

Settlements

Settlement System

In Hungary, settlements as functional units can be best described as independent, local governments, and the boundaries between settlements and local governments as a rule coincide. Rare exceptions are represented by the districts of Budapest, and the so-called 'tanya' settlements (scattered farmsteads) of the Alföld, where administrative boundaries do not coincide with the physical boundaries of human settlements. In the case of the former, the Hungarian capital is divided into 23 fairly autonomous districts, whereas the latter are an integral part of larger villages and towns in their vicinity.

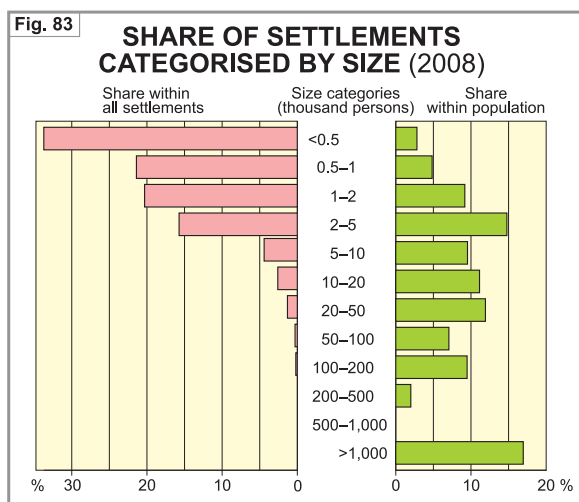
On 1 January 2008, the number of local governments in Hungary was 3,151, disregarding the districts of Budapest. The number of independent local governments has gradually increased since the regime change (1993: 3,108; 2001: 3,135; 2008: 3,152) which is the product of the separation of settlements, i.e. where smaller settlements previously incorporated into larger towns have gained independence. The average population figure for Hungarian settlements (i.e. public administrative units) is 3,188.

Fragmentation and concentration are equally present in the Hungarian settlement system (Figure 83). One third of settlements are below 500 inhabitants (1,062 settlements = 33.7%

of the total), and 362 settlements have less than 200 people. A further 21.4% of settlements have a population between 500–1000. The result is that 55.1% of Hungarian settlements have less than 1,000 inhabitants. On the other hand, the only city with a population in excess of one million is Budapest, which concentrates 17% of the total population. In terms of ranking by size, Budapest is followed by Debrecen which has 205 thousand inhabitants. Thus, the gap between Budapest and the country's other major cities is very wide. Nevertheless, if we focus on population distribution by settlement category, we see a somewhat different picture. Very small villages (below 200 inhabitants) concentrate only 0.4% of the total population, and only 7.6% of Hungarians live in settlements with less than 1,000 inhabitants.

In the Hungarian settlement system, the size (i.e. population figure) of a settlement has a strong impact on its development potential, the quality of services, the characteristics of the labour market, incomes of inhabitants and migration flows. Smaller settlements (villages) were especially disadvantaged within the settlement system after World War II. Since agricultural employment steadily decreased during the socialist era (1949: 53.8%; 1960: 38.5%; 1980: 18.6%) villages were especially hard hit by economic modernisation and industrialisation. Many of the active wage earners from smaller villages became commuters already before 1990. The shrinkage of those employed in agriculture continued after 1990 and by 2001 only 5.5% of the economically active worked in agriculture. Thus, it is easy to understand why on the eve of the 2001 national census, 68.4% of employees living in villages below 500 inhabitants were classed as commuters.

Commuting has also encouraged the outward migration of people from smaller settlements and hence hastened population loss from these settlements. The exodus of people from smaller villages was most intense in the 1960s, when public services including health care, primary education, nurseries, public ad-



ministration, etc., along with the headquarters of agricultural cooperatives were nationally reorganised and many smaller settlements lost their basic institutions. This process was strongly supported, and justified, by the settlement policy of the communist regime. The products of this rationalisation policy were the result that typically only 1% of settlements below 500 inhabitants had a pharmacy, 3.4% had schooling for the upper four classes of primary-age children, 4.1% retained a medical doctor, 4.5% had some form of public administration, and 9.5% provided a home to the headquarters of an agricultural cooperative. Adequate public and economic services were only available in settlements with more than 3,000 inhabitants. The deliberate concentration of public institutions and economic services in the higher levels of the settlement hierarchy had painful consequences for the living conditions of people in small villages. As a result, most of the regions where small villages prevailed became very much deprived socially and economically during the 1970s and 80s.

The political changes of 1989–90 considerably decreased the disadvantages of smaller settlements. Every settlement became independent, with the right to decide freely over the provision of public services and the establishment of local authorities, including notary offices. Subsidies from the central budget were aligned in proportion to the number of inhabitants and settlements could use these resources as they wished. The

introduction of the market economy and growing motorisation has also contributed to the improvement in working and living conditions for residents in small villages. Despite all these changes, socio-economic indicators of the population still show a strong correlation with the settlement size in Hungary (Table 15). Generally it can be concluded that the average (taxable) income of active earners increases with settlement size, just as the level of services does, which in turn directly impacts upon migration patterns. Smaller settlements tend to loose population due to migration, whereas the bigger ones are growing.

The spatial distribution of settlements of different size is very imbalanced (Figure 84). This is partly the outcome of the physical geographic features of the country; hilly regions are characterised mainly by their smaller settlements. On the other hand, the historical development of the country has also significantly shaped the settlement pattern. The Ottoman Empire occupied the southern part of Hungary (the Alföld, or Great Hungarian Plain) in the 16th–17th centuries and perpetual warfare destroyed substantial parts of the original settlement system. As a consequence, the density of settlements and the average size of towns and villages significantly differ in the various regions of Hungary today. In South and West Transdanubia, as well as in North Hungary, the number of settlements per 100 km² is above 5 (national average: 3.4), whereas on the Alföld the figure is below 2 (Figure 85).

