Competitiveness and Growth

THE ROAD TO SUSTAINABLE ECONOMIC CONVERGENCE

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The road to sustainable economic convergence

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Regional differences in economic growth in Hungary

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The empirical observations of global economic processes and the Nobel Prize awarded to Paul Krugman in 2008 highlighted the fact that the economy is functioning in space and is shaped by strong concentration processes, and that even the various regions of countries exhibit different development trajectories. Understanding the regional economic specificities and the spatial dimension is particularly important in the case of Hungary, as the country is characterised by significant spatial disparities despite its small size, and its geographic location within Europe results in various opportunities for forging regional links.

In Central and Eastern Europe, and specifically within Hungary, the transition to a market economy also led to a sharp increase in geographic disparities. This was mainly caused by the strong selectivity of FDI-funded investments which were a major driver of development, as a result of which only a small number of regions were able to intensely connect to the competition of the integrated common European market. In the wake of market liberalisation, many of Hungary's regions first faced the loss of their Eastern markets and then their domestic markets as well. The geographic concentration of the Hungarian economy ground to a halt at the level of the counties after 2009, and a moderate levelling-out dynamic has even been perceived in recent years. This is due to a smaller extent to the reinforcement of less advanced regions, and to a larger extent to the temporary slowing of economic dynamics in more advanced regions, and to the more sustained slowdown in the dynamics in Budapest.

A territorial analysis of GDP, employment and other parameters reveals that the Hungarian growth trajectory is not uniform; instead, 3-4 territory types

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characterised by significantly different development paths can be identified, which can be effectively incentivised using different strategies, with integrated interventions. Budapest and its vicinity have become globally integrated, and several manufacturing regions fuelled by FDI (Győr-Moson-Sopron, Komárom-Esztergom, Fejér, Vas, and more recently Bács-Kiskun county) have become integral parts of the European economy through the subsidiaries of multinational manufacturing firms. Since 2011, Hungarian economic growth has largely depended on the performance of these regions. Every county in Hungary was able to improve its GDP until 2006, but 2007 brought significant setbacks. After 2009, only 3-4 FDI-driven manufacturing regions were capable of growing and improving their labour productivity dynamically and significantly. From 2011, economic growth resumed in all counties, albeit slowly at first, and mainly as a result of improving employment. At the same time, the country's northeastern and southwestern regions remain economically only moderately active, also limiting the opportunities of macrolevel output.

At present, the regional disparities and economic spatial structure are no longer just a question of fairness, but may also be one of the bases of or even limits on growth. The country's excessively monocentric economic spatial structure, its excessively Budapest-centric transportation network and weak transversal links and the disproportionalities of the settlement network hinder the economic development of rural regions. Meanwhile, beyond a certain point this structure does not benefit the capital and holds back the entire country's economic growth. The spatial economies of scale stemming from the concentration of labour, demand and economic agents in Hungary, in other words agglomeration advantages are present only in the Budapest region mainly due to the historically induced nature of the urban network in Hungary. In order to strengthen the urban nodes needed to reach the critical mass necessary for agglomeration advantages outside the agglomeration of Budapest, larger rural towns could engage in cross-border agglomeration with nearby large cities in the Carpathian Basin to form joint economic regions. At the same time, this calls for an economic policy that offers opportunities in less urbanised regions with no export potential by creating employment opportunities, strengthening their domestic market presence, deepening urban-rural relationships and by applying a local economic development approach.

The appreciation of spatial agglomeration advantages and the presence of lagging regions that are barely active economically underscores the fact that it is possible to tap into growth reserves for the national economy by understanding geographically diverse development and the regional dynamics of the economy, and by reinforcing the regional foundations of economic growth in an integrated manner using strategies tailored to specific regional characteristics.

This chapter analyses the development of regional differences in Hungary's economic development and growth and provides a Central and Eastern European outlook as well. It evaluates the changing contribution of the different counties to the country's economic performance over time. In addition to this, it reveals how and to what extent certain factors, such as labour productivity, employment and changes of the number of individuals of working age shaped economic growth in different counties. The spatial features of the determinants of the status of human resources are analysed as a special topic in the chapter, and the summary attempts to identify certain spatial conditions for economic growth.

7.1 The changing approaches to the examination of regional economic growth

A national economy should not be considered a unified whole, as there are significant differences between the regions within a country with respect to growth potential. This notion has gained increasing acceptance among those examining the economy, thanks, among other factors, to the new economic geography approach linked to the name of Paul Krugman. Due to the impact of globalisation, the operation of societies and thus economies has been greatly transformed. Factors that were previously unknown or regarded as less important have gained in importance, and new processes are under way. As globalisation has gained momentum, socio-economic conditions have changed, and the neoclassical approaches have been unable to appropriately describe their impact. A dual spatial process has been observed in the operation of the economy: in parallel with the **geographic spread of economic activities**, local tendencies

have strengthened. **The economic role of spatial concentration has acquired new significance**, while ties between remote business partners may also become stronger. Companies in global industries plan for country groups with respect to product markets and sales, while they plan for subnational regions, usually cities and the surrounding areas, when organising input markets and production. Companies competing globally have realised that the sources of their competitive advantages are concentrated spatially, therefore they need to strive to strengthen them locally. Due to this competition within industries, regions and territorial units gained in economic importance, which manifests itself in rivalry among regions, i.e. the unique competition of cities on the one hand, and in businesses' increasing utilisation of the agglomeration advantages (basically spatial external economies of scale) resulting from spatial concentration on the other hand.

Owing to the above-mentioned trends, several basic tenets of economics should be revisited, such as territorial competition and the interpretation of economic growth and development – that are closely linked to competition – as well as the concepts of economic policy and development employed in the face of the new challenges.

The economic approaches based on different principles have interpreted the economic growth of regions differently (Abreu 2014; Armstrong–Taylor 2000; Ács–Varga 2000; Capello 2007a; Capello–Nijkamp 2009; Lengyel 2010a; McCann–Van Oort 2009; Pike et al. 2006). **Until the 1970s, the principal method was the spatial application of Keynes' ideas**, while it was accepted that the negative effects of market cycles can be mitigated by economic policy interventions. The main aim was to increase incomes and employment, which was sought to be achieved in the regions through stimulating demand (consumption, investments, public spending). As a result of the socio-economic changes happening in the background, the drawbacks of the Keynesian economic policy became obvious by the early 1970s. Inflation rose, while at the same time the economy stagnated, and instruments that were useful earlier did not work in regional development.

Neoclassical approaches became dominant in the 1970s. Neoclassical exogenous growth theories assume that self-regulating market mechanisms operate efficiently, and that the results of technological change basically spread as externalities. If factors of production (capital, labour force) and technology can flow freely among regions, economic growth can achieve equilibrium in spatial terms as well: capital flows from developed regions to underdeveloped ones as greater returns can be achieved there, while the labour force moves from less developed regions to the developed ones in hope of higher wages. In this approach, development was primarily sought to be achieved by creating the underlying conditions facilitating the flow of the production factors in space (mainly through the establishment of the technical infrastructure and transportation links), and thereby achieving the goal, i.e. evenly rising productivity and living standards and convergence among regions.

In the 1980s, the neoclassical endogenous growth theories gained prominence, since hardly any spatial levelling-out could be observed, mainly due to the limited flow of production factors between regions. Economic growth and the increase in productivity and living standards were expected from technological progress corresponding to the requirements of economic agents, effective innovation policy and the improving quality of human capital. In line with this expectation, one should not interfere with market forces, but the factors providing the qualitative underlying conditions beyond companies should be strengthened.

As globalisation gained momentum **in the 1990s**, underlying socio-economic conditions changed fundamentally. As a result, **various heterodox approaches became popular, which were recently replaced by the endogenous, place-based regional growth approaches** that expect increased competitiveness on the global stage from the improving competitiveness of the region and the utilisation of its unique competitive advantages. Technology and knowledge are considered endogenous within the region. Therefore, a unique growth path is charted in each region based on the given local features, and this

growth path can be stimulated by a unique economic development "competition strategy".

Table 7.1: Major economic approaches to regional economic growth

Theoretical aspects	Keynesian theory	Neoclassical (exogenous) theory	Neoclassical (endogenous) theory	Heterodox theory	Regional theory
Period	1960s, 1970s	1960s, 1970s	1980s, 1990s	1980s, 1990s	1990s, 2000s
Interpretation of economic growth	Growth of incomes and employment	Improvement of productivity and quality of life	Improvement of productivity and quality of life	Improvement of competitiveness	Improvement of competitiveness
Factors of economic growth	Demand (consumption, investments, public spending)	Factor endowment and productivity	Endogenous mechanisms of productivity growth (technological development)	Non-conventional factor endowment (infrastructure, innovation, accessibility)	Endogenous regional factors
Theoretical basis	Export base theory, cumulative causation theory	Flow of factors of production between regions	Macroeconomical endogenous growth theories	Growth potential theories	Endogenous subregional growth theories

Source: Lengyel (2010a) p. 40

The chronology of the above-mentioned approaches clearly shows that regional growth used to be interpreted as the "late print" of macroeconomic growth theories, e.g. by adapting the results of the Keynesian (export-base) or neoclassical (technical progress) approaches (Lengyel–Rechnitzer 2004). In addition, the growth of each region was thought to happen based on similar conditions or "templates". Recently, it has become obvious that in a global context **growth is based on region-specific, endogenous place-based factors**, and several growth paths can be observed due to the intense global competition, and the region-specific inclusion in the international division of labour due to the varying underlying natural, social and economic conditions. The most widespread are now territorial approaches based on endogenous territorial elements that form an independent theoretical system by spatially applying the main results of endogenous growth theories. In the case of exogenous neoclassical approaches, we can apply the same model anywhere,

i.e. space is considered passive, whereas in the case of endogenous approaches space plays an active role, as all regions are unique due to the differences in geographical location, accessibility, neighbourhood and settlement patterns (being one of the sources of agglomeration advantages) (Capello 2008; Lengyel 2010a). This approach revisits the basic concept of geography and has become generally accepted. With the introduction of the place-based principle, the approach has also emerged in the European Union's 2014–2020 regional policy and provides the theoretical basis for economic development subsidies as well.

Competitive advantages have clearly gained priority over comparative advantages (Lengyel 2010a; Porter 1990). A conceptual change has also occurred, competitiveness as the "ability" for growth and development under the conditions of territorial competition (see Box text) has clearly become the key concept in the interpretation of regional economic growth. Consequently, although the central government's (post-Keynesian) interventions are necessary, in addition to these, **unique, bottom-up economic development strategies based on endogenous features and integrating several sectors need to be developed in each region** in order to improve competitiveness, which basically means the enhancement of regional competitiveness. Accordingly, not only moderately developed regions should be supported in their convergence but also developed urban regions, as the latter compete on the international level. The type of support should be vastly different: while the economies of moderately developed regions should be stimulated by "hard" instruments (e.g. developing infrastructure, facilitating investments, establishing new business facilities), developed regions should be invigorated by the development policy using "soft" instruments (the introduction of the results of R&D into business life, the implementation of technology transfer, fostering cooperation and trust).

According to empirical analyses in the international literature, the agglomeration advantages, without which companies start out in the international competition with an almost insurmountable disadvantage, depend on city size. The business advantages stemming from spatial

concentration enable, inter alia, the reduction of transaction costs, the sharing of services, the emergence of externalities and efficient input substitution.

Box 7-1:
New economic geography and competition among regions

According to the new economic geography theory of Nobel laureate Paul Krugman (2000, 2003), the general equilibrium theory describing the new conditions can only be formulated by taking into account spatial dimension. Economies operating under the new conditions can be characterised by the reduction of unit transport costs, the growing importance of the economies of scale, the role of increasing returns to scale in global industries, monopolistic (and oligopolistic) spatial competition and agglomeration externalities. According to the new economic geography, the centripetal forces leading to spatial concentration and the centrifugal forces entailing spatial dispersion stem from these effects, and the two opposing forces result in spatial equilibrium. The increasing importance of spatial concentration, i.e. metropolitan economies – which serve as "hubs" in the global economy – follows from the theory.

The examination of the competition among countries and regions has become one of the central issues in economics and regional studies, generating lively debates. In his earlier, well-known opinion, Krugman (1994) disputed that there was any competition among countries (and thus regions) similar to the business sector (for example, the success of a country does not necessarily entail the marginalisation of its competitors). In fact, Krugman considered the initial use of the concept of competitiveness dangerous, as the international division of labour based on comparative advantages benefits every country, since living standards rise everywhere. Therefore, the economic growth of every region is automatic, provided that they specialise in line with their comparative advantages.

According to Porter (2008), however, competition among regions can, in fact, be observed, and comparative advantages cannot be utilised. Instead,

competitive, i.e. absolute advantages have become important, similar to competition among industries. Porter asserts that in regional competition "competitiveness depends on the productivity i.e. how human capital and natural resources are utilised locally. Productivity sets the sustainable standard of living" (Porter 2008 p. 3). Therefore, economic growth is not automatic. In competition among regions, win-lose situations can also occur, and therefore programmes based on strategic planning should be fostered in economic development (Porter believes that cluster-based organisations can take part in the global competition).

In regional economics and economic geography, it seems to be established that regions do compete, but the features of this competition are unlike those between companies or countries (Batey-Friedrich 2000; Chesire 2003; Malecki 2002). As Capello (2007a) put it: "regions compete on the basis of absolute rather than comparative advantages". The consequences of competition between regions are similar to the results of competition among countries: for example, in successfully competing regions incomes increase, the standard of living and employment improves, new investments emerge, and talented and creative young people and businessmen gravitate towards such regions (Malecki 2004; Polenske 2004).

Another factor fundamentally determining regional development is the fact that competition between regions is not simply for capital, but for activities with various levels of value added, i.e. the levels of the increasingly global value chains representing higher value added (Parrilli et al. 2013). The key to the global economic success of regions and countries is increasingly their ability to attract the higher levels of these economic value chains (e.g. R&D, knowledge-intensive industries, design), and how well they can "anchor" these activities and avoid their relocation, for example with an exceptional knowledge base, synergy ties or an environment fostering innovation. The majority of the conditions for forming links with value chains can be created in individual regions or metropolitan areas, therefore in addition to the increasing importance of agglomeration advantages, this also boosts the significance of regionalism and urbanisation.

7.2 Developments in the inherited spatial structure and regional disparities

7.2.1 Certain consequences of the transition on regional development in Central and Eastern Europe and Hungary

In the economies of the Central and Eastern European countries transitioning from the socialist planned economy to a market economy, gradually in the 1980s and at an increasing pace from the 1990s, foreign direct investment became the engine of the economy and growth. The substantial inflow of capital into Central and Eastern European that started in the early 1990s was stimulated by higher yield prospects, stronger growth rates, the exceptionally cheap but still relatively skilled labour and the expanding demand on these markets. Typically, the **export base** created through foreign direct investments became the main driver of growth in the economies of the region, which also contributed to the fact that these countries became exceptionally open economies. However, only a limited number of regions were able to profit from this, as the **inflow of capital proved to be highly selective by region,** preferring only a smaller part of these countries, mainly the regions around the capital and closer to the Western market. Just like most of the regions in Hungary, a significant share of Poland's and Slovakia's regions were unable to join the export production representing the new model, while their earlier economic role eroded during the unavoidable structural transformation. As the 2014 analysis by the European Commission points out, in contrast to the EU-15, in the EU-13 the spillover effects of the developed capitals did not take hold, or hardly took hold in their broader regions (European Commission 2014).

