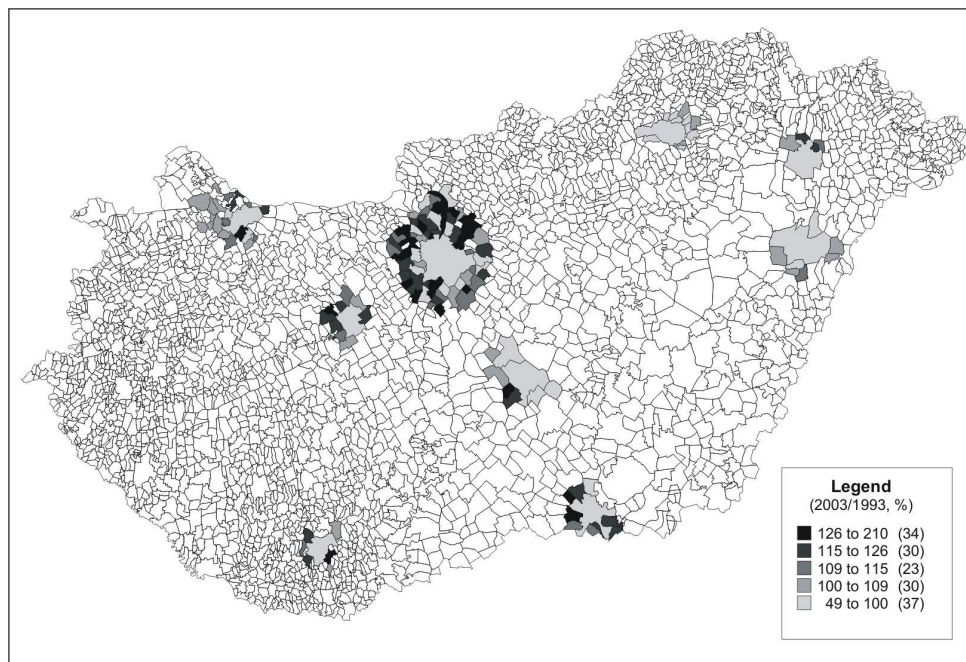
The differences between the institutional supply and the use of education services were investigated in the public and higher education system. These services are also dominated by high urban concentration and their importance is continuously increasing.

The average value of full-time secondary pupils per 1,000 inhabitants informs us about the present utilization ratio of secondary schools and its future tendencies. *On the scale of urban areas* the average 8.5 secondary pupil per 1,000 inhabitants value is nearly one-fifth of the national average (43; but this figure has resulted from the non-existence of students in non-existent background settlements). The two extreme values of these data are 3 secondary pupils per 1,000

inhabitants in Győr and 18 in Nyíregyháza (this figure is 13 in the Budapest agglomeration zone. The 40% average change in urban areas is more or less correlating with the 35% of average growth between years 1993 and 2003.

Figure 12

The changing values of total hospital bed supply per 1,000 inhabitants between 1993 and 2003 (%)

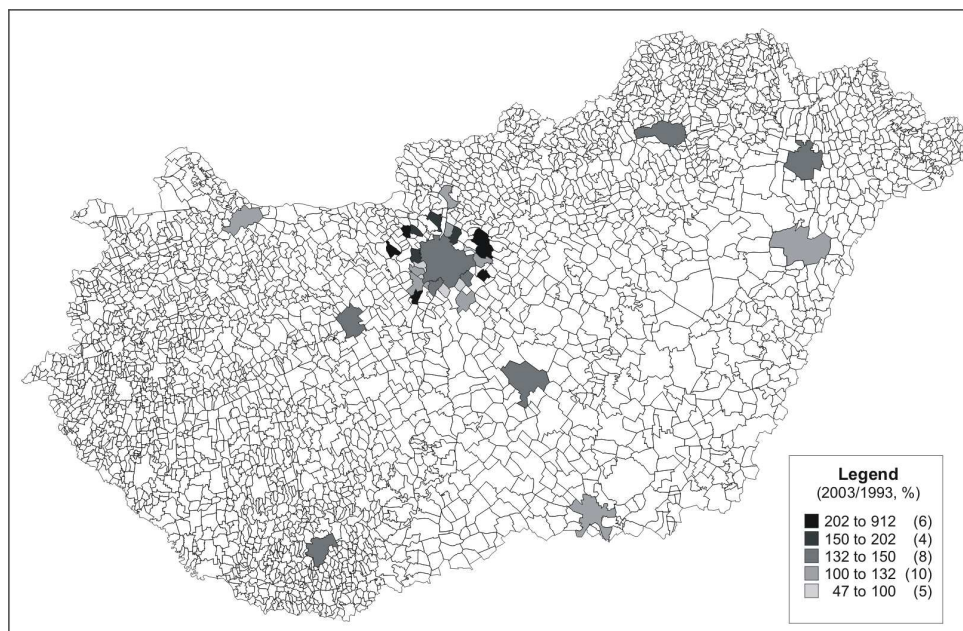


Source: edited by Szépvölgyi Á. on the basis of KSH data.

The values on the scale of urban areas can practically be replaced by the average of cities everywhere except in Budapest. Within urban areas the average of cities (85 secondary pupils per 1,000 inhabitants) is the double of the national average clearly expressing the high urban concentration of secondary education services. Differences on the scale of cities can be well illustrated by the fact that compared to the value of 63 secondary pupils per 1,000 inhabitants value in Budapest this figure increases to 110 in Székesfehérvár. Besides Székesfehérvár, Miskolc, Győr and Nyíregyháza are traditional 'high-school cities', while Budapest, Szeged, Pécs and Kecskemét are the least high-school oriented. The 35% national growth rate is relevant for big cities as well: the growth rate was the smallest in Győr and Szeged (125%) and was the highest in Nyíregyháza and Pécs (145%, Figure 13).

Figure 13

The changing figures of full-time secondary pupils between 1993 and 2003 (%)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

The ratio of the students of higher education of the broader sense (accredited master trainings, university and college education, post-graduate professional training, PhD, DLA training) in different sections (full-time courses, evening classes, correspondence courses) is providing a more clear picture on the situation of the whole higher education sector than data limited to the ratio of full-time students only. Of all the background settlements only those in the Budapest agglomeration zone have institutes of higher education, therefore making difference between background settlements would be useless in this case.

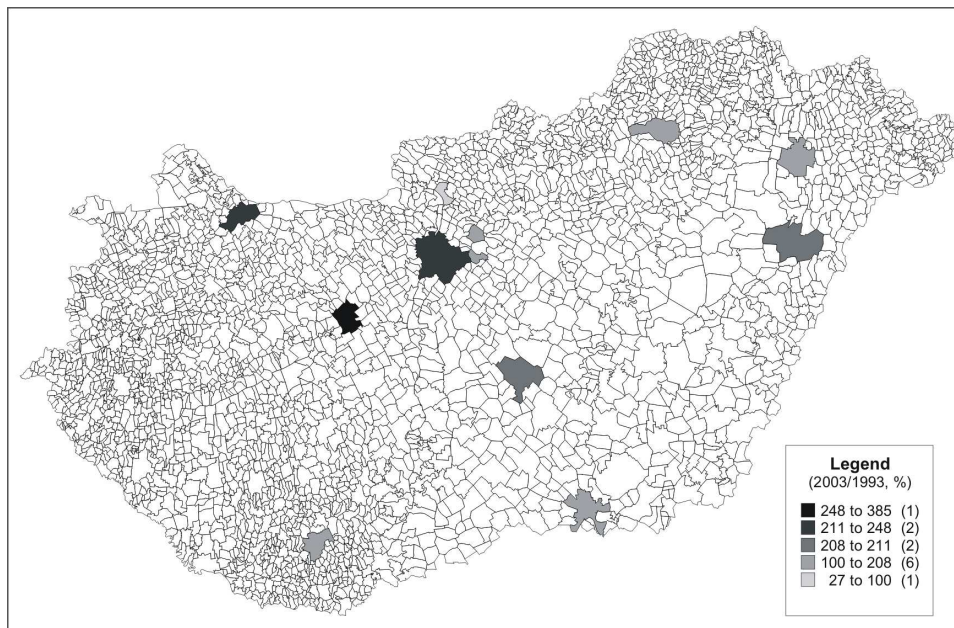
On the scale of urban areas the student per 1,000 inhabitants indicators are exceeding the national average in several urban areas (Nyíregyháza, Debrecen, Szeged) (10 students per 1,000 inhabitants) indicating that in these urban areas (cities) the full-time forms of higher education, extended by evening and correspondence courses or other supplementary forms of university or college education such as accredited master trainings, special training classes etc. are more available than in any other parts of Hungary. These forms of education are the least available in the cities of Győr, Székesfehérvár and Budapest. The urban area of Miskolc was the only one with decreasing number of students between 1993 and 2003 but the growth rate of students was also below the national

average of 16 students per 1,000 inhabitants (108%). However the growth rate of other urban areas fairly exceeded it (144% in the urban area of Győr, 137% in the urban area of Pécs) (Figure 14).

On the scale of big cities the values of these figures are lower, due to filtering out the data of background settlements. In this way the relative higher educational capacities and the utilization ratio of big cities can directly be compared. Both in case of full-time higher education services and in case of comprehensive higher education services Szeged and Pécs can be regarded as ‘classic university cities’ with the values of 102, 89 and 172, 170 students per 1,000 inhabitants (these figures are four times higher than the values of the national average [20 and 40]). These cities are followed by Debrecen and Győr with their dynamically increasing values. However, the educational indicators of all the big cities are exceeding the national average, even the values of Székesfehérvár and Kecskemét by 1.5 times having colleges only. The differences in higher education supply among big cities are threefold regarding both major forms of their training system.

Figure 14

The changing number of university and college students between 1993 and 2003 (%)



Source: Edited by Szépvölgyi Á. on the basis of KSH data.

The social structure of metropolitan areas: the changing core-periphery model⁶

The social structure of Hungarian metropolitan spaces has historically been formulated by the high-ranked core and low ranked periphery model. (In the period following the turn of the 19th and 20th centuries until the 1950s high social classes with high incomes lived in the inner city quarters of Budapest while suburban zones, industrial districts and peripheral settlements were inhabited by low social classes).⁷

The state socialist regime significantly changed the social inequalities of the historical core-periphery model. *These changes were initiated by the functional and social transformation of city centres and by the suburbanization process of that time.*

Since the 1970s Hungary has been struggling with the problems of inner cities: the physically eroding houses and flats, the increasing number of slums and the damages of the environment. Deteriorating cities became more perceivable in the 1980s. The concentration of the poor, the old-aged and the Roma population in large cities was significant even in the periods mentioned above (*Ladányi-Szelényi*, 1988, 83; *Musil*, 2002). but the massive outmigration of middle classes from urban peripheries did not start at that time, though the distribution mechanisms of state housing provision, the building of new housing estates created some opportunity for some ‘quasi-suburbanisation’. In several cases the society of housing estates was originating from the outmigration of the wealthy, socially high-positioned classes from city centres with better political chances for the enforcement of their interests. Within the framework of a redistributive state housing provision system⁸ the modern, new housing estates built in the outer belt of city centres or

⁶I used core-periphery model in socio-geographic and sociological sense. In socio-geographic sense the core should be interpreted as the spatial centre of a certain geographic unit while periphery means the outer space of the geographic unit. Between core and outer space there may exist economic, infrastructural, functional and social differences or disparities. These disparities are marking out the spatial centre of the geographic unit and the periphery's ecological and social positions. In sociological sense core and periphery are marking out the social rank of the geographical unit's population in the social hierarchy and the social position of population living in core and peripheral areas. In my ‘traditional’ core-periphery model the inhabitants living in core areas have the highest social rank gradually lowering as moving out of the city centre.

⁷In Hungarian big cities the core-periphery model has never followed directly this pure analogy. City centres had always residents from the lower classes as well. This goes back to architectural reasons on the one hand and to the traditional structure of urban societies resulting from the low percentage of upper and middle classes.

⁸The redistributive housing provision system was an organic component of the housing policy of the socialist regime until the late 1980s. It was characterized by the state's dominance in the provision of flats. The system was originally targeted at reducing social differences in the state's welfare services. However in most cases the provision of flats – by eliminating the rules of market and social aspects – was driven by different political motivations and by certain elite groups in power.

in urban outskirts equipped with all comfort and amenities were considered as an acknowledgement of social and political position and a bonus for the loyalty to the state. The less preferential middle-class and lower middle classes, positioned at a lower level of the social and political ranking system, had no chances for leaving their homes located in urban centres within the framework of the state housing provision system (Cséfalvay 1995, 41).

The above-described processes changed the linear downward tendency of physical environment and social position indicators as moving out from the city centre towards the peripheral zone. The ecological position of city centres has deteriorated, the social reputation of transitional urban zones has increased as a result of building new housing estates and the social classes settled down there. At the same time the social reputation of urban peripheries remained low.

The 1990s was a period of fundamental changes. These changes took place in a very contradictory way with a rapid and spectacular development at certain spots of urban centres while other parts were lagging and gradually perishing. The advantages of urban restructuring are originating from 'big city life'-styled development processes, from the domination of business and commercial functions. This assigns characteristic features for metropolitan centres: the building of financial centres, banks, office quarters the building of new or the rehabilitation of urban economic and commercial centres, the construction of their servicing infrastructure, building or renewing hotels, shopping centres and business or market oriented real estate developments. The elegant shops, the new restaurants, bars and cafeterias, pedestrian streets, tourist spots create a modern urban environment in city centres. *The above-described changes have partially improved and partially spoiled the city centres' ecological positions in the traditional core-periphery model.*

Since the 1980s an increasing number of people have outmigrated from city centres into urban peripheries. The years of the 1990s further increased the dynamics of suburbanization.⁹ Suburbanization processes were further encouraged by the economic demands of spatially expanding residents and by the spatial decentralization of economy. The new housing market positions, the increasing salaries of (mostly high class) citizens, the widening selection alternatives and demands for suburban residential areas are further catalysators of suburbanization. These new demands were correlating with urban environmental problems too, such as air pollution, noise and the missing rehabilitation of central urban quar-

⁹The above described socio-statistical analyses have also verified the dynamically growing intensity of suburbanization. The population of big cities and their urban areas has dropped by 5% between 1993 and 2003. This drop rate exceeded the national average. One of the largest population drop rates (nearly 7%) was revealed in the Budapest agglomeration zone. The greater part of population drop took place in cities. It was 14.6% in Budapest and the average drop rate of the remaining cities was 4.8%. The average population growth rate of suburbs was 15.7%.

ters. The local development policy of suburban municipalities is further increasing the dynamism of suburbanisation by encouraging outmigrants for settling down by different means of land use policy, such as infrastructure development and big supply of building sites.

The findings of the representative survey in 9 urban areas in 2004 have revealed that suburbanization process may be interpreted as a spatial restructuring of high classes in the city pursuant to their gradual outmigration from the city centre into external urban zones and finally to suburban zone. The outmigrants first selected well-advanced urban peripheries, then good quality urban outskirts and finally less-advanced urban peripheries.¹⁰ On the other hand we also followed the spatial migration of low classes within urban zones. For example in Székesfehérvár only a low ratio of high and upper-middle classes are involved in suburbanization but middle and low classes were more mobile. (A representative survey for the suburban population of Székesfehérvár indicates that 8.4% of the outmigrants from city centre are top or medium-level managers, 7% are private entrepreneurs, 13% are high-educated employees and 48% are skilled or semi-skilled workers (Szirmai et al. 2003a).

Several urban researches have revealed that the majority of citizens including high classes have no intentions to move out from the city centre. In a representative sociological survey carried out in 2003 only 5% of people interviewed had definite plans for outmigrating and another 3% are also intended to leave the city centre but had no chances for doing it. Another 4% are going to leave the city centre within the next few years¹¹ (Szirmai et al 2003b). A public poll made in Tatabánya in 2000 also confirmed this tendency as 78% of the interviewed residents claimed they would remain in the city and only 7% claimed expressed their wish to outmigrate the city (Kiss-Dénes, 2000, 36).

¹⁰The zoning of the 9 urban areas of our investigation was partially made on the basis of the traditional (human and ecological) classification categories of urban sociology and partially by local experiences and on-site inspection walks. The following major urban zones were delimited: central urban zone or the historic city centre in other words. It is the old town and the first employment zone with the city's employment organisations of outstanding importance (administrative bodies, banks and credit institutes, educational and cultural organisations, offices etc.), business, commercial and entertainment facilities. This area is characterized by multi-storey office blocks and high built-in density. The transitional zone comprises industrial plants and commercial centres with their surrounding residential quarters. The suburban zone consists of satellite cities standing in close functional relationship with the city. These satellite cities used to function in administrative sense as independent settlements in the past. Today this zone has residential functions primarily. It is generally built in with private houses, housing estates or nowadays more and more gated residential communities are emerging here

¹¹In an NKFP survey made in 2005 already 6.4% of the inhabitants of Székesfehérvár stated they had a definite plan to leave the city and another 9.7% claimed they would like to leave the city centre but had no chances for doing it.

The results of the representative survey of urban areas in 2005 have also revealed that the majority of urban area residents – 79.6% – are not intending (or having no chances) to change their place of residence. Only 13% of city dwellers stated they definitely would move out of the city and another 7.3% claimed they intended to leave the city but had no chances for doing it. Of the suburban citizens 4.2% would move but had no chances for doing it. Of those being sure of moving the percentage of city centre and transitional zone inhabitants is high. In inner city quarters people with secondary and high education and brain workers while in transitional zones and city outskirts people with secondary education and private entrepreneurs are over-represented among those claiming to be definite of changing their residential location. In advanced and less advanced suburban zones again the ratio of people with secondary and high-education, private entrepreneurs and brain workers is the highest within the same question item. *Thus, it is an interesting phenomenon that on the two endpoints of urban hierarchy – in the core city and in the periphery – the percentage of the highest social classes while in transitional urban zones the percentage of middle classes is the highest in the group wishing to change residential place.*

More than half of the citizens intending to move would like to find their new residence within the same city and 22% would remain in the neighbourhood of their present home. (This figure is 13% in urban peripheries). Of the urban residents we have interviewed 27% would like to find their new home outside the city. Our data are indicating a higher than average ratio of low social classes selecting socially low-ranked urban districts, such as urban-style residential areas in the proximity of the city centre or garden city areas or rural style suburban zones to live in. Middle classes prefer to settle down in elite residential areas, garden cities or gated residential communities. The highest social classes and professionals intending to leave the city centre follow two patterns during the selection of their new homesite: they either move out to elite central urban districts of their cities, the historic old town part or escape out of the city to suburban garden villa quarters or elite gated residential communities. Brainworkers and professionals prefer rural style urban peripheries for their living environment. *Finding correlation between a position of a selected (or desired) residential area in the ecological hierarchy and the social position of the interviewed persons is a very important result of our research: different social classes select ecological-social units harmonising the best with their social position and financial circumstances.*

Residence change plans in Hungarian urban areas do not provide a sufficient basis for forecasting a significantly accelerating suburbanisation process. Today's residence change plans do not represent a massive trend; they are rather representing the dissatisfaction of minority groups with their present place of residence or expressing their new expectations for their residential area. This does not prognostify a radical change in the present social structure of urban zones and in the

core-periphery model having been formed by history and bearing the marks of the regime change. However recent migration processes show a significant restructuring process. The spatial restructuring of high social classes within urban areas, their gradual out-migration from the city centre and settling down in suburban zones changes the content of the traditional core-periphery model, rearranges the social structure of peripheries and although in different ways but improves their ecological and social positions.

The social structure of metropolitan areas

The analyses in the first part of our case studies have revealed the inequalities of infrastructural and institutional supply between cities and their neighbourhood (background settlements), the advantageous positions of cities and the disadvantageous positions of neighbourhood settlements. The inequalities of infrastructural and institutional supply between cities and their neighbourhood and the geographical units of urban areas are marking such ecological positions (*Figure 15–16*).