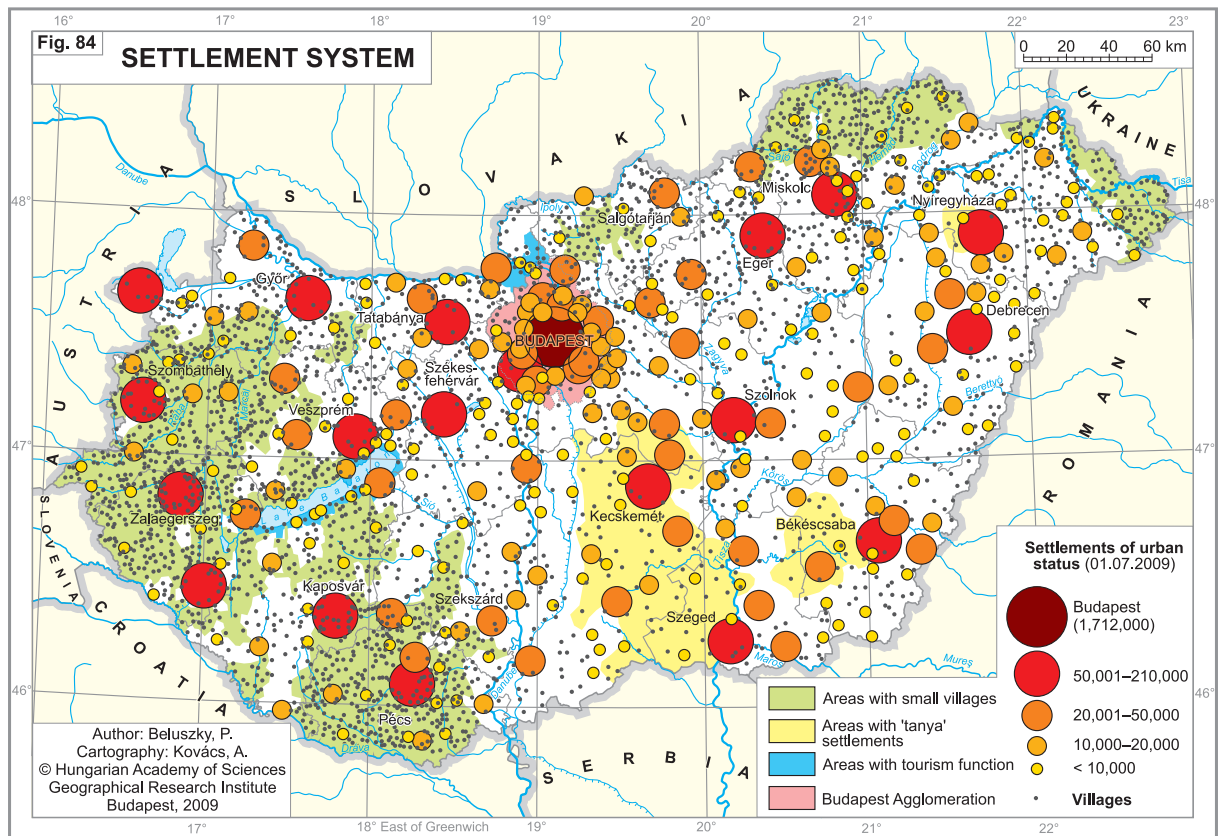
Table 15. Number of settlements grouped by population size and some relevant indicators (01.01.2008)

Population size categories	Number of settlements	Urban settlements	Population	Urban population	Population density (persons/km ²)	Migration balance (2007, ‰)	Average income per tax-payer**	Average number of shops
–199	362	–	43,585	–	14.8	-16.9	1,186,012	1.29
200–499	700	–	237,842	–	25.2	-9.1	1,238,443	2.94
500–999	674	–	486,438	–	36.1	-6.3	1,308,897	6.33
1,000–1,999	640	4	921,012	5,937	48.4	-3.4	1,391,550	14.00
2,000–4,999	496	58	1,484,595	218,391	71.0	-2.0	1,462,072	35.40
5,000–9,999	138	96	960,713	689,180	95.3	1.1	1,541,239	106.61
10,000–19,999	81	79	1,139,728	1,118,443	155.8	0.0	1,680,105	248.06
20,000–49,999	41	41	1,202,742	1,202,742	205.4	0.7	1,742,610	588.78
50,000–99,999	11	11	708,831	708,831	513.4	0.7	1,846,224	1,286.18
100,000–199,999	7	7	952,552	952,552	587.3	2.9	1,881,464	2,799.43
200,000–*	2	2	1,907,381	1,907,381	1,933.0	3.6	2,358,974	18,231.15
Total	3,152	*** 298	10,045,401	6,803,439	108.0	–	1,757,931	51.55

Remarks: *Debrecen (205,084 inhabitants) and Budapest (1,702,297 inhabitants).

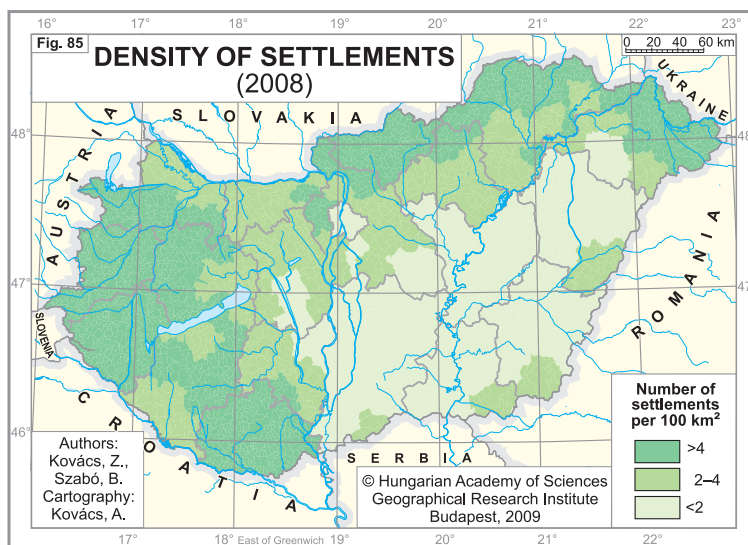
**Personal income tax, HUF.

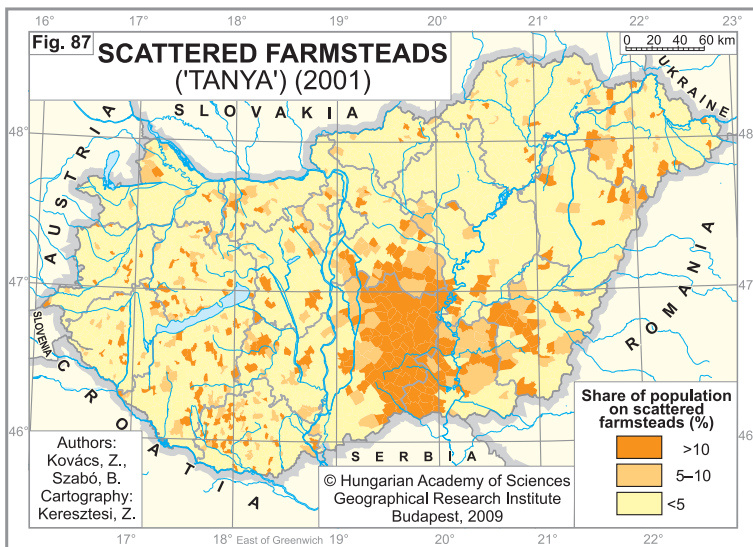
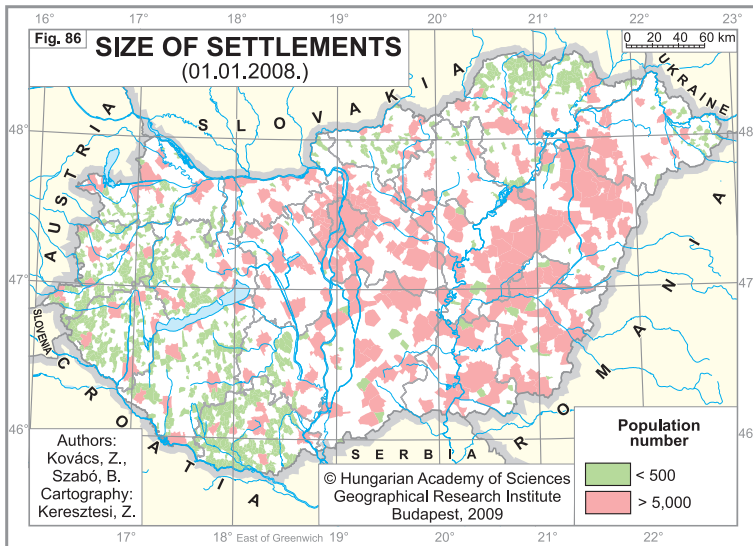
*** On 01.07.2008 another 8 settlements received urban status.