The eastern part of the European Union is less urbanised than the vast majority of the older Member States, which in today's competition between regions is already a disadvantage from the perspective of the now increasingly important external economies of scale (agglomeration economies, Vas–Lengyel–Szakálné Kanó 2015). While the proportion

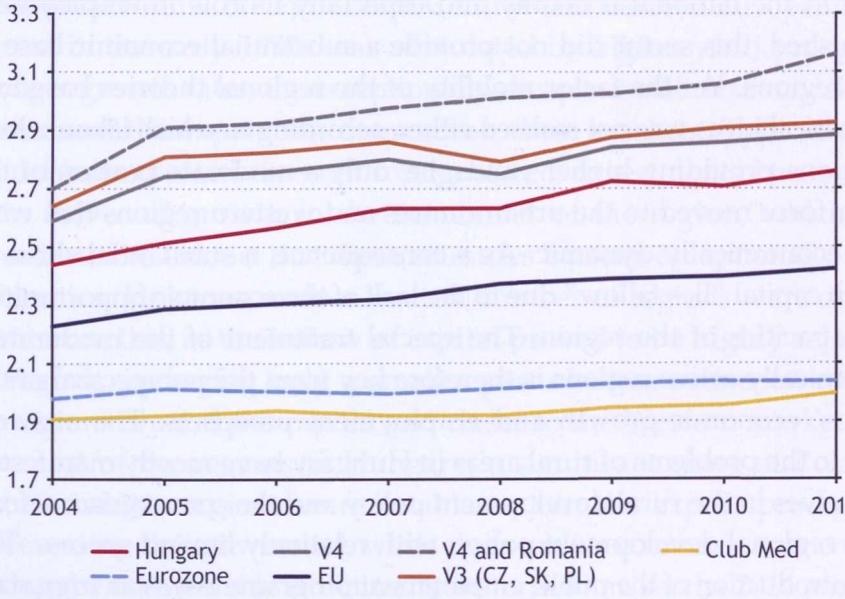
of urban population in the EU-15 is 79 per cent, it amounts to merely 62 per cent in the post-Soviet EU Member States (UN 2014), and the share of those enjoying a quality urban lifestyle is even lower.

Just like the heavy industry crisis areas, most of the rural regions were unable to establish their position on the competitive market that became unified on account of the market liberalisation and the EU integration, and they lost a significant portion of their domestic market share – for example in certain sectors of the food industry or the light industry – due to the increasing imports in the 1990s. As the weight of the agricultural sector in the national economy and especially its role in employment diminished, this sector did not provide a substantial economic base in these regions. Yet the factor mobility of the regional theories based on neoclassical ideas was not realised either, according to which labour shifts to regions providing higher yields, i.e. only a moderate portion of the labour force moved to the urban centres and western regions that were more economically dynamic. As a consequence, a substantial share of human capital "lies fallow" due to the lack of the economic opportunities and capacities of the region. The special treatment of the moderately economically active regions is therefore key from the perspective of the regions' economic growth and employment prospects. The answers given to the problems of rural areas in Hungary have mostly manifested themselves in the rural development policy and the convergence efforts of the regional development policy, with relatively limited success. The 2011 introduction of the public employment programme was an important step, but it does not provide a permanent solution in this area. However, the economic crisis hit rural regions less hard, and therefore in the EU-13 the relative position of the rural regions improved, albeit only slightly (European Commission 2014).

One direct consequence of the above is that while in the past 15 years the Visegrád Group exhibited a perceptible convergence with the European Union at the national level – although this convergence has slowed down since 2008 or was disrupted – there is considerable regional divergence within the individual countries (Chart 7-1). Actually, with the exception of

the Czech Republic, vastly different courses of development can be seen behind the growth paths of the Visegrád Group, and certain successful metropolitan regions (primarily around the capital) and western regions are neighboured by economically hardly active regions that are typically rural or burdened by the challenges of structural transformation from the former heavy industry, which results in considerable economic disparities among the regions overall (Chart 7-2).

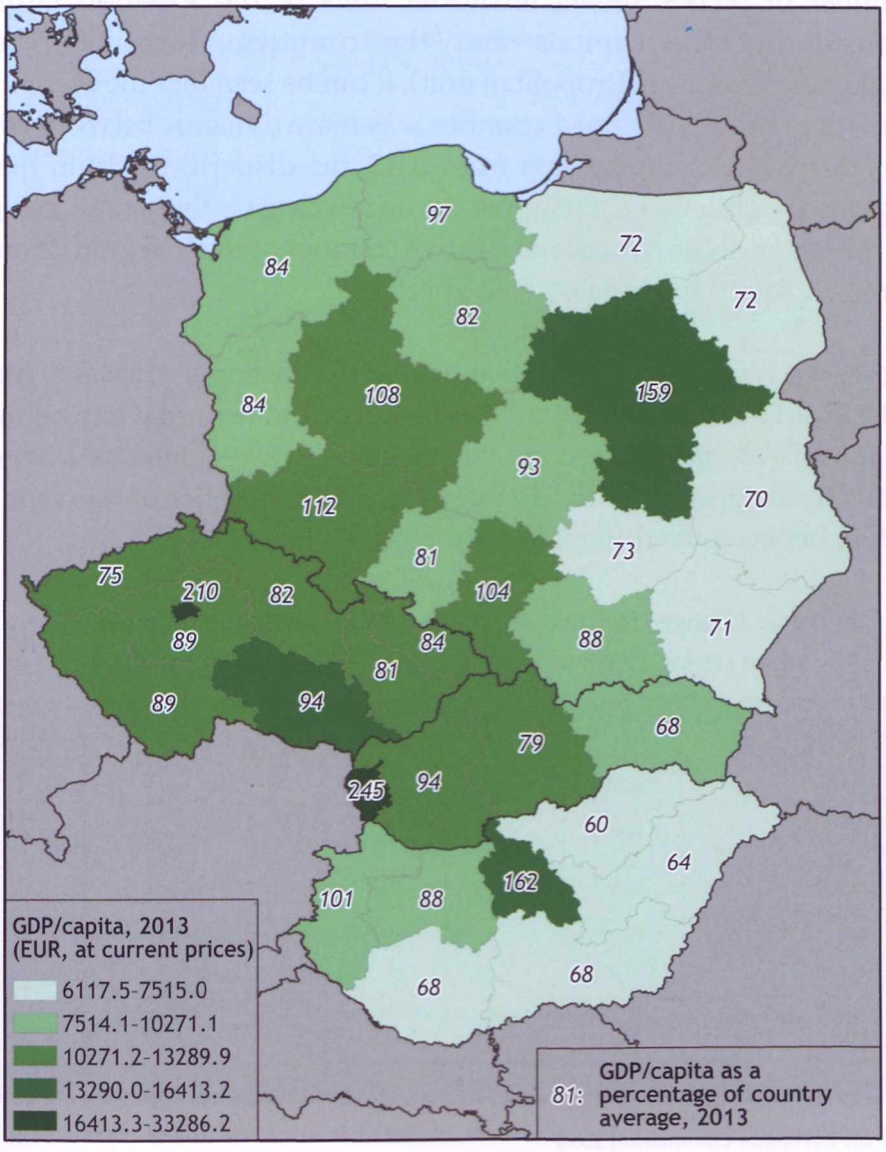
Chart 7-1: Changes in regional concentration of GDP within countries (2004-2011)



Note: The ratio of the GDP per capita of a given country's most developed and least developed NUTS 2 regions. In the case of country groups, the unweighted average of the ratios, excluding overseas regions and countries consist of one region. The characteristics of statistical regions should be taken into account. In the case of all countries of the Visegrád Group, the most developed region is the one containing the capital, which, however, contains only the capital in the case of the Czech Republic and Slovakia, the capital and its nearby surroundings in the case of Romania, and the capital and its broader surroundings in the case of Hungary and Poland.

Source: EUROSTAT

Chart 7-2: GDP per capita in the NUTS 2 regions of the Visegrád Group (2013)



Note: The Hungarian GDP figures are preliminary.

Source: EUROSTAT

The disparities between the regions not only clearly widen within countries, but also across the Visegrád Group. Examining the total number of NUTS 3-level territorial units of the Visegrád Group (considering the capitals and the counties "carrying" their agglomeration one metropolitan unit), it can be seen that the economic growth of more developed counties was more dynamic between 2009 and 2013. According to data from 2013, the disparities within these regions are quite large: the upper decile's average is three time as high as the lower decile. Out of the last five counties of the Visegrád Group, three are found in Hungary (see Chart 7-17).

However, it can also be seen that during the economic crisis, i.e. **from 2008 to 2011, the largest slump was observed in the capital city regions of the EU-13**, and the second-tier metropolitan regions fared better, while in the case of the EU-15 there were no disparities of this type or extent between the different urban regions (Table 7-2).

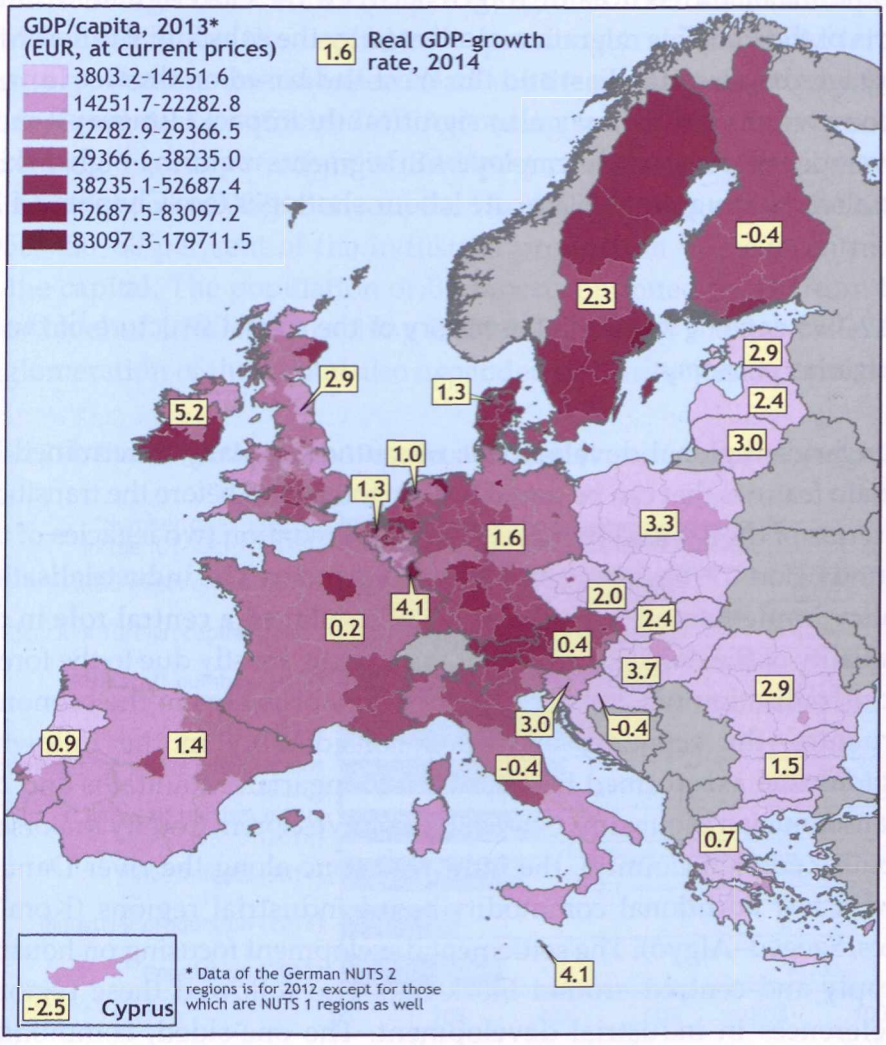
Table 7-2: Changes in GDP per capita, productivity and employment by urban region types in 2000-2008 and 2008-2011 in the EU-13

	2000-2008			2008-2011		
	GDP/ capita	Productivity	Employment	GDP/ capita	Productivity	Employment
Capital city metropolitan regions	5.5	3.6	1.9	-0.3	1	-1.3
Second-tier metropolitan regions	4.9	4.1	0.8	1.4	1.3	0.1
Smaller metropolitan regions	3.7	3.6	0.1	1.4	1.2	0.2
Non-metropolitan regions	4.5	4.4	0	0.6	1.7	-1.1
Total	4.9	4.3	0.6	0.7	1.4	-0.8

Source: European Commission 2014

From the perspective of the spatial development of the Central and Eastern European regions, the dangers of certain dependences need to be pointed out. The dominance of foreign capital "prone to" relocation in development creates a sort of vulnerability in these

Chart 7-3: GDP per capita in the NUTS 2 regions of the EU, and real GDP growth in the Member States (2013, 2014)



Note: Data for Hungary, Finland and Croatia are preliminary. With respect to the GDP growth rate only Greece, Spain, Cyprus, the Netherlands, Romania and Portugal have preliminary data.

Source: EUROSTAT

countries, especially at the regional level, where the economy of the regions depends largely on one or two multinational corporations. In the future, the risk of migration by the skilled and active labour force

may cause greater vulnerabilities in the development of Central and Eastern European regions, for which a steady motivation is provided by the major differences in wages between the eastern and western parts of the EU. This migration motivated by the substantial differences in wages between the East and the West and based on the free flow of labour within the EU may also significantly impact Hungary's most developed regions, where employers in segments requiring higher skills are already struggling with acute labour shortages (see Chapter 7.4.3).

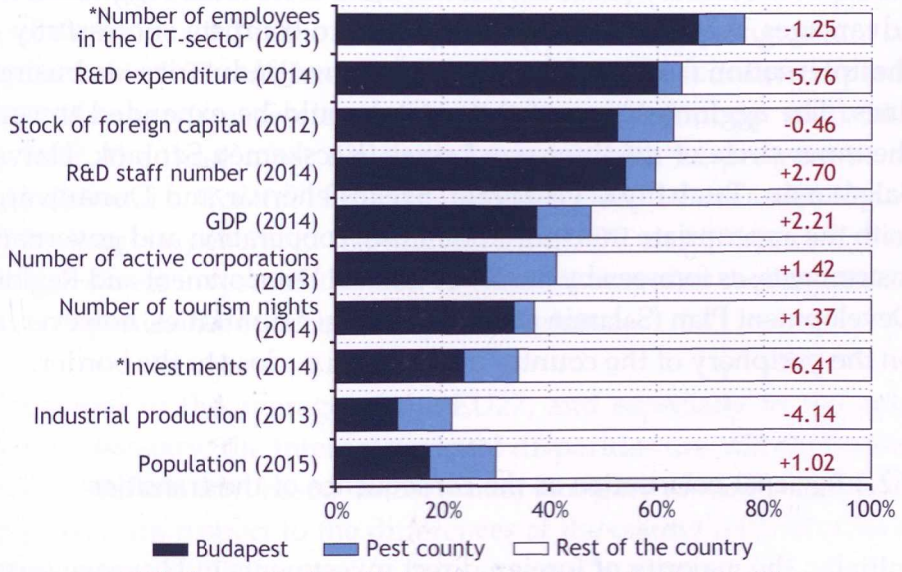
7.2.2 Two defining factors in the history of the spatial structure of the Hungarian economy

Hungary's regional development was fundamentally determined by certain features that can be traced back to the period before the transition. In terms of the spatial structure, we should mention two legacies of the period before 1990 which are still dominant today. **The industrialisation policy implemented from the early 1950s played a central role** in the spatiality of the domestic economy. As a result, mostly due to the forced industrialisation which later caused severe problems in the economic structure, the economy expanded considerably in the following regions: the axis formed by the North Hungarian Mountains and the Transdanubian Mountains (stretching from Veszprém County to Borsod-Abaúj-Zemplén County), the industrial zone along the river Danube and a few additional commodity-based industrial regions (Komló–Pécs, Szeged–Algyő). The settlement development focusing on housing supply and centred around block flats also followed these regional preferences in industrial development. The one-sided, commodity-intensive, heavy industry economic base of the socialist cities that were constructed almost as "greenfield" investments during this period, such as Dunaújváros, Komló, Kazincbarcika, Ajka, Oroszlány, and partly Salgótarján and Ózd, still represents an economic burden.