Figure 15

The spatial location of university and college graduates in the urban areas of Hungary

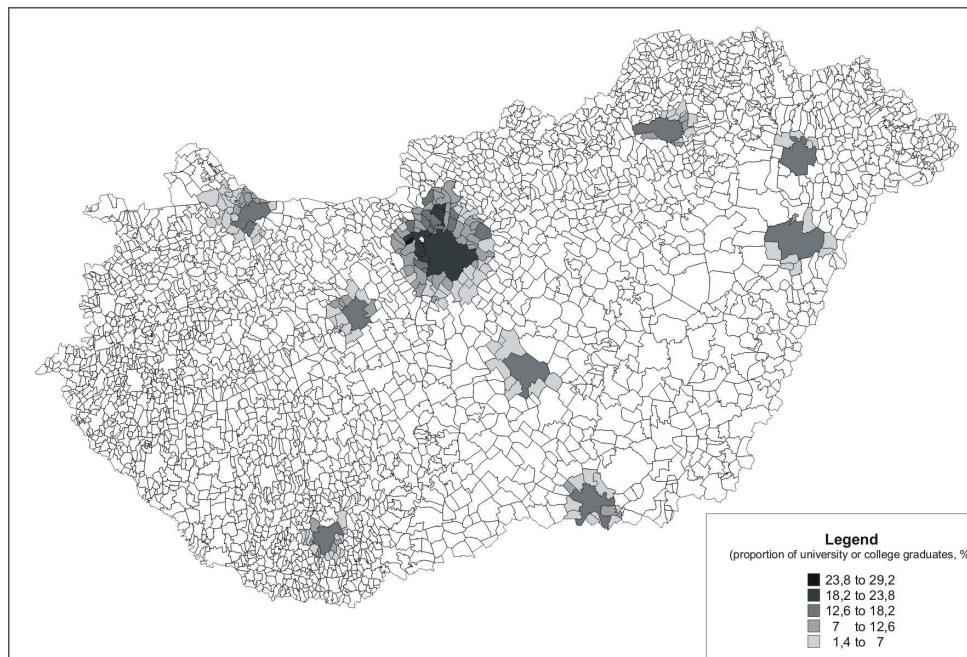
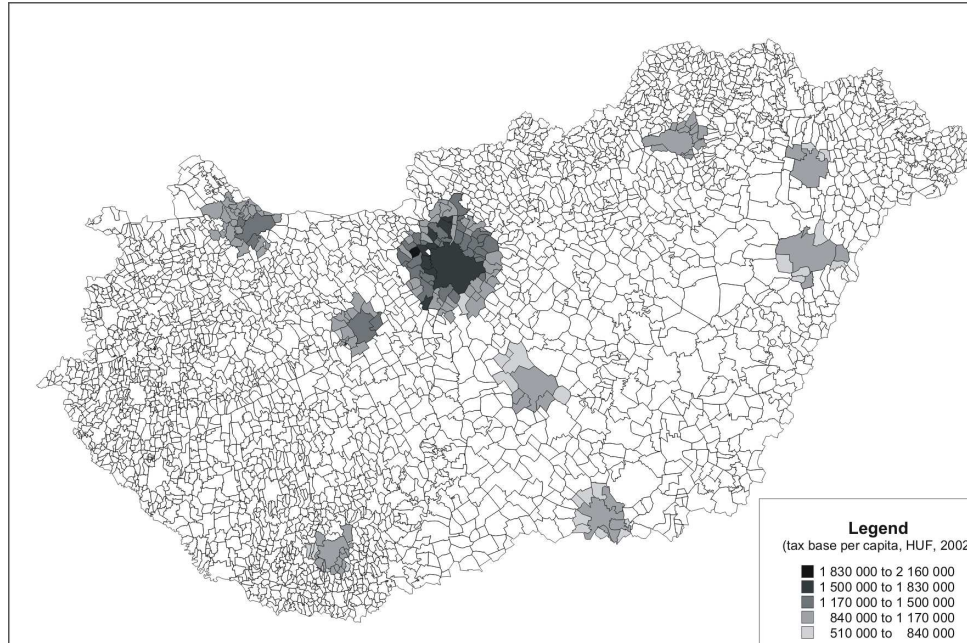


Figure 16

Taxable value per capita in the urban areas of Hungary



Following the mapping of the infrastructural and institutional supply of urban areas we prepared a comparative analysis on the social structure of cities and their environment. From the series of comparative analyses of social statistical data it became evident that cities and their environment have rigid hierarchical social structure: high social classes tend to live in city centres and low social classes are rather located in the outskirts of cities (*Baráth–Molnár–Szépvölgyi, 2005*)

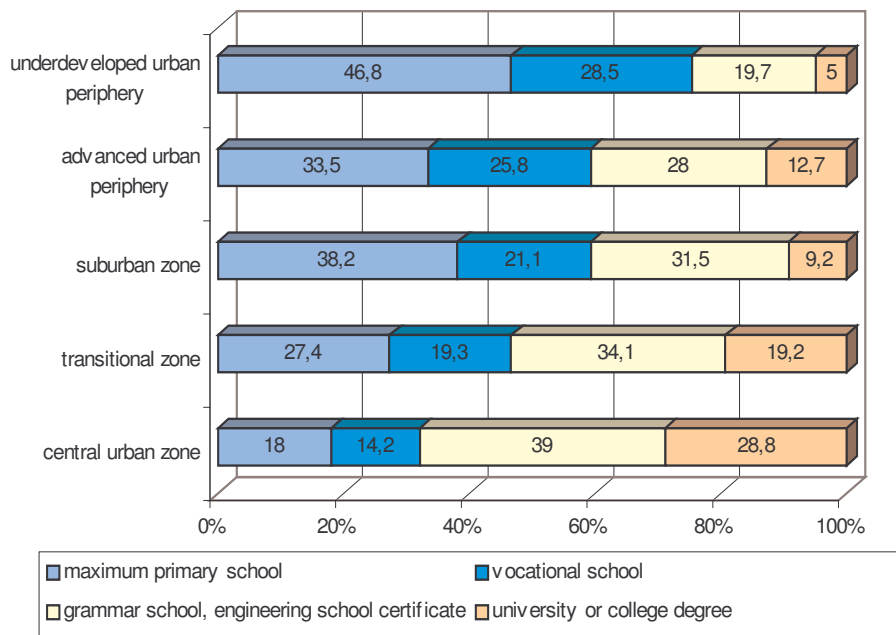
The survey provided a clear analysis of socio-spatial hierarchy. While moving out the city centre towards outer urban districts and outskirts the ratio of high social classes (highly qualified professionals, qualified experts) is gradually decreasing with an increasing spatial concentration of low classes (low educated, unskilled people)¹² (see *Figures 17–18*).

¹²The research sample of the residential survey included maximum three settlements from the most advanced and maximum three settlements from the backwarded background settlements of each big city. The background settlements were selected by a non-parametric trial named as ranking number method. The ranking was made by the consideration of the indices as follows: accessibility, housing conditions, public and higher education, health service, the activity intensity of local entrepreneurs, taxation, incomes, employment, unemployment, mobility and social provision. The final development ranking was prepared on the basis of the summarized ranking of indices. In each urban area maximum three settlements from the most advanced and maximum

The research is confirming the segregated socio-spatial structure of urban areas in Hungary.¹³ The data of research are showing that the ratio of city centre residents with primary education (18%) and vocational school certificate (14.2%) are lower than their sample ratio (28.8% and 18.9%). Their spatial concentration in transitional areas is correlating with their sample average (27.4% and 19.3%) but higher than the average in urban outskirts (38.2% and 21.1%) and suburban zones. The percentage of people with secondary education in city centres is higher than their sample average (34.2%) and this is correlating with the national average in transitional urban areas and with the lower than average values in urban outskirts and peripheral zones. The spatial concentration of university and college graduates is higher than their sample average in city centres, correlating with the average in transitional zones and it is much lower in suburban zones (differing by the development level of suburban zone).

Figure 17

The spatial division of population by education level in different urban zones



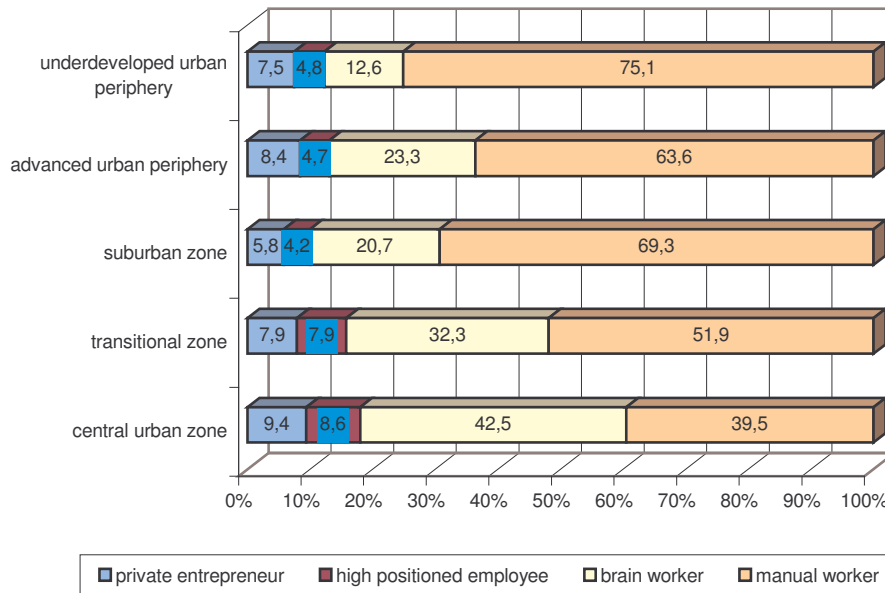
Source: Edited by Zoltán Ferencz on the basis of NKFP data.

three from the most backwarded ones were selected into the sample. These criteria are serving as a basis for the definition of advanced and backwarded suburban settlements.

¹³The term segregation means a spatial isolation with a higher than average concentration of a social group within the social structure of a certain urban district.

Figure 18

The spatial division of population by profession in different urban zones



Source: Edited by Zoltán Ferencz on the basis of NKFP data

The spatial division of professions by urban zone is showing a similar pattern with that of the education level. Its most spectacular element is the considerably lower concentration of manual workers in city centres than the average (55.1%) and their very high concentration in urban outskirts and suburban zones. The differences of the spatial division of private entrepreneurs are less high between urban zones (except for suburban zones), their distribution ratio is correlating with the sample average (7.6%) with low dispersion coefficients. The higher than the average (30.5%) concentration ratio of brain workers in city centres is also a factor of primary importance from this aspect.

The spatial location of residential incomes is another indicator of segregated socio-spatial structure. The ratio of people falling into the highest income category (above 100 thousand HUF per month) is gradually decreasing as moving out of the city centre towards the peripheral zones (23.7–8.8%). It is exceeding the national average (15.6%) in city centres and in transitional zones. We can see the same tendency in case of the income category between 75 and 100 thousand HUF and of the category below 50 thousand HUF per month. However much less dif-

ferences can be seen between the two extreme values in the category of average incomes (50–75 thousand HUF) and in zero income categories which means they are not fitting into the hierarchical structure model.

Thus, as the above listed indicators are illustrating, the geographical units of urban areas i.e. the core settlement (the city) and the periphery (the suburb) are also differentiated in the context of infrastructural and institutional supply including (and verified by the statistically analysed) socio-spatial and ecological inequalities and of the different spatial concentration of different social classes.

The dual structured core-periphery model

And now we are analysing the changing core-periphery model by a figure (Figure x), where the starting and at the same time the peak point is representing the core area, i.e. the historic city centre and the endpoint is representing the periphery i.e. the underdeveloped suburb. By the same figure we are demonstrating the spatial division of the urban area's population by education level, profession and income categories. As it can clearly be noticed the social structure of advanced urban peripheries is breaking the monotonous downsliding trend of the traditional spatial, ecological and social hierarchies by turning it back into an upward direction for a while. This can be explained by the fact that new social values have been assigned to the peripheral zones of urban areas. Due to the outcomes of the present socio-economic processes of suburbanization and to the new socio-economic and functional relations of urban peripheries the social appreciation of urban peripheries has been differentiated; the suburban parts of urban zones have been divided into low-ranked and high ranked socio-spatial units. These units – periurban districts and villages – are populated both by high and low social classes.

The recent changes of inner city quarters (slums, regenerated areas) have also changed the earlier ecological and social structure of cities. The once homogeneous high social reputation of inner cities has been eroded by the deteriorating parts of inner city quarters.

The socio-spatial analyses of urban areas suggest that the traditional core-periphery model is relevant for the urban areas in Hungary as well. In cities and their central areas the presence of high classes is dominant while in suburban zones and urban peripheries generally low classes are in majority. Going outward from core areas towards the periphery the social structure shows a hierarchical structure. Going down the ecological-spatial slope indicating the economic, infrastructural and institutional supply level of the different geographical units of urban spaces we can see a gradually decreasing presence of high social classes and a gradually increasing presence of low social classes.

On the basis of the evaluation of research data we can also declare that in Hungarian urban spaces the traditional core-periphery model cannot be identified

in its original form any more: the social structure of advanced urban peripheries is firmly breaking up the monotony of the downward line of the ecological-spatial slope of social hierarchy between the 'two endpoints': the core and the periphery.

As a consequence of transition and globalisation the social structure of Hungarian metropolitan spaces and the social content of the core-periphery model have significantly changed. The social processes of the past years through the differentiated – partially high, partially low social contents of the core-periphery model created *a dual socio-spatial hierarchy. The first type of socio-spatial hierarchy contains a high-ranked core and a low ranked periphery model. The second type of socio-spatial hierarchy shows a formation of low-ranked core and a high-ranked periphery model. Both hierarchies are simultaneously present in urban spaces.*

Conclusion

On the basis of analysing the spatial disparities of Hungarian urban areas we can draw the following conclusions:

The analysis of the infrastructural, demographic, housing, economic and institutional supply indicators in Hungary's nine urban areas has revealed two major tendencies: On the one hand during the research period the separation of residential and public service functions further increased and also has restructured the relevant spatial disparities. This means that the improving residential functions in background settlements were not followed by an appropriate development of those public services that we have investigated in our research. Institutions and services providing extra facilities beyond the essential public services are concentrated in big cities only, which increases the dependency of background settlements on core cities. On the other hand, however, successful economic restructuring does not necessarily imply a dynamic development of institutional supply because the expansion or retreat of the services we have investigated are influenced by other factors as well, such as residential incomes, the key factors of public consumption or the historical background of institutional supply. In certain areas the provision of public services was abandoned by the state and there were no businesses to fill in the gap of missing public services by the same or similar ones.

- 1) The spatial disparities of economic development are increasing the superiority of the metropolitan area of Budapest in the areas of economic power and efficiency (foreign direct investments, the level of incomes, economic performance, employment structure, purchasing power etc.). The current development disparities of provincial urban areas are showing tendencies having been emerged several decades ago: the urban areas of Győr and Székesfehérvár in Northern Transdanubia besides functioning as re-

gional centres enjoy significant competitive advantages as well and are pretty far ahead of their competitors; the urban areas of Nyíregyháza, Miskolc and Kecskemét. Within urban areas economic resources are heavily concentrated in core cities. A comparison of the division of economic performance between central cities and non-central settlements points out that the economic performance of non-central settlements is only 10–15% of the urban area's overall economic performance. This figure is only cca 20% even in the metropolitan area of Budapest.

- 2) The changes of demographic and economic indicators within the period between 1993 and 2003 (and 1990–2001) are clearly marking a strong correlation between increasing social inequalities and agglomeration tendencies. As it is seen the spatial disparities between urban areas originating from macroregional development differences have decreased but due to the intensification of suburbanization and to its consequences core-periphery relations and spatial dependencies have increased within urban areas.
- 3) The development chances of background settlements were determined by their geographical location. Settlements with good physical accessibility and having built strong connections with other settlements can easily integrate themselves into their urban area. This can easily be verified by statistical figures. Others with less favourable circumstances seem to be uncertain of their integration into their urban area and they are bouncing between closing up and 'fading out' i.e. falling off to the level of disadvantaged rural areas.
- 4) Spatial disparities are also largely influenced by the processes and impacts of the integration to global economy (the benefits that can be gained from the socio-economic impacts of global networks and foreign direct investments). At the same time these processes and impacts are also warning of the threats of socio-economic inequalities, of the increasing interaction, of their mutual consequences and of their spatial expansion. All these may intensify social conflicts that can already be noticed in Budapest and its environment due to the increasing problems of transport and loads on environment and to their negative social impacts seen day by day.
- 5) The results of the representative research of Hungary's metropolitan areas are providing clear evidences on the socio-structural inequalities of urban areas. The centres of Hungarian urban areas are concentrating high social classes, high-educated and qualified professionals earning high salaries, while low social classes generally live in the peripheral parts and in suburbs of low social prestige. However some groups of handicapped classes do live in the city centre as well and the percentage of high social classes is also significant in suburbs. Today's socio-spatial processes, their historic determinations, the age of transition and global integration have all created

a core-periphery model of dual social structure where the traditional model of socially high-ranked centre with and low-ranked periphery has been extended by another scheme of low-ranked centre and high-ranked periphery. All these processes have created a new type of socio-spatial unit.

The Austrian case study – Social Inequalities in the Vienna Metropolitan Region

Preface

A spatial analysis of social inequalities tackles one of the major issues of modern human geography: How equal or unequal is society and its spatial distribution? The answers range from one extreme, a totally equal distribution representing a homogeneous social area, to the other, a distinctly unequal distribution as a characteristic feature of a society that is socially as well as spatially highly diverse. Equal distribution indicates that all spatial units share the same features, which means that all units have the same proportion of affluent and poor residents, the same proportion of qualified and unqualified employed persons and of large and small apartments. Unequal distribution obviously refers to the complete opposite. The highly qualified and well-off groups of population as well as the large apartments concentrate in a very limited number of units, whereas low-income and unskilled residents living in small apartments concentrate in a completely different set of spatial units. What is not intended in this context, however, is an evaluation of socio-spatial inequality, since the question whether an unequal spatial distribution is to be interpreted as fair or unfair will always be a matter of ideology. Therefore the focus of this paper will rather be put on an objective description.

The analysis itself is primarily based on data of the census 2001, which allows a very detailed spatial differentiation. The first step includes the identification of relevant indicators characterizing social inequality, the second step is aimed at depicting their spatial distribution and, thirdly, the individual features are going to be combined in order to establish basic dimensions of inequality. The smallest spatial unit in this analysis is the community or municipality for the suburban region of Vienna or the census tract for the City of Vienna itself. Together the City of Vienna and its suburban region constitute the Vienna Metropolitan Region that has been subject of the analysis.¹⁴

¹⁴In this context Ms D. Schönbichler is to be thanked for the translation into English as well as for reviewing the draft.

Theoretical background

The analysis of social and spatial inequality has evolved from two basic questions of research: the Social Indicator Research of the 1970s and the Social Area Analysis of urban space of the 1940s. In this paper both concepts will be dealt with and for the first time combined to achieve an integrative approach. For this purpose the two rather different concepts will be introduced briefly in the following chapters.

Social inequality and social indicator research

Social inequality is a relative measurement of the distribution of relevant indicators within society. Social inequality is the expression of different access to housing, health care, and education. It is inextricably linked to unequal distribution of income and wealth in society, which was again made the focus of attention during the creation of the social welfare states in Europe. The question as to which extent social inequalities can or even should be tolerated and which extent makes public interference desirable or even necessary was becoming a crucial issue. Therefore measuring social inequality by means of social indicators was regarded as a fundamental task (see *Fassmann, 1997*).

The social indicator research of the 1970s was guided by a normative conception of an active social policy. This conception advocated state intervention with the aim of bringing about change within society, by ensuring equality of possibilities and by supporting selected groups. Social indicators were and still are a necessary pre-condition in the field. Social policy is not feasible without prior knowledge of the social situation and without identification of the marginal groups of society. The question concerning which political measures should be implemented on which population groups, remains impossible to answer without the knowledge of the real and objective situation. With reference to an extensive system of yearly economic statistics, the foundation for every national economic policy, a similar system of social reports was conceived and carried out in an exemplary manner. The functions of the system consisted of a statistical observation of society, the gaining of information on specific problem groups and the supervision of the success of the socio-political measures.

Social indicator research was not based on a universal self-contained theory, which settled the central dimensions of a modern industrial society and set up a relationship with each other. The theory rather served the normative fixed dimensions, which, on the basis of operationalized indicators, should have reproduced the notion of „quality of life“. The theoretical argument, in terms of which societal dimensions were selected and through which indicators were operationalized, took on more of a subordinate role. Empirical analyses of the individual indicators

or the formation of synthetic indicators were and still are in the forefront of the wide range of literature devoted to measuring quality of life, living conditions or trends in the development of the social structure.¹⁵

Social area analysis

In the late 1940's Eshref Shevky and Wendell Bell developed the Spatial Area Analysis which heavily relies on the tradition of Social Ecology founded by the Chicago School (see Shevky and Bell 1955). Spatial Area Analysis claims that cities are divided into small, segregated 'worlds' which are referred to as 'Natural Areas'. They correspond to the 'Neighborhoods', the residential areas typical of American metropolitan areas. Those neighborhoods provide a high potential of identification for the residents who deliberately separate themselves from the outside and insist on social control mechanisms within the boundaries of their neighborhoods. Consequently, 'Natural Areas' or 'Neighborhoods' are 'natural' units of the city, just like biotopes can be seen as 'natural' units of nature.

Social Area Analysis regards the city as a mosaic consisting of numerous individual neighborhoods. It is the goal of Social Area Analysis to distinguish these neighborhoods from each other and to describe the structure of the neighborhoods by using different indicators. Who is living together? Which groups of population constitute a common social entity of its own? How can the social-spatial patterns of a city be described and explained?

The Social Area Analysis did not have any normative objective. It was not aimed at any specific measures of planning or policy and it did not claim to even out inequalities. Its goal was rather to identify the social morphology of a city, the extent of segregation and, most of all, the crucial variables responsible for the differentiation. In time two different approaches developed: firstly an inductive approach with the concept of collecting as many variables as possible in order to determine the primary dimensions in the formation of neighborhoods by means of factor analysis (factorial ecology) and, secondly, a deductive approach in which the selection of variables influencing the socio-spatial differentiation of a city is based on theoretical considerations (e.g. modernization theory). Both notions have advantages and disadvantages and have clearly contributed to explaining

¹⁵In Germany for instance, the SPES-Project (socio-political decision and indicator system for the Federal Republic of Germany) or in Austria, the project examining „social inequality“ were two examples of this type of research dating back to the 1970's. Evaluations of the societal development as well as social transformation were carried out and published in manual form in many European and non-European countries. The British Social Trends (published yearly since 1970), the French *Donnees Sociales* (1973), the American Social Indicators, the welfare surveys and social reports in Northern Europe or the Austrian report pertaining to the population's social situation should be mentioned here.

socio-spatial differentiations. With regard to this analysis, however, it is not necessary to dwell on these approaches any further.

In this analysis it is attempted to combine both approaches. The selection of the indicators is based on the concept of social indicator research and they ought to be able to define and validly measure social inequality. Therefore a profound examination is necessary, because official statistics provide a large number of indicators identifying physical, economic and demographic structures, which, however, contribute hardly anything to a problem-centred delineation of social inequalities. The path of analysis itself is determined by Social Area Analysis. It leads to an understanding of the socio-ecological milieu of a society characterized by obvious social inequalities and imbalances and finally to an answer to the basic question: how can the social morphology of the Vienna Metropolitan Region be described.