Taking into account the size of settlements that settlements with more than 5,000 inhabitants are concentrated mostly on the Alföld and around Budapest. This picture is further refined by the spatial distribution of small settlements with less than 500 inhabitants (Figure 86). In some counties of Transdanubia (e.g. Vas, Baranya and Zala) over 60% of settlements belong to this size category. On the other hand, in the counties of the Alföld they play a subordinate role.

The so-called 'tanya' settlements (i.e. scattered farmsteads) of the Alföld occupy a special niche in the Hungarian settlement system. Their origin goes back to the period of the Turkish occupation, when less populous settlements were completely destroyed and only bigger towns could survive in exchange for heavy taxes paid directly to the Sultan. After the withdrawal of the Turks during the late 17th century, the density of settlements was very low in South-East Hungary and settlement re-establishment was limited, thus a large part of the land between the existing settlements remained uncultivated. In the 18th century the first 'tanya' settlements were established in these outlying areas. They were used as temporary shelter by residents of nearby towns, who cultivated the land (grazing, farming, etc.) in the growing season. The regulation of lowland rivers (e.g. the Tisza) in the middle of the 19th century added vast areas to the stock of uncultivated land on the Alföld, where new 'tanya' settlements were built. In the second half of the 19th century, the first demographic transition be-





came visible in Hungary. The rapid population growth and the lack of housing in the core settlements generated an exodus of younger people to the 'tanya' settlements which became permanently inhabited thereafter. The population living in 'tanya' settlements reached its peak in 1949, when more than 1.1 million people lived on these scattered farmsteads. The share of 'tanya' dwellers was 33% on the Alföld. The settlement policy of the communist regime targeted the demolition of these settlements and residents were moved to nearby villages. The buildings were pulled down, and construction of new 'tanyas' was strictly prohibited. Due to the active destruction of these tiny settlements and intense ageing of their inhabitants, the number of people living on a 'tanya' had dropped to 200 thousand by 1990. Since the regime change, political opposition to 'tanyas' has vanished, and in the environs of bigger towns (e.g. Kecskemét and Szeged) there is even a revival underway, due to suburbanisation, and new private ventures in agriculture or tourism. Today, the share of the population living on 'tanyas' is the highest in South-East Hungary, and particularly in the Danube-Tisza Interfluve (mainly in the region of Kiskunság) (Figure 87).

Urbanisation and the Urban Network

Hungarian society remained predominantly agrarian until the end of World War II, and communist industrialisation commenced with the advent of the 1950s. Urbanisation and urban development in Hungary was considerably behind that of Western Europe. Modern industrial development driven by foreign capital (Austrian and Czech) only started in the 1870s and remained restricted mainly to Budapest and to a

couple of bigger towns. In 1870 the proportion of the urban population was only 12.8%. Due to capitalist industrialisation and growing rural to urban migration, the national urban ratio increased to 16.7% by 1910.

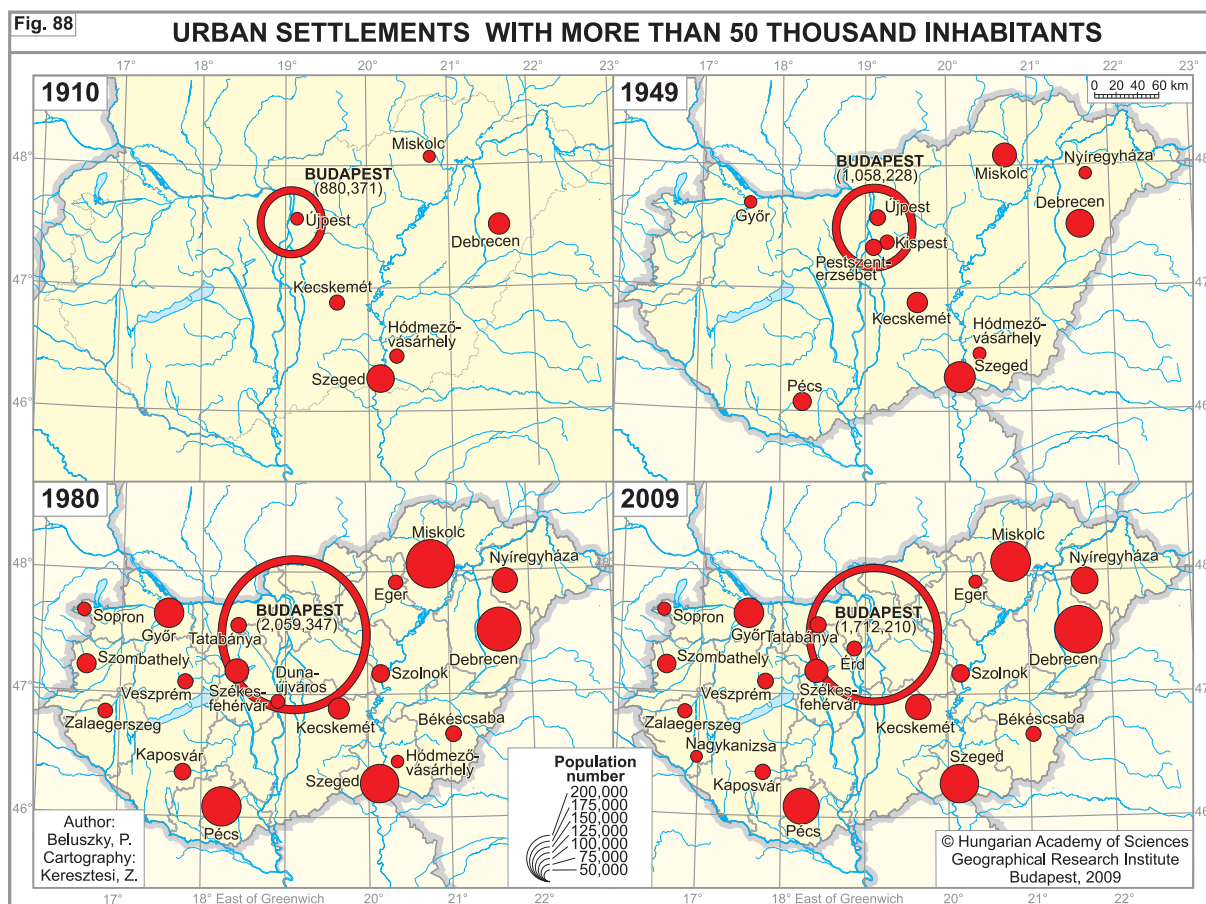
A special feature of urbanisation prior to World War I was the rapid growth of Budapest. On the eve of its administrative establishment in 1873, with its population of 280 thousand

the Hungarian capital ranked only seventeenth among the large European cities. By the 1910 census, the population had tripled to 880 thousand, and the city advanced to seventh place in Europe. By the start of World War I, Budapest had an economic and cultural influence stretching far beyond the borders of the Austro-Hungarian Empire, as far as the Balkans and North Italy, and it was a rival of Vienna in many respects. As a consequence of rapid urban growth, the weight of Budapest within the country gradually increased. In 1870 only 2% of the country's population lived in the city, but by 1910 this figure had reached 4.8%. As a consequence of the buoyant urban growth, a wide zone of suburban settlements evolved around Budapest. The number of inhabitants in the evolving agglomeration zone rapidly increased to 230 thousand by 1910. Small villages developed into medium-sized cities within a few decades, e.g. the population of Újpest grew from 6,722 in 1870 to 55 thousand in 1910.