However, the significance of the – not only politically, but also economically – greatly divisive borders created after the 1920 Treaty

of Trianon is perhaps even greater in today's economic spatial structure, as the Treaty severed off two-thirds of the territory of the country and all of the large cities which played a regional role, while **Budapest**, which used to be the capital of a previously substantially larger territory, **became the "swollen head" of the country due to the lack of regional centres** (Chart 7-4). According to the literature, to some extent the excessive weight of Budapest could already be observed earlier (Beluszky 2007). Between the two World Wars and in the early 1950s, 50–60 per cent of the industrial production was concentrated in the capital. The population of Budapest continued to rise from the 1949 level of 1,590,000, reaching 2,059,000 by 1980.[66] Meanwhile, the agglomeration of the capital also expanded its territory and population

Chart 7-4: Share of Budapest and Pest County in certain socio-economic indicators



Note: The 2014 GDP and investment figures are preliminary data published by the HCSO.

Source: HCSO

[66] Growth includes the expansion due to the creation of Greater Budapest.

at a rapid pace. In the 1960s the growth of Budapest's industry was restricted with administrative measures: the city's proportion from the country's industrial workers dropped to around 20 per cent by the end of the socialist era, however, its weight in the metropolitan segment of the increasingly important tertiary sector, i.e. social and economic governance, was preserved (Beluszky, 2007). Although the government's plans for regional development[67] (1971, 1998, 2005) almost always sought to strengthen large cities' regional centre functions, the multi-polarisation of the country did not make substantial progress (Chart 7-4).

According to the literature, in Hungary the advantages from economies of scale and agglomeration stemming from spatial concentration, which is gaining increasing importance in terms of competitiveness, can only be observed in Budapest. Due to their small size, the other Hungarian urban areas can only provide conditions, i.e. localisation agglomeration advantages, which enable the companies to compete successfully on the international stage, for only one or two industries or business lines. The agglomeration of the capital could be expanded towards the inner circle of medium-sized cities (Kecskemét, Szolnok, Hatvan, Salgótarján, Tatabánya, Veszprém, Székesfehérvár and Dunaújváros) with the appropriate transportation links, cooperation and governance instruments, as foreseen by the 2014 National Development and Regional Development Plan (Salamin et al. 2014). Larger rural cities, however, are on the periphery of the country's territory, i.e. close to the border.

7.2.3 Regional polarisation as the consequence of the transition

Initially, the majority of foreign direct investments in Hungary served privatisation purposes, and then from 1997 the sources of foreign capital investments were reinvested incomes and greenfield investments, and after the turn of the millennium investments increasingly flowed towards manufacturing (HCSO 2015a). Foreign direct investments mostly

[67] 1971: National Settlement Network Development Plan; 1998, 2005: National Regional Development Plan.

targeted the capital and its nearby surroundings, as well as Western Transdanubia and Central Transdanubia, and market-based investments typically preferred facilities in metropolitan regions. Meanwhile, as agriculture lost its significance in the economy, and the role of the dominant agricultural regions diminished, especially on the Great Hungarian Plain. In addition, the crisis of most of the aforementioned "socialist industrial regions" still poses a growth problem today, primarily in the previously heavy industrial regions of counties Borsod-Abaúj-Zemplén, Nógrád and Baranya. As a consequence of the above-mentioned developments, regional disparities within the country have almost continuously increased since the mid-1990s.

The main regional dimensions and trends of the Hungarian disparities are the significant differences in the level of development between the capital and the rural areas and between the eastern and western parts of the country, as well as the fact that the regions without a significant city lag far behind. **The differentiation continued almost uninterruptedly after Hungary's accession to the European Union**, up until 2009. In 2012, the three most developed regions with 24 per cent of the population, i.e. Central Hungary, Western Transdanubia and Central Transdanubia, generated two-thirds of the GDP, and 89 per cent of the foreign direct investment linked to the area was also concentrated in the companies headquartered in these regions.

Compared to the average of the EU27, and especially to the small size of Hungary, the internal regional disparities are still excessively huge in the country: based on 2011 data, Hungary ranked second after Bulgaria with respect to the differences at the county level (European Commission 2014).

The literature points out that the increasing regional differences since 1990 have, in a certain sense, been a natural consequence of the market economy transition. According to Nemes Nagy (2009), the relative parity of the Soviet countries was not based on real factors, i.e. it did not have an enduring real basis. While in modern market economies the basic precondition for convergence was the tertiarisation of the economy,

i.e. the increasing dominance of the sectors linked much more to the population proportions than the primary or the secondary sectors, in socialist countries convergence was primarily based on the over-subsidised productive sectors (heavy industry), mass production and the levelling of wages and incomes. According to Nemes Nagy, the political transition not only marked a return to the market economy, but also, as an unavoidable consequence, a return to trend of regional disparities characteristic of market economies (see Box 7-2). Nevertheless, it must be noted that while Hungary still performs relatively well with respect to the social and income inequalities "kept" at a low level in socialist countries – the country's so-called Gini index measuring income inequalities is lower than in 17 EU Member States - the economic disparities in regional terms are much higher than in the majority of the EU15.

Box 7-2:
Relationship between growth and regional disparities[68]

In the literature, the classic basis for the empirical analysis of regional disparities within countries is considered the 1965 study by J. G. Williamson. The so-called Williamson Hypothesis is basically the territorial equivalent of Kuznets' model for economic growth and social inequalities, according to which the relationship between national economic growth and the internal territorial division of the country can be described with an inverted U-curve. Economic growth typically entails an increase in regional differences, which start to diminish after a certain point that cannot be determined exactly. According to Nemes Nagy, the curve can be described the following way: in its first phase, the universal dominance of agriculture keeps regional disparities low. In the second phase, capitalism and the capitalist manufacturing industry starts to take hold, the operation of which takes place in a spatially much more concentrated manner. In the third phase, services appear in the economic structure in increasing proportion, thereby mitigating the "marked duality of the economic structure" and regional disparities. The fourth is basically the

[68] Based on Nemes Nagy 2009, pp. 319–329.

continuation of the third, which is supplemented with a top-down regional policy aimed at convergence, which reduces regional differences even further.

The original model was not designed to forecast economic and regional trends, and therefore had to be adjusted later on. The 1988 model by Amos can be regarded as one of the most important contributions to the original, in which two possible appendages were added to the inverted U-curve. The first indicates a balanced and hardly changing spatial structure, while the second signals the resuming increase in disparities. As the possibilities of empirical studies expanded, several additions were made, and several attempts were made at confirming or refuting the curve's validity.

The Williamson Hypothesis is one of the few theoretical models used for describing and forecasting territorial processes. Nonetheless – due to the nature of models – it generalises and mixes several growth paths; therefore, the course of development of individual countries cannot be inferred from it. The development of Hungary, similar post-Soviet countries and their spatial structure is a good example for this, as the artificial equality created by socialism considerably diverted them from the paths projected by the models. With the strong differentiation that started with the political transition and lasted until recently, disparities returned to the trend line typical of market economies.

The results projected by the model show considerable differences between developed and less developed countries. In the latter, regional (and social) disparities have stabilised at a high level. In developed countries, for example in Western Europe, (regional) differences in the level of development are smaller, and they followed Williamson's model closely until the 1970s. However, in the 1970s, as a manifestation of the developments in the economy, the levelling-out observed since World War II came to an end. These changes transformed the previous situation and features of the regions. Both developed and moderately developed countries have been characterised by an unstable, fluctuating growth path since the 1970s, but these developments have had no fundamental influence on the fact that the spatial structure of the most developed countries is much more balanced than in less developed countries.

While Hungary's economy showed a converging trend between EU accession and 2008, in regional terms we can see that **the national figures are based on widely varying regional paths**. Of the seven Hungarian regions, Central Hungary improved its position considerably until 2011, while Western Transdanubia did so to a lesser extent, but five of the country's regions slid down 7-8 places with respect to per capita gross domestic product. Compared to the average of the EU28, all Hungarian regions reached their trough in 2007. On account of the downturn in 2012, Central Hungary's position weakened considerably, and it was ranked 17 places lower than previously, which was closely linked to the macro-level slowdown at that time (Table 7-3).

Table 7-3: Position of the Hungarian regions in the ranking of the EU28's 272* regions based on GDP per capita

Region	2004		2011		2012		2013*	
	GDP/capita PPS EU28=100	Rank	GDP/capita PPS EU28=100	Rank	GDP/capita PPS EU28=100	Rank	GDP/capita PPS EU28=100	Rank**
Central Hungary	101	124	110	79	105	96	108	83
Western Transdanubia	65	225	68	218	66	218	67	216
Central Transdanubia	60	233	59	241	57	241	59	238
Southern Transdanubia	45	251	45	259	44	260	45	261
Southern Great Plain	44	252	44	260	44	261	45	262
Northern Great Plain	41	256	43	263	41	263	42	263
Northern Hungary	41	257	40	265	39	266	40	266

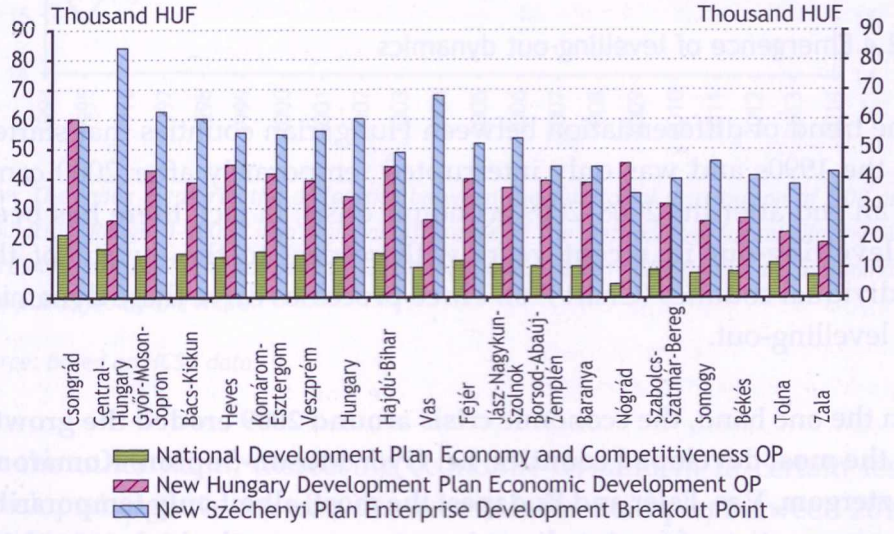
Note: GDP figures based on the ESA95 methodology.

**According to the current NUTS-classification there are 276 NUTS2 regions in the EU, the used data table published by EUROSTAT contains only 272 regions. It does not contain Mayotte and the additonal regions created from the reclassification of Inner and Outer London regions.*
***The 2013 data for Hungary, Croatia and Finland are estimates. When creating the ranking, due to the lack of 2013 data for 29 German regions, 2012 data were taken into consideration at 2013 prices.*

Source: EUROSTAT

Domestic regional development policy and the availability of substantial European Union funds after EU accession had a minor impact on the levelling-out of regional development, or at least its results could not be seen until 2010. Although strategies for the use of funds and programmes considered the aspect of regional convergence, and territory-based programmes (regional operational programmes) were launched, in reality, more developed regions were able to access more economic development funds, which were mainly allocated in an application system. Although the territory-based regional operational programmes achieved considerable success in the development of settlements and rapid fund absorption in general, they were mostly unable to use the opportunity for aligning with the different features of the individual regions (which would have been one of their main advantages). They remained uniform and were typically unable to

Chart 7-5: Value of the EU's economic and enterprise development funds disbursed per resident, by the location of the projects



Note: The National Development Plan (NDP) includes the Economic Competitiveness OP (ECOP), the New Hungary Development Plan (NHDP) includes the Economic Development OP (EDOP), while the New Széchenyi Plan (NSP) includes the Business Development Breakthrough Point, which in turn includes the business development projects of the regional OPs, EDOP and TÁMOP.

Source: EMIR, accessed: 12 January 2016

realise improvements that would have substantially boosted regions' economic development and enhanced corporate value added and employment (Salamin et al. 2014). This was coupled with the low share of funds in domestic operational programmes dedicated to economic development within the structural funds. Transportation developments, especially motorway developments, did not have the expected huge economic benefit in rural regions. No improving economic dynamics can be observed in the disadvantaged regions accessible from the expanded M3 and M6 motorways (counties Baranya, Borsod-Abaúj-Zemplén and Hajdú-Bihar), in fact, the Budapest-centric large-scale infrastructure developments may have improved the agglomeration advantages of the capital city region against rural regions (Lengyel 2013). In the new 2014–2020 cohesion policy cycle, Hungarian operational programmes focus on economic development in the service of innovation and employment, and the opportunity for regional economic programmes has also emerged (Péti 2014).

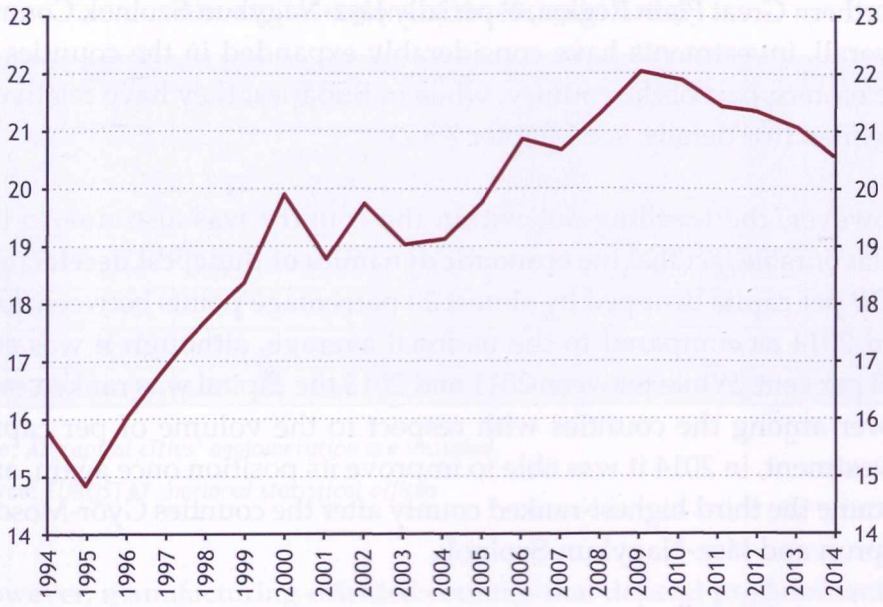
7.2.4 Emergence of levelling-out dynamics

The trend of differentiation between Hungarian counties that started in the 1990s and was only interrupted temporarily after 2000 came to an end after the 2008–2009 economic crisis; in fact, **there has been a levelling-out in recent years** with respect to the output of the individual counties (Chart 7-6). Three processes drive these dynamics of levelling-out.