Relevant indicators

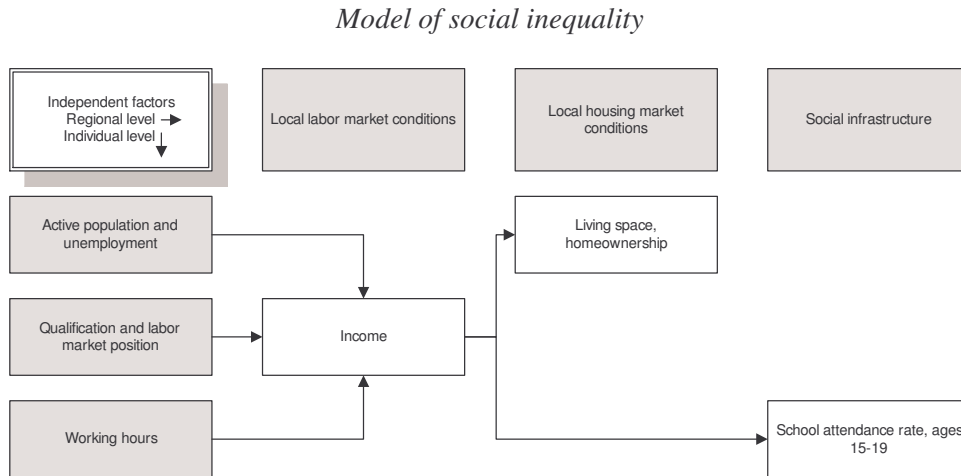
The social indicator research provides the background for the selection of indicators: they certainly have to contribute to comprehending and explaining social inequalities. This alone hardly gets you anywhere, however, because there are numerous variables responsible for social inequalities. The decisive criterion is the availability of data especially for a spatial differentiation. Therefore the data required need to provide information related to social inequalities at the level of communities and municipalities for the urban fringe and at the level of census tracts for the City of Vienna. Both levels together constitute the Vienna Metropolitan Region. In the following section every individual indicator and its specific advantages and disadvantages will be defined and presented in a statistical and cartographic overview.

Selection model

The first differentiation that can be ascertained concerns the difference between subjective and objective indicators. Inequality and quality of life and welfare do not only concern objective living conditions, but are also a matter of personal perception. The same objectively evaluated living conditions can be perceived differently from a subjective point of view. This occurs because either relevant factors are left out or because the living conditions, which are evaluated at a specific time, sometimes are the result of a “recovery process“, and at other times and places of a downward spiral. Both objective and subjective indicators are

valuable in their own way, as the methodological difficulties in collecting and comparing subjective indicators are well known (*Table 1*).

Table 1



Source: Author's concept.

The present article concentrates on objective indicators that are available on a detailed spatial level. The considerations are based on a model which forms causal chains of variables and differentiates between independent and dependent factors. Independent factors comprise indicators related to employment, whereas income, standard of living and school attendance rate of teens between 15 and 19 can be understood as its consequence. At first there must be some kind of employment, only in that case income can be generated. The local labor market conditions influence how much somebody earns, although this mainly depends on the kind of employment.

Consequently, the level of income determines the living conditions, even though the specific local situation has to be taken into account again (real estate market, property prices, building costs, do-it-yourself (DIY) resp. mutual support in tightly knit neighbourhoods). At last, the level of income but also the “social background” influences the school attendance rate of the 15–19 year olds, who have already completed their compulsory school attendance. High-income households with privileged positions on the labor market pass on the necessity of gaining higher qualifications to the next generation. In this context local conditions seem to be of a certain relevance again. A dense network of educational infrastructure appears to be reflected by a high school attendance rate of 15–19 year olds.

Thus, social inequality is operationalized as a phenomenon which is first of all based on employment leading to different levels of income. These incomes permit the purchase of goods, especially living space as a central indicator of social inequality. Eventually, local infrastructure and public facilities (e.g. schools) are indirectly perceived as a part of social inequality.

Statistical Overview

After testing several variables if they are significant and reliable 12 variables have been included in the analysis. These variables characterize the local employment opportunities defined by the general employment rate, unemployment, the quality of jobs and working hours as well as the dependent dimensions income, quality of housing and the proportion of high school students as indicators of the local infrastructure and predominant social values.

The following table mainly shows the respective means as well as the coefficients of variation, which illustrate the extent of socio-spatial inequality¹⁶ (Table 2).

Table 2

Mean, standard deviation and variation coefficient of the indicators of social inequality

Indicator	City of Vienna		Suburban Region		Metropolitan Region	
	mean	var.coeff.	mean	var.coeff.	mean	var.coeff.
Income per capita	12.8	11.0	12.2	6.2	12.5	9.6
Active labor force	82.4	4.3	82.6	3.5	82.5	4.0
Unemployed	9.9	41.4	5.0	33.6	7.8	52.6
Self-employed	8.8	57.6	10.8	38.0	9.6	49.6
Highly qualified labor force	13.8	28.1	7.4	62.2	11.1	47.4
Unskilled workers	17.9	44.6	16.8	36.9	17.4	41.8
Full-timers	75.0	5.2	79.6	3.0	77.0	5.2
Part-timers	10.4	15.7	11.8	17.3	11.0	17.7
Marginal part-timers	4.1	34.3	3.0	40.0	3.6	39.1
Living space per capita	37.6	18.8	43.6	7.0	40.1	16.0
Homeownership	25.0	76.6	73.5	17.7	45.6	64.3
High school students	43.2	30.9	42.4	22.4	42.9	27.7
Number of spatial units	245		181		426	

Source: Statistik Austria: Census 2001, author's calculation.

¹⁶Coefficient variation can be understood as the variation with regard to the mean in %. A small value indicates a very equal spatial distribution, a high coefficient of variation, however, indicates an unequal distribution of variation: Standard deviation divided by mean (multiplied by 100).

The spatial level of reference is provided by 245 Viennese census tracts and 181 communities and municipalities of the Viennese suburban fringe. All in all, a total of 426 spatial units have been included.

Employment and Qualifications

Social inequalities are triggered by an unequal distribution of income and income will mostly be allocated by employment. Somebody who has been unemployed over a long period of time usually has a hard time reintegrating into the labor market and is not only in danger of dropping below the poverty line, but also loses some part of his identification in society. A job does not only provide economic security but also fulfils important social and psychological functions. Not only is income distributed through a position in the labor market, but holding a job gives life structure and meaning. Indicators pertaining to the employment situation and to unemployment are therefore regarded as the central issues in each social report. For the analysis eight indicators that characterize the employment situation as well as the estimated income are selected.

The first indicator characterizes the percentage of the active labor force defined as the economically active population between ages 20–60 as a percentage of the total population of the same age group (*Figure 19*). A high rate of active labor force indicates the economic need of making a living by holding a job on the one hand and the opportunity of being attached to the local labor market. The distribution of that variable shows a less significant variation. The population in the Vienna Metropolitan Region is integrated in the labor market with a similar intensity in all spatial units and the range varies only from around 70% to 85%. The variation coefficient is one of the lowest compared to other variables and the spatial variation shows no clear pattern.

In contrast to this “homogeneous” spatial distribution of the rate of active labor force, with a coefficient of variation of 52.6 the distribution of unemployment is rather unequal (*Figure 20*). Joblessness concentrates on the City of Vienna and amounts to almost 10%, whereas it is only half of that in the surrounding region. Even there it is not distributed equally, but there seem to be some “hot spots” whose labor markets face serious problems. The southern part of the Vienna Basin with its old industries can be counted among these “hot spots”. In addition, there are also some communities in rather rural areas which make workers redundant as a result of rationalization and concentration in agriculture.

The high unemployment rates in Vienna are a relatively new phenomenon, for which there is not just one single explanation. Even though the city was the region with the highest employment rates and the lowest unemployment rates until recently, this pattern is changing dramatically. The factors relevant in this process are the exodus of manufacturing, trade and retail to the suburbs.

Figure 19

Active labor force, Vienna Metropolitan Region 2001

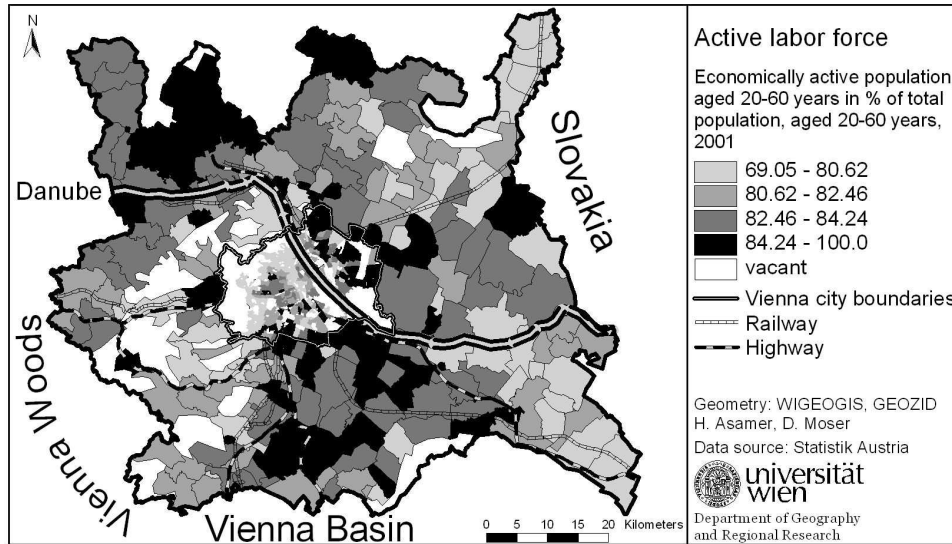
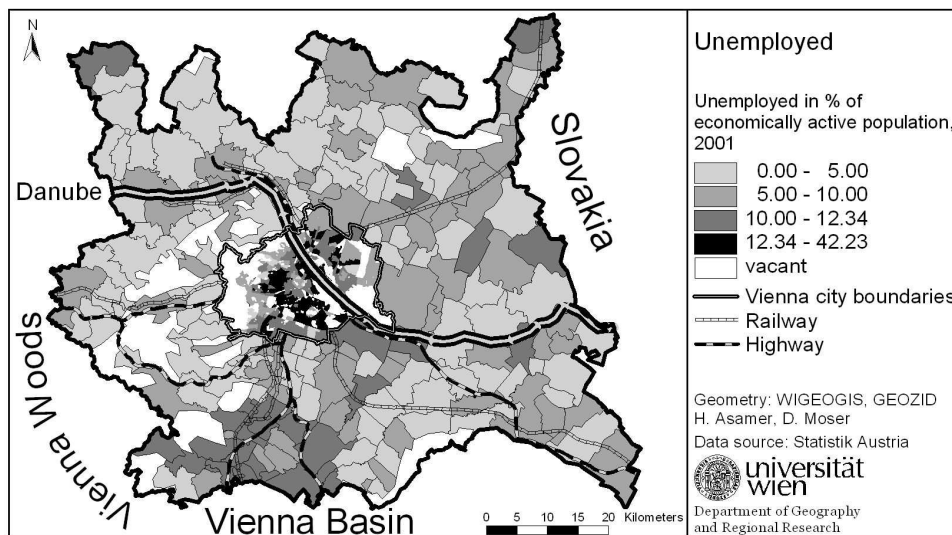


Figure 20

Unemployed, Vienna Metropolitan Region 2001



The establishment of shopping centres as well as the relocation of manufacturing to the outskirts result in a loss of jobs in the city. Due to limited space many industries did not see any chance of expansion in the city and have consequently moved their production sites to the urban fringe. In addition, the inner city is getting less and less accessible for trucks and lorries, which is, however, extremely important in an era of “just in time production”. The city has lost jobs in production, supply and distribution and due to suburbanization it simultaneously has to face a loss of younger high- and middle income households with children. The groups remaining in the city are those at a greater risk of being made redundant: immigrants, unskilled workers and elderly people still in employment.

The city undeniably provides protection and anonymity for those who regard joblessness as a stigma. In rural or suburban areas unemployment is more visible, because people who are out of work do not leave the house in the morning and return at the end of the working day. The social environment pays attention and observes. People having to cope with a long-term “labor-market exclusion” find cheaper housing in the city, together with an environment without intensive social control. In addition, joblessness is something that has to be admitted. If in a specific environment a larger number of unemployed people are open about the struggle they have in common, it is easier for the individual to reveal the personal situation and turn to the labor exchange.

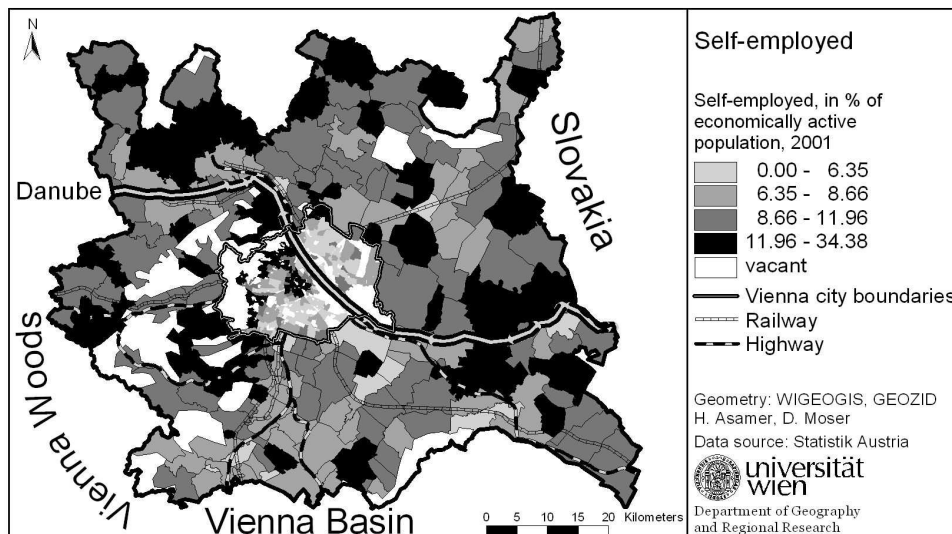
Another important indicator is the percentage of self-employed among the economically active population (*Figure 21*). This indicator defines a group that generally has a higher income as well as a higher prestige. The category “self-employed” includes entrepreneurs, doctors, lawyers, architects, notaries, tradesmen, and the group of “new self-employed” people as well. The group of self-employed can certainly not be regarded as homogenous, yet it rather marks the top of society, especially as the number of self-employed people providing jobs in industrial businesses and service industries (small tradesmen) has declined. All in all, in 2001 an average of 8.4% of the labor force in Vienna is self-employed, but 10.8% in the suburban zone around the city. As the variation coefficient and the respective spatial distribution clearly demonstrate, the proportion of self-employed is rather unequally than equally distributed. The variation coefficients of 57.6 within the city and of 38.0 in the urban fringe rate among the highest, observed in the indicators analysed in the course of the study.

Self-employed are concentrated in the city center (1st district), its neighboring districts and in the outlying districts in the west of the city. Especially in the outskirts of the districts 13–19 and 23 with their attractive locations at the slopes of the Vienna Woods the proportions of self-employed people are above average. But also in the more rural communities with a higher proportion of farmers and wine makers in the north and east of the Vienna Metropolitan Region, the percentage of self-employed is above average. Further steps of analysis therefore

have to prove if in those spatial units with high proportions of self-employed the “dependent” social indicators such as income, living space per capita and the rate of high school attendance show positive correlations. In that case it can clearly be argued that the proportion of self-employed people characterizes the spatial pattern of social inequality.

Figure 21

Self-employed, Vienna Metropolitan Region 2001



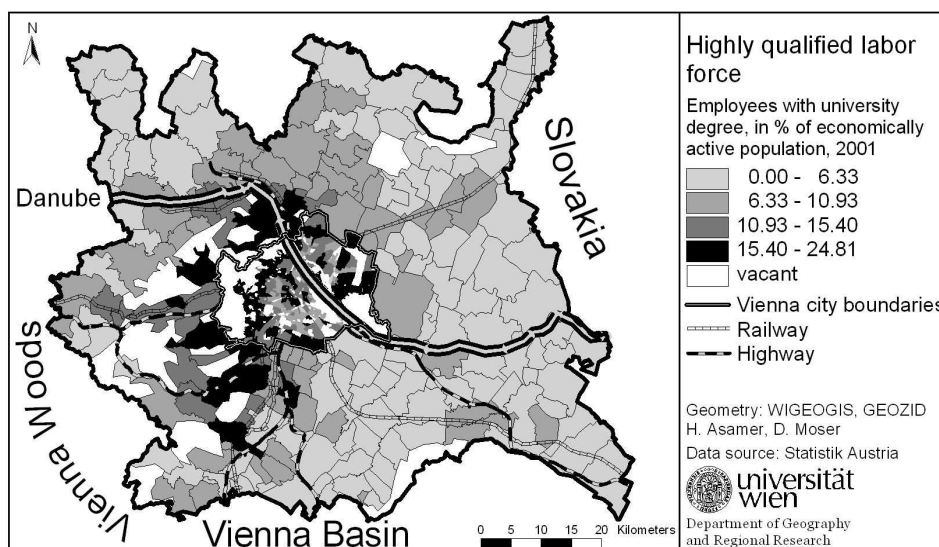
Social inequality in the Vienna Metropolitan Region is even more clearly and precisely reflected by the distribution of highly qualified labor force than by the share of self-employed (*Figure 22*). The indicator comprises employees with a university degree in relation to the economically active population. The spatial pattern reveals that the City of Vienna is still the prime residential area for highly qualified labor force. On average 14% of the economically active population living within the city boundaries hold a university degree, while the respective value drops to half the amount in the suburban region.

What is also significant is the difference of coefficients of variation in the city proper and the suburban region. While the indicator shows a relatively homogeneous distribution in the City of Vienna and suggests that – with the exception of the typical working class districts of Favoriten, Simmering in the southeast, Floridsdorf in the northeast of the city as well as in the census tracts along the Gürtel, the second ringroad around the inner districts 1–9, a considerable number of university graduates lives in nearly all districts, the complete opposite can be noticed in the suburban regions where this indicator is extremely unequally distributed. In

a small number of communities beyond the city limits, especially in the south, west and northwest of the city along the Danube, up to 25% of the population hold a university degree. Communities and municipalities such as Klosterneuburg, Kaltenleutgeben, Mödling or Perchtoldsdorf are the “strongholds” of university graduates in the metropolitan region. The coefficient of variation of a total of 62.2 in the suburban region is the highest among all indicators.

Figure 22

Highly qualified labor force, Vienna Metropolitan Region 2001



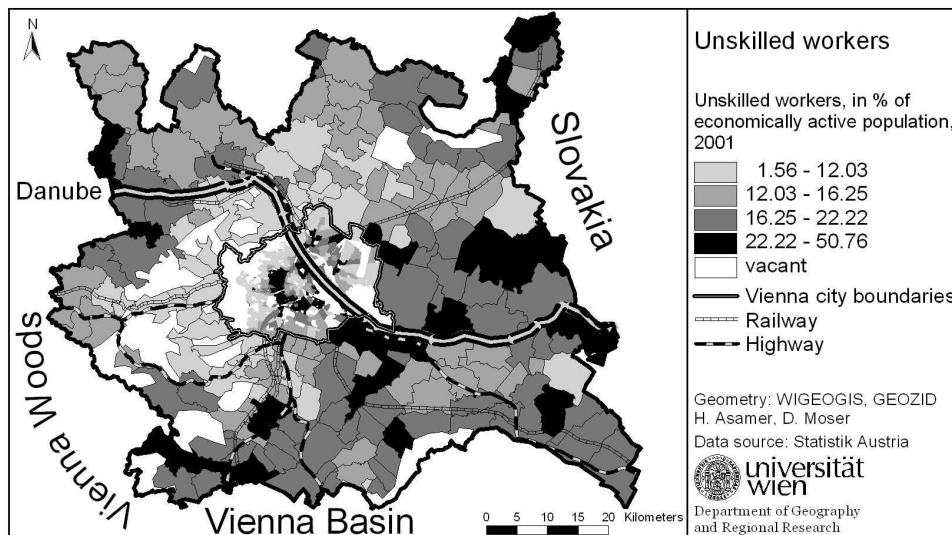
The distribution of university graduates is in total opposition to the distribution of unskilled workers (*Figure 23*). This group constitutes on average 17.4% of the entire economically active population, with only a slight difference between city (17.9%) and suburban region (16.8%). Similarly, the coefficients of variation hardly differ. Unskilled workers are highly segregated in the city as well as in the outskirts. They live in environments that provide affordable housing and their pattern of distribution points out a marked contrast to the distribution of the highly qualified labor force.

In Vienna a high percentage of unskilled workers can be found in the working class districts along the Gürtel, moreover in parts of Favoriten and Simmering in the south-eastern and Floridsdorf in the north-eastern section of the city. The south-western sector of the suburban region can be neglected in this respect, whereas the percentages in the southeast and east along the Danube are above average. This is mainly the result of property prices, because due to their limited

income, unskilled workers are forced to move to neighbourhoods where they can find affordable housing, either to buy or to rent. These are predominantly communities in the eastern parts of the suburban region, which is fertile and productive farmland, though not considered as an attractive or idyllic location. In addition, some locations are dominated by the effects of specific functions or facilities, like the refinery, the airport or the food plants in Schwechat, southeast of Vienna, or traditional industrial cities in the south of the Vienna Basin going back to the 19th century, like Wiener Neustadt.