New elements of the urban network were mining and industrial centres like Diósgyőr (today in Miskolc), Ózd and Salgótarján.

Although urban development in general was vigorous in the country before 1914, the dynamism of Budapest could not be challenged by other centres. If we take the indicators of economic growth and dynamism of the ten regional centres of Hungary at that time – i.e. Zágráb (Zagreb), Kolozsvár (Cluj), Pozsony (Bratislava), Szeged, Kassa (Košice), Debrecen, Pécs, Temesvár (Timișoara), Nagyvárad (Oradea) and Arad – the aggregate figures for these cities fell far behind the level of Budapest. On the present territory of Hungary there were only seven cities with more than 50 thousand inhabitants in 1910 (Figure 88). Of them, Újpest was a suburb of Budapest, whereas Kecskemét and Hódmezővásárhely were both agrarian towns, poorly provisioned with central functions and where a substantial part of the population lived on individual farmsteads.

World War I and the subsequent Peace Treaty of Trianon in 1920 altered the conditions of urban development across the country. Due to the treaty, Hungary lost 71.4% of its territory and 63.5% of its population. By virtue of the stipulations of the peace treaty, a new regional order



was established in the Carpathian Basin, and the socio-economic character and urban pattern of Hungary were fundamentally changed. In 1918 there were 139 settlements with urban status in Hungary, whereas in the country's new, reduced territory only 47 remained. One of the important characteristics of the Hungarian urban network was the extreme increase of the weight of Budapest as a primate city. Post-Trianon Budapest became the capital city of a country of only 7.6 million inhabitants, instead of 21 million, which was Hungary's population prior to 1920. In 1910 Budapest concentrated less than 5% of the population of the country; this figure had grown to 12% by 1920, and even further to 18% by 1941.

Trianon resulted in Hungary losing seven out of its ten major regional centres, and only Szeged, Debrecen and Pécs remained within the limits of the new boundaries. Economically, Budapest became the absolute dominant centre, or as many call her, the country's 'swollen head'. Besides Budapest, no other major centres were able to develop, and typically the second largest towns (Debrecen and Szeged) were ten times smaller than the capital city. The urbanisation process of the interwar period also concentrated mostly on Budapest and its environs. The development of other towns slowed, not least because in many cases the new borders divided urban centres from large parts of their tributary areas, cutting off their organically grown connections. This, of course, had serious economic and social consequences as the development of these towns has ever since been significantly stunted and their rate of population growth has fallen behind the national average. This is also confirmed by the statistics: in Hungary the ratio of urban population hardly showed any increase between 1920 and 1940 (31.8% and 34.6%, respectively) and the Hungarian urban network changed little in the interwar period compared to previous decades. The discrepancy between towns that were legally titled as such, versus the town-like functions they performed, remained intact. At the end of World War II, in total 56 Hungarian settlements were legally accorded town status, whereas the number of centres that bore urban functions was about 150. The lack of a functionally well developed network of small towns became remarkable.

By 1949, 37% of the total population lived in the then 54 urban settlements, hence Hungary was still predominantly a rural country compared to the West. The number of cities with

more than 50 thousand inhabitants increased to 12 by 1949, but three of them (Újpest, Kispest and Csepel) were soon amalgamated with Budapest as part of the 1950 administrative reform. Thus, the skeleton of the Hungarian urban network was constituted by only nine cities.

After World War II, in line with the geopolitical changes in East Central Europe, a socialist-style centrally planned economy, and single party system was introduced in Hungary. The main objective of the communist regime's economic policy was – at least during the 1950s and 60s – rapid industrialisation in order to catch-up with the West. Industrialisation not only meant the concentrated development of mining and production, but also involved the internal reorganisation of agriculture, i.e. collectivisation and the establishment of large scale agricultural plants (state farms and cooperatives). The net result was a radical change in employment trends. The number of industrial employees increased from 882 thousand to 2 million between 1949 and 1970, and the share of industry within national employment grew from 21.6% to 43.7%. Industrial development was mainly the designated activity of large and medium sized cities, but there were also some new towns established. Large scale industrial investments were carried out in these settlements, and next to the new industrial plants, huge housing estates were erected. On average 90% of communal investments were realised in towns in the 1950s. The central functions of cities were also enriched by new institutions (such as secondary schools, hospitals, public administration offices, libraries, theatres, etc.). All these served to generate a widening gap between cities and villages in terms of living conditions, and resulted in a massive rural to urban migration in Hungary. As a consequence of this spatial shift of population, the number of Budapest's inhabitants grew by 200 thousand, and that of other cities by an aggregate 700 thousand in the 1960s. The migration process however gradually slowed from the early 1970s onwards, and between 1970 and 1980 there were already some cities (most of them located on the Alföld) where the balance of migration turned negative. The number and ratio of the urban population also dynamically increased. By the late 1970s, Hungarian society became increasingly urban, as 53% of the population lived in cities in 1980 (*Table 16*). The number of cities with more than 50 thousand inhabitants

also significantly increased. In 1980, already 20 settlements fell into this category, among them Dunaújváros (61 thousand), an emblematic new town of the communist regime.

In addition to rural to urban migration, another 'source' of urbanisation was the administrative designation of new towns during the communist period. The number of officially recognised urban settlements in Hungary increased from 54 in 1950, to 166 in 1990 (Table 16). The systematic use of the 'legal factor' in urbanisation was partly associated with growing state intervention and the centrally planned character of economic modernisation. As a consequence the urban ratio of the country increased steadily and by 1990 already 62% of the Hungarian population lived in urban settlements.