On the one hand, the economic **crisis around 2009 eroded the growth of the most developed counties, i.e. Győr-Moson-Sopron, Komárom-Esztergom, Vas, Fejér and Budapest the most, albeit only temporarily.** The proportion of foreign direct investments was the highest in these regions, and their output was the most exposed to the contraction in world trade as well as in household consumption and investment demand, which was partly financed from credit. This slump was only temporary, however, as after 2012 and 2014 the stronger-than-average

upswing returned to these counties, with the exception of Komárom-Esztergom County, the growth of which is less dynamic, probably due to NOKIA's discontinuing production.

Chart 7-6: Regional disparities in GDP at the county level based on the Hoover index (1994-2014)



Note: The index measures the difference between the territorial distribution of GDP and population. Range: 1-100 (1 = no regional difference).[69] *The methodology for calculating GDP was ESA95 until 2002, and has been ESA2010 since 2002. The 2014 GDP figures are preliminary data published by the HCSO.*

Source: Based on HCSO data

On the other hand, increasing economic dynamism in certain less developed regions can also be observed: for example, between 2010 and 2014 the second strongest growth was recorded in Bács-Kiskun, while the counties Borsod-Abaúj-Zemplén, Tolna, Békés and Jász-Nagykun-Szolnok were also characterised by substantially higher-than-

[69] Methodology based on Nemes N. 2009.

average growth. (On the role of the counties in growth, see Chapter 7-3) The spatial distribution of investments, which contracted by one fifth between 2008 and 2012 at the country level[70] and has increased considerably since 2013, showed a unique realignment and exhibited signs indicating the possibility of regional levelling-out, as in this period investments gained momentum first in Bács-Kiskun County, then in the Northern Great Plain Region, especially Jász-Nagykun-Szolnok County. Overall, investments have considerably expanded in the counties in the eastern part of the country, while in Budapest they have relatively declined (for details, see Chapter 7.3.2).

However, the levelling-out within the country was also due to the unfavourable fact that the **economic dynamics of Budapest decelerated.** GDP per capita dropped by almost 12 percentage points between 2010 and 2014 as compared to the national average, although it was still 210 per cent. While between 2011 and 2013 the capital was ranked ever lower among the counties with respect to the volume of per capita investment, in 2014 it was able to improve its position once again, and became the third highest-ranked county after the counties Győr-Moson-Sopron and Jász-Nagykun-Szolnok.

Capitals stand out in all four countries of the Visegrád Group, however Budapest and its surroundings lag behind them with respect to GDP per capita. The capital city regions in Slovakia and Poland (when analysed together with the counties in their surroundings) exhibits greater per capita GDP figures by 26 per cent, while the Czech Republic's advantage in this respect is 14 per cent. Based on 2013 data, in addition to the three capital city regions, one Polish county (Trójmiejski and its agglomeration) was ranked higher than Budapest taken together with Pest County (Chart 7-17). It should be noted, however, that this difference is also due to the varying divisions of statistical regions, as the relatively underdeveloped Pest County distorts the figures for Budapest. Based on 2013 data, when only the capital cities (as NUTS 3 units) are examined without the surrounding counties, Budapest and Warsaw are

[70] Measured at constant prices.

on the same level below Bratislava and Prague, with respect to **market size and population size,** which are key agglomeration features, **the region of Budapest comes second behind Warsaw, and with respect to patents it ranks higher than all the other three capitals** (Table 7-4).

Table 7-4: Position of Budapest and its agglomeration among the capital regions of the Visegrád Group

	Population 2013 (million)	Life expectancy at birth 2013 (years)	Share of population with higher education degree 2013 (%)	Employment rate 2013 (%)	Number of EPO patents/ 100 000 inhabitants 2011-2012-2013	GDP/capita. 2013 (PPS)	GDP/ employee 2012 (PPS)	Investments as a percentage of GDP 2011-2012-2013 (%)
Prague	2.54	78.9	24	74.2	5.8	32284.6	63963.2	28
Budapest	2.95	76.6	25.5	62.7	9.2	28358.8	65902.3	15.7
Warsaw	3.28	78	33.7	78.2	6.1	36360.5	71299	13.6
Bratislava	1.17	77.1	25.6	68.8	4.1	35929.9	71238.1	26.9

Note: All capital cities' agglomeration are included.

Source: EUROSTAT, national statistical offices

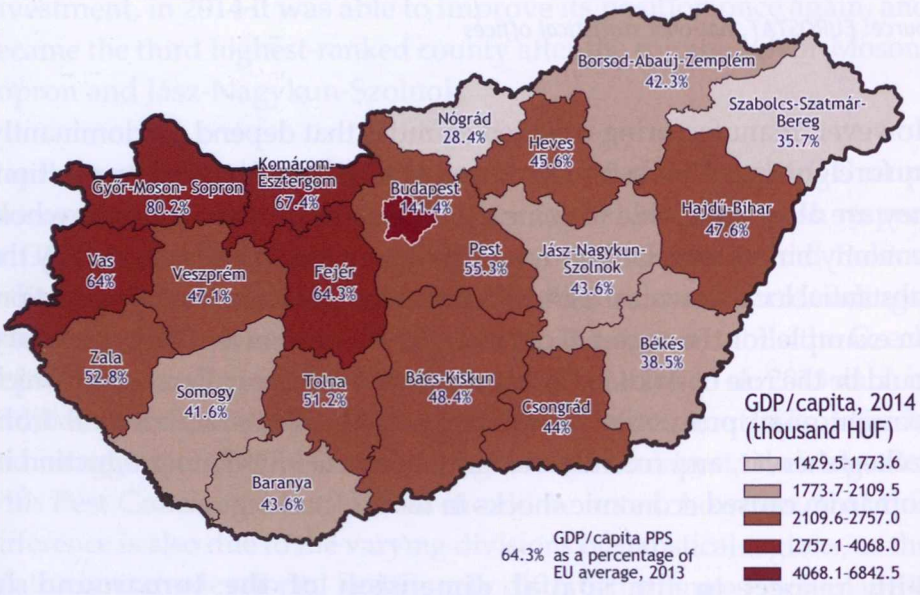
However, manufacturing-oriented counties that depend predominantly on foreign direct investments are not only in a favourable position, they are also vulnerable to some extent due to the fact that their whole economy hinges on relatively few large enterprises. This is attested by the substantial local downturns after the termination of a factory's production. An example for the regional dependence on one enterprise in Hungary could be the role of Audi in Győr and Mercedes-Benz in Kecskemét which brought great prosperity. In the early 2000s, IBM's withdrawal from Székesfehérvár, and recently the termination of NOKIA's production in Komárom caused economic shocks in the affected regions.

With respect to the spatial dimension of the turnaround in growth after 2012, we can say that Northern Hungary and Western Transdanubia contributed the most to the upswing in 2013–2014, followed by the Southern Great Plain and Central Transdanubia. The regional data on employment (see Chapter 4.1) and the uptick

in investments in 2013–2014 both show that growth was not driven by Budapest but primarily by certain rural areas, which may also contribute to the dynamics of levelling-out.

If we attempt to **map growth** and potential growth, we can see that the growing zone of the north-western part of the country and the developed zone of the capital may form a sort of **growth centre** that expands in a south-eastern direction through Kecskemét towards Szeged and Csongrád. Debrecen with Hajdú-Bihar County is an insular addition to the north-western, south-eastern axis. The north-eastern part of the country, where some signs of convergence can be observed, and Southern Transdanubia, which increasingly lags behind, are the areas that may hinder the growth of the national economy due to the lack of their resources' economic utilisation (Chart 7-7).

Chart 7-7: GDP per capita in absolute terms and relative to the EU average in Hungarian counties (2013, 2014)



Note: The 2014 GDP figures are preliminary data published by the HCSO.

Source: HCSO STADAT

The lack of the spatial spillover effect of economic dynamics can be vividly seen in the striking difference between Budapest and Pest County, and in the case of Nógrád County, which is close to the capital but still increasingly lags behind. The trends of spatial concentration and the burden of the inherited heavy industry continues to hamper growth in Nógrád, which is characterised by a very low level of urbanisation, and which, despite its proximity to the capital, increasingly lags behind the other counties with respect to GDP per capita. Nevertheless, employment figures have clearly improved in recent years, which shows that in addition to the impact of public employment, the county may also profit from its proximity to Budapest. Out of the resource-intensive heavy industry regions, Tatabánya and its surroundings and Komárom-Esztergom County in general were able to exhibit dynamic growth after tackling their crises, thanks to their strengthening geographical position (M1 motorway, Vienna–Budapest axis) and the inflow of foreign direct investments.

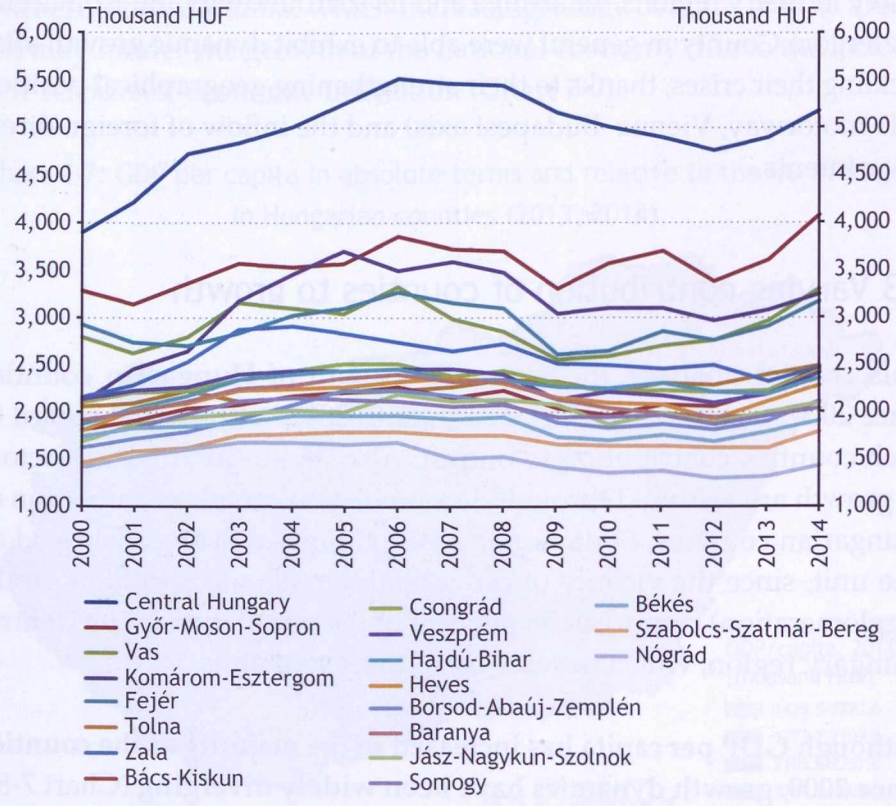
7.3 Varying contribution of counties to growth

This chapter analyses the economic growth of Hungarian counties since 2000, and from the 2009 trough until 2013, with special regard to each county's contribution to output. Also, the individual subfactors of growth are analysed through decomposition. In this examination of Hungarian counties, Budapest and Pest County will be considered as one unit, since the vicinity of the capital, i.e. the metropolitan group (agglomeration) comprises 86 per cent of the population in the Central Hungary region, which is made up of these two units.

Although GDP per capita has increased in the majority of the counties since 2000, growth dynamics have been widely diverging (Chart 7-8). Central Hungary and Győr-Moson-Sopron County stand out, and in a Hungarian context, the counties Komárom-Esztergom, Fejér and Vas and partly Zala have also been characterised by this process. We can also see that **one huge investment**, such as Audi's plant in Győr-

Moson-Sopron, **only boosts GDP over the short term, and does not have a lasting impact on growth**, and no regional multiplier effects can be seen either, i.e. counties manage to take one step forward but after that economic growth decelerates. The economic growth of the other 13 counties is very similar, they develop almost as "one group". Most of them can be found in the lowest 10 per cent among the counties in the EU28 Member States. As we have pointed out, Nógrád County clearly lags behind, but both the counties Szabolcs-Szatmár-Bereg and Békés develop at a slow pace.

Chart 7-8: GDP per capita in Hungary between 2000 and 2014[71]



Note: The 2014 GDP figures are preliminary data published by the HCSO.
Source: HCSO STADAT

[71] At 2014 prices.

Of the Hungarian counties, only Central Hungary and Győr-Moson-Sopron were able to considerably improve their position in PPS terms since 2005 as **compared to the EU27 average**, and to exceed 75 per cent (which is a "mythical threshold" in the EU's regional policy, see table 7-5). However, Fejér, Vas, Tolna, Jász-Nagykun-Szolnok and Bács-Kiskun counties all converged with the EU average by at least three percentage points. The other 12 counties were unable to improve their position, despite the substantial subsidies from the EU's development funds. In fact, several counties, such as Komárom-Esztergom, Baranya and Nógrád slid back as compared to 2005, i.e. their economic growth lags behind the EU average.

Table 7-5: GDP per capita at purchasing power parity as a percentage of the EU27 average

	2005	2010	2012	2013	Percentage point difference 2013-2005
Central Hungary	100.6	107.0	105.0	105.9	5.3
Győr-Moson-Sopron	69.0	77.8	74.7	80.2	11.2
Komárom-Esztergom	71.5	66.8	65.5	67.4	-4.1
Fejér	59.6	56.7	60.5	64.3	4.7
Vas	58.6	55.5	60.8	64.0	5.4
Zala	54.1	53.2	54.9	52.8	-1.3
Tolna	42.2	47.6	50.0	51.2	9.0
Csongrád	48.3	47.3	48.3	48.9	0.6
Bács-Kiskun	42.2	41.8	45.1	48.4	6.2
Hajdú-Bihar	46.6	48.1	47.6	47.6	1.0
Veszprém	46.6	47.2	45.6	47.1	0.5
Heves	43.6	44.9	42.3	45.6	2.0
Baranya	45.1	43.4	42.4	43.6	-1.5
Jász-Nagykun-Szolnok	38.5	39.8	41.6	43.6	5.1
Borsod-Abaúj-Zemplén	42.7	39.4	39.9	42.3	-0.4
Somogy	40.9	41.5	40.9	41.6	0.7
Békés	37.7	36.2	36.6	38.5	0.8
Szabolcs-Szatmár-Bereg	34.2	35.2	35.0	35.7	1.5
Nógrád	31.8	29.1	28.3	28.4	-3.4
Hungary (total)	62.1	64.8	64.5	66.2	4.1

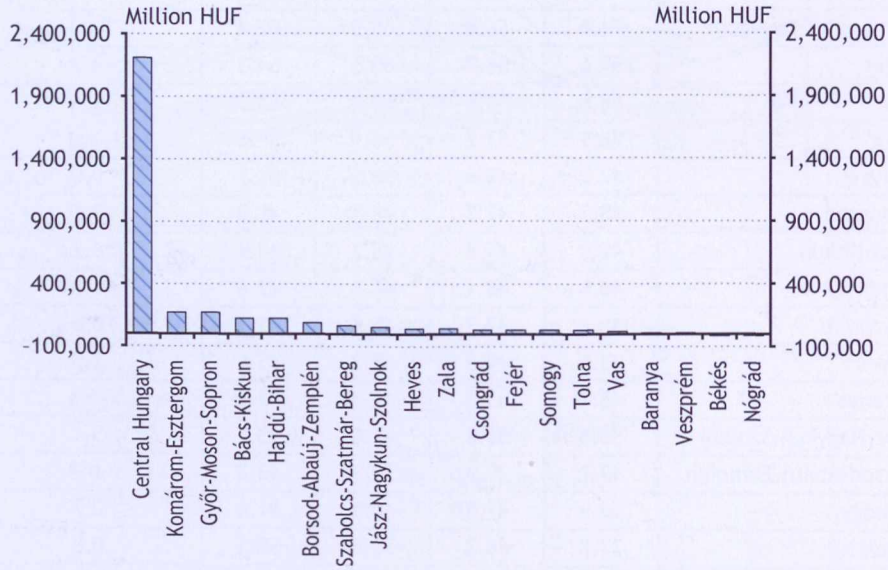
Source: HCSO (2015)

7.3.1 Changing role of counties in the growth path of the country

The data above show that the pace of economic growth varies greatly across the counties. We should examine how individual counties contributed to the economic growth of the country, and which county boosted or hampered growth of the country and when.