Figure 23

Unskilled workers, Vienna Metropolitan Region 2001



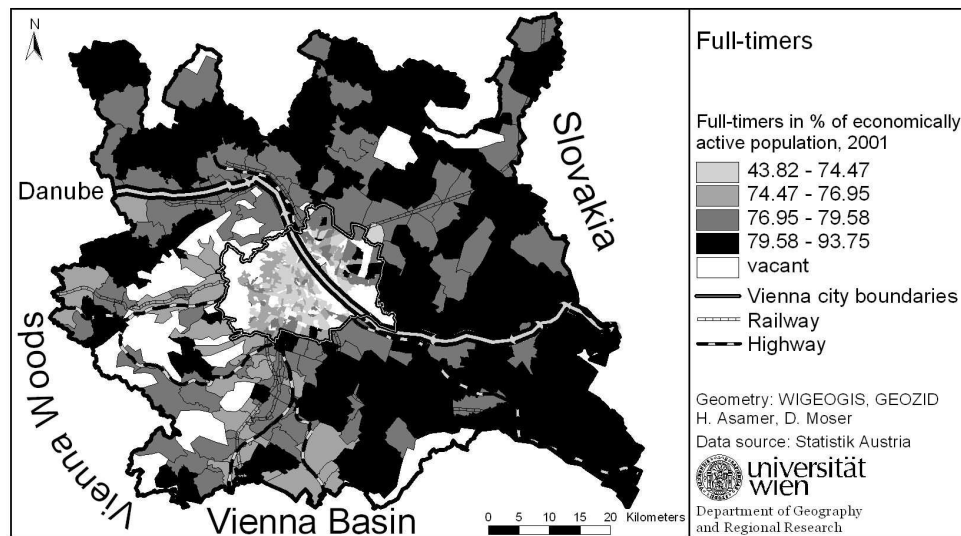
The third combination of variables in the field of employment deals with working hours. This category is split into three subcategories: the percentage of full-timers (*Figure 24*), part-timers and marginal part-timers, reflecting the trend to new flexible, untypical and precarious jobs.

In the Vienna Metropolitan Region regular full-time jobs are still the norm. On average about three quarters of the active labor force in the city and almost 80% in the suburban region hold jobs requiring approximately 40 hours per week. Depending on the sector, it can be slightly more or less, but 40 hours a week are generally regarded as the official norm. This type of employment is still dominating manufacturing, trade and a lot of service industries. In the census of 2001 those members of labor force working more than 32 hours weekly were labelled as full-timers.

The low values of the coefficient of variation (5.2 in the city and 3.0 in the surrounding region) indicate that full-timers are equally distributed in the entire metropolitan region. Although the spatial distribution shows that the percentages of full-timers is higher in the more industrialized and agricultural communities in the southeast, east and north of the city than in the south, southwest and the City of Vienna itself, there are hardly any variations with regard to the means. Just like the distribution of employment itself, the distribution of full-timers is similarly equal.

Figure 24

Full-timers, Vienna Metropolitan Region 2001



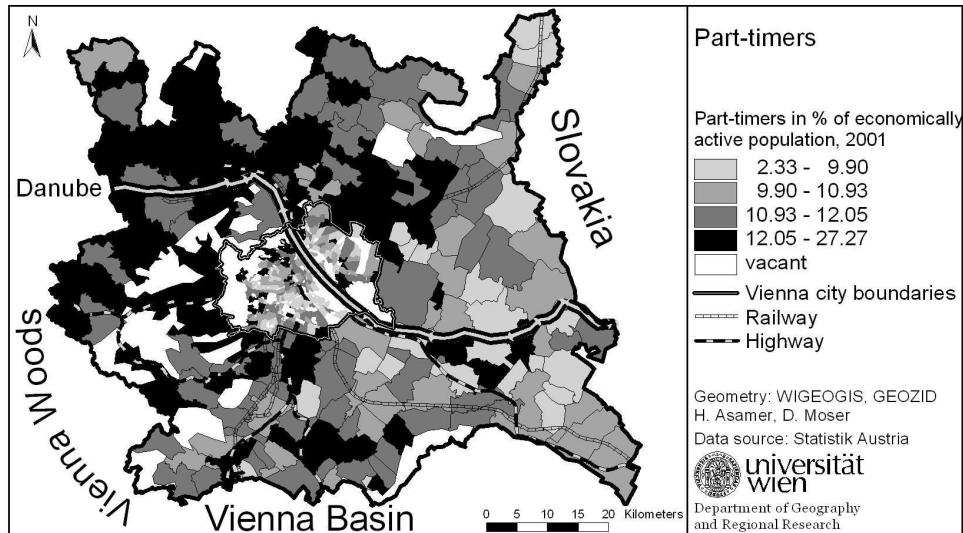
The distribution of the part-timers, however, results in a different pattern (*Figure 25*). They amount to an average 10.4% in the city and 11.8% in the suburban region. Part-time jobs are basically female, concentrate in few sectors like retail, light industry, but also in private and public service industries, and are characterized by working-hours which are far less than the norm of 40. In the census of 2001 part-timers were considered as the active population working at least 12 up to a maximum of 31 hours weekly. In many respects part-time work matches the intentions of women who want to have their own income and combine job and child care. Especially for women who live in the outskirts and have to cope with a considerable amount of commuting a regular 40-hour-job can be very stressful.

Correspondingly, in the suburban region the percentage of female part-timers, hardly any males, is considerably higher than in areas further away or in the city itself. Yet, the specific local situation must not be overlooked, such as the influ-

ence of shopping malls. This is why the communities in the vicinity of Shopping City Süd, Shopping Center Nord or the Factory Outlet Center in Parndorf are characterized by higher percentages of part-timers.

Figure 25

Part-timers, Vienna Metropolitan Region 2001

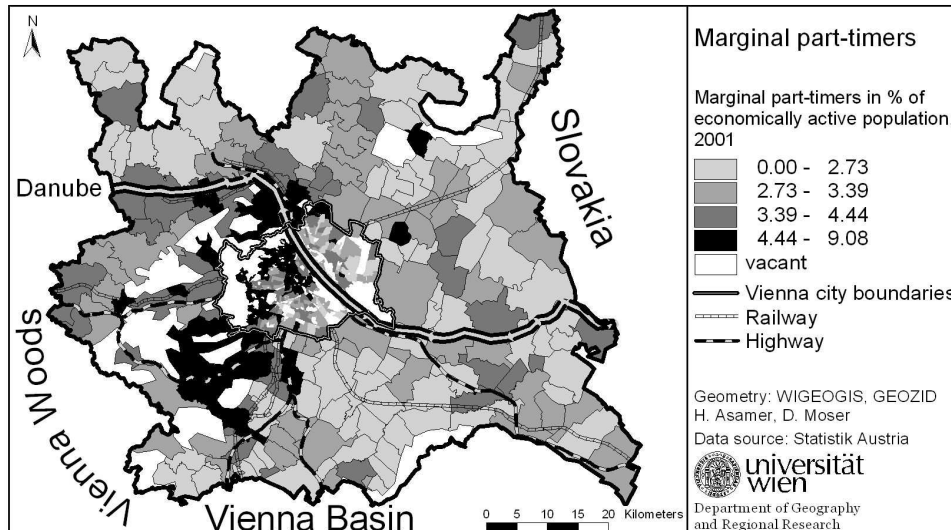


Finally, there is a third indicator called marginal part-timers (*Figure 26*). These are members of the labor force who work part-time in what could be called “mini jobs”. According to the census of 2001 marginal part-timer comprise active labor force working up to 11 hours per week.

Marginal employment represents new forms of labor which can react to expectations of the labor market even more flexibly than traditional part-time work. Again it is mainly women who accept marginal jobs either to supplement the family income or to take on specific jobs in their husbands’ company, office or surgery without having to bother about contributions to social security. These types of employment have been created as a reaction to economic deregulation and liberalization, and they probably do not point to social inequalities, but rather to a total transformation of labor. It seems to be characteristic that these marginal part-timers can be found in all the neighbourhoods with high percentages of self-employed and university graduates. Respectively, these neighbourhoods are mainly situated within the city proper, in the upscale districts in the west (Döbling, Währing and Hietzing) and, beyond the city limits, in the south-western segment of the suburban region and in Klosterneuburg in the north.

Figure 26

Marginal part-timers, Vienna Metropolitan Region 2001



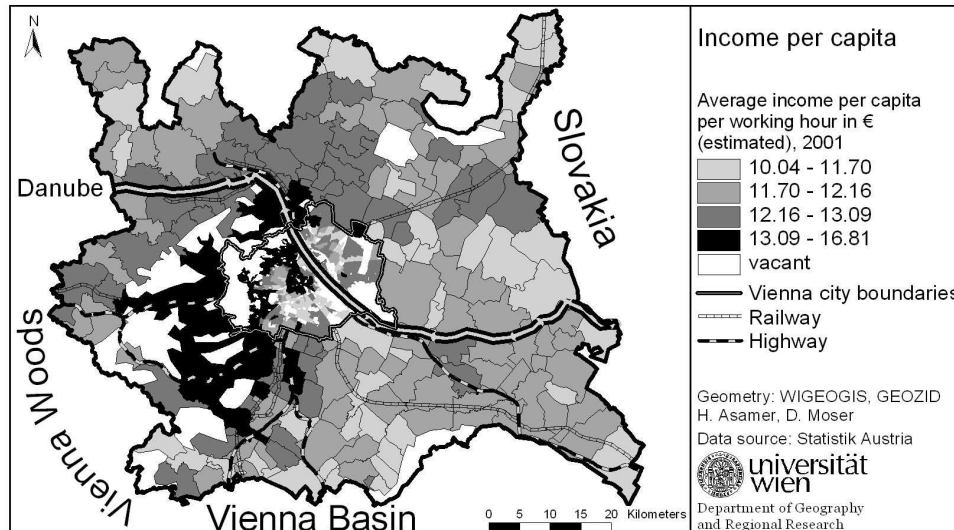
Income

In most cases income will be allocated by employment and income is the main source for all forms of social inequalities. Due to a certain level of income, specific parts of the city and the suburban region can be afforded and others cannot (Figure 27). Therefore spatial inequalities can only be explained in a satisfactory way when the income distribution is considered. Those who own available capital can afford specific neighbourhoods, those who do not are displaced and forced to move to less attractive locations.

Unfortunately, the census does not offer any direct data on the income situation. Therefore the spatial income distribution was estimated by combining two variables. The census provides very detailed information of the occupational structure of the population in each of the census tracts and communities. The second source of the income distribution for each of the occupational categories, but without any spatial information, was the microcensus. The estimated income per capita was calculated by multiplying the occupational distribution by the average income for each of the occupational categories. It can be assumed that the income per capita in each of the communities and census tracts is mainly linked to the occupational structure and the spatial effect can be neglected. Shift and share analyses show that this assumption is not perfectly true, even though the effect of the occupational structure is much more important than the spatial effect.

Figure 27

Income per capita, Vienna Metropolitan Region 2001



The average income per capita and per working hour varies from 10.0 € to 16.8 €. In individual cases the income difference can be higher but on average it is around 1 to 1.7. The spatial distribution shows a very clear differentiation into sectors. Within the city limits the districts in the western part (Döbling, Währing, Hietzing) show a significantly higher income than that of the districts in the southeast (Favoriten, Simmering) and the northeast (Floridsdorf, Donaustadt). This sector of high income units reaches far beyond the city limits. In the suburban communities in the north, west and southwest high income groups are living and contrast to the more agrarian and low income sectors in the east and the southeast. The more elaborate and socio-ecologically relevant analysis is aimed at finding out which social structures are prevalent in the high-income neighborhoods.

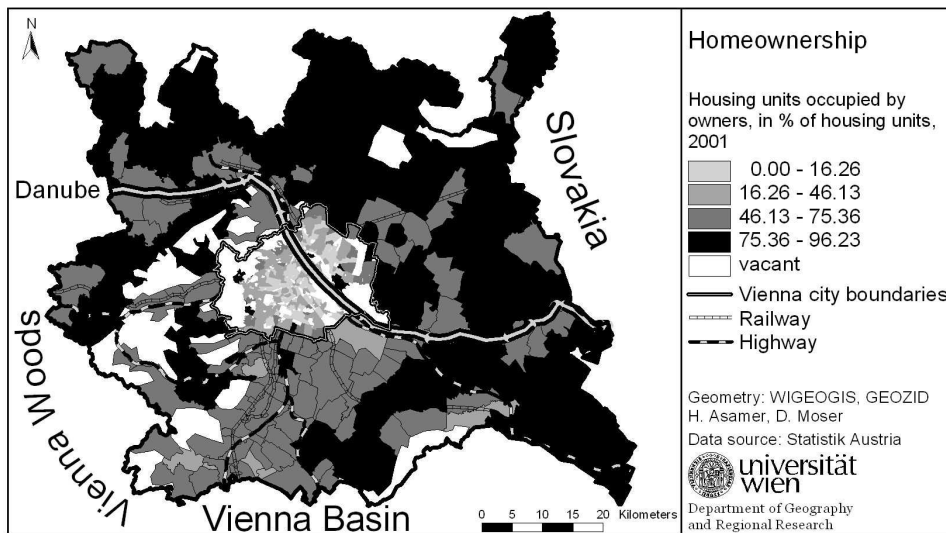
Housing and living conditions are directly linked to the economic position which, respectively, depends on the integration in the labor market. The real estate market, however, is also influenced by local conditions which can definitely change this chain of cause and effect. Especially in rural areas relatively cheap land and a good deal of neighborly help can compensate for lower incomes.

A key to social inequalities is homeownership (*Figure 28*). Owning or not owning property was and maybe still is the most important feature of social differentiation which further results in specific cultural and political attitudes. Those owning a house or an apartment might think and act differently under certain circumstances than others. On the whole a little less than half of all households in

the metropolitan region own a house or an apartment, but it is three quarters in the suburban region and only a quarter in the city itself. Whereas homeownership practically occurs in the entire suburban region and there are hardly any differences between the individual sectors, homeownership within the city proper reveals a spatial concentration. The coefficient of variation amounts to 76.6, which is the highest of all indicators in the city. Homeownership can only rarely be found in the inner districts, whereas in the newly developed areas at the fringe of the city it is by far more common.

Figure 28

Home ownership, Vienna Metropolitan Region 2001

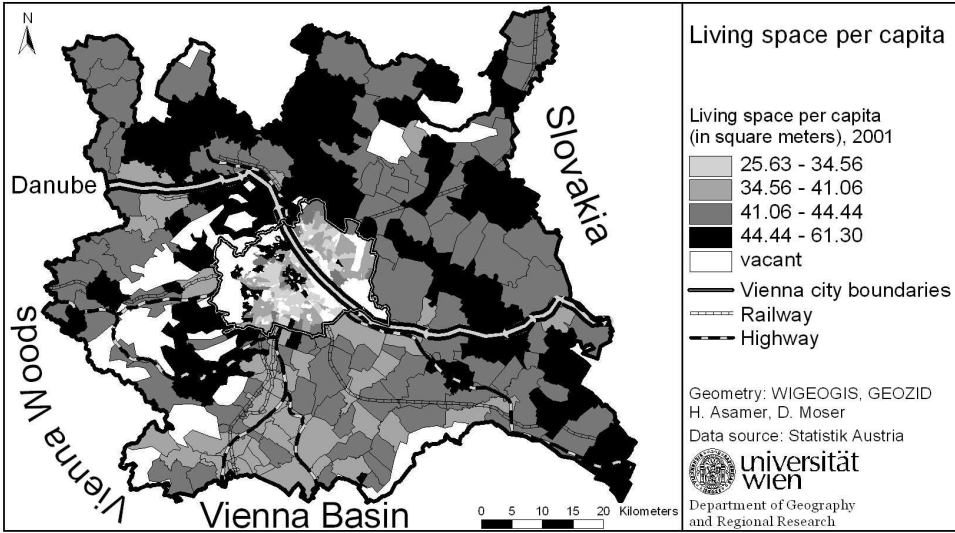


The second indicator with regard to housing defines the available living space per capita (*Figure 29*). Again it is not surprising that living space can be a measure for social inequality, in this case even in two ways: On the one hand vast living space indicates that individuals or households have sufficient means of buying, renting or maintaining it. On the other hand the living space available has an enormous impact on an individual's quality of life, which, in turn, correlates with social equality or social inequality.

On the whole an average of 40.1 m² living space per capita is available to the population of the entire Vienna Metropolitan Region, in the city itself it is 37.6 m² and in the suburban region it goes up to 45.6 m². The spatial distribution shows a positive correlation with other indicators of social differentiation: income, percentage of self-employed and university graduates. In the City of Vienna the upper-class districts Döbling, Währing and Hietzing as well as the city

center itself are characterized by extensive living space per capita. The most striking phenomena in the surroundings are the affluent south-western sector and the agrarian communities in the north, east and southeast of the city. In these communities it is the farms and the DIY-houses that are responsible for the increase in the average living space.

Figure 29
Living space per capita, Vienna Metropolitan Region 2001

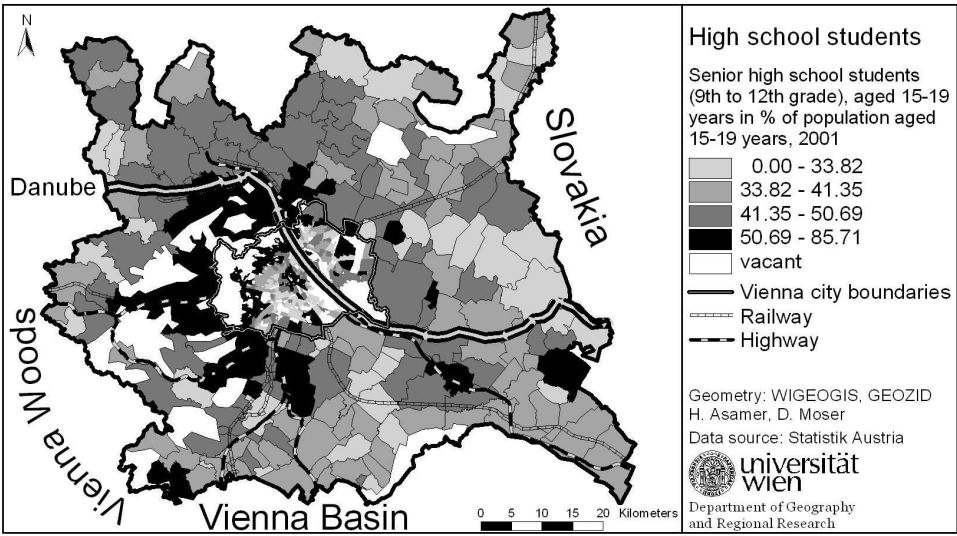


School attendance rate

In addition to employment, income and housing conditions, the school attendance rate is also used as a variable determining social inequality (Figure 30). In this context two aspects should be taken into consideration: on the one hand parents' and teenagers' pattern of behaviour deciding either to remain in the educational system as long as possible or to drop out in order to be financially independent as soon as possible. This decision is certainly heavily influenced by the cultural and social background adults and teens are exposed to. As it is widely-known, social inequality may also be passed on from one generation to the next. On the other hand this variable points to the infrastructure of the communities or census tracts, which can also be interpreted as spatial context of social inequalities. Spatial units lacking infrastructure put the inhabitants at a disadvantage, whereas top infrastructure means that the residents are in a privileged position.

The school attendance rate of the 15- to 19-year-olds averages 42.9% in the entire Vienna Metropolitan Region and there are only slight variations between city itself (43.2%) and the surrounding areas (42.4%). The coefficients of variation hint at a “medium” inequality, which matches the variables income, university graduates and living space per capita. Vienna’s upper-class districts as well as the affluent south-western sector in the suburban region stand out with distinctly higher attendance rates.

Figure 30
High school students, Vienna Metropolitan Region 2001



Dimensions of social inequality

After the descriptive analyses of the variables, their spatial distribution and the extent of segregation, the bivariate correlations and dependencies between the variables has to be examined. In the course of this procedure this set of correlations is going to be simplified and basic underlying factors of social inequality and its spatial dimensions which cannot be determined a priori are extracted from this larger set.

Bivariate correlations

At the beginning of the article the selection of variables was thoroughly discussed. It was assumed that employment was an important factor to explain social inequality. Employment determines the level of income which, in turn, influences the material and financial aspects of living standard and quality of life. Living space and homeownership are equally dependent on the available income, the same is true of other goods which, due to a lack of statistics, cannot be measured (car ownership, household equipment, extensive and frequent long distance vacations, etc.). Finally, the school attendance rate of the 15-to 19-year-olds was included in the analysis, which seems to depend on the financial background of the parents, but which also reflects the existing infrastructure of the residential neighborhoods.

In order to test these assumptions statistically, bivariate correlations based on spatial units were calculated. All in all, this analysis, which can also be referred to as ecological analysis, clearly proves the whole set of assumptions. Employment determines the income. The higher the percentage of self-employed and especially highly qualified labor force in a particular unit (census tract or community), the higher the (estimated) income. The bivariate correlation between the percentage of highly qualified labor force and income is about +0.7, which again emphasises the importance of this indicator. None of the other indicators succeeds in marking the extent of social and cultural inequality in the city and the suburban region in the same way as the proportion of highly qualified labor force. It is also true the other way round: the higher the percentage of unskilled workers, the lower the income.

What is amazing is the correlation of the marginal part-timers with the local level of income, which might indicate that wives are employed in the companies, offices or surgeries of their husbands for a few hours per week, but it could also be concluded that high income groups and new service industries available to them exist side by side (*Table 3*).