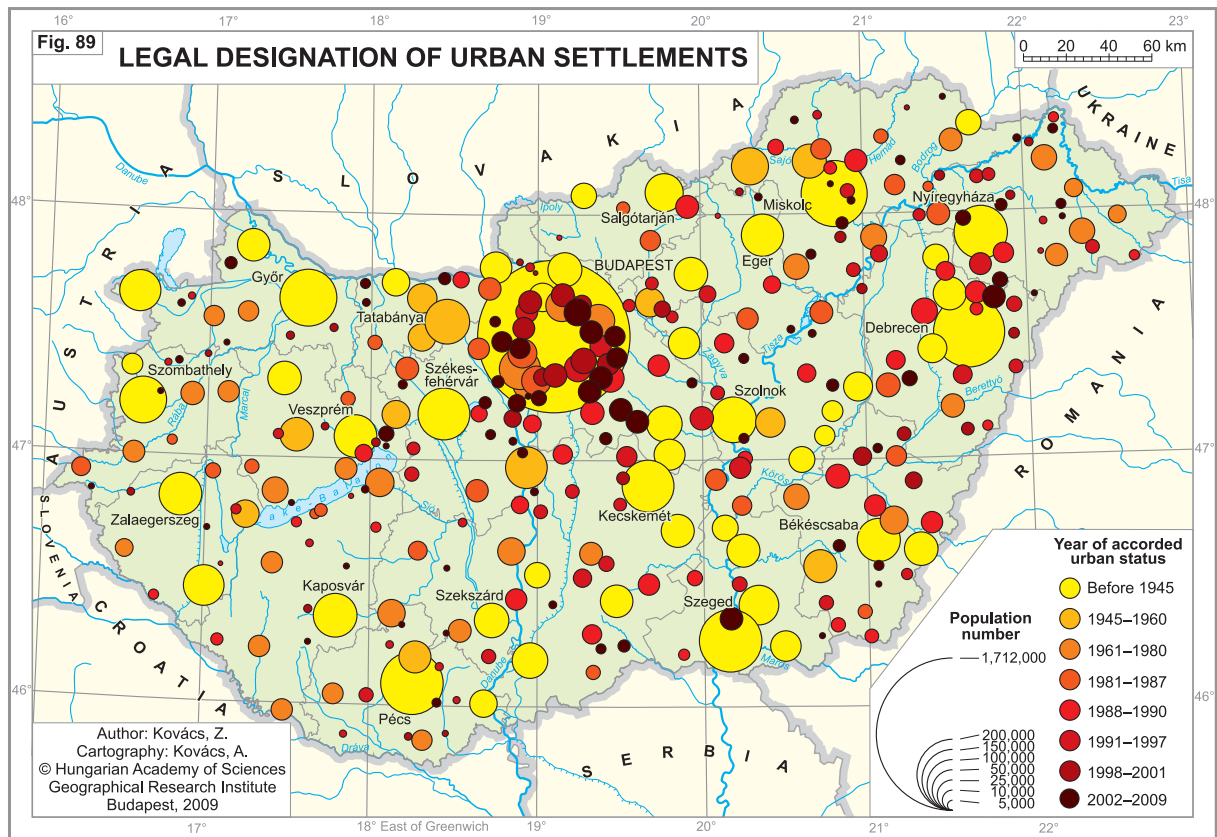
When examining the number of newly designated towns, the communist era can be divided into two periods. Between 1950 and the late 1960s, the re-designation of villages to towns was comparatively moderate and only 9 settlements were accorded the elevated status (Figure 89). The majority of them were so-called socialist new towns; settlements developed most often around an industrial facility or mine, typical examples of which are Dunaújváros (for-

Table 16. Number of urban settlements (1945–2008)

Date (01.01.)	Number of urban settlements	Ratio of urban population %
1945	52	32***
1950*	54	36
1960	63	40
1970	73	45
1980	96	53
1988	125	58
1990	166	62
1995	194	63
2000	222	64
2002	252	66
2006	289	67
2008	298	68
2009**	328	69

Remarks: *Between 1945 and 1950, 6 towns were administratively attached to Budapest **On 01.07.2009 22 settlements received urban status. ***estimated figure.

merly 'Stalin City', with its large steelworks on the Danube south of Budapest), or Tiszaújváros (formerly 'Lenin City' with a petrochemical industry), Oroszlány (coal mining), Komló (coal mining), etc. Another important element of the urban development strategy in the 1950s and 60s was the modernisation and intensive de-



velopment of old industrial centres, e.g. Ózd, Tatabánya and Salgótarján.

From the beginning of the 1970s, the re-designation process of new towns gathered pace remarkably. This was partly the consequence of the 'National Settlement Development Concept' (OTK) approved in 1971, which specified a strict order of rank among settlements and tried to slow the growth of Budapest by strengthening the five largest provincial cities: Debrecen, Győr, Miskolc, Pécs and Szeged. As a result of the Concept, the national urban network was significantly extended during the following decades. The majority of newly designated towns had long traditions of urban functions and possessed a zone of influence greater than that of a mere village.

This indicated that the allocation of urban status was a warranted adjustment in the administrative divisions of the country, to align them with the pre-existing organic development of the settlement system, rather than just a mere legal step. As a consequence, one of the major contradictions of the Hungarian urban system, deriving from the difference between the numbers of towns in a legal as opposed to a functional sense, gradually disappeared. By the end of the 1980s the Hungarian urban system already included most settlements that were in reality functioning as cities.

After 1989 due to the radical political and economic changes, the conditions of urban development changed fundamentally. Acting together, the introduction of the market economy, re-establishment of the system of local government, deregulation of the planning system, de-industrialisation in the economy and liberalisation of the property market led to new spatial phenomena in urbanisation. Suburbanisation and desurbanisation became typical, inducing population loss in cities. A typical example of this phenomenon is Budapest, where the population figure shrank from 2 million to 1.7 million between 1990 and 2009. Only a couple of towns and suburban settlements were able to register modest population growth in the last two decades.

On the other hand, as part of the democratisation process, the legal promotion of villages to 'town' status became much simpler. Due to the liberal system of legal definition, 162 settlements have been accorded town status since 1990, and the number of urban settlements – at least in a

legal sense – had grown to 328 by 1 July 2009. Owing to the frequent legal re-labelling of villages into towns, the Hungarian urban system became spatially denser and more balanced after 1990. Vast areas without any towns have virtually disappeared and even regions with astonishingly high densities of urban area (e.g. the BMR, or the region around Lake Balaton) can now be identified. The large scale extension of the urban system has resulted in a growing number of small towns, and even the emergence of 'dwarf' towns. One fifth of Hungarian towns have less than 5,000 inhabitants, and four of them have even less than 2,000. The re-designation process has brought about a continual devaluation of urban status, since a significant portion of the newly designated towns are in fact villages, both in a functional and infrastructural sense.

Despite the mushrooming of new towns, the national urban ratio has increased by only 7% since 1990. Today 69.3% of the population of Hungary live in urban settlements, and with this figure Hungary is below the European average. If we consider only those cities and towns (166) that acquired urban status before 1990, the level of urbanisation would be 58%. This is a clear indication that Hungary entered a new phase of urbanisation after 1990. The relative decline in the urban population can be explained by essentially two factors: natural decrease and a negative migration balance (i.e. suburbanisation and desurbanisation).

Another outcome of the transformation has been that the gap between towns and villages has generally narrowed. This can be partly explained by the introduction of the market economy and the re-emergence of local governance. After 1990, the allocation of resources became fairer than under the previous regime, privileges granted for towns were withdrawn, and villages gained more opportunities for infrastructural development. In summary, this resulted in improvements in local infrastructure, better services and living conditions in rural areas, assisting villages to hang onto their inhabitants and attract new ones.