The country's GDP can also be conceived as the sum of the GDP of the 19 territorial units (counties). The examination of territorial time series always poses difficulties in measurement, and this study based its comparison of counties' economic growth on the country's volume index of GDP. In measuring counties' 2013 GDP in 2000 real terms, the difference between the 2000 and the 2013 figures shows how much individual counties increased the country's output in this period (Chart 7-9). In absolute terms, Central Hungary stands out markedly, as it

Chart 7-9: Contribution of the counties to the country's GDP growth between 2000 and 2013 (at 2000 prices)

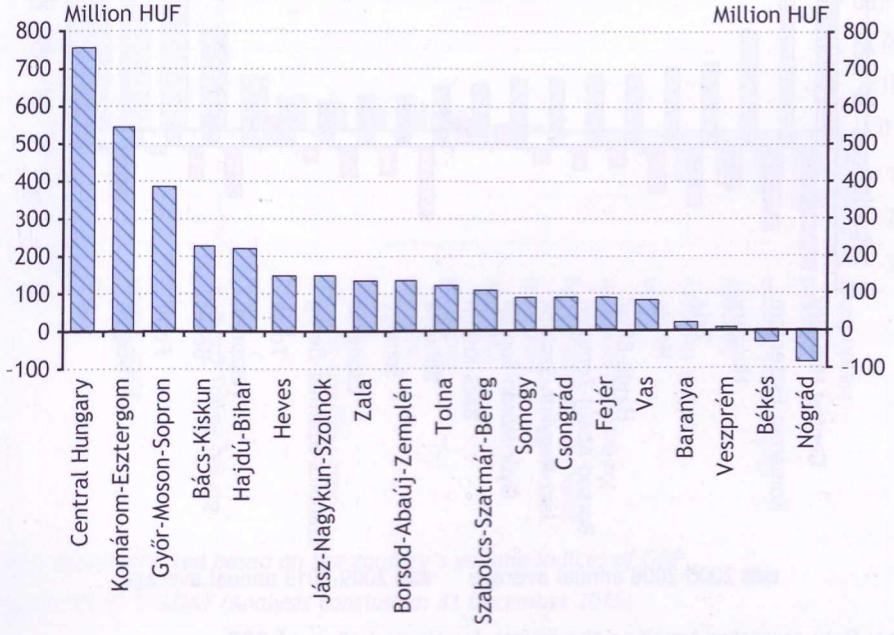


Note: The data from HCSO STADAT 6.3.1.1, corrected based on the country's volume indices of GDP (STADAT 3.1.1).

Source: HCSO STADAT (Analysis concluded: 31 December 2015)

generated 68 per cent of the increase in the country's output, while the other counties grew at a much slower pace. On account of its population of almost 3 million, the comparison with this county probably does not show a realistic picture, but the figure per thousand inhabitants is also the highest here, and it is more than double the national average (Chart 7-10). In addition to Central Hungary, the counties Komárom-Esztergom and Győr-Moson-Sopron stand out, while the other counties achieved much more subdued growth compared to 2000. The data also show that in two cases, in Nógrád and Békés, output has declined in real terms since 2000, i.e. these counties lowered the country's economic growth, and Veszprém and Baranya were also unable to make considerable progress in 13 years.

Chart 7-10: Contribution of the counties to the country's GDP-growth per 1000 inhabitant between 2000 and 2013 (at 2000 prices)

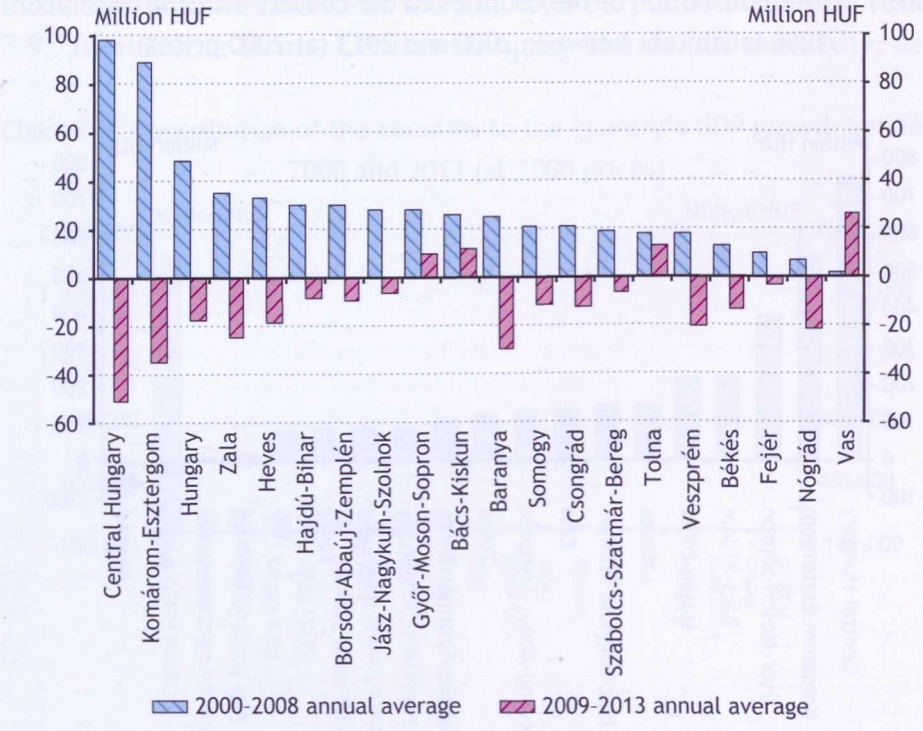


Note: Population based on the figure in the middle of the period. Data corrected based on the country's volume indices of GDP.

Source: HCSO STADAT (Analysis concluded: 31 December 2015)

In 2000–2008, steady, exceptional economic growth was observed, with an average annual growth rate of 4 per cent. In this period, it was once again Central Hungary which contributed the most to the country's output, accounting for around 60 per cent of the country's increase, and based on the data calculated per thousand inhabitants, economic growth was seen in all countries. The expansion was exceptionally strong in the capital city region as well as in Komárom-Esztergom (Chart 7-11). **In territorial terms, the economy expanded fairly evenly until 2008, and all counties were able to improve their output as compared to 2000**, but Nógrád and Vas counties showed the least improvement.

Chart 7-11: Contribution of the counties to the country's GDP-growth per 1000 inhabitant between 2000-2008 and 2009-2013 (at 2000 prices)

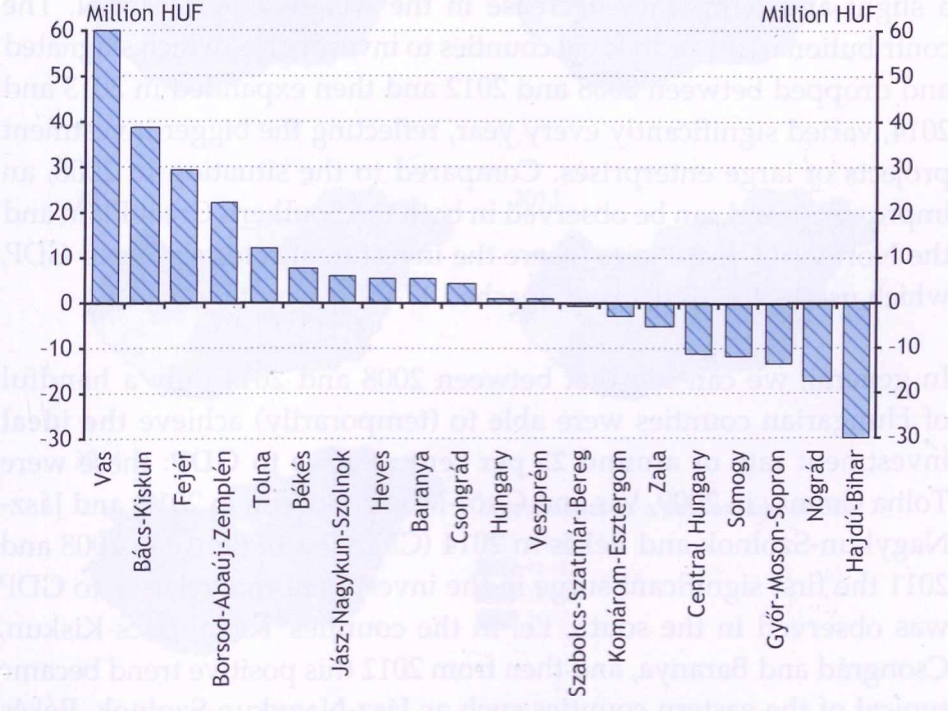


Note: Data corrected based on the country's volume indices of GDP.

Source: HCSO STADAT (Analysis concluded: 31 December 2015)

Country-wide economic growth came to a halt in 2009. Based on the counties' GDP change **in 2009–2013** in real terms at 2000 prices, the **counties split into two groups** in this period. Economic growth was seen in 4 counties, while the other 15 experienced a downturn. According to data calculated per thousand inhabitants, the counties Vas, Bács-Kiskun and Győr-Moson-Sopron took the lead, while the economic output of the capital city region declined considerably. Therefore, the country's stagnant economic growth between 2009 and 2013 was mainly attributable to further decline of the capital city region.

Chart 7-12: Contribution of the counties to the country's GDP-growth per 1000 inhabitant between 2011 and 2013 (annual average, at 2000 prices)



Note: Data corrected based on the country's volume indices of GDP.

Source: HCSO STADAT (Analysis concluded: 31 December 2015)

In examining the recent past, **GDP growth in real terms can be observed in the majority of the counties since 2011.** Per capita figures show that **relative to their population, Vas, Bács-Kiskun and Fejér have played**

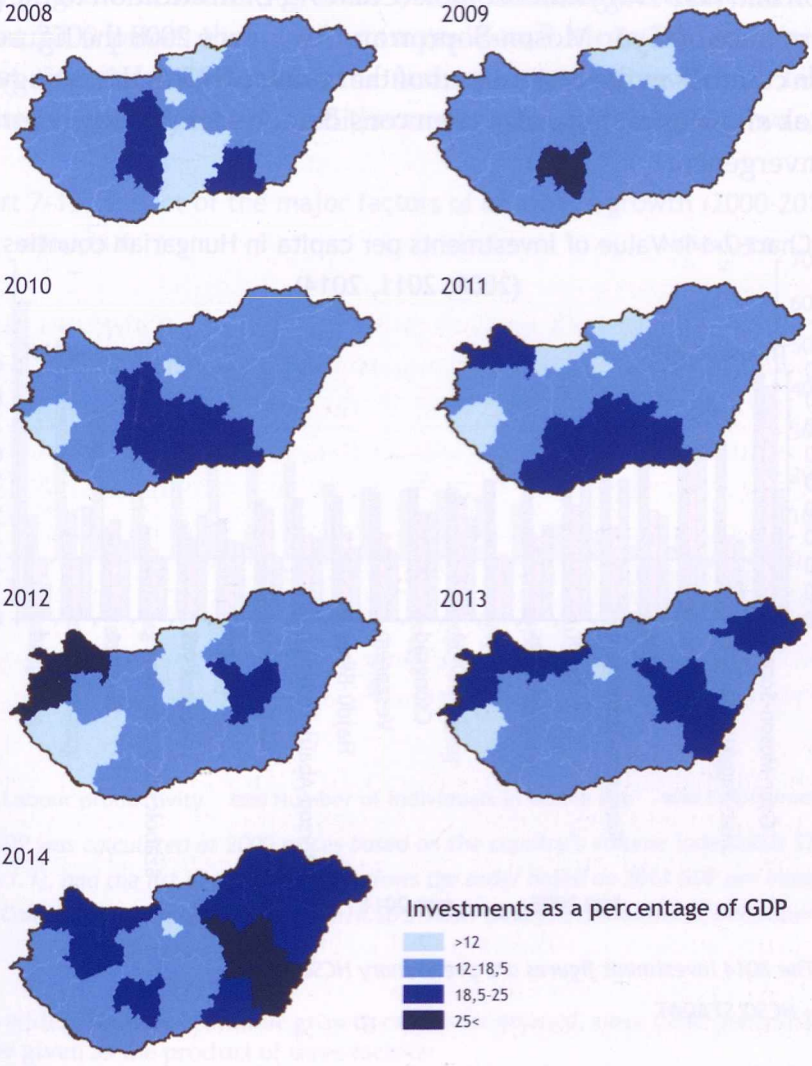
a central role in boosting growth since 2012 (Chart 7-12). A turnaround could be observed in the majority of counties that previously experienced a downturn. It seems that they have reached their trough and that their GDP has increased. It should be noted that according Table 7-5, 18 counties improved their position relative to the EU27 average in 2013 as compared to 2012, i.e. **the convergence process resumed everywhere.**

7.3.2 Changing position of counties with respect to investments

In the field of investments, a sort of relative realignment was witnessed in favour of the eastern part of the country, which entailed a slight and temporary decrease in the weight of the capital. The contribution of the individual counties to investments, which stagnated and dropped between 2008 and 2012 and then expanded in 2013 and 2014, varied significantly every year, reflecting the bigger investment projects of large enterprises. Compared to the situation in 2008, an improving trend can be observed in both the Southern Great Plain and the Northern Great Plain, where the investment rate relative to GDP, which used to be 15 per cent, reached 17–27 per cent by 2014.

In general, we can say that between 2008 and 2014 only a handful of Hungarian counties were able to (temporarily) achieve **the ideal** investment rate **of around 25 per cent relative to GDP**: these were Tolna County in 2009, Vas and Győr-Moson-Sopron in 2012, and Jász-Nagykun-Szolnok and Békés in 2014 (Chart 7-13). Between 2008 and 2011 the first significant surge in the investment rate relative to GDP was observed in the south, i.e. in the counties Tolna, Bács-Kiskun, Csongrád and Baranya, and then from 2012 this positive trend became typical of the eastern counties such as Jász-Nagykun-Szolnok, Békés and Szabolcs-Szatmár-Bereg. The 2008–2010 performance of Fejér and Tolna declined, and their prominent position was gradually taken over by Győr-Moson-Sopron, Komárom-Esztergom and Vas. In the period under review, Nógrád and Zala were mainly characterised by a low investment rate relative to GDP. The former has been the "permanent loser" of investments since 2008.