Table 3

Correlation Coefficients, Vienna Metropolitan Region 2001

Nr.	Indicator	1	2	3	4	5	6	7	8	9	10	11
1	Income per capita	x										
2	Active labor force	-0.44	x									
3	Highly qualified labor force	0.70	*	x								
4	Full-timers	*	*	-0.25	x							
5	Part-timers	0.31	*	*	*	x						
6	Marginal part-timers	0.68	-0.45	0.55	-0.48	*	x					
7	Unemployed	-0.26	*	*	-0.72	-0.56	*	x				
8	Self-employed	0.58	-0.24	*	0.26	0.39	0.35	-0.60	x			
9	Unskilled workers	-0.75	0.30	-0.57	-0.23	-0.31	-0.44	0.53	-0.52	x		
10	Living space per capita	0.61	-0.32	*	0.34	0.46	0.25	-0.70	0.79	-0.64	x	
11	Homeownership	*	*	-0.41	0.54	0.41	-0.22	-0.73	0.44	-0.26	0.61	x
12	High school students	0.80	-0.27	0.57	*	0.42	0.53	-0.41	0.58	-0.76	0.62	*

Source: Statistik Austria: Census 2001; author's calculation.

By examining the variables associated with „housing“, income shows a positive correlation regarding living space per capita. The higher the average income in a spatial unit, the more living space is available for the residents in this unit. Vice versa, the higher the rate of unemployed or unskilled workers, the more available living space per capita is declining.

Finally, there is convincing evidence that the assumed correlation between the variable “high school students” and the socio-economic indicators as well as the local infrastructure actually exists. The higher the income in a spatial unit – together with the percentage of self-employed and highly qualified labor force, that refers to university graduates, – the more teenagers between 15 and 19 remain in the educational system. Vice versa, the school attendance rate is declining in a specific unit, if the percentage of unemployed or unskilled workers is high. Social inequality is therefore something that can be inherited, and social inequalities also continue in the next generation as a result of discrimination in education.

Multivariate Factor Extraction

Based on the analysis of bivariate correlations it might be assumed that the spatial structure of social inequality is defined by only one differentiation: income which is the result of qualification and labor market position. If this refers to the real

situation, it can be revealed by Factor Analysis. It analyses the direct bivariate effects, examines the input of more independent variables and suggests a reduction of bivariate correlations to a few principal dimensions (factors). These factors are artificial features which are results of mathematical and statistical procedures and which cannot be measured directly.

The technique chosen for factor extraction involves primary components and, subsequently, oblique rotation. Factors have been selected according to the criteria of eigenvalues. The matrix of loadings presents an interesting, plausible and not at all trivial explanation of the socio-economic structure and its related spatial dimensions of social inequality in the Vienna Metropolitan Region. It indicates that is not sufficient to emphasize just one dimension of social inequality – for example income –, because the matter is much more complex (*Table 4*).

Table 4

Factor loadings – oblique rotated factor matrix

Nr.	Indicator	Factor 1	Factor 2	Factor 3
1	Income per capita (estimated)	0.905	-0.337	-0.540
2	Active labor force	-0.252	0.202	0.800
3	Highly qualified labor force	0.887	*	-0.225
4	Full-timers	*	-0.633	0.594
5	Part-timers	0.245	-0.590	*
6	Marginal part-timers	0.661	*	-0.770
7	Unemployed	*	0.925	-0.200
8	Self-employed	0.417	-0.746	-0.402
9	Unskilled workers	-0.837	0.546	0.202
10	Living space per capita	0.436	-0.865	-0.296
11	Homeownership	*	-0.838	*
12	High school students (aged 15–19 years)	0.859	-0.475	-0.326
	Explained Variance (in %)	35.0	30.4	13.9

Annotation: Loadings between .200 and -.200 are represented by ‘*’. The technique chosen for factor extraction involves primary components and, subsequently, oblique rotation; factors have been selected according to the criteria of eigenvalues.

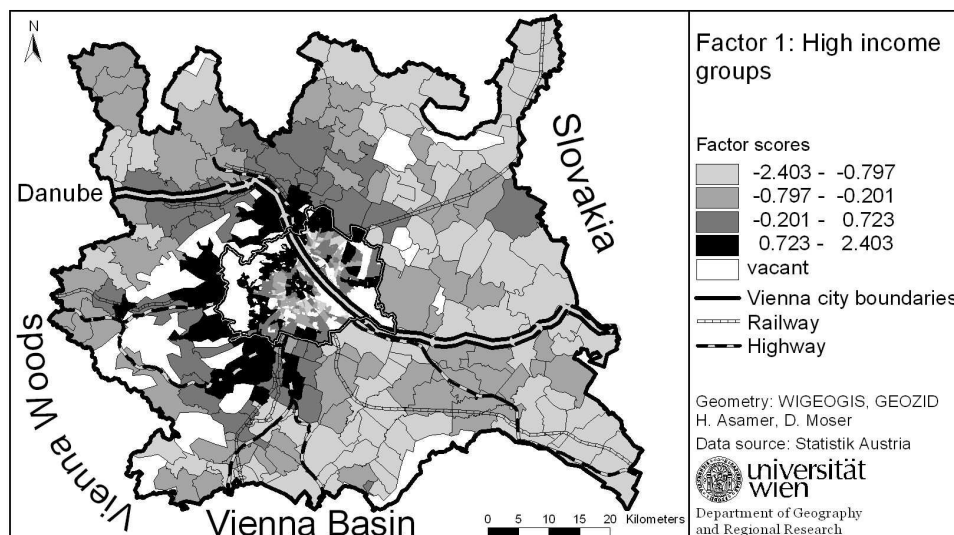
Source: Statistik Austria: Census 2001; author’s calculation.

The first factor describes the effect of position on the labor market and income on the spatial pattern of social inequality. The first factor is certainly the most important one and explains 35% of total variance of all input variables. It shows high loadings with regard to the percentage of the highly qualified labor force, to the level of income and the school attendance rate as indicated by the share of high school students aged 15–19 years, and – interestingly, to the marginal-employed part-timers.

The spatial pattern of this factor is clear (Figure 31). Its significance is obvious in the Vienna city center and in the upper-class districts in the west of the city. It continues throughout the privileged south-western sector of the suburban region along the slopes of the Vienna Woods as far as the fringe of the Vienna Basin, and it also spreads to the suburban districts in the north. The factor loadings decrease with a growing distance to the city. This means: the further one moves from the city limits, the lower the average income and the more distinct is the decline in the percentages of highly qualified labor force and in the school attendance rate of the 15- to 19-year-olds. Middle and upper classes are replaced by a social structure dominated by lower and middle classes.

Figure 31

Dimension of income, Vienna Metropolitan Region 2001



The second factor basically resulting from unemployment and indicators related to housing turns out to be independent of the social stratification. High unemployment rates in a specific spatial unit, combined with a low rate of homeownership and limited living space per capita cannot simply be matched with a very basic social model of “top-bottom”. This factor contributes with a value of 30% to the explanation of the total variance of the analyzed variables and therefore has to be regarded as very important for the set of data and for the entire Vienna Metropolitan Region.

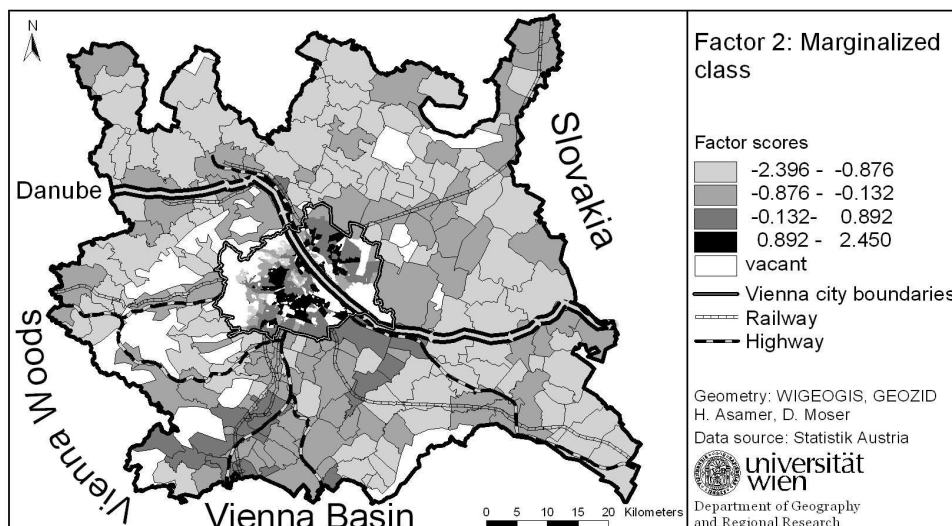
Unemployment together with a low standard of housing is a typical phenomenon of the City of Vienna and a small number of selected communities in the southern part of the suburban region which are dominated by old industries

(Figure 32). Within the city proper all census tracts along the Gürtel, but also a few in the east, in the districts of Floridsdorf and Donaustadt are characterized by this combination of variables. It can be assumed that even more variables which are not included in this analysis correlate with this factor: the proportion of late-19th century working class apartment blocks, the proportion of low-standard apartments lacking up-to-date sanitation and the proportion of immigrants not holding Austrian citizenship.

Häussermann and Siebel (1987) quite drastically referred to this structure as the marginalized city of peripheral groups, the excluded, the jobless without any chance of work, the immigrants. The two authors regarded the typical neighborhoods inhabited by these groups as mentally segregated, the complete opposite to the globalized or international city of the affluent, educated and highly-qualified population.

Figure 32

Dimension of marginalization, Vienna Metropolitan Region 2001

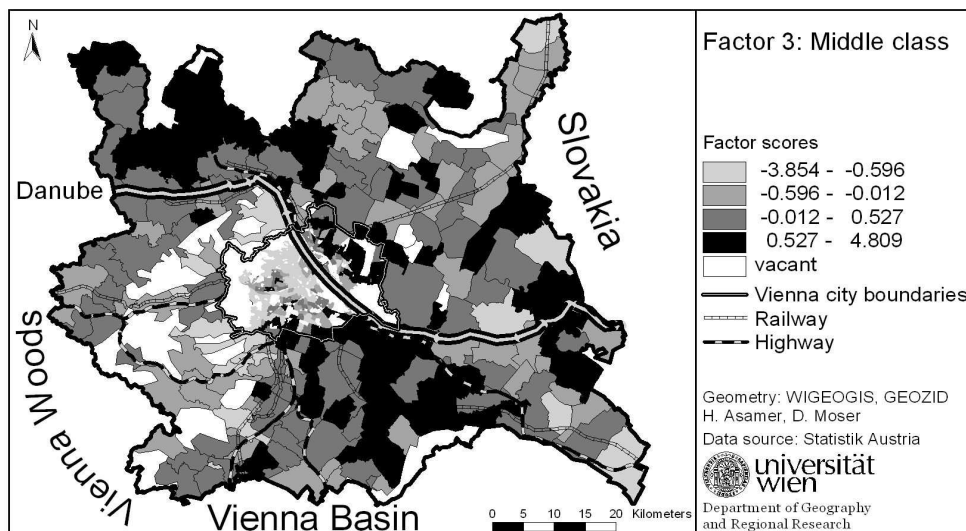


At last a third factor which characterizes social inequality but cannot be linked to the other two factors has to be considered. Explaining 14% of the total variance of all indicators selected for the analysis, this third factor is not so significant, but it cannot be totally ignored. It is constituted by a high percentage of members of the active labor force, full-timers and low rates of marginal part-timers. This factor refers to the traditional world of labor, which can either be influenced by agriculture, industry or trade and which cannot unquestioningly be assigned to the

“top” or to the “bottom”. What is meant in this context is the “normal” city providing work, supplies and housing (see Häussermann and Siebel 1987), which is neither marginalized nor particularly chic, modern, fashionable or trendy. In Vienna this applies to some parts of the working class districts like Ottakring along the Gürtel in the western section of the city, but also the newly-developed housing estates in the south, close to the city limits (parts of the districts Liesing and Favoriten). In addition, most of the communities in the southeast, east and north of the city can be counted among the “normal”, ordinary ones, which are neither particularly upscale nor extremely marginalized (Figure 33).

Figure 33

Dimension of the middle class, Vienna Metropolitan Region 2001



Conclusion

Social inequality always has a spatial dimension, which is the main focus of the present article. At first, it has proven the spatial dimensions by means of simple univariate statistics and, in a next step, by means of factor analysis. The empirical analysis comes to the same conclusion as Häussermann and Siebel, who already introduced the idea of a city divided into three sectors in 1987.

This type of a city is characterized by three separate social milieus, which are segregated from each other and whose development is due to completely different processes. The first sector is the city of the rich and educated who benefit from

the globalized economy. They live in the city center, the upper-class neighbourhoods and the “affluent” suburbia. They use the airport, cultural facilities in the city and high-quality services. These provisions determine their scope of action.

In this paper the second city refers to the city of the marginalized groups, consisting of the unemployed, an underclass dealing with multiple social problems like poverty, homelessness and drug abuse, and, finally, specific groups of immigrants. Their city is made up of small units and they live in rather distressed neighbourhoods providing cheap housing. They do not have any contact to the globalized economy and their actions are restricted to their immediate neighborhood or a few intersections of public transport.

Last but not least, the third city has to be mentioned, the “normal” city providing work, supplies and housing. Its population consists of “ordinary” people, neither particularly affluent and well-educated nor extremely poor or marginalized. It is the city of the middle class, making up the largest part of the entire Vienna Metropolitan Region. It comprises the “working-class” districts of the city itself, reaches far beyond the city limits and can be found in all areas with attractive property prices. The inhabitants rarely use the airport, the high-class cultural facilities and the globalized service industries in the city. Their actions concentrate on where they live and work and on a limited number of cultural and sports facilities. The third city is not directly influenced by globalization, but by local and national political and planning decisions.

This city that is divided into three parts and the suburban region cannot be interpreted statically, but is undergoing continuous transformation. The first city can expand into sectors of the third city, the second city can relocate its small-scale centres. The dynamics of this development has not been topic of this analysis and therefore predicting the future can rather be understood as clairvoyance than as a result of a profound analysis. But it can be assumed that due to globalization and internationalization on the one hand and the ongoing transformation of the welfare system on the other hand the polarization of social inequality and, thus, the division of the city in three parts will rather be increasing than decreasing. Especially the first city will be the “powerhorse” of the economic development and, at the same time, the marginalized city will be growing, due to a social network that nowadays is not as tightly knit as it used to be. Polarizations will be more characteristic of the social reality in a city than a homogeneous structure.

The Czech case study – Social Inequalities in Urban Areas and Their Relationships with Competitiveness in the Czech Republic

Metropolitan areas, cities and their economic and urban development

Metropolises and metropolitan areas

The settlement structure of the Czech Republic is very fragmented with cities surrounded by a large number of small settlements with administratively independent municipal governments. In 2001, the country consisted of 6,258 municipalities (obec) and 14 regions (kraj) both with elected representations. The capital city of Prague and other so-called statutory towns can be further subdivided into boroughs. 60 per cent of Czech municipalities have less than 500 inhabitants and further 20 per cent population between 500 and 1,000. 90 per cent of municipalities have population below 2,000. There are four major cities with population over 150,000 inhabitants: Prague (1169 thousands inhabitants), Brno (376), Ostrava (317) and Plzeň (165). A cluster of six cities with population between 90–105 thousand inhabitants follows: Olomouc (103), Liberec (99), České Budějovice (97), Hradec Králové (97), Ústí nad Labem (95) and Pardubice (91). All these cities are regional capitals. The remaining regional capitals are smaller: Zlín (81), Karlovy Vary (53) and Jihlava (51). There are other 9 cities with population between 50-90 thousands inhabitants.

Metropolitan regions do not exist as independent administrative units in the Czech Republic. No official list of and spatial delimitation of metropolitan areas exists even for statistical purposes. Usually, Prague is considered to be a metropolis of international significance. In some analyses, the second largest city of Brno is seen as metropolis. These cities have their metropolitan areas. Other cities have their city regions.

Therefore here we consider Prague and Brno as the country's two cities that have their metropolitan areas. With a population of 1.2 million, Prague is the country's largest city and its capital. It is a dominant centre in the Czech settlement and regional systems, not only because of its population size, but also because it accommodates most of the government institutions and economic control and command functions. Prague is the gateway to the country for foreign investors (*Drbohlav–Sýkora, 1997*). It is situated in the middle of Bohemia, the western part of the Czech Republic. Brno is the country's second largest city; it is sometimes considered as the “capital” of Moravia, the eastern part of the country.

With nearly 400,000 inhabitants, as a settlement centre it ranks second in the national urban hierarchy. Brno is the seat of the Supreme Court; the city hosts the most important trade fairs in the country and is a major centre of university education.

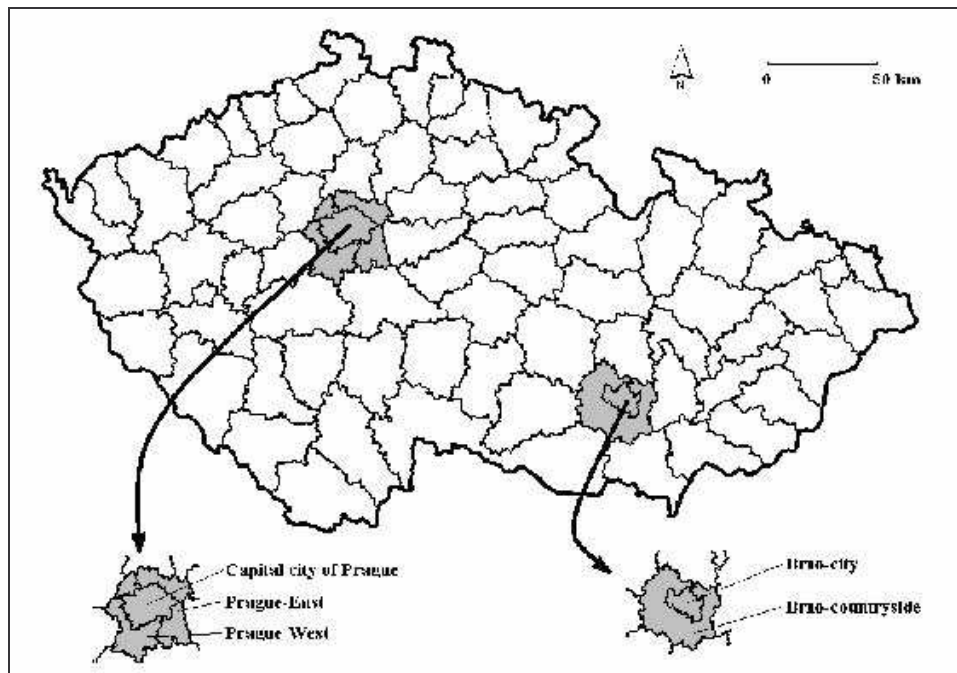
Metropolitan areas consist of core cities (one municipality) and a large number of smaller municipalities ranging from villages of a few hundred inhabitants to small towns with a population in tens of thousands. There is no official or universally accepted method of spatial delimitation of metropolitan areas. The most often used delimitation of metropolitan areas uses amalgamation of core cities and surrounding districts. This approach allows for the utilisation of data available at district level. However, the districts were abolished and they do not exist anymore as administrative spatial units. Furthermore, for some analyses a more detailed delimitation is more useful. Basic data are presented for the delimitation using districts.

The Prague Metropolitan Area (PMA) covers an area of 1666 sq. km and has 1.35 million inhabitants living in the city of Prague and the two surrounding districts of Prague-East and Prague-West. The Brno Metropolitan Area (BMA; 1338 sq. km) consists of the two districts of Brno-City and Brno-Countryside with a total population of 535,000 people (*Figure 34, Table 5*).

The metropolitan areas can be divided into four main zones: (1) centre; (2) inner city; (3) first (inner) suburban zone; (4) second (outer) suburban zone. This subdivision of metropolitan areas respects urban morphology and takes into account the boundaries of local government territorial units. Both Prague and Brno are municipalities. Therefore, from the point of view of local government, their rights and responsibilities are on the same level as those of the small municipalities around them. They are, however, municipalities of a special kind and can be divided (at their own discretion) into boroughs, each with its own elected local government. The spatial delimitation of metropolitan zones uses borough and municipal boundaries. The suburban zone is described as the area outside the compact city and within the metropolitan area. The administrative boundary of a Czech city extends far beyond its compact built-up area and thus the city's administrative territory contains part of the suburban zone. Therefore, the suburban zone in a metropolitan area consists of a zone within the administrative boundary of the core city together with areas outside it. The city administrative boundary is the division line between the first and second or the inner and outer suburban zones. The second (outer) suburban zone is defined as the districts around the core city (or municipalities within these districts). In the case of Prague, there are two districts Prague-West and Prague-East; in the case of Brno, there is the Brno-Countryside district (*Figure 35*).

Figure 34

Location of metropolitan areas of Prague and Brno within the territorial structure of districts



Source: Sýkora, Ouředníček 2007.