Hungarian towns can be classified according to a hierarchical grading system (*Figure 90 and Table 17*). The basis of the classification is size, along with the central functions they perform for the surrounding regions through their commercial, administrative, cultural etc. institutions. Selected indicators reveal a strong concen-

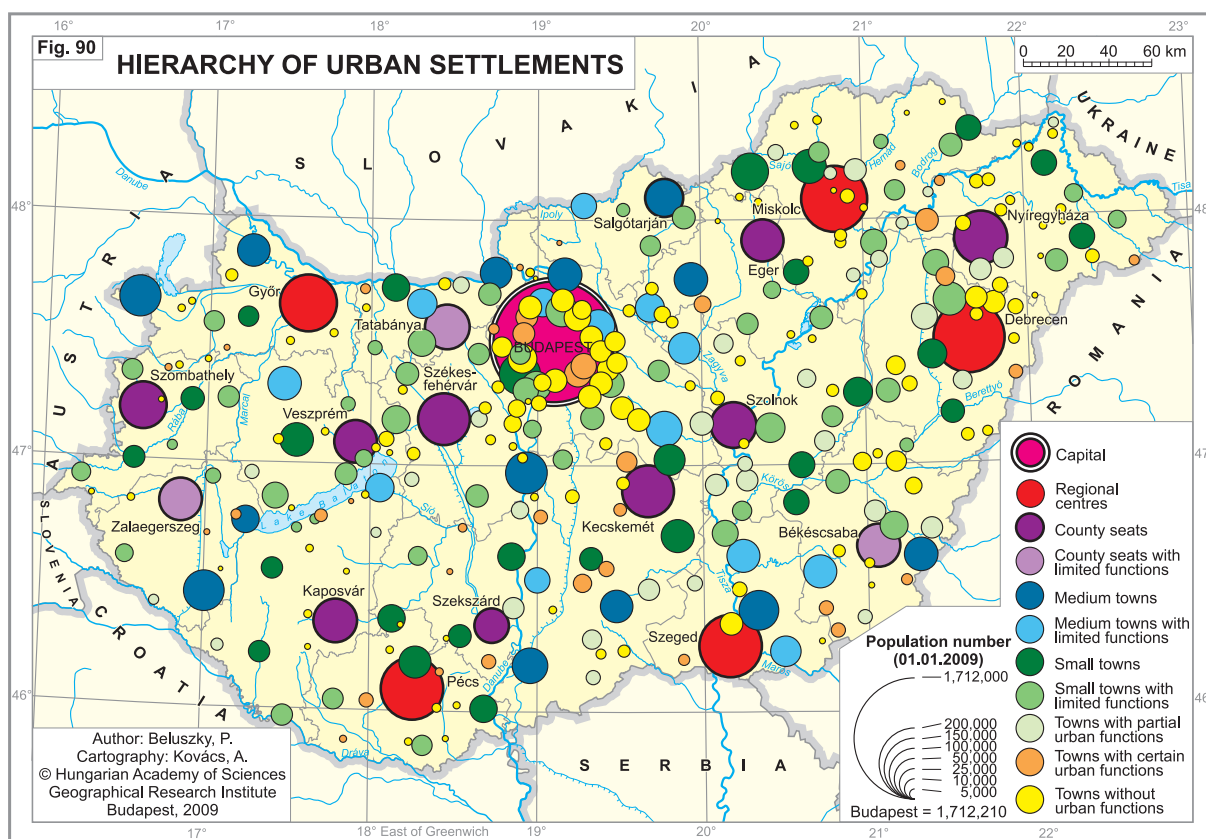


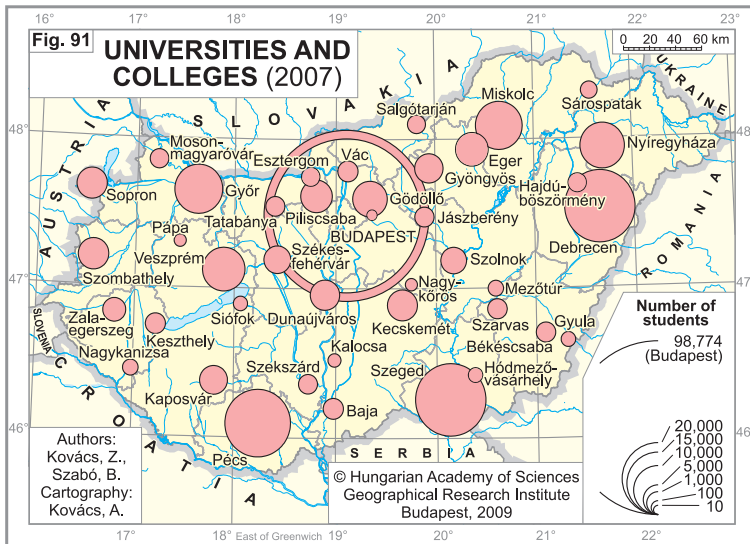
Table 17. Hierarchy of urban settlements (01.01.2009)

Level of hierarchy	Number of settlements
1. Capital	1
2. Regional centres	5
3. County seats I	9
II	4
4. Middle-sized towns I	12
II	13
5. Small towns I	28
II	56
6. Small towns with partial urban functions	37
7. Small towns with limited urban functions	33
8. Small towns without real urban functions	108
Total	306

tration of urban functions within the country (figures 91 through 93), whilst a study of the hierarchy reveals that approximately 130 Hungarian cities and towns function as real urban centres, another 70 occupy an intermediate position between towns and villages, and there are 100 legally defined towns without real urban functions. The outstanding position of Budapest within the Hungarian urban system is highlighted by the fact that the aggregate population of the 5 regional centres (Debrecen, Győr, Miskolc, Pécs and Szeged) struggles to total half that of the capital city. The primacy of

Table 18. The primacy of Budapest according to different indicators (2007)

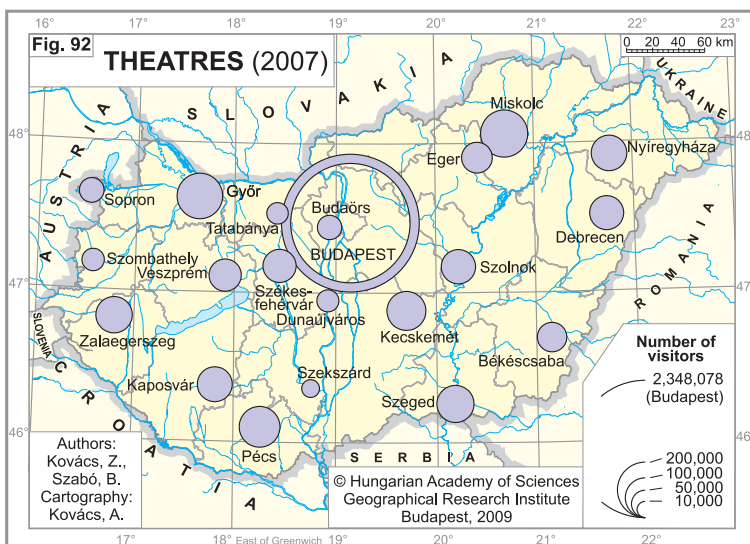
Indicators	National figure	Value of Budapest	Share of Budapest %
Population number	10,045,401	1,702,297	16.9
Visitor nights in hotels (thousand)	2,906	2,017	69.4
Books in specialised libraries (thousand)	58,822	36,353	61.8
Shareholding companies	4,493	2,415	59.8
Researchers employed in research institutes	17,391	10,336	59.5
Theatre visits (thousand)	4,049	2,288	56.5
Graduate students	226,642	98,063	43.3
Tutors in institutions of higher education	22,342	9,423	42.2
GDP (million HUF)	23,795,306	8,874,185	37.3
Employees	3,007,033	888,563	29.6
Telephone lines	3,281,523	922,363	28.1
Active hospital beds	71,902	19,252	26.8



Budapest within Hungary is even more prominent in other fields, as confirmed by selected socio-economic indicators (*Table 18*).