Chart 7-13: Changes in the value of investments relative to GDP in the counties between 2008 and 2013



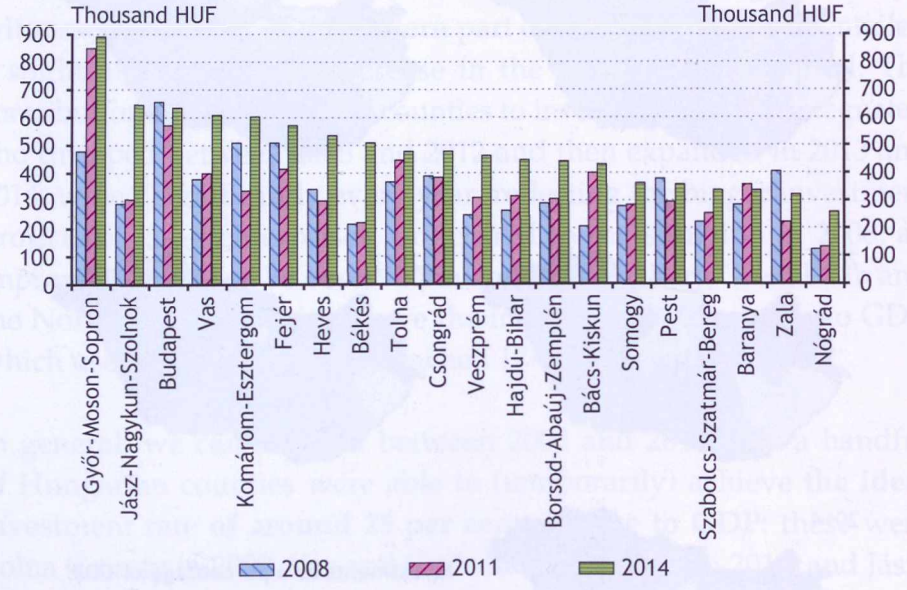
Note: The 2014 investment figures are preliminary HCSO data.

Source: HCSO STADAT

Based on the **per capita values of the investments** flowing into the counties, the top position that was secured by Budapest in 2008–2010 was taken over by Győr-Moson-Sopron, and then in 2012 Vas and in

2013 Komárom-Esztergom also surpassed the capital. In 2014, Budapest pushed to the fore once again and was only outdone by Győr-Moson-Sopron and Jász-Nagykun-Szolnok (Chart 7-14). In addition to the good performance of Győr-Moson-Sopron and Vas, since 2008 the figures for certain counties in the eastern part of the country (Békés, Jász-Nagykun-Szolnok and Heves) have also risen considerably, which may contribute to convergence.

Chart 7-14: Value of investments per capita in Hungarian counties (2008, 2011, 2014)



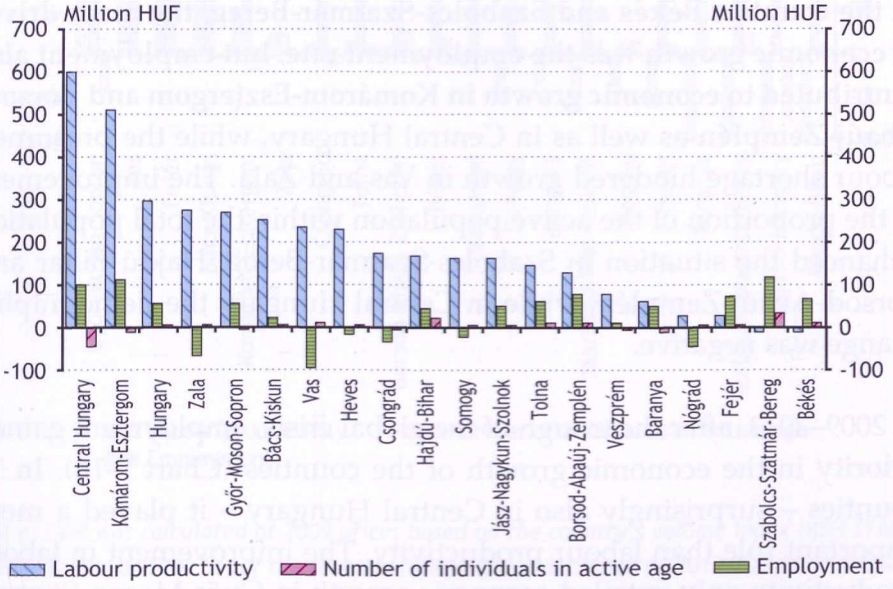
Note: The 2014 investment figures are preliminary HCSO data.

Source: HCSO STADAT

7.3.3 Growth factors of the counties

Analysing the economic growth of the counties between 2000 and 2013 at 2000 prices through decomposition,[72] it can be seen that **for almost one and half decades the main source of growth was labour productivity everywhere**, and the more developed a county was, the

Chart 7-15: Impact of the major factors of economic growth (2000-2013)



Note: GDP was calculated at 2000 prices based on the country's volume index (KSH STADAT Table 3.1.1), and the list of the counties follows the order based on 2013 GDP per inhabitant
Source: Calculation of the authors based on HCSO STADAT (Analysis concluded: 31 December 2015)

[72] As is widely known, economic growth can be *decomposed*, since GDP per inhabitant can be given as the product of three factors:

$$\frac{GDP}{inhabitants} = \frac{GDP}{employees} \times \frac{employees}{working\text{-}age\ population} \times \frac{working\text{-}age\ population}{inhabitants}$$

The above formula means that GDP per inhabitant equals the product of labour productivity (lp), employment rate (er) and the proportion of the active population (ap). It has to be noted that by definition labour productivity means the output per one hour worked; therefore, we only use an approximation here. In short, the formula is: $y=lp*er*ap$

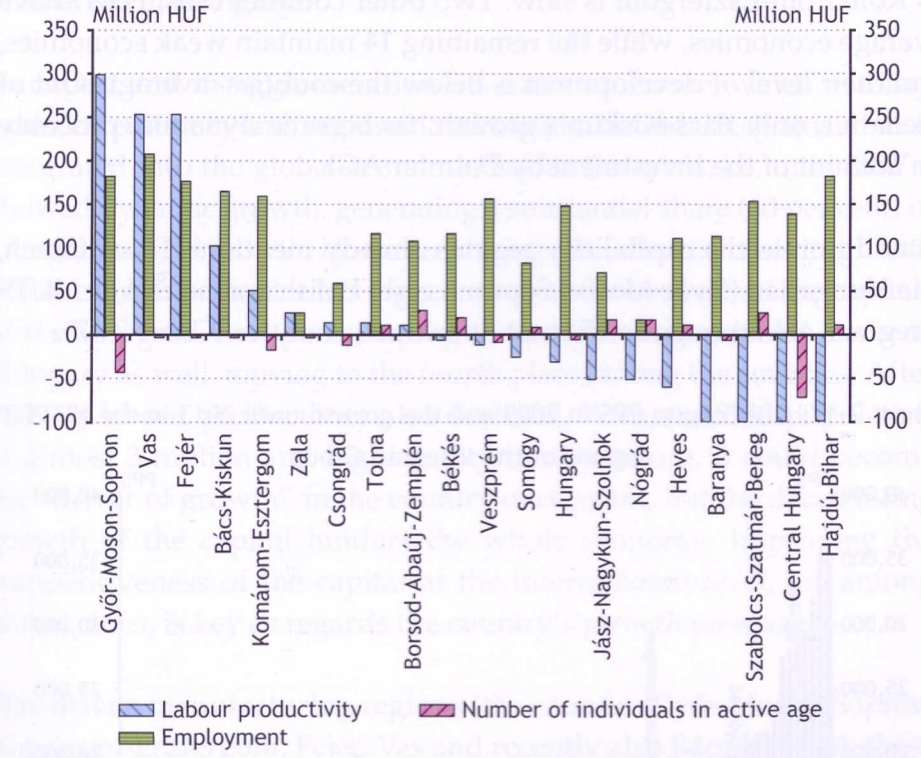
When comparing two periods, the increase in real GDP terms can be decomposed:
$y_1-y_0=(lp_1-lp_0)*er_0*ap_0+(er_1-er_0)*lp_1*ap_0+(ap_1-ap_0)*lp_1*er$

more marked this effect was (Chart 7-15). Compared to the starting year of 2000, labour productivity growth in Central Hungary and Komárom-Esztergom was above the national average, and these counties were followed by manufacturing-centred counties such as Zala, Győr-Moson-Sopron, Bács-Kiskun, Vas and Heves. In two counties, Békés and Szabolcs-Szatmár-Bereg, however, labour productivity decreased, and compared to 2000 it also hardly improved in Fejér County.

In the counties Békés and Szabolcs-Szatmár-Bereg, the main driver of economic growth was the employment rate, but employment also contributed to economic growth in Komárom-Esztergom and Borsod-Abaúj-Zemplén as well as in Central Hungary, while the presumed labour shortage hindered growth in Vas and Zala. The improvement in the proportion of the active population within the total population enhanced the situation in Szabolcs-Szatmár-Bereg, Hajdú-Bihar and Borsod-Abaúj-Zemplén, while in Central Hungary the demographic change was negative.

In 2009–2013, after the trough of the global crisis, employment gained priority in the economic growth of the counties (Chart 7-16). In 15 counties – surprisingly also in Central Hungary – it played a more important role than labour productivity. The improvement in labour productivity only entailed economic growth in Győr-Moson-Sopron, Fejér, Vas and Bács-Kiskun. **A drop in the proportion of working age population was observed in several counties, partly due to ageing and partly to the considerable share of employees working abroad. Therefore, in Central Hungary and in Győr-Moson-Sopron and Komárom-Esztergom this had a negative impact on economic growth.**

Chart 7-16: Impact of the major factors of economic growth (2009-2013)



Note: GDP was calculated at 2009 prices based on the country's volume index (KSH STADAT Table 3.1.1), and the list of the counties follows the order based on 2013 GDP per inhabitant.

Source: Calculation of the authors based on HCSO STADAT (Analysis concluded: 31 December 2015)

Comparison with the regions of the Visegrád Group

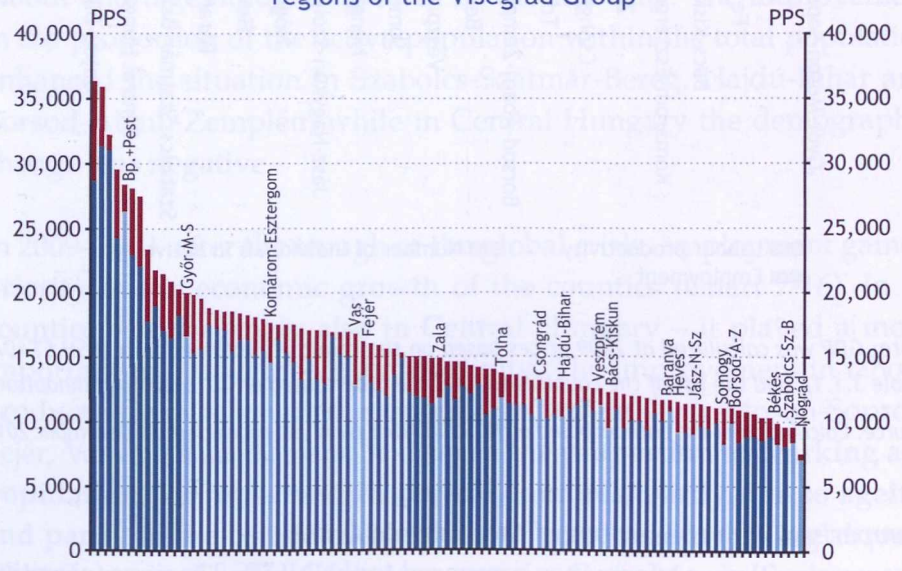
In assessing their performance compared to the NUTS 3 regions (counties) of the Visegrád Group, it can be seen that the growth rate in most of the Hungarian counties has been slowed since 2009, i.e. the the other countries of the Visegrád Group and their regions are growing more rapidly, and in the case of the Czech economy, they stagnate at a higher level.

Based on the 2013 GDP figures, among the 93 NUTS 3-level territorial units of the Visegrád Group, three Hungarian ones are included in the group of strong economies, but only Győr-Moson-Sopron exhibits

dynamic growth. The growth rate of Budapest and its vicinity as well as Komárom-Esztergom is slow. Two other counties (Vas, Fejér) have average economies, while the remaining 14 maintain weak economies, and their level of development is below the counties' average. Out of the latter, only Bács-Kiskun's growth has become dynamic (probably on account of the investment by Daimler AG).

In addition to the capital city regions already mentioned, two Czech, one Hungarian (Győr-Moson-Sopron), eight Polish and no Slovak NUTS 3 regions are among the 15 most developed counties (Chart 7-17).

Chart 7-17: GDP/capita PPS in 2009 and the growth until 2013 in the NUTS 3 regions of the Visegrád Group



Note: Capital cities and the metropolitan Polish urban regions are considered one metropolitan unit with the counties surrounding them.

Source: EUROSTAT, national statistics offices

7.3.4 Three types of county growth paths

We believe that, based on the county-level indicators of economic growth and other empirical analyses (Lengyel B. – Szanyi 2011; Lengyel I.

– Szakálné Kanó 2012; Vas et al. 2015), three types of growth paths can be charted in Hungary:

Budapest and its agglomeration (its commuter zone, which in many cases extends beyond regional and county boundaries): this area is integrated into the global economy; before the crisis, i.e. until 2007 it showed dynamic growth, generating a substantial share (60 per cent) of Hungarian GDP growth. However, during and after the crisis its growth became subdued, and it has lagged more and more behind the capitals of the Visegrád Group. According to per capita data, it slid lower in Hungary as well, moving to the fourth place among the counties. After 2009 its labour productivity also declined. With a skilled population of almost 3 million and high-quality infrastructure, it could become the "driver of growth" in the country once again, but the decelerating growth of the capital hinders the whole economy. Improving the competitiveness of the capital at the international level, i.e. among global cities, is key as regards the country's growth prospects.

FDI-driven manufacturing regions (the counties Győr-Moson-Sopron, Komárom-Esztergom, Fejér, Vas and recently also Bács-Kiskun): these units have become integrated into the European economy through the plants of multinational manufacturing corporations. Since 2011 economic growth in Hungary has been largely dependent on these regions. Their economic growth is "staggered", and growth is boosted by individual investments only temporarily, decelerating again after that, which suggests that the subsidiaries of multinational corporations have become hardly integrated into the economy, and the initial push impact is not followed by others, i.e. local multiplier effects are minimal. This can be partly attributed to the fact that, on the one hand, the population of the regions is small (the labour market and the market for modern business services is limited) and, on the other hand, local companies are unable to join the FDI value chains (for example, by providing business services). In these regions, economic growth depends on multinational corporations. Their labour productivity has been improving, which points towards continued GDP growth, but this will be reflected in

local labour incomes to only a minor extent. Also, the population of these counties is 1.5–2 million, i.e. they can only influence the country's economic growth to a modest degree (Lengyel–Szanyi 2011).