Table 5

Prague and Brno – basic data from Census 2001 (1.3.2001)

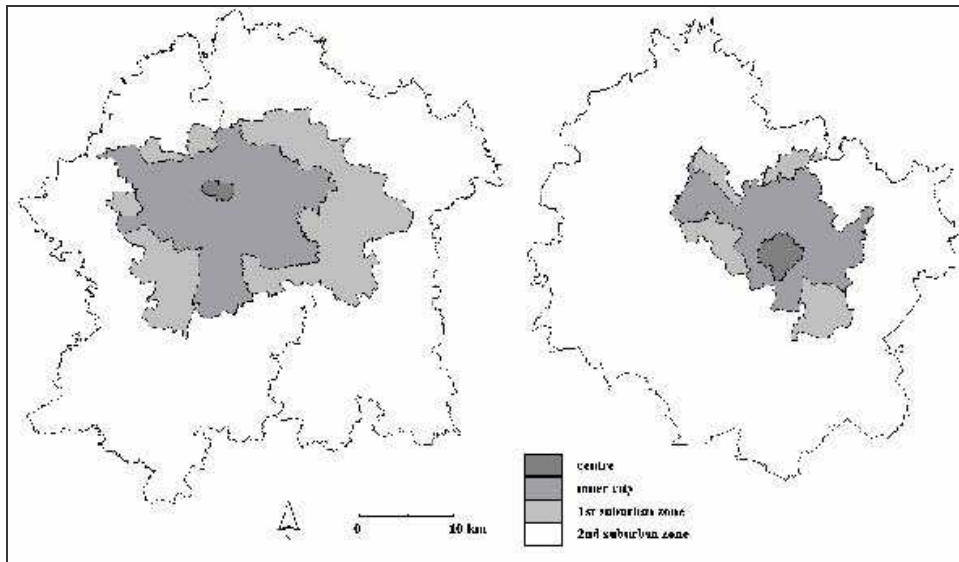
Region	Area (sq. km)	No. of municipalities	Population	Density of population
Prague				
City	496	1 (57)*	1,169,106	2357
Hinterland	1170	171	179,150	153
Total PMA	1666	172 (228)*	1,348,256	810
Brno				
City	230	1 (29)*	376,175	1636
Countryside	1108	137	159,169	144
Total BMA	1338	138 (166)*	535,341	400

*Number of boroughs in the cities of Prague and Brno.

Source: Sýkora–Ouředníček, 2007.

Figure 35

Zones of Prague and Brno Metropolitan Areas



Source: Sýkora, Ouředníček 2007.

The division of city territory into centre, inner city, and inner suburban zone reflects the historical development of the intra-urban spatial structure. Both cities have medieval cores in which government and commercial functions are now concentrated; these cores play the role of a city centre. A historic core/city centre is encircled by an inner city made up of densely-built-up residential neighbourhoods and old industrial zones dating from the industrialization and rural-to-urban migration of the 19th century. In the inter-war period of the 1920s and 1930s, low-rise and low-density residential areas consisting of detached and terraced single-family houses were constructed around the inner city in both cities. During the communist period, zones were constructed consisting of housing estates with high-rise prefabricated apartment blocks and new industrial districts spatially separated from the residential areas. In both cities, these zones form compact built-up areas. Beyond the compact city, but still within the administrative boundaries, is a zone characterized by a rural landscape with small villages and agricultural land. This zone is now the subject of intensive transformation through both residential and non-residential suburbanization. The area is defined as the first (or inner) suburban zone.

More detailed analyses use delimitation of metropolitan areas as functional urban regions (FUR) based on the commuting to work. FUR consists of municipalities with the most intensive commuting to the core city. FUR are delimited as

consisting of municipalities with the share of 30 (alternatively 25) and more percent of commuters from economically active population (EA) in given municipality to the core city. The municipalities fulfilling the criteria usually do not form a spatially contiguous area. Therefore, the principle of territorial coherence is applied adding those municipalities that are inside and leaving those that are outside of the geographically compact area. This method allows for a precise analysis of certain urban and metropolitan processes such as suburbanization and for comparison of metropolitan areas. However, some data, especially about economic development are not available for such territory. As the method involves discretionary decision of a researcher about inclusion or exclusion of some municipalities at the edges of metropolitan area, the actual delimitations for a concrete metropolitan area may differ. In the later analysis of sociospatial inequalities one of such delimitations is used. The total population within this delimitation of Prague Metropolitan Region was 1 357 168 in 2001. It shows that the difference from the rough delimitation using district boundaries in terms of total population size is not significant. The major difference is in larger territory and inclusion of small municipalities which residents are dependent on Prague job market where they commute for work.

Concerning metropolitan management, Prague metropolitan region extends over the territory that includes the City of Prague (that is at the same time Region Prague) and surrounding hinterland that is part of administrative region Central Bohemia, which is in this case also identical with cohesion region Central Bohemia. The territory of Prague metropolitan region thus stretches over whole (Prague) or part (Central Bohemia) of two NUTS 3 administrative as well as over two NUTS 2 cohesion regions and is under jurisdiction of governments responsible for these territories. No institutional arrangement for joined metropolitan government exists at present time. In past 15 years several policy and planning documents have been prepared and some approved or are under preparation or revision. The strategic and physical plans (that were approved and have impact on metropolitan development) deal separately with Prague, Central Bohemia or individual municipalities. Brno metropolitan region extends over the part of territory of NUTS 3 administrative region South Moravia, which is part of NUTS 2 cohesion region South-East. No institutional arrangement for joined metropolitan government exists. However, at present new Master Plan for the City of Brno and Regional Plan are under preparation with attempts to coordinate their mutual aims.

Conditions of urban development¹⁷

The urban development can be characterized by population data. However, provided we want to explain urban change we have to turn to interpret economic development and its uneven spatial impacts on regions and cities. Concerning demographic change, it has been characterized by the decline in the total population and an ageing population caused by very low fertility and by shifts in the structure of households with a growing share of single member households and a declining share of couples with children. These changes have been especially pronounced in major cities (*Table 6–8*).

Urban change is mainly associated with the geographic redistribution of population. While major cities loose population through migration, small municipalities gain it. A large part of out-migration is towards suburban areas, especially around Prague and Brno (*Čermák, 2004*). There is a remarkable regional differentiation in housing construction with booming suburban areas, namely around the capital city of Prague, where the wealthiest Czech population is now building new homes. However, the transformation in settlement pattern has been rather conditioned by economic change in comparison to demographic change. Therefore, our attention now turns to economic restructuring and its effects on urban development.

Table 6

The development of population in selected major cities and towns (1970–2001)

	Number of inhabitants (Census)						
	Population				Change in percent		
	1970	1980	1991	2001*	1980/ 1970	1991/ 1980	2001/ 1991
Czech Republic	9,807,696	10,291,927	10,302,215	10,230,060	4.9	0.1	-0.7
Prague	1,140,654	1,182,186	1,214,174	1,169,106	3.6	2.7	-3.7
Brno	344,218	371,463	388,296	376,172	7.9	4.5	-3.1
Ostrava	297,171	322,073	327,371	316,744	8.4	1.6	-3.2
Plzeň	152,560	170,701	173,008	165,259	11.9	1.4	-4.5

*including inhabitants with long term residency permit.

Notes: the population is calculated for the territorial delimitation in 2001.

Source: Sýkora, 2005; Census 2001, Czech Statistical Office.

¹⁷This section is based on Sýkora, L. (2005) The Czech Republic. In: Baan, A., van Kempen, R., Vermeulen, M., eds., *Urban Issues and Urban Policies in the New EU Countries*. Ashgate. and Sýkora, L. (2006) *Urban Development, Policy and Planning in the Czech Republic and Prague*. In: Altrock, U., Günter, S., Huning, S., Peters, D., eds., *Spatial Planning and Urban Development in the New EU Member States: From Adjustment to Reinvention*. Ashgate.

Table 7

The age structure of population, share in percent (1991–2001)

Age	0–14		16–64		65+	
	1991	2001	1991	2001	1991	2001
Czech Republic	21.0	16.2	66.3	70.0	12.7	13.8
Prague	18.5	13.4	66.2	70.4	15.4	16.2
Brno	19.7	14.4	66.1	70.0	14.2	15.7
Ostrava	20.8	16.4	67.8	71.0	11.3	12.7
Plzeň	19.8	14.1	67.9	70.8	12.4	15.1

Source: Sýkora 2005, Census 2001, Czech Statistical Office.

Table 8

The structure of households in 2001 (share in percent)

	couples without children	couples with children	family of single adults	single-parent with children	singles	multimember non-family households
Czech Republic	29.1	25.5	5.5	8.0	29.9	2.0
Prague	24.9	18.3	6.8	9.5	36.8	3.6
Brno	26.7	21.3	6.2	9.5	33.3	2.9
Ostrava	26.2	23.2	5.6	9.3	33.9	1.9
Plzeň	29.0	20.6	5.5	8.9	34.2	1.8

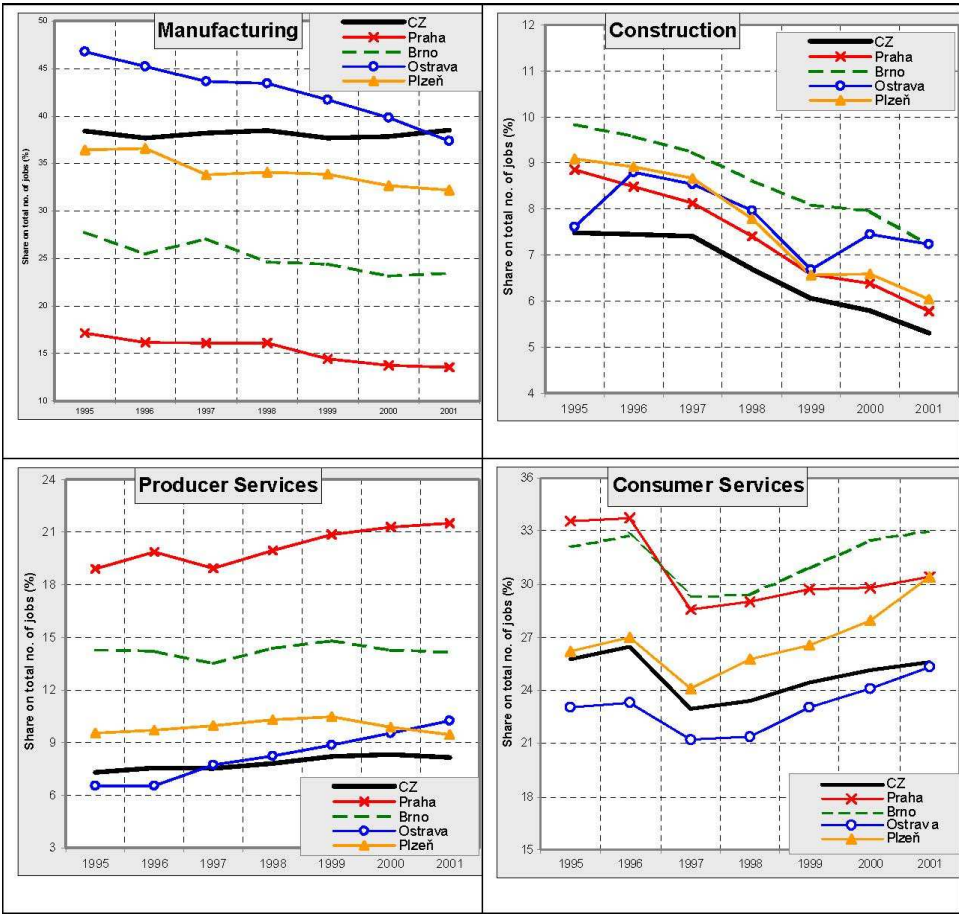
Note: Children are dependent children. A family of single adults can be mother with a child aged over 26.

Source: Sýkora 2005, Census 2001, Czech Statistical Office.

There has been a remarkable difference in the dynamics of urban development and urban restructuring between major Czech cities and their regions. The urban growth and decline has been influenced by economic restructuring on the national level and strongly conditioned by the position within the international economy. The variability was especially influenced by the position of individual cities in the hierarchical divisions of labour within the Czech economy being integrated into the international economic system. The potential of cities was given by their inherited economic base, geographic position and attractiveness for new investments. The urban economic restructuring has been characterized by deindustrialization and tertiarization and strongly affected by local urban labour markets. While employment in manufacturing and construction declined, the number of employees in services increased. Despite the universal decline in manufacturing, there are still major differences between cities with Prague having less than 15 per

cent of jobs in manufacturing while the 3rd largest city Ostrava has 37 per cent (Figure 36). In Prague, and to certain extent in Brno and some other towns, the decline in manufacturing was balanced by the increase in the service sector. There are, however, also towns and cities that have been severely hit by the economic decline with very limited options for alternative growth.

Figure 36
The share of jobs in selected economic sectors in cities of Prague, Brno, Ostrava and Plzen and compared with the Czech Republic (1995–2001)



Note: Data before 1995 are not comparable; there was change in method between 1996 and 1997.
 Source: Czech Statistical Office.

The capital city of Prague has strengthened its position as a prime national centre and has assumed the role of a gateway, linking the national with international economy (*Drbohlav–Šýkora, 1997; Dostál–Hampl, 2002*). The inflow of foreign direct investment and the growth in advanced services confirmed Prague as the country command and control centre. The city is also a major national logistic hub with a huge pool of relatively wealthy consumers. The growth in advanced producer services greatly influenced the structure of jobs, as well as salary levels (*Table 9*), and the booming property development, which makes the capital city quite different from the rest of country. The capital city of Prague is the only city where a sufficient number of new jobs were generated to replace the losses from deindustrialization. There are even structural shortages of labour and low paid jobs, and in a number of instances these jobs are taken by labour migrants from Eastern Europe.

Table 9

Comparison of an average wage in cities with the average wage in the Czech Republic (100)

Year	Praha	Brno	Ostrava	Plzeň
1991	108	99	112	103
1993	123	99	112	102
1995	129	103	112	110
1997	132	103	109	108
1999	138	103	105	107
2001	142	103	104	106

Source: Czech Statistical Office.

In the Czech Republic, there is no other city that would assume the role of gateway between the international and the local economy. This affects especially the second largest city Brno and its metropolitan area, where employment in traditional manufacturing quickly declined. Brno aspired to play a more important role than merely being a manufacturing centre. The city, for instance, initiated the establishment of a Czech Technology Park and intended to develop a huge development project of so-called South Centre. Masaryk University in Brno accepts the highest number of new students from all Czech universities. However, in reality the major growth in Brno has been in retail, i.e. the sector that offers only lower level salaries. The city government finally started to attract production capacities to the newly established industrial zone and the city also succeeded to develop as an important logistic/distribution/warehousing hub.

New labour opportunities in other cities were associated mainly with the growth of individual entrepreneurship, growth in retail sector and state admini-

stration. This however, has not been sufficient to cover the decline in industrial jobs. Therefore, all cities, except Prague attempted to attract new foreign investments to supply jobs in manufacturing. In some other cities, there has been strong reindustrialization. Consequently the establishment of new production capacities supplied new jobs that were substituting for decline of employment in traditional manufacturing production. As these cities could not compete for service jobs they attempted to attract foreign direct investments (FDI) into manufacturing by offering cheap land equipped with necessary technical and transport infrastructure for construction of enterprises, and a cheap and skilled labour force. Despite increasing overall unemployment, the rates in these cities and towns are below national average (*Table 10*).

Table 10

The unemployment rate, %

Year	Czech Republic	Prague	Brno	Ostrava	Plzeň
1998	7.5	2.3	6.0	12.0	6.7
1999	9.4	3.5	8.1	15.9	8.3
2000	8.8	3.4	7.9	16.6	7.3
2001	8.9	3.4	8.6	16.2	7.2
2002	9.8	3.7	10.0	17.2	7.4

Source: Czech Statistical Office.

Some cities have not succeeded in the competition for new investments and now exhibit decline and unemployment. Their situation is usually a combination of severe decline of industries inherited from Communism and a low current desirability for new investors due to the bad quality of the physical and social environment, and geographic distance from the western frontier (in the case of Ostrava this is further strengthened by the non-existing highway connection to North Moravia). Cities and towns in old industrial regions in North Bohemia and North Moravia formerly associated with mining, metallurgy and chemical production are those that have been most severely hit by de-industrialization and have not succeeded to attract new major investments. Their current situation is shaped by economic problems that produce unemployment as high as 20 per cent and more. The economic decline in these cities is not only the question of cities itself but whole regions with a high concentration of heavy industries. The support for economic growth in these areas remains an important task for national economic and regional policy.

Each city and each local labour market has been impacted by a combination of several forces including inherited economic structure, contemporary attractive-

ness for foreign investors and activity of local governments in attracting them. While all cities have been affected by deindustrialization, only some benefited from the new developments. In general, Prague quickly adapted as the centre of advanced services, some other cities benefited from reindustrialization and growth in consumer services. However, there are also cities that were exposed to the severe consequences of deindustrialization that have not been balanced by growth in other sectors of the local economy. The differentiated external conditions have been decisive for urban development in particular cities.

Urban spatial reorganization and associated urban social problems

Major urban changes occurred within the internal space of cities. On the supply side the urban restructuring has been conditioned by the government directed reforms, especially privatization and price and rent deregulation, which have created conditions for the establishment of urban property markets. The demand side has been largely differentiated between cities. In Prague, the newly emerged actors in private sector, mainly foreign firms, fuelled the operation of land markets and started to reorganize land use and reshape the historically developed urban structure. This has also happened in other towns and cities, but these developments have been smaller in the extent of changes and have taken other forms. For instance, new office buildings of international standard have been developed nearly exclusively in Prague (*Sýkora, 2007*), while shopping centres have mushroomed over the whole country.

Czech cities are characterized by small urban cores of medieval origin, large inner cities originating with the industrial revolution of the second half of 19th century, further developing through the first half of the 20th century, and vast areas of new industrial and residential estates from Communist times. The urban growth after 1989 concentrated in the most attractive locations of the city centre, some adjacent nodes and zones in inner city, and in numerous suburban locations. The main transformations in the spatial pattern of former communist cities and their metropolitan areas included (1) the reinvention, commercialization and expansion of city centres, (2) the dynamic revitalization of some areas within the overall stagnation in inner cities, and (3) the radical transformation of outer cities and urban hinterland through commercial and residential suburbanization (*Sýkora, 1999a; Sýkora et al. 2000*). The city centres and suburban areas have been territories with the most radical urban change. Most of the 1990s were characterized by huge investment inflow to city centres causing their commercialization and decline in residential function, albeit substantial physical upgrading. Since the late 1990s, decentralization occurred with investments flowing to both out-of-centre and suburban locations. Central and inner city urban restructuring involved the

replacement of existing activities with new and economically more efficient uses and took the form of commercialization, gentrification, construction of new condominiums, brownfield regeneration, the establishment of new secondary commercial centres and out-of-centre office clusters (Sýkora, 2005, 2007; Temelová, 2004). Since the late 1990s, suburbanization has become the most dynamic process changing the landscapes of metropolitan regions. It brings a complete reformulation of metropolitan morphology, land use patterns and socio-spatial structure (Sýkora–Ouředníček, 2007).

Post-communist transformations brought uneven spatial development within cities, redifferentiation of land use patterns and an increase in socio-spatial segregation (Sýkora, 1999b) thus changing the formerly rather homogeneous space of socialist cities. The uneven character of post-1989 urban restructuring was caused not only by decline of some urban zones and areas, but also by the investment flowing only to some parts of the built environment, while many areas were omitted. Both decline and growth are causing a number of urban problems.

Since the beginning of the 1990s, the central parts of cities have been experiencing the strong pressure of new investments. While these investments contributed to physical upgrading and brought more economically efficient land use, they also contributed to the densification in central city morphology. The higher density and intensity of use contributed mainly to increased use of the central parts of cities including rapid growth in car traffic and consequent congestion (especially critical has been the situation in Prague). The disappearance of green spaces in inner yards is another effect of this process. Furthermore, as Czech cities have medieval cores there were numerous conflicts between investors and the protection of historic buildings and urban landscapes. Commercialization, i.e. the increase in the share of commercially used floor-space led to the rapid decline of residential land use in inner cities and the out-migration of residents. Consequently, there are now blocks of central city properties without any residential function – a problem known from western cities.

There are two particular zones within Czech cities that are currently threatened by downgrading. These are old industrial districts and post Second World War housing estates. Inner urban industrial areas are affected by economic restructuring and are becoming obsolete. Old buildings, contaminated land, and complex ownership patterns complicate the regeneration of these areas. Furthermore, in many cities and locations there is virtually no interest in their redevelopment. Brownfields left by deindustrialization, and in some cities such as Olomouc by demilitarization, are becoming one of the major problems areas for many Czech towns and cities. Up to now there have been rather scarce examples of the reuse of former industrial areas, namely associated with the redevelopment driven by commercial functions in locations near city centres, such as Smíchov in Prague (Temelová 2004), or specific functions, such as the construction of new multipur-

pose sport and cultural hall Sazka Arena in Prague Vysočany associated with the World Hockey Championship 2004.

Another problem area are housing estates of large multifamily houses constructed with the use of prefabricated technology during the 1960s–1980s for tens of thousands of inhabitants. Their life span and technical conditions call for regeneration; otherwise this will lead to physical and social decline. Due to the extent of housing estates and current out-migration of more wealthy people from them, their areas may present one of the largest concentrations of physical and social problems in coming decades. This may concern in particular those cities whose labour markets are strongly affected by economic decline. The population affected by unemployment usually concentrates in housing estates. Rent arrears and limited financial resources of the owners contribute to low level of maintenance, disrepair and physical dilapidation. Even in booming cities, there is an ongoing remarkable differentiation between housing estates. The residential areas that are well located on public transportation and near green areas are perceived as good living addresses and attract new investments into apartment houses, offices and retail facilities. However there are also residential districts with a higher concentration of manual workers and with worse accessibility by public transport, and they show significant signs of decline.

The major growth in postcommunist metropolitan areas is concentrated in the suburban zone. The future of brownfields, housing estates and suburbs is interlinked together. If brownfields and housing estates are omitted and get on the spiral of ongoing decline, firms and wealthier people are more likely to leave for suburbs, while inner cities will be characterized by dilapidation and decline.