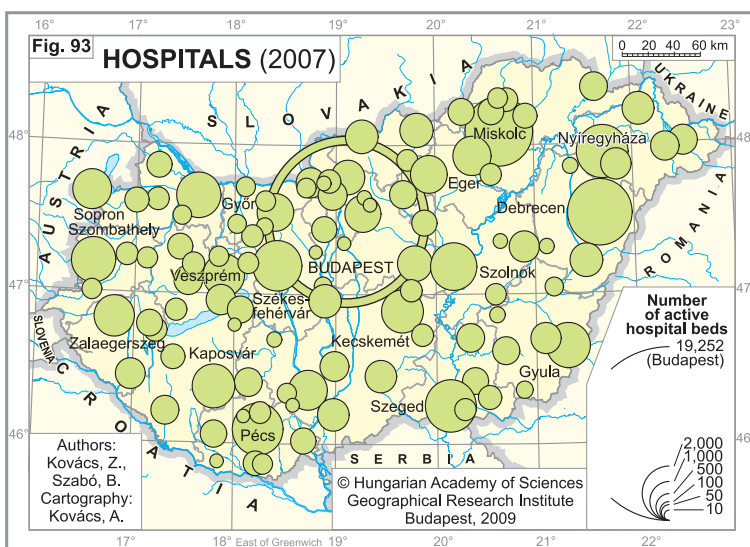
On the basis of their specialised urban functions and local economy, an alternative classification of Hungarian towns seems to be possible, even though the economic transformation (i.e. deindustrialisation and boom in the tertiary sector) of the last two decades has diminished previously acute differences (*Figure 94*). Today, ten major types of town can be distinguished in Hungary; in some cases subgroups can also be identified.

With respect to the quality of the technical infrastructure, a marked east–west polarisation can be identified in the settlement system. This is partly the heritage of the past, as the regional development pattern of Hungary has always been determined by a distinct east–west dichotomy. On the other hand, the outcome of the recent socio-economic transition and the changing economic fortunes of the regions have also contributed to the polarisation of the settlement system. An increasing regional differentiation can be seen by examining indicators of public services (*figures 60, 95 and 96*).



On the basis of the outcome, the favourable position of North Transdanubia and Budapest becomes quite evident. Rapid modernisation of the housing stock and communal infrastructure in the west; stagnation and low levels of modernisation in the east are the results of the transition. Thus, geographical location is increasingly responsible for the widening gap within the national settlement network.

Equally strong polarisation has occurred in the metropolitan region of Budapest since 1990. Due to intensive suburbanisation, the population of Budapest has been



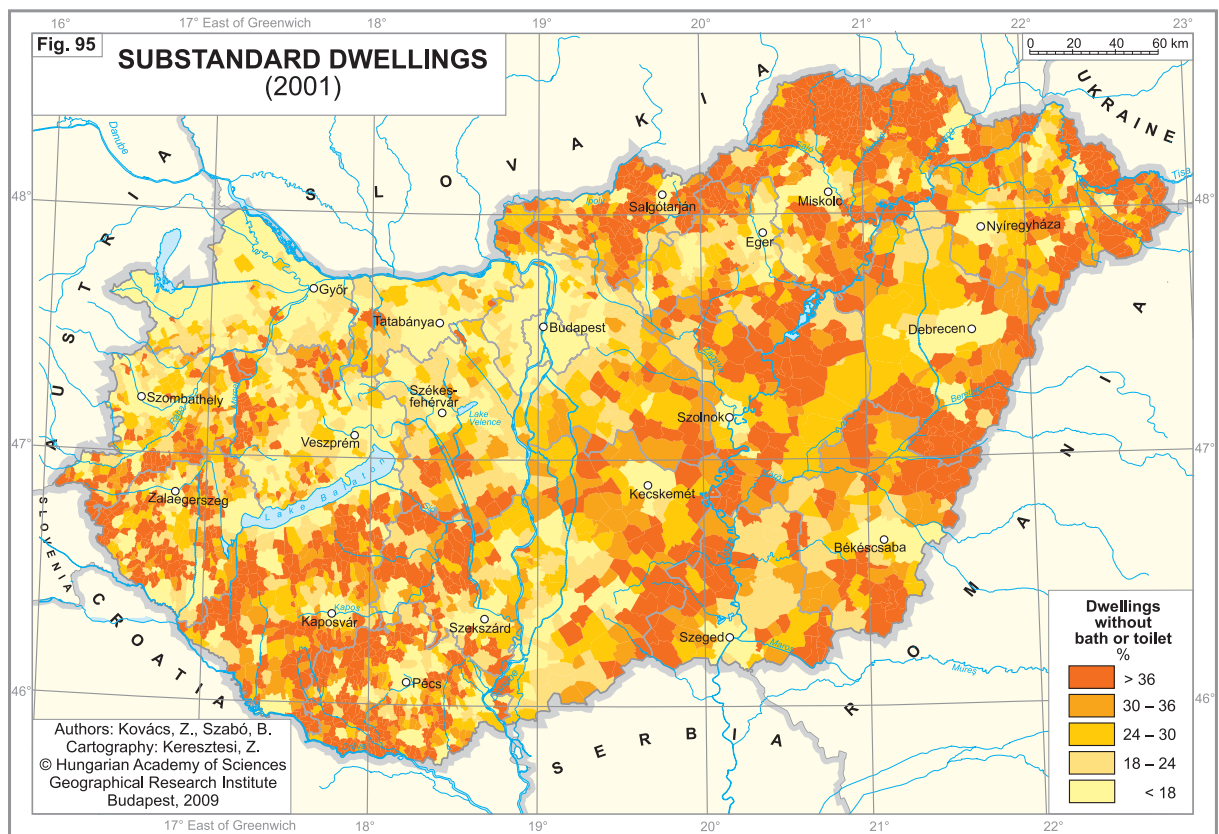
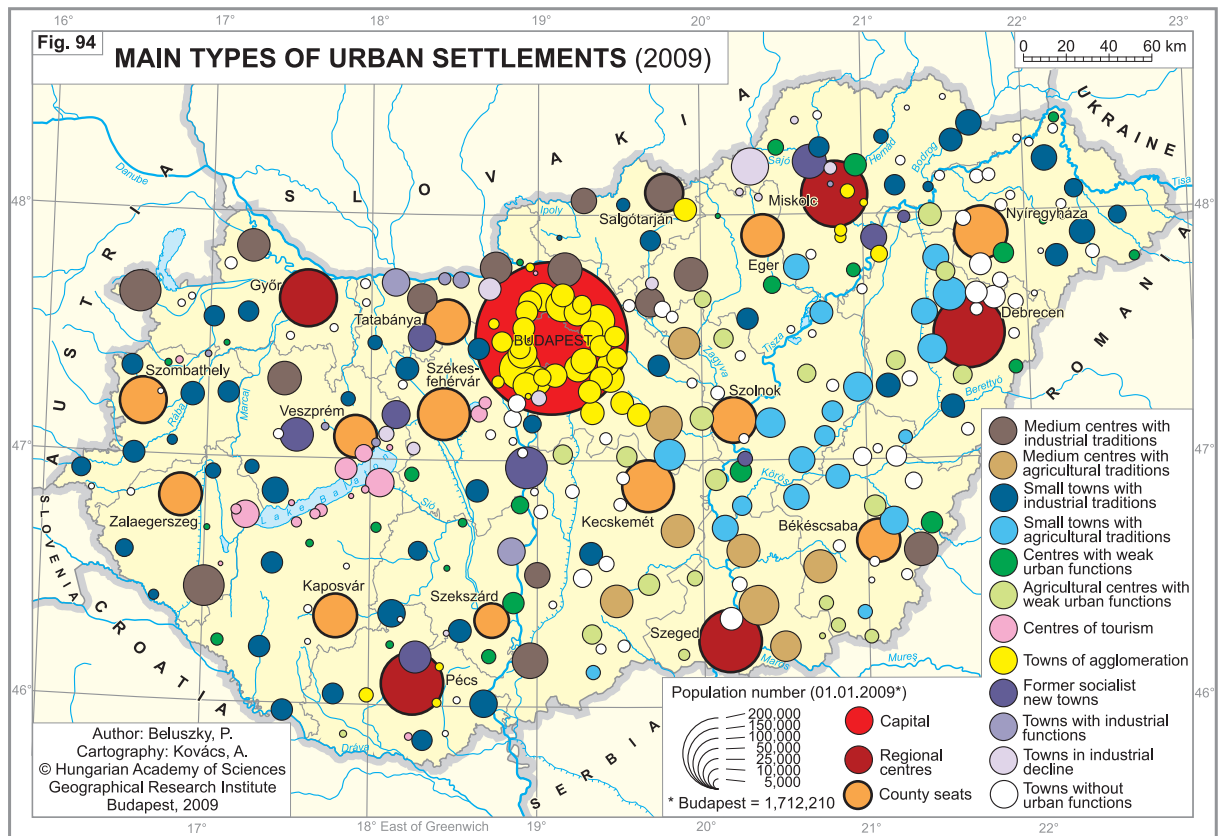
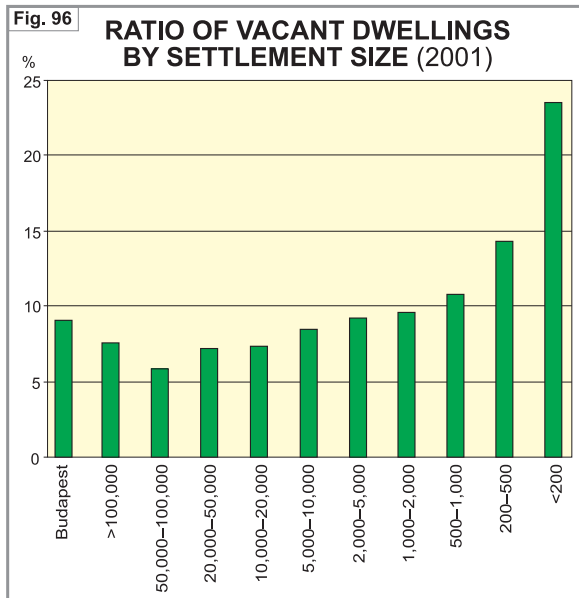