Other regions: they have companies primarily producing and providing services for the domestic market, the improvement in the competitiveness of certain firms mainly drives domestic competitors out of the market, and economic growth is slow, which can principally be attributed to the improvement in employment. These regions form a heterogeneous group, and in counties with larger university cities (Debrecen, Miskolc, Pécs, Szeged) the skills of the labour force are close to the EU average, although a substantial portion of graduates work in the public sector, however, growth-driving industries may be established with connections to the universities. Within this group, small towns and rural regions do not have competitive economies: only a handful of their companies are competitive, and the skills of the labour force and the quality of corporate management are generally low.

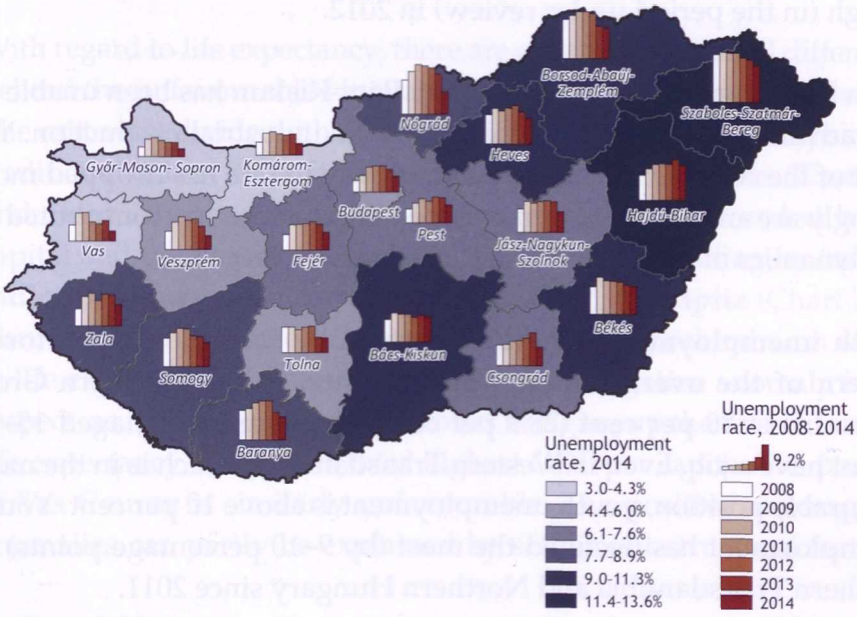
7.4 Spatial pattern of certain factors determining human capital

7.4.1 Unemployment

The employment situation shows especially marked regional segmentation. In contrast to the high employment in the central and north-western regions of the country, the regions in the north-eastern part of Hungary and Southern Transdanubia still face enormous challenges with respect to employment.

While unemployment increased in all counties but one between 2006 and 2010, the turnaround in **employment after 2011** resulted in an improvement in almost all counties. Increasing employment **did not significantly change the regional pattern, but caused a substantial realignment in the relative position of individual counties** (Chart 7-18).

Chart 7-18: Unemployment in Hungary (2008-2014)



Source: HCSO STADAT

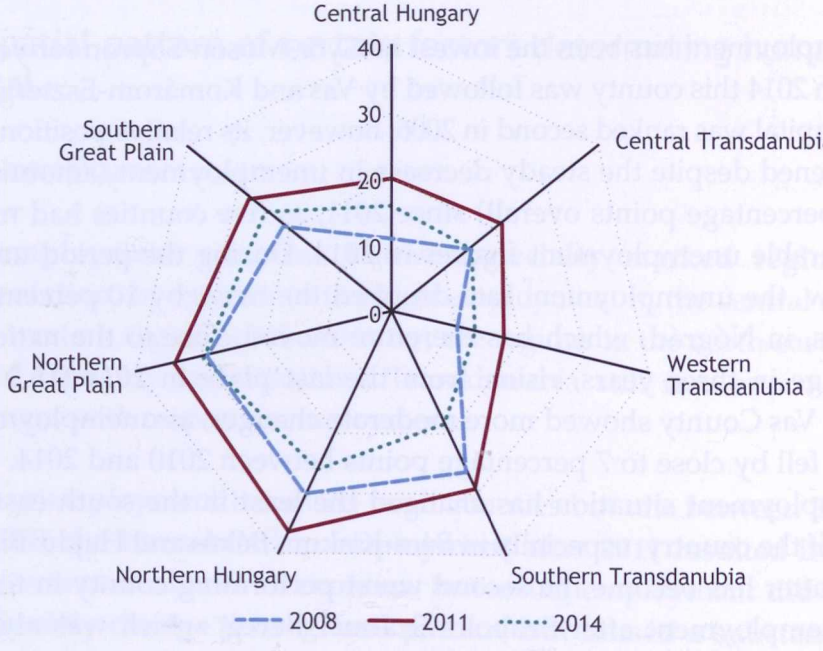
Unemployment has been the lowest in Győr-Moson-Sopron for years, and in 2014 this county was followed by Vas and Komárom-Esztergom. The capital was ranked second in 2006, however, its relative position has weakened despite the steady decrease in unemployment (amounting to 3 percentage points overall) since 2011, as five counties had more favourable unemployment figures in 2014. During the period under review, the unemployment rate dropped the most, by 10 percentage points, in Nógrád, which has therefore moved close to the national average in three years, rising from the last place in 2011 (18.3 per cent). Vas County showed more moderate changes, as unemployment there fell by close to 7 percentage points between 2010 and 2014. The unemployment situation has changed the least in the south-eastern part of the country, especially in Bács-Kiskun, Békés and Hajdú-Bihar. The latter has become the second worst performing county in terms of unemployment after Szabolcs-Szatmár-Bereg, which was almost always ranked in last place in the period under review, despite the

improvement (amounting to 4.6 percentage points) as compared to the trough (in the period under review) in 2012.

From the perspective of employment, Bács-Kiskun has been unable to take advantage of the exceptional growth in industrial production. Yet most of the counties where the unemployment rate has dropped most strongly are among the least developed ones, which has contributed to the dynamics of levelling-out and regional convergence.

Youth unemployment (Chart 7-19) basically **follows the territorial pattern of the overall unemployment rate.** In the Northern Great Plain almost **30 per cent** (28.9 per cent) of young people aged 15–24 do not have a job. Even in Western Transdanubia, which is in the most favourable position, youth unemployment is above 10 per cent. Youth unemployment has declined the most (by 9–10 percentage points) in Southern Transdanubia and Northern Hungary since 2011.

Chart 7-19: Unemployment rate among people aged 15-24 (2008, 2011, 2014)

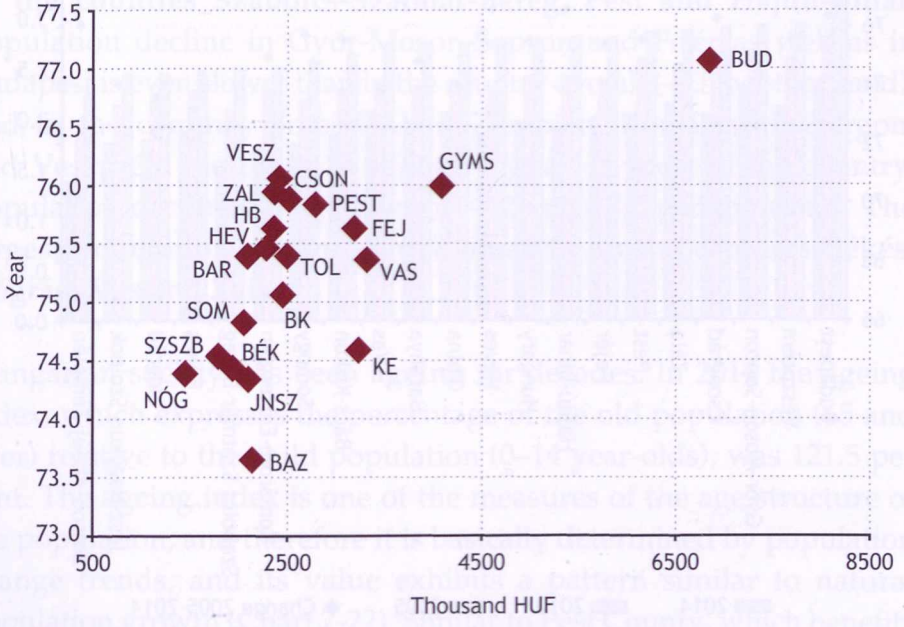


Source: EUROSTAT

7.4.2 Life expectancy

With regard to life expectancy, there are substantial regional differences behind the unfavourable Hungarian situation as compared to Europe. The east-west divide with respect to life expectancy can be considered traditional (Chart 7-21). With the exception of two counties (Csongrád and Hajdú-Bihar), the national average was only exceeded by the capital and the western counties, with the capital leading by far. **The indicator shows close correlation with GDP per capita** (Chart 7-20). Counties with the lowest GDP per capita also lag behind with regard to life expectancy. Komárom-Esztergom is a negative anomaly in this respect, as it ranks among the counties bringing up the rear in terms of life expectancy, despite its third highest GDP per capita. The position of Vas County is similarly unfavourable. The positive and negative anomalies can partly be explained by settlement structural features.

Chart 7-20: Average life expectancy at birth and per capita GDP in the counties of Hungary (2014)



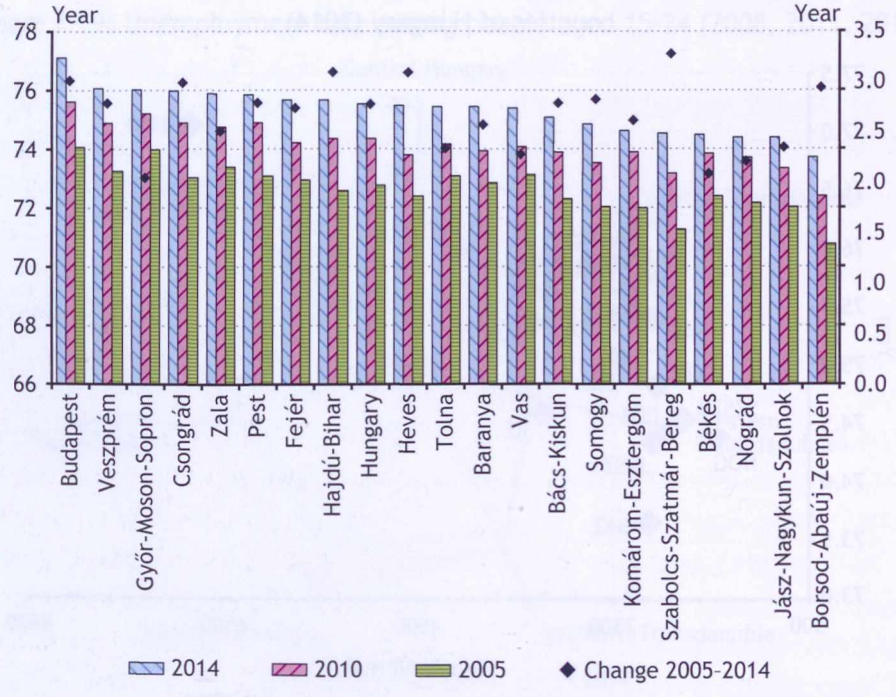
Note: The 2014 GDP figures are preliminary data published by the HCSO.

Source: HCSO STADAT

It is generally true that **the lower the population of a settlement, the less favourable mortality and life expectancy are**, while the most favourable life conditions are provided by cities with a population of between 50,000 and 100,000 (HCSO 2010). Taking into account the settlement structure of Vas County which has many small villages, and the relatively high level of urbanisation in Csongrád and Hajdú-Bihar, we can say that the idiosyncrasies in settlement structure may partly explain certain anomalies.

With respect to the change in **life expectancy, an almost uninterrupted rise was observed over the past ten years** in the country overall (Chart 7-21). Life expectancy has increased by more than 4 years in the country since 2005. At the county level, however, there are significant differences in this respect as well. **Life expectancy increased the most**

Chart 7-21: Average life expectancy at birth in Hungarian counties (2005, 2010, 2014)



Source: HCSO STADAT

in Szabolcs-Szatmár-Bereg, which is among the laggards, and has risen by almost three years in Borsod-Abaúj-Zemplén as well, although the figure for the latter remained the lowest in the country. Among the top performers, a considerable improvement was seen in the capital and in the counties Csongrád and Hajdú-Bihar. Life expectancy changed the least in Győr-Moson-Sopron, and increased by less than the national average in the lowest-ranked counties of Békés, Nógrád and Jász-Nagykun-Szolnok.

7.4.3 Population change

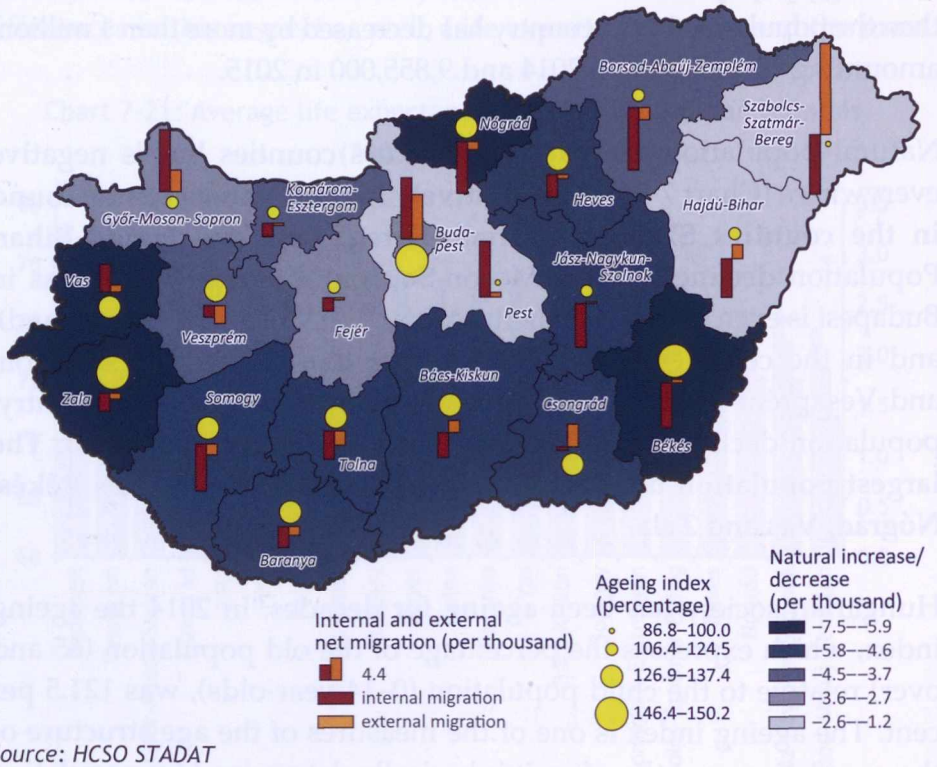
In Hungary, **population decline** has been observed **since 1981**. Since then the population of the country has decreased by more than 1 million, amounting to 9,877,000 in 2014 and 9,855,000 in 2015.

Natural population growth varies across counties but is negative everywhere (Chart 7-22). **The relatively highest values can be found in the counties Szabolcs-Szatmár-Bereg, Pest and Hajdú-Bihar.** Population decline in Győr-Moson-Sopron and Fejér as well as in Budapest is even slower than in the country overall (–3.5 per thousand), and in the counties Borsod-Abaúj-Zemplén, Komárom-Esztergom and Veszprém the figure is slightly higher. In most of the country, population decline varies between –4.2 and –5.2 per thousand. **The largest population decline** can be observed **in the counties Békés, Nógrád, Vas and Zala**.