Suburbanisation itself can become a major problem. The compact character of the former socialist city is being changed through rapid commercial and residential suburbanisation that takes the form of unregulated sprawl. New construction of suburban residential districts is fragmented into numerous locations in metropolitan areas around central cities. Noncontiguous, leap-frog suburban sprawl has more negative economic, social and environmental consequences than more concentrated forms of suburbanisation. The societal costs of sprawl are well-known from North America and Western Europe and now threaten sustainable metropolitan development in the Czech Republic. This concerns not only residences but also new commercial facilities. For instance, suburbanization of retail facilities has completely reshaped the pattern of commuting for shopping. While in 1990s, most retail was concentrated in central city shopping areas and in secondary centres within cities, at present a large share of shopping is realised in suburban hypermarkets and shopping malls, where people travel by car from the inner city. A very specific example is the city of Brno, where most new shopping facilities were built south of town while most of new suburban residential districts are in naturally valuable areas north of town. Consequently, people commute to shop

through the inner city contributing to traffic congestion. Another major impact of suburbanization is in the field of spatial mismatch in the distribution of jobs in metropolitan areas. Suburban jobs are namely in retail, warehousing and distribution with low paid employees taken by people from inner city and surrounding region. On the other hand suburban areas are now becoming home of wealthy population that commute to their office jobs in central and inner cities. Therefore, there is developing spatial mismatch between the location of jobs and residences, contributing to increased travel in metropolitan areas and consequent effects on the quality of environment and life. The outcomes of rapidly developing suburbanisation in terms of spatial distribution of people and their activities in metropolitan areas form conditions that will influence the life of society for several generations. Therefore, patterns of urbanisation in metropolitan areas shall become important targets of urban and metropolitan planning and policies that intend to keep a more compact urban form.

The postcommunist cities are also being impacted by increasing segregation. With growing income inequalities and established housing property markets, local housing markets are divided into segments that are expressed spatially (*Sýkora, 1999*). Wealthy households usually concentrate in city centres, high status inner city neighbourhoods (both apartment housing and villa neighbourhoods and garden towns) and increasingly move to new clusters of inner city condominiums and especially to newly built districts of suburban housing. Less wealthy households concentrate in inner city zones of dilapidation usually associated with declining industries and brownfield formation, and in some post Second World War housing estates especially those originally built and allocated as enterprise housing where larger share of blue collar workers concentrate. A specific urban social problem is the segregation of parts of the Roma population in some cities, where they are intentionally allocated to local government housing in poor condition. Some local government purposefully built shelters for municipal tenants that do not pay rent and move them into this type of very simple housing that is usually segregated on the edge of urban areas. The processes of the separation of the wealthy citizens and the segregation of poor populations contribute to a changing spatial distribution of population according to social status, growing socio-spatial disparities, and can contribute to the weakening of social cohesion in our cities. The segregation processes are relatively slow; however, once started it will be difficult to later solve its undesirable consequences. Cities with high social disparities and social conflicts are not desirable places to locate new investments and thus social problems can threaten their economic viability and further add to the vicious circle of socio-economic decline.

Socio-spatial inequalities in metropolises

This part first touches on the issue of the level of socio-spatial inequality as it is the key aspect to understand post-socialist urban change. Secondly it provides the information about the distribution of social groups in urban space and especially those changes that are crucial for the understanding of the current situation in the level of socio-spatial inequality.

Inequality in the level of spatial distribution of social groups

We can start the discussion of socio-spatial inequalities with the main issue that characterizes the urban change in post-socialist period. The inequality in the spatial distribution of population (according to its various characteristics) in cities and their metropolitan areas has decreased for most of these characteristics during the 1990s. This could be expected in the case of demographic characteristics such as age or family size. During communism housing construction was usually concentrated in certain areas in which housing was allocated to a narrow cohort. This formed an uneven distribution of demographic groups across urban space. With the sharp decline of housing construction in the 1990s and decentralized market housing supply the concentrated housing provision does not play anymore such important role in the spatial distribution of mostly young households starting their life carrier. More surprising is that the socio-spatial inequality according to characteristics of socio-economic status diminishes as well. And this is a situation that was not expected. Contrary, the expectation was that capitalism will generate growing income and consequently social disparities and these will find its expression in growing socio-spatial inequalities. However this has not happened and the whole issue deserves very close attention and analytical scrutiny. The sociospatial inequalities increased only for social groups defined by their ethnicity or nationality. This is not much associated with ethnic groups that lived in post-socialist cities during Communism, but with immigrants on both ends of socio-economic status: wealthy managers and specialists of origin from developed countries and less wealthy migrants mostly from former socialist countries of Eastern Europe as well as Asia. However, the high spatial inequality in the distribution of population according to ethnic status is insignificant when measuring the level of exposure and isolation. The indexes of isolation are extremely low showing that these groups are not due to their small numbers isolated in urban space.

Not surprisingly, the highest socio-spatial inequality measured by index of segregation concerns the spatial distribution of population according to their ethnicity or nationality. In Prague metropolitan region, the indexes of segregation range from 58% for Romanies (Gypsies) to 31% for Ukrainians (measured for 1307 small territorial units within Prague Metropolitan Region). High socio-spa-

tial inequality also concerns economically active in primary sector (*Table 11, Figure 37*). However, this is largely impacted by the small size of this population and its spatial bonds to particular locations. Furthermore, the inequality in spatial distribution significantly declined between 1991 and 2001.

Table 11

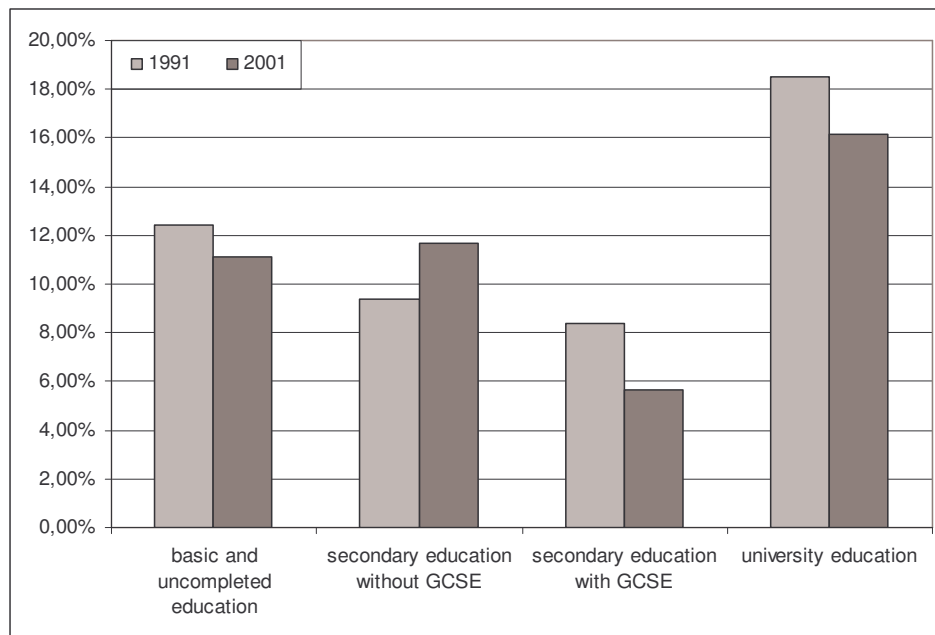
*Indexes of segregation for Prague metropolitan area
(basic settlement units), %*

Status	Indicator	Index of segregation		Index of isolation	
		2001	1991	2001	1991
e	Romany	8,17	3,90	0,32	1,09
se	economically active in primary sector	39,77	44,00	3,84	13,17
f	age 75+	22,90	24,96	8,74	8,70
f	complete family household with dep. children	19,20	22,79	21,89	30,97
f	age 60–74	16,69	19,20	1,68	17,07
se	university education	16,17	18,40	19,78	17,23
e	other than Czech, Moravian and Silesian nat.	14,99	14,74	8,67	4,12
f	single-person households (lodger or living alone)	14,44	16,40	37,00	3,86
f	complete family household without dep. children	13,30	13,42	27,00	2,80
se	economically active in tertiary sector	13,34	18,04	7,97	6,63
f	age 0–14	12,90	1,18	1,10	20,4
se	economically active in secondary sector	12,26	14,62	2,27	3,19
se	secondary education without GCSE	11,69	9,39	31,77	31,67
se	basic and uncompleted education	11,10	12,43	1,37	3,83
f	incomplete household without dep. children	9,98	14,80	7,16	11,24
f	age 45–59	9,78	12,19	24,87	19,10
f	age 30–44	9,67	11,69	20,30	24,00
f	incomplete family household with dep. children	9,60	9,24	10,00	11,70
f	age 15–29	7,27	6,38	22,80	19,97
se	secondary education with GCSE	0,68	8,42	30,22	30,02
e	Vietnam nationality	7,19		1,17	
e	EU15 citizenship	42,79		1,94	
e	Russian nationality	32,77		1,71	
e	Ukrainian nationality	31,42		3,13	
e	foreigners (persons without Czech citizenship)	2,46		7,00	
se	unemployed	11,60		6,02	

Source of data: Census 1991, 2001, Czech Statistical Office.

Figure 37

Indexes of segregation for population in Prague according to achieved education (1991 a 2001, basic settlement units)



Source of data: Census 1991, 2001, Czech Statistical Office.

Beside Romanies, the only significant increase in the inequality concerns population without full secondary education (with GCSE – general Certificate of Secondary Education, i.e. literally population with vocational training with consequently restricted opportunities on labour market and lower income level). The least unequal socio-spatial distribution concerns population with full secondary education. This inequality furthermore in 1991–2001 diminished similarly like in the case of university educated population.

Mechanisms of uneven spatial distribution of social groups

Therefore, the question is what has been happening. Which mechanisms contributed to the decline in the socio-spatial inequality of population according to socio-economic status measured by indices of segregation. The major factors behind changes in socio-spatial patterns in metropolitan areas in the 1990s have been (1) the increase in income inequalities and therefore of the housing demand and (2)

the transformation in housing system, especially the growing impact of property market operation on housing in terms of increasing differentiation of housing supply. Increasing social disparities within population and growing differences within the geographical pattern of housing stock should theoretically contribute to the increase in socio-spatial disparities. Differentiated household incomes and differentiated prices and rents in the housing sector have created basic preconditions for the development of processes of socio-spatial (re)differentiation.

The socio-spatial inequalities can increase (or decrease) through the social and/or spatial mobility of population. If there is growing social inequality produced by upward social mobility of high social status population and downgrading of lower social status population, the socio-spatial inequality will increase. The contrast in spatial pattern is strengthened, but the spatial distribution of population groups according to their social status is not changed.

Socio-spatial inequality can also be increased or decreased through migration of population. If relatively wealthy people living in less wealthy areas move to more wealthy neighbourhoods and less wealthy people move to poorer neighbourhoods, the socio-spatial inequality will increase. The mutual combination of social inequality and this type of migration can generate sharp socio-spatial disparities in urban space, but without the change in spatial distribution of wealthy and poor population.

However, migration can also transform spatial patterns in terms of the distribution of various groups of population according to their social status in urban space. This is the case of gentrification of formerly socially weaker neighbourhoods, suburbanization of formerly socially weak urban hinterland by new wealthy population and on the other side and in contrast to this, there is immigration of socially weaker households to communist housing estates, which have had above average social status that is now declining. The mechanisms where migration is changing the former social status of urban areas can temporarily contribute to the decline in social inequalities measured by indexes of segregation as it contributes first to the social mix of population within these areas bringing their average social status closer to city or metropolitan average. However, it is likely that in the course of time, the social profile of such socially transforming neighbourhoods or areas will change to the other end and thus the processes of socio-spatial differentiation will finally contribute to growing socio-spatial inequalities.

Precisely the mechanism described here is the key for understanding of the contemporary urban socio-spatial change in post-socialist cities. Interestingly and importantly, this decline in socio-spatial inequality is produced by processes that are by their nature segregation processes. And it is a key paradox of post-socialist urban change that segregation processes are contributing to diminishing of socio-spatial inequality. However, this is only a temporary situation as once suburbanization, gentrification or immigration to housing estates moves the social status of

these areas on the city average, the socio-spatial inequality will start to increase and a more “normal or usual” relation between processes of residential segregation and growth of socio-spatial inequality will start to play decisive and more obvious role in reshaping urban social geography of post-socialist metropolises.

Socio-spatial patterns: areas of concentration/overrepresentation of particular social groups

Now we can come to the description of socio-spatial patterns, i.e. distribution of social groups within urban and metropolitan space and changes in this distribution. Let's start with “foreigners” or in other words population with other nationality than Czech, Moravian, Silesian, Slovak or Romany. The most important nationalities, whose proportion has been rapidly growing during the 1990s and at the same time they account for a significant quantity are Russians, Ukrainians, Vietnamese and citizens of EU15 as identified in Census 2001. Their indexes of segregation in Prague metropolitan region are provided above. The Figure below shows their spatial distribution in terms of territorial units with their disproportionate concentration, i.e. units where the location quotient of these groups is at least 3 (i.e. at last 3 times higher concentration in comparison with national average) and at the same time there are living at least 25 people of the given nationality. The map of the Czech Republic shows that Prague is the major (however not exclusive) concentration of foreigners. If we consider citizens of EU15 they concentrate nearly exclusively in Prague and close vicinity – the only exception is an exclusive district of wealthy population in Hluboká nad Vltavou. EU15 citizens live in areas of high social status especially in Prague city centre and the north-west sector that is traditionally high social status area. Russians predominate in Prague and some towns namely Karlovy Vary, their traditional Czech destination. In Prague, they live especially in housing estates, often purchasing newly built apartments in condominiums. Their spatial location often coincides with areas of higher social status. Ukrainians are more evenly dispersed through the territory of the Czech Republic which is associated with their dominant economic involvement as manual workers. In Prague, their higher concentrations are in areas with cheaper rental housing in inner city and some housing estates. Vietnamese concentrate in cities and especially along German border, which is associated with their dominant economic activity as vendors supplying cheap Asian products to their customers from Germany (it is easier to establish small business in the Czech Republic, cost are lower and there has also been until recently lower effort to tackle the sales of “illegal” products). In Prague, Vietnamese concentrate in housing estates closer to major marketplace dominated by Vietnam vendors. In general, Vietnamese are segregated in their economic activities. However, they do not tend to cluster their residences. Their increased concentration in some areas is

given by the availability and affordability of housing rather than by their desire to live close to other Vietnamese.

The localities with high social status were identified using indicators of university education and PC and internet access at home. They include traditional neighbourhoods of high social status population such as villa quarters from 1920s and 1930s in inner cities and some early high status suburbs in urban hinterland. The other major group of these localities consists of places with concentrated new housing construction. These are often completely new residential places including districts of inner city condominiums with apartments for sale and more importantly areas of mostly suburban single-family housing. The majority of these places is located in Prague and its hinterland. There are some in Brno and usually single place in some other mid size towns. Some of the new suburban places have some features of closed or even gated communities including both physical obstacles and/or surveillance systems.

There are two basic types of low social status localities. First are urban usually inner city areas with tenement housing -pre 2nd World War as well as Communist housing estates that usually coincides with concentration of Roma population. Second are small settlements in rural and peripheral areas. While the urban places are the outcome of segregation and represent urban socio-spatial inequalities, peripheral locations are consequences of urbanization and rural depopulation strengthened by regional labour market inequalities and are outcomes of urban-rural and regional inequalities (*Figure 38–41*).

The areas with over-representation of Roma population often coincide with localities with population of lower socio-economic status, described above. However, they also include localities with higher than low socio-economic status. The census data unfortunately do not show the Roma ethnicity but those Roma who determined themselves having Roma nationality in the Census. As most Roma population rather determined Czech, Moravian or Slovak nationality the data show only fragment of actual Roma population. Concerning metropolitan areas of Prague and Brno, localities exist in both of them with the overrepresentation of Roma population – these are zones in inner city neighbourhoods with old tenement housing stock dating back often even to 19th century.

Figure 38

Localities of overrepresentation of foreigners (2001)

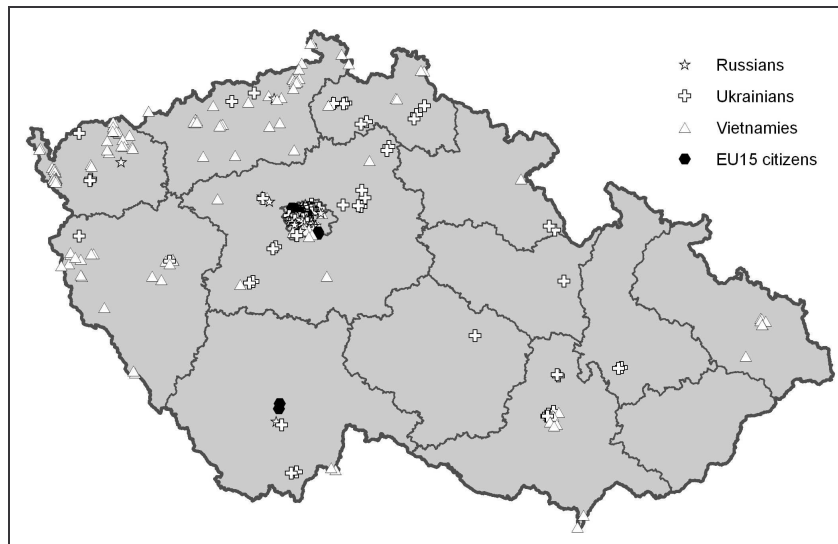


Figure 39

Localities of overrepresentation of foreigners in Prague (2001)

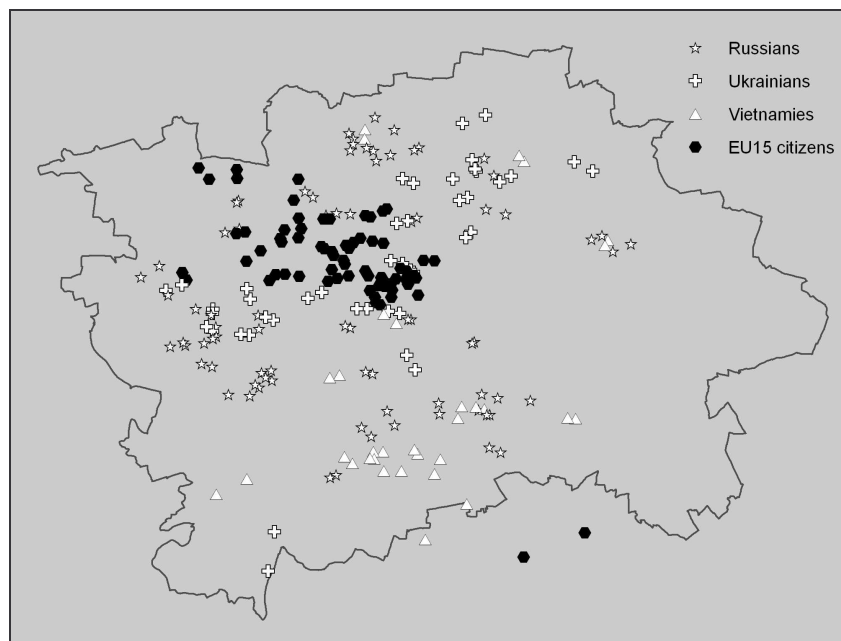


Figure 40

Localities of overrepresentation of social groups (2001)

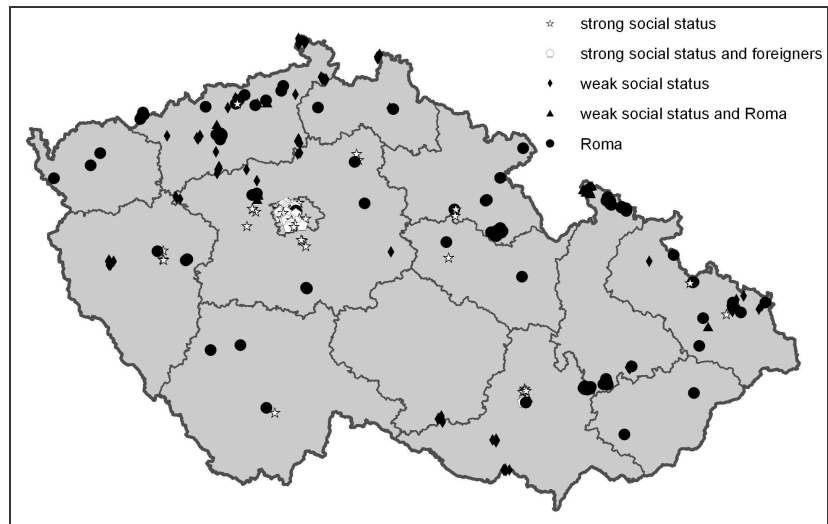
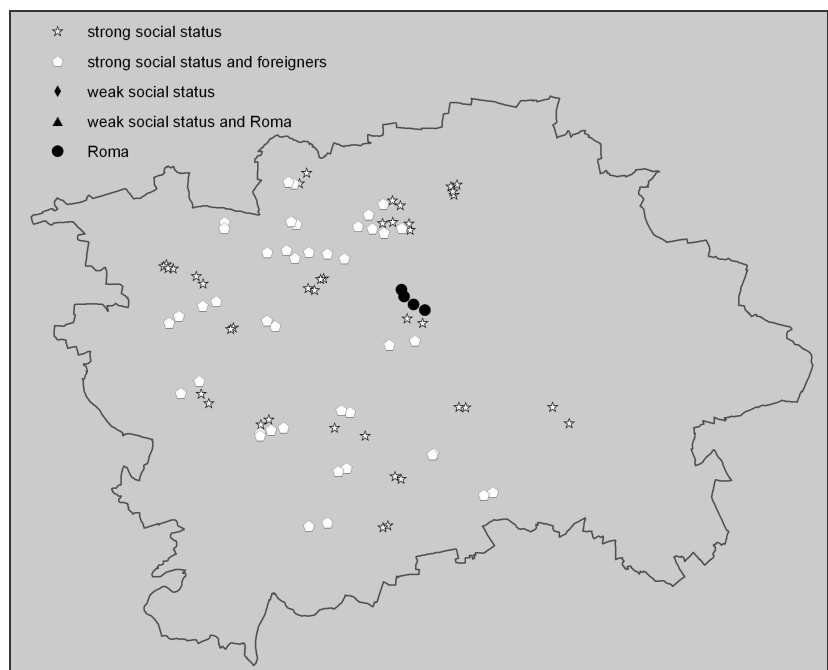