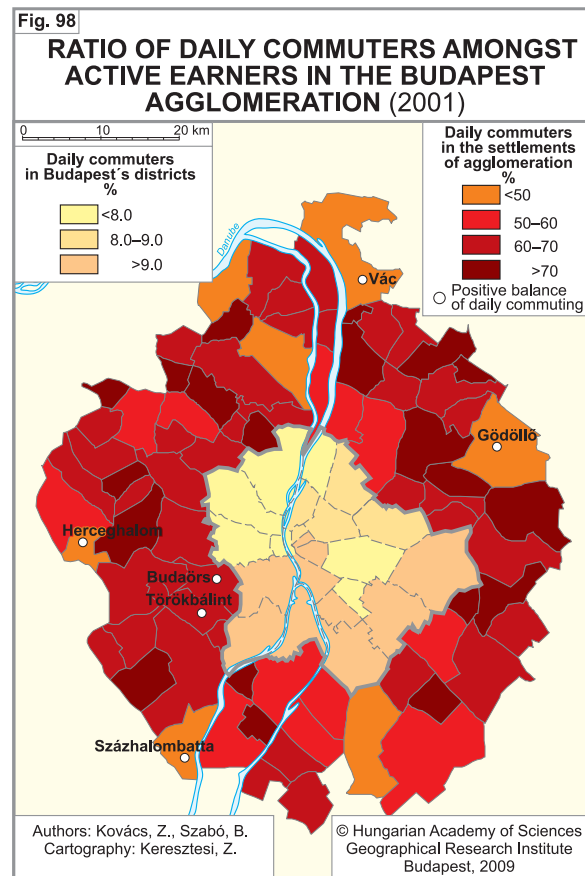
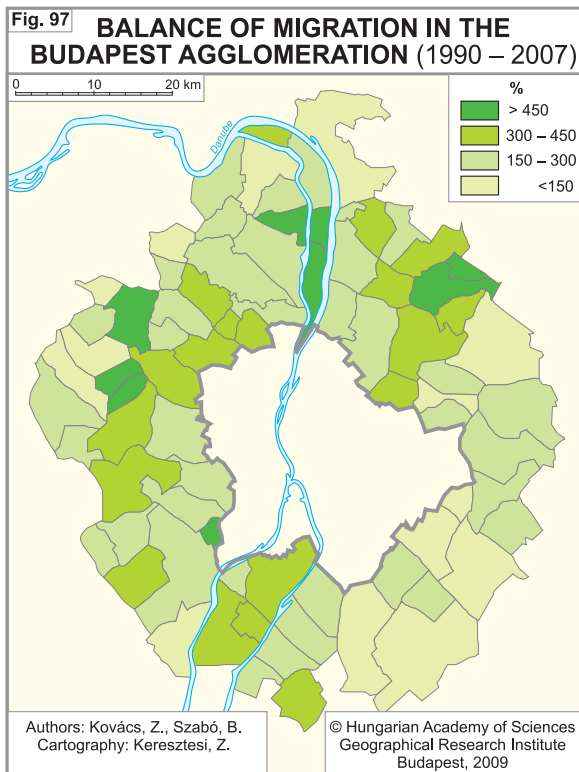
Table 19. Population change in the Budapest Metropolitan Region (BMR, 1990–2007)

Region	Population 1990	Population 2007	Population change 1990–2007	Number of births	Number of deaths	Natural population change	Migration balance
Budapest	2,016,681	1,696,128	-320,553	277,200	451,425	-174,225	-112,107
Agglomeration	566,961	755,290	188,329	119,695	125,834	-6,139	164,466
BMR	2,583,642	2,451,418	-132,224	396,895	577,259	-180,364	52,359
Central Hungary	2,966,523	2,872,678	-93,845	471,154	675,758	-204,604	110,332



continuously decreasing (Table 19). The main targets for suburban migration have been predominantly rural communities in hilly areas north and west of Budapest, which offer a high quality residential environment in an attractive landscape (Figure 97).

As a consequence of these migration patterns, there is a distinct social polarisation trend in the agglomeration zone: the northern and north-western regions around Budapest provide the upper-middle classes, whereas the southern and eastern regions are dominated by residents from lower socio-economic groups. Alongside residential suburbanisation, increasing deconcentration of economic activities (e.g. offices, retail, and manufacturing) also started in



the capital's metropolitan region after the mid-1990s. Some of the centres of economic growth around Budapest (e.g. Budaörs and Gödöllő), with their numerous workplaces, attract a mass

of employees from the core city (Figure 98). In terms of their physical appearance and functions, some of these locations closely resemble North American edge cities (Figure 99).