Hungarian society has been **ageing** for decades. In 2014 the ageing index, which expresses the percentage of the old population (65 and over) relative to the child population (0–14 year-olds), was 121.5 per cent. The ageing index is one of the measures of the age structure of the population, and therefore it is basically determined by population change trends, and its value exhibits a pattern similar to natural population growth (Chart 7-22). Similar to Pest County, which benefits from the suburbanisation around Budapest and where the proportion of

old-age population does not exceed the share of the young yet, Szabolcs-Szatmár-Bereg County has a youthful age structure. The counties Borsod-Abaúj-Zemplén, Győr-Moson-Sopron, Fejér and Komárom-Esztergom have better values than the national average, but in these counties the old already outnumber the young. In the other Hungarian counties the population is characterised by higher-than-average ageing, **with the most unfavourable situation observed in Békés and Zala and Budapest**. In the case of Budapest, ageing is exacerbated by the fact that families with children move out into the agglomeration.

Chart 7-22: Natural population growth, ageing index, internal and international net migration in Hungary (2014)

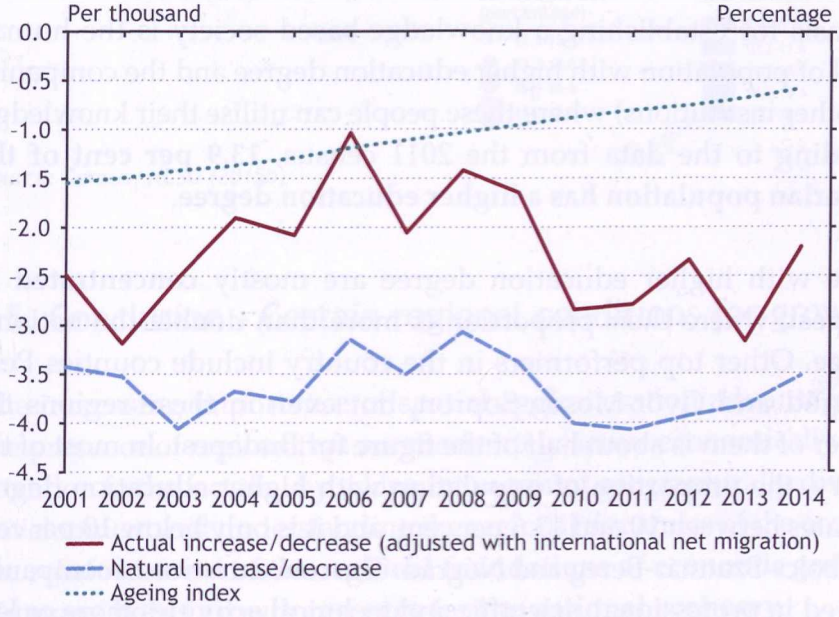


Source: HCSO STADAT

The negative, steadily downward trend in natural population growth (with the exception of minor interruptions) has always been offset by

cross-border migration in the past 24 years, albeit to varying degrees (Chart 7-23). **The major recipients of immigration are the counties along the eastern and south-eastern border,** with the exception of Békés, primarily Szabolcs-Szatmár-Bereg, **as well as the capital, but Győr-Moson-Sopron also has a substantial foreign migration surplus.** In the case of counties Pest and Békés, the balance shows a minor surplus, while **emigration** decreases the population of all the other counties, albeit to varying extents. **Veszprém and Tolna** were characterised by the **highest** outflows (Chart 7-22), but the emigration of skilled labour possibly affects more developed regions as well.

Chart 7-23: Natural population growth, internal and international net migration and ageing index in Hungary (2001-2014)



Source: HCSO STADAT, Regional Statistical Yearbooks

Up until the economic crisis, the main targets of internal migration were the regions that benefited from the developments of the political transition. Central Hungary and the counties Győr-Moson-Sopron

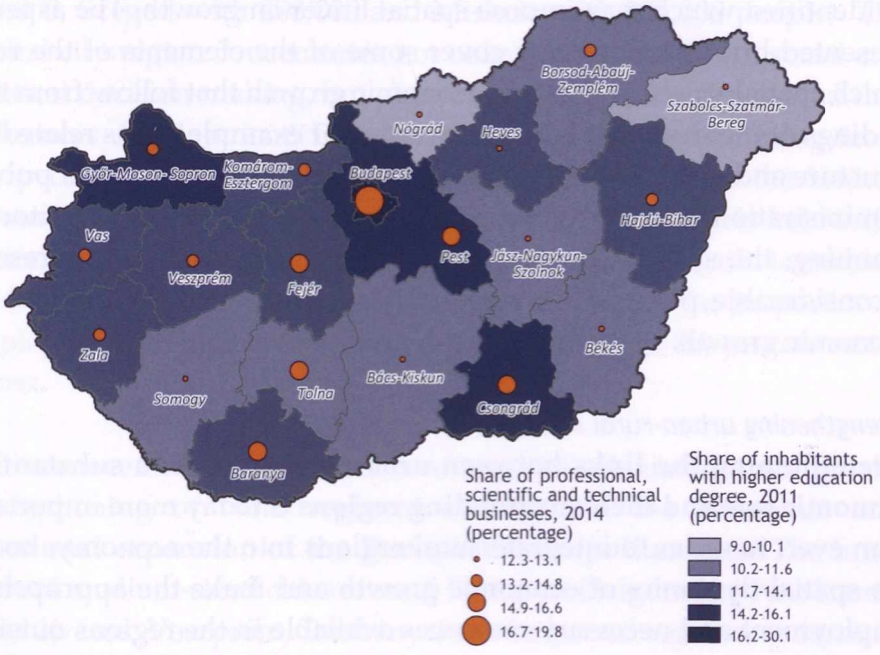
and Vas are still the primary targets of those changing their place of residence, but the counties Fejér and Komárom-Esztergom have had a negative internal migration rate since 2008, just like the other Hungarian counties. With respect to internal migration, Budapest is in a unique situation. Between the 1990s and 2006 its population declined on account of the suburbanisation processes, but this trend was reversed in 2007 as the dynamics of reurbanisation gained momentum, and today the capital is once again among the main targets of internal migration. As discussed in Chapter 7.3.3, demographic developments between 2009 and 2013 hampered growth in eight counties.

7.4.4. Qualification and skills

The basis for establishing a knowledge-based society is the human capital of population with higher education degree and the companies (and other institutions) where these people can utilise their knowledge. According to the data from the 2011 census, **13.9 per cent of the Hungarian population has a higher education degree**.

People with higher education degree are mostly **concentrated in Budapest**, where their proportion is more than double the national average. Other top performers in the country include counties Pest, Csongrád and Győr-Moson-Sopron, but even in these regions the number of them is about half of the figure for Budapest. In most of the country, the proportion of population with higher education degree fluctuates between 10 and 13.6 per cent, and it is only below 10 per cent in Szabolcs-Szatmár-Bereg and Nógrád. The concentration of companies engaged in professional, scientific and technical activities more or less corresponds to the population's educational attainment. With the exception of Somogy County, **Central Hungary and the western part of the country boast higher proportions, while in the east most of the counties that perform better than their environment are those with a substantial knowledge base (university or industrial centres) such as Csongrád, Hajdú-Bihar and Borsod-Abaúj-Zemplén** (Chart 7-24).

Chart 7-24: Knowledge society in Hungary



Source: Census, HCSO (2015b)

7.5. Conclusion - Certain regional conditions for growth

The increasing importance of spatial agglomeration advantages and the presence of regions that are moderately active economically draws attention to the fact that by taking into account geographically diverging development and understanding the regional dynamics of the economy, the **reinforcement of the regional foundations of economic growth in Hungary holds growth reserves for the national economy**.

The territorial distribution of economic activity is not only the result of national economic processes, as macro-level economy performance is also substantially influenced by the socio-economic spatial structure, i.e. the settlement network, which may accelerate or, conversely, hamper economic growth. In conclusion of the present analysis, a few

phenomena resulting from the territorial structure and its shaping can be identified which may impose spatial limits on growth. The aspects presented briefly below only cover some of the elements of the role which spatial structure plays in economic growth that follow from the findings of the study, and do not include, for example, areas related to structure and operation such as the local or regional systems of public administration, regional governance, urban development, territorial planning, the systems of public services, which may also represent a considerable potential in regional terms from the perspective of economic growth.

Strengthening urban-rural relations

Strengthening the links between urban centres with a substantial economic role and their surrounding regions is today more important than ever, in order to integrate rural regions into the economy, boost the spatial dynamics of economic growth and make the appropriate employment and necessary resources available in the regions outside the major economic centres. The transportation links enabling commuting, which influence the size of the local labour market, the cooperation among economic actors (supplier networks), the functional division of labour among settlements whereby smaller settlements are linked to the urban regions through their recreational, ecological and food producing role all serve this purpose. Taking into account the functionally developing urban regions in public regional governance and the implementation of **local economic development programmes** are important to achieve the above. The cooperation between urban and rural regions is a key aspect in EU policy documents (Territorial Agenda of the European Union 2011) and is one of the goals of the Hungarian National Development and Regional Development Plan (2014), the practical implementation of which also has economic significance.

Alleviating the monocentric settlement structure of the country

In Hungary, metropolitan agglomeration advantages can only be observed in Budapest. This is because 2.6 million people live in the vicinity of the capital, while the labour markets of other regions

are small (the largest after Budapest are those of Debrecen with 243,000, Szeged with 208,000 and Miskolc with 205,000 people). The capital city region concentrates not only the institutions of social and political decision-making, but also the innovative human capital that influences development. Due to the **disadvantages stemming from the** peculiar **Hungarian settlement network** – such as the limited labour agglomeration of provincial urban regions that is below the critical mass – input substitution is expensive and difficult, launching modern business services is not financially viable and the proportion of employees with higher education degree working in the private sector is low.

The monocentric spatial structure may be alleviated through the strengthening of rural regional centres and the **economic and functional expansion of the Budapest metropolitan area**. The inner circle of medium-sized cities around Budapest (Salgótarján, Kecskemét, Dunaújváros, Veszprém, Tatabánya) can be bound together to form an integrated economic region unifying agglomeration advantages and providing a larger supply of facilities and labour through transportation links, governance instruments and common economic programmes. As it has been pointed out in earlier studies (OFTK 2015; Matolcsy et al. 2007), the medium-sized cities around Budapest that can be reached within an hour may supplement the capital city region as circle of so-called „bearing cities". The centres in the outer city circle may primarily strengthen their role through cross-border ties.

Cross-border agglomeration

Due to the character of the Hungarian city network, the urbanisation clustering necessary for achieving the "critical mass" of agglomeration advantages has very limited opportunities outside the Budapest metropolitan area. The larger rural cities located near the border owing to historical reasons cannot be considered substantial agglomerations in international comparison, but in certain cases they may **form a region of substantial economic weight together with large cities on the other side of the border.** Such regions may be formed from the cooperation

between Miskolc and Košice, Debrecen and Oradea, Szeged, Arad and Timişoara, while Győr could integrate into the agglomeration area of Bratislava and Vienna. This cross-border agglomeration can be stimulated by enhancing the cooperation between the cities and the economic actors concerned, encouraging clustering, improving the systems of accessibility as well as launching regional economic development programmes encompassing the economies of the Carpathian Basin. In addition, strengthening the Vienna–Budapest axis and complementing it with Bratislava may increase the global weight of the capital. The EU membership and funds from the European regional cooperation programmes that can be spent on cross-border programmes provide a theoretical opportunity for much more active cross-border integration. At the same time, the development of cross-border functional regions – agglomerations – has also emerged as a sort of common European regional priority (Zaucha–Salamin 2011; Salamin et al. 2011).

Alleviating the radial, monocentric transportation network

The Hungarian **transportation network is monocentric:** the – otherwise necessary - construction of motorways reaching the border, **i.e. the central transportation system, fostered the concentration of the economy**. The motorways constructed have not produced the expected results yet, i.e. they have not boosted the economy of the regions they reached, but they have exerted a unique impact on spatial economies of scale. The construction of motorways reduced unit transport costs, and the markets of companies in the capital expanded; therefore, traded business activities are inevitably concentrated in and around the capital, as pursuing financial, logistical and business services activities utilising the economies of scale and covering the whole country is only financially viable there. In parallel, the business services of cities in rural areas lose market share, which may hamper growth not only in rural regions but also in the whole country. The unipolar transportation system inevitably concentrates mobile activities, which may have both advantages and disadvantages from the perspective of the country. The advantage is that clustering traded-type companies are strengthened

in the global competition and become successful internationally, thereby boosting employment and fostering economic growth. The disadvantage is that if the driving-out effect is strengthened, companies in rural areas engaging in non-traded activities (that only attract Hungarian consumers) go bankrupt, and unemployment rises in such regions. The GDP figures from the capital city regions may indicate that the concentration mainly amplified this driving-out effect rather than the internationally successful activities entailing growth, which was strengthened by, inter alia, the enhanced accessibility.

The limited competitiveness of moderately active rural regions and local economic development

The consistently lagging regions of a rural character – mostly in the north-eastern, but increasingly also in the south-western part of the country – cannot enter the competition of the integrated European space. **The economic policy aimed at international competitiveness cannot provide a solution to the problems of the typically peripheral and mostly rural regions that mainly have low-skilled labour**, while managing the related social problems places a considerable economic burden on the country. The level of utilisation of the labour force and other resources of these regions is typically low. These regions may require a targeted economic policy beyond the current rural development and regional development, which, in line with the model of local economic development, stimulates production for both the domestic and the local (urban) markets in these regions, based on endogenous resources and taking into account the fact that these regions hold resources of strategic importance (food production, arable land, ecological resources).

Regional aspects in economic and development policy

An economic policy with an appropriate regional "sensitivity" should not only shape the macroeconomic conditions, but also find differentiated solutions tailored to the needs of the regions on various development paths. **The types of regions** presented in the analysis **require different economic policies**. The economic growth of the

capital and its surrounding region is slow mainly because its companies are primarily present on the domestic market, owing, in part, to the developments in concentration. However, due to the decreasing or stagnant corporate and household demand in rural areas these companies cannot generate substantial growth. Few companies can take part in the international competition and expand, although the conditions for traded business services are in place. It should be noted that in the capital city region deindustrialisation developments can be observed, and manufacturing is on the back foot, since the number of employees in manufacturing is falling. In the FDI-driven regions, the dependence of the one-sided, one-legged economy poses a risk, and the main problem is that the "radiant effect" is weak, i.e. only few local companies can form ties with multinational corporations, and there are few local suppliers. Finally, in the other regions there are hardly any industries that reach the level and economies of scale necessary for global competition. In rural regions, the aforementioned local economic development requires an alternative economic policy.

Economic development funds reached disadvantaged regions less, and in public developments, which dominated the economic framework, the previously forced tendering system generated unnecessary competition among local actors, thereby hampering regional coordination and synergies. The regional efficiency of development policy can be increased substantially if regional developments are coordinated and territory-based development programmes are implemented. According to international empirical results, in the globalising world the regional level plays a decisive role in economic growth. In Hungary, the role as well as the economic and development policy competence of the counties is unclear, and smaller local governments can only provide a limited economic stimulus due to their size and the size of their settlements. Larger cities have the best potential for local stimulation of the economy, but one of the problems of the fragmented Hungarian system of local governments is that there is no well-defined authority that presides over the governance and economic management at the level of regions and urban regions.

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