Figure 41

Localities of overrepresentation of social groups in Prague (2001)



Socio-spatial patterns: intra-metropolitan socio-spatial inequality

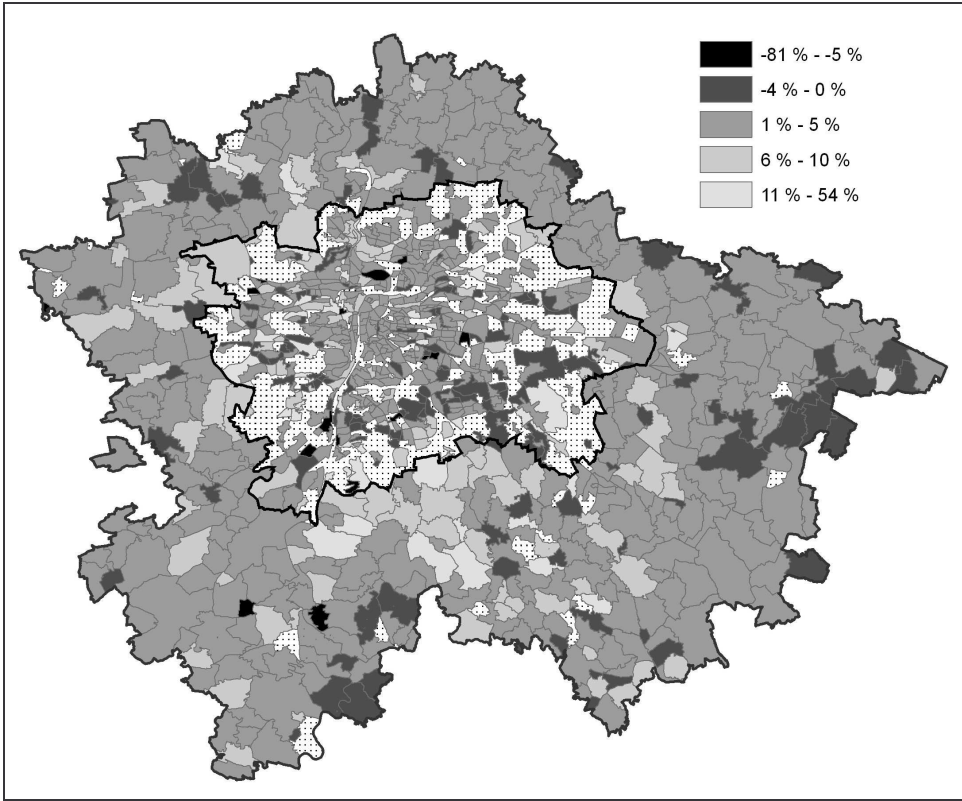
The internal socio-spatial pattern and socio-spatial inequality within metropolitan area of Prague must be seen in the context of the whole country. Cities have in general older population than country average. However, there are rural and peripheral areas with higher share of old population. Nevertheless as these are smaller numbers than in cities, urban areas concentrate largest absolute numbers of older population. Concerning the socio-economic status of population, data about income are not available. The best information indicating socio-economic status (if we work with aggregate data) is provided by the characteristics of education as there is high correlation between education and income. University educated people are concentrated in large cities, namely in Prague and Brno. Interestingly, if we assume correlation between age and education, and over-representation of elderly and at the same time under-representation of people with only basic education in inner cities, even urban elderly belong to educated population with likely higher incomes as well as capabilities to deal with changing economic, social and cultural context of post-socialist transformation. There is a low rate of unemployment in the cities of Prague and Brno and their metropolitan regions as well as in some other areas in contrast with regions affected by industrial decline and high levels of unemployment. This corresponds with low levels of the social benefits provision especially in Prague and its vicinity. Taking the indicators of socio-economic status into consideration and placing Prague and its metropolitan area into national context, we can say, that Prague region is in socio-economic terms the most-wealthy area in the Czech Republic with concentration of large quantity of population with the highest-socio economic status in comparison with national average.

The major process that is changing the intra-metropolitan socio-spatial inequality is migration of high social-status population into suburban areas strengthening the socio-economic status in these areas, while weakening socio-economic status in areas, which this population leaves (*Figure 42*). This process has not changed between 1991 and 2001. However, it did decrease the differences between spatial units within the metropolitan area, as show the segregation indices presented above. In general, it also decreased the difference between socio-economic status of inhabitants in inner city and urban hinterland. At 2001, there still was large over-representation of high-social status population in inner city and under-representation in suburban zone. However, provided that current processes of residential suburbanization and housing estates decline continue, the general pattern of spatial distribution of higher and lower socio-economic status population will change with high socio-economic status population living in suburbs and selected neighbourhoods in city centre and inner city, and low socio-economic status population concentrating in selected less desired inner city neighbourhoods and housing estates. Whether this will happen and the current

pattern of still resembling socialist city will be reversed and whether it will take 10 or 30 years still remains to be seen.

The changes in socio-spatial pattern and spatial inequality were produced by three mechanisms (Sýkora, 1999a). First, social mobility of households fixed in their residential locations sharpened disparities within the existing socio-spatial pattern. Second, internal migration within the existing housing stock also strengthened the existing socio-spatial pattern. Third, immigration of affluent people to newly constructed residential areas of suburban homes or urban condominiums formed separated districts of wealthy population in the existing ecological structure of the metropolitan area. While new residents of condominiums usually strengthened existing socio-spatial disparities, suburbanisation contributed to changing social-status relation between traditionally stronger urban core and weaker outer urban districts and hinterland surrounding the city.

Figure 42
Prague Metro Area: change in the share of university educated (1991–2001)



Social upgrading has been especially strong in the case of neighbourhoods that have exhibited high social status prior to communist period and declined during communism. Since 1989, the social status of these neighbourhoods has increased through the social mobility of its indigenous population, through gentrification of renovated properties and in-filled new condominiums. From the geographical point of view, this includes the central city, some inner city areas and north-west sector of Prague, whose traditional position within the social geography of Prague has been strengthened. Social upgrading has been very selective and concentrated, affecting only some inner city areas. However, most of inner city population lives in neighbourhoods characterized by stagnation or decline. The communist housing estates, which concentrate about two fifths of Prague's population, have not been subject to major social changes yet. However, their relative position within urban social geography has declined. Furthermore, there are signs of their differentiation. While at some housing estates new apartment houses for relatively affluent population are being constructed, residential districts with higher concentration of manual workers and with worse accessibility by public transport show signs of both social and physical decline.

The outer city and suburban areas have undergone important transformations. Provided that suburbanization of affluent people continues, the socio-economic status of population in the suburban zone will continue to increase relatively to other urban zones in Prague and can move above metropolitan average. In this case, the socio-spatial pattern of former socialist city is being reshaped and can be in some time completely reversed. I anticipate, that in future the most affluent people will live in the city centre, some inner city neighbourhoods especially in the north-west segment of Prague, and in suburban areas, while population with lower-social status will occupy large zones of the inner city and housing estates from communist times. However, the built environment and social geography of Prague is very heterogeneous on the micro-scale, and this will certainly affect the impact of above mentioned macro-trends on the urban socio-spatial restructuring.

Metropolitan inequalities and competitiveness

Major and especially capital cities are characterized by a very dynamic social development. They are places where key decisions are made and where the most progressive human activities are concentrated. Cities are also places where new trends in thinking, technologies and fashion are introduced and materialized. Urban development in important cities, including major post-socialist metropolises such as Prague, has received new impetus with the transition towards market economy and consequently developed linkages with global economy. The global economy is characterized by the concentration of command and control functions

in a small number of metropolitan areas. Not all cities that have flourished in the previous period have the opportunity to keep up the pace in the contemporary super league of the major world centers. The top cities naturally attract transnational corporations, international organizations and important events as well as real estate developers and investors. Many other cities fight for their place at the sunshine. Their natural attractiveness is not sufficient any longer to keep pace with the frontrunners. Public officials and major companies in such cities are joining their forces to support city development and compete for investments in global economic arena. The attractiveness of certain cities for major investors and thus their competitiveness is not only influenced by economic parameters, but by the overall quality of the urban environment. The latter is not a mere matter of the general societal development in a country, but also a matter of a whole range of factors, which can be directly influenced by the politics of the city such as the quality of built environment and infrastructure. Sophisticated strategies of city presentation and promotion, i.e. city marketing can create a positive image of a city as desirable location for investment, business and everyday life. Investors prefer cities that care about their long-term development and present themselves to the outside world.

Where Prague stands in this respect? It has been very success full in terms of economic progress and strengthening its position within country as well as in Europe. The city per capita GDP in 2003 was 156% of the EU per capita average of GDP, unemployment keeps at low rates and there is higher demand than supply of labour. The economy of the city is dominated by services that account ca for 80% of GDP and 75% of employment in Prague. Prague has a highly skilled workforce and educated population (nearly 20 % of population has university education), concentrates major universities and research institutions. Prague has been highly attractive for foreign investors. According to the European Cities Monitor, a survey of business attractiveness in Europe's top 30 cities since the 1990s, the city of Prague has steadily strengthened its position from rank 23 in 1990 to 13 in 2005.

Even cities, which successfully attract investments and where development takes place, like Prague, may not win in the long run. New investments are usually allocated to certain areas, while other places decline. An internally divided city with growing disparities and conflicts can become a place that offers good business opportunities but not a quality residential environment. The objective of cities should be to direct investments in urban area in such a way that would ensure harmonic and balanced development of many city parts so it would contribute positively to a majority of firms and inhabitants. The priority of city political representations should be the protection of the public interest: to create an attractive and friendly environment for both entrepreneurship and life of citizens. Cities in cooperation with the local business community and representatives of citizen

groups can prepare transparent rules of the game for urban development, which express and take into account interests of the government, private and citizens sector. Such partnerships can contribute to the economically, socially and ecologically sustainable development of the city.

What is the reality in post-socialist metropolises and namely in Prague. The post-communist urban development has been characterized by an uneven impact on urban space. Most politicians see this as a natural outcome of market mechanisms that are creating economically efficient land use pattern. However, the spatially uneven development can in the future threaten economic efficiency, social cohesion and environmental sustainability. The question of social justice and social cohesion, issues of environmental impacts and sustainability, and more balanced spatial development have been up to now rather subordinated to the preferences given to economic growth. Urban governments could attempt to stimulate investment activity in less preferred locations to distribute the benefits from the growth and development more evenly across the urban territory. In a number of cases, cities need support from the national government to solve some of the most severe problems. The urban problems, however, currently are not among the issues of political and public debate on the national level. Some attention has been given to the decline in post-war housing estates and to the regeneration of brown-fields. Most urban problems are, however, seen as local in their nature and left to local solutions.

In Prague the major achievements of urban policy and planning during the 1990s were:

- (1) planning system was kept in operation despite unfavourable conditions;
- (2) basic planning documents, i.e. Master Plan and Strategic Plan were approved by the end of the 1990s;
- (3) Strategic Plan and Single Programming Documents pay attention to both urban competitiveness and sustainability.

The major weaknesses of contemporary urban policy and planning in Prague however are:

- (1) non-existence of city marketing/promotion strategy, city land policy and real estate strategy and policy towards inward, especially foreign direct investments;
- (2) very weak consideration of sustainability principles;
- (3) virtually no cooperation between the city and private sector and prevailing relations of confrontation between the city officials and environmental NGOs.

The city government took the inflow of foreign capital for granted and up to now there has been a lack of activity in attraction of FDI, city promotion or public private partnership with foreign firms. Despite a number of issues which fall within the range of economic, social and ecological sustainability are present in city planning documents, the explicit declaration of political commitment to pur-

sue the principles of sustainable development are still missing. The voluntary citizens sector has quickly developed, especially in the second half of the 1990s, and a number of NGOs by their activities increased public awareness of some issues and projects in Prague's urban development. While at the beginning there has been hostility between "city bureaucrats" and "radical environmentalists", some limited opportunities were opened for the involvement of NGOs representatives to the decision-making processes.

The main aim of national, regional, and city government should be to promote such development that will result in the increasing quality of life of urban citizens. At present, there are three major challenges to governments seeking to achieve that goal. They are: (1) the increasing global competition between regions, cities, and localities for inward, especially international investments; (2) the growing attention paid to sustainable ecological, social and economic development; (3) the necessity to open up urban policy and planning procedures for the involvement of representatives from the private sector and voluntary citizen organizations (Sýkora 2002). The third of these challenges is procedural in nature; each of the urban policies applied should pay attention to the integration of public, private, and citizens sectors into decision-making, implementation, and evaluation, thereby building new and more complex modes of urban governance. The first of the challenges is very much about the activity of the government concerned itself. A city's competitiveness, however, is also dependent on specific objective local conditions and can be threatened, for instance, by having an obsolete infrastructure or vast derelict or declining areas. In such a case, the national and EU urban policies can support cities in diminishing the negative impacts of such obstacles. Even if cities are successful, new investments do not automatically bring wealth to all parts and all residents of the city and its metropolitan region. The location decisions of investors are highly selective in urban space, with a preference given to urban cores and suburban greenfield sites. Cities should attempt to achieve a more balanced, sustainable development. The second challenge seems to be one where the support of the cities from national and EU urban policies would be the most valuable. Urban policies should provide support to declining areas within cities, stimulate sustainable development, and restrict unsustainable growth patterns. In the context of Czech cities, attention should be paid to the regeneration of post-war housing estates and some inner-city neighbourhoods, to brownfield regeneration, to the application of sustainable metropolitan transportation systems, and to putting limits on sprawling patterns of metropolitan growth. The application of EU programmes in the Czech Republic is capable of helping to consolidate government measures towards these issues and possibly even to establish urban policy as a key tool for the coordinated and complex solution of the most pressing urban problems. However, whether it happens remains to be seen yet.

CONCLUSIONS: THE SOCIO-SPATIAL INEQUALITIES OF EUROPEAN AND HUNGARIAN URBAN AREAS AND THEIR SPECIAL FEATURES IN CENTRAL EUROPE¹⁸

Similarly to their European counterparts Hungarian metropolitan areas are also playing an increasing role in national (and international) economy, in social processes and in global social and economic competition. The results of the comparative analyses of our research are also verifying the outstanding strategic importance of Hungarian metropolitan areas in them. Hungarian cities successfully tackled down the socio-economic crisis originating from the historic eras before the regime change and were able to manage the whole process of economic restructuring. Today they are the driving engines of economic development in Hungary. Our socio-statistical analyses have demonstrated the relative competitive advantages of some urban areas in the fields of economic, social and infrastructure development in comparison with the national average. They have also pointed out that mostly high qualified and the richest social classes are concentrated in metropolitan areas. It has also been revealed that there are big differences among Hungarian metropolitan areas concerning their regional and historical background and their skills to integrate into global economy. Socio-economic differences among metropolitan areas are partially originating from the development differences between the metropolitan area of Budapest and other Hungarian cities. In this latter group of provincial cities the urban areas of Győr and Székesfehérvár have achieved the largest advancement in economic development while

¹⁸Besides the above-presented research results this summary is based on the following background studies and papers: Baráth G. – Molnár B. – Szépvölgyi Á.: A várostérségi területi egyenlőtlenségek rendszere. Kutatási rész tanulmány [The System of Spatial Disparities in Urban Areas. An Interim Research Paper], MTA RKK NYUTI, 2005.; Balázné Varga M.: A várostérségek társadalmi egyenlőtlenségei – társadalomstatistikai elemzés. Kutatási részjelentés [The Social inequalities of Urban Areas – A Socio-statistical Analysis. An Interim Research Report], MTA SZKI, 2005.; Molnár B.: A nagyvárosi térségek gazdasági egyenlőtlenségei Magyarországon [The Economic Disparities of Urban Areas in Hungary]. MTA RKK NYUTI, 2006.; Szirmai V. – Váradi Zs. (2006): A nagyvárosi térségek urbanizációs egyenlőtlenségei Magyarországon [The Urbanizational Disparities of Urban Areas in Hungary]. MTA SZKI, 2006.; Balogh E. – Huszár Á.: A magyarországi várostérségek gazdasági és társadalmi versenyképessége [The Economic and Social Competitiveness of Urban Areas in Hungary]. MTA RKK – SZRVA, 2007.; Szirmai V.: A globalizáció és térbeli társadalmi szerkezet alakulása: nemzetközi trendek [The Socio-spatial Structure of Globalization: International Trends]. MTA SZKI, részlelemzés, 2007.; Szirmai V.: A globalizáció várostérségi hatásai Magyarországon [The Impacts of Globalization on Urban Areas in Hungary]. MTA SZKI, részlelemzés, 2007.

the urban areas of Miskolc, Nyíregyháza and Kecskemét are lagging far behind them. Regarding development potentials traditional regional centres such as Debrecen, Pécs and Szeged are in an intermediary position, though their development was fairly good during our research period. Our research results indicate significant development differences between the internal parts of urban areas as well. The division of socio-economic development resources within metropolitan areas is rather inhomogenous between cities and their environment as well as within the inner parts of urban areas.

The socio-spatial inequalities of Hungarian urban areas are all following the overall European trends of global urbanization and the mechanisms of global economy but their outcomes have also been influenced by the special historical background of the Hungarian society. This is even true for comparing their similar and different features with those in the state socialist regime of the past. Global trends originating partially from the past, such as socio-economic concentration, the high density of urban population, the concentration of economic activities and global capital resources in metropolitan areas are true for Hungarian urban spaces as well. However we can also see country size dependent differences in the processes we have investigated (Illés 2002, 74). The degree of residential concentration in cities (and in the capital city) is the highest in Poland with over 100 thousand inhabitants as an average. Poland is followed by Hungary and the Czech Republic in the ranking of the residential concentration of big cities (and the capital city). It is the citizens of Austria who live in the least populated cities with 25–55 thousand inhabitants as an average. (The number of Austrian cities with over 100 thousand inhabitants, including Vienna, is 5 only.)

The intensive, space consuming expansion of urban agglomerations, the increasing commuting and transport activities are typical phenomena of our time but they are extensively damaging the environment and reducing the territory of green areas. It is mostly the metropolitan area of Budapest that is most badly hit by these phenomena but the urban areas of Győr Székesfehérvár and Nyíregyháza, the provincial cities most involve areas of global economy driven dynamic development are neither excluded from these processes.

The intensity of suburbanisation and the outmigration of middle classes from city centres to suburbs have significantly increased not only in Hungarian but also in Czech cities. The new trends of economy (the inflow of foreign direct investments) and social changes increased land values in certain suburbs and periurban settlements. All they have reshaped the relationship between core areas and peripheries and also changed the attitudes towards them.

The signs of 'dual' spatial society (Castells 1993) and its different internal structures, the different chances of integration to global economy with their advantageous and disadvantageous socio-spatial processes as an impact, can clearly be identified. The intensive development of big cities and their urban areas is

shadowed by the increasing socio-spatial polarization between core areas and peripheries and between the different parts of cities. The results of Hungarian, Austrian, Czech (and other international) comparative researches can be summarized by stating that the basic features of socio-economic inequalities of urban areas are following a similar trend. The social positions of citizens living in the different zones of urban areas are very different: the presence of high classes is dominating in core areas while peripheries are mostly inhabited by low or poor classes. This trend however does not seem to contradict to the fact that suburban zones also provide homes for high classes and low classes: they (low educated groups with low salaries employed mostly in the industrial sector) are rather located in the external parts of cities (preferably in transitional zones or suburbs) and in less favoured periurban settlements. However some differences can also be discovered in the spatial location of poor classes in central urban quarters as well. A case study in Vienna revealed that the ratio of poor classes (the unemployed) in the inner parts of cities is by far higher than in Hungarian big cities (Unemployment is concentrated in the city of Vienna approaching a ratio of 10%. This figure is about half in the neighbour regions of Vienna. Unemployment in the Hungarian big cities involved in our research is everywhere lower than in their neighbourhood.

Comparative researches have verified that on the ecological slopes of cities involved in our research citizens living in different urban zones are adapting and integrating their life to global processes in various ways, therefore it differs how they utilize the benefits of integration for their own purposes. High and upper middle classes living in the elite residential quarters of urban areas are more tightly embedded into global (or national and local) socio-economic environment: it is they are who most heavily use the modern metropolitan infrastructure and institutional facilities, and it is they are who can turn employment chances offering high salaries and opportunities for running independent businesses with the highest efficiency for their own benefits, and it is also they are whose lifestyle is less bound to a concrete place of residence. People living in the urban quarters of lower middle classes or in workers' districts (frequently through a deep dependency system or being even in a defenceless situation) are less embedded into their global (or national and local) environment and they less intensively utilize the advantages their urban area offers for their own purposes than the members of the previous group and their life is more strongly bound to their place of residence. The marginal (partially city centre and partially suburban or periurban) parts are the areas of handicapped classes having been 'pushed off' from the labour market and of underclasses who not (or very rarely only through the state's or the local municipality's social aiding programme) can utilize the socio-economic advantages of their global (and national or local) environment, of modern infrastructural and institutional facilities for their own benefits. Thus, spatial dimension is a key

component of the transmission mechanisms of global impacts and of social inequalities. The socio-spatial units formulating in the ecological and social slopes of metropolises (indicating differences in infrastructural, institutional supply and economic development level) are both indicators and creators of social inequalities at the same time.

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