Review on Agriculture and Rural Development 2015 vol. 4 (1-2) ISSN 2063-4803

CHANGES IN HUNGARIAN SPATIAL DIFFERENCES DURING THE PAST TWO DECADES

JOLÁN PALOTÁS ABONYINÉ[1], LEVENTE KOMAREK[2]

[1]University of Szeged
[2]University of Szeged, Faculty of Agriculture
Institute of Economics and Rural Development
H-6800 Hódmezővásárhely, Andrássy u. 15.
komarek@mgk.u-szeged.hu

ABSTRACT
This paper examines the differentiated development and the levels of development of 20 unit areas of Hungary (19 counties + Budapest) over the time. The authors form indicators from the data of 1994, 2003 and 2014(2013) as well as from the census data of 2001 and 2011 and they draw conclusions from the extreme values. They claim that, over the two decades, spatial differences occurred instead of levelling. The ratio of the upper and lower extreme values all relevant indicators increased. Considering the important indicators some regions might have stepped forward in the development ranking, the others lagging behind and also the extending investment volume inhibited the progress and as a result the expansion of the field strengthened. Over the last two decades the development resources - including those for catching up - did not bring the expected results. This is most detrimental for the population living and working in regions lagging behind. The resulting migration – in case the investment policy does not change - will worsen the situation further.

Keywords: GDP per capita, the ratio of range, infrastructure, spatial differences, exclusion

INTRODUCTION

In our globalizing world spatiality came to the forefront again. Porter claimed first that although the market is global, the competition is global, however the long-term competitive advantage is local (PORTER, 1990). The importance of the place(s) is also emphasized by the Nobel-prize awarded Paul R. Krugman, when he established the "new economic geography". He acknowledged that the theories of economics for a long time did not take adequately into account the obvious fact that production takes place in well-defined areas. The new aspect of spatiality approach included spatial issues into the important questions of economics and thus put a lot of revaluation challenge for science. In his works he gave a new interpretation of territorial concentration (KRUGMAN, 1991; KRUGMAN ET AL., 2003; VERES, 2010).

MATERIAL AND METHOD

The authors drew conclusions from the analysis (range, standard deviation, extreme values quotient, correlation analysis) of national and county spatial and temporal indicators (distribution ratios, intensity ratios, dynamic ratios). The years of 1994, 2003 and 2014 (2013) were examined. Where it was only the census that provided basic information, the resources for the years 2001 and 2011 were used. The inductive analysis methods were applied, however the previous findings of authors and other spatial researchers were also referred to. The figures (cartograms) illustrate the development values of the indicators in five categories in a colour spectrum.

RESULTS

Next we project a snapshot on how these regional processes went on in Hungary NUTS-3 levels over the past 20 years.

It is known when analyzing the volume and the specific values of gross domestic product a number of critical comments regarding the objective of this nature arise, but there are still no better indicators for expressing the complex development of the regions. Since in our country the county level GDP data have been available since 1994, during our research we relied on the data of the years of 1994, 2003 and 2014 (when that is not yet available, then for 2013) (*Figure 1*). We examined how the GDP per capita changed in the three examined periods and how it correlates with other indicators of priority.

The limiting factor in the selection of indicators to compare was the one that the data gathering of the Central Statistical Office (CSO) changed over the past two decades. Thus, a number of indicators were eliminated from the system as the basic data were absent.

The following conclusions can be drawn from the two-decade changes in specific values:

- The prominent role of the capital was not only stabilized, but the rate grew dynamically. The range rate (how many times the difference is between the two extremes) rose strongly (NEMES NAGY, 2005).

$$K = \frac{X_{max}}{X_{min}}$$

(where the maximum was Budapest and Szabolcs-Szatmár-Bereg and Nógrád, alternating, were the minimum)

$K_{1994} = 2.92$ $K_{2003} = 3.73$ $K_{2013} = 4.98$

It was not just because of the very dynamic development of the capital city, but also of the slow forwarding of the regions lagging behind.

- Out of the counties, the upper extreme was always Győr-Moson-Sopron County. The forefront always included the Western and Northern-Transdanubian counties. In 1994 it was only Komárom-Esztergom County that was able to enter the vanguard of Győr-Moson-Sopron and Vas County.
- Among the lower extreme groups no marked change occurred, because in the base year Szabolcs-Szatmár-Bereg, Nógrád and Borsod-Abaúj-Zemplén were the most lagging, and by 2013 together with Nógrád and Szabolcs-Szatmár-Bereg Counties it was Békés County that also dropped behind.
- It is remarkable that the six Great Plain counties, with the exception of Bács-Kiskun County, fell further behind in the national field, with Békés and Csongrád County having the strongest decline.
- When examining the range ratio of the 19 counties without Budapest, again a strong differentiation can be observed.

$K_{1994} = 1.68$ $K_{2003} = 2.16$ $K_{2013} = 2.83$

So the developed counties are becoming more and more developed, while those at the back were further declining. Not surprisingly, the unemployment rate has many similarities to the GDP per capita rankings (*Figure 2*). Although in 1994 the capital, Pest and Győr-Moson-Sopron Counties were in the best position, by 2014 Győr-Moson-Sopron, Vas and Komárom-Esztergom Counties took the lead.

In the base year the highest unemployment rate was in Szabolcs-Szatmár-Bereg, Borsod-Abaúj-Zemplén and Nógrád Counties, while in 2014 Békés and Hajdú-Bihar Counties lined up next to Szabolcs-Szatmár-Bereg and Borsod-Abaúj-Zemplén. These changes also

show the powerful fall-back of the Great Plains counties. The range-ratio rose from 2.66 through 3.29 up to 4.53, which again shows the field stretching apart.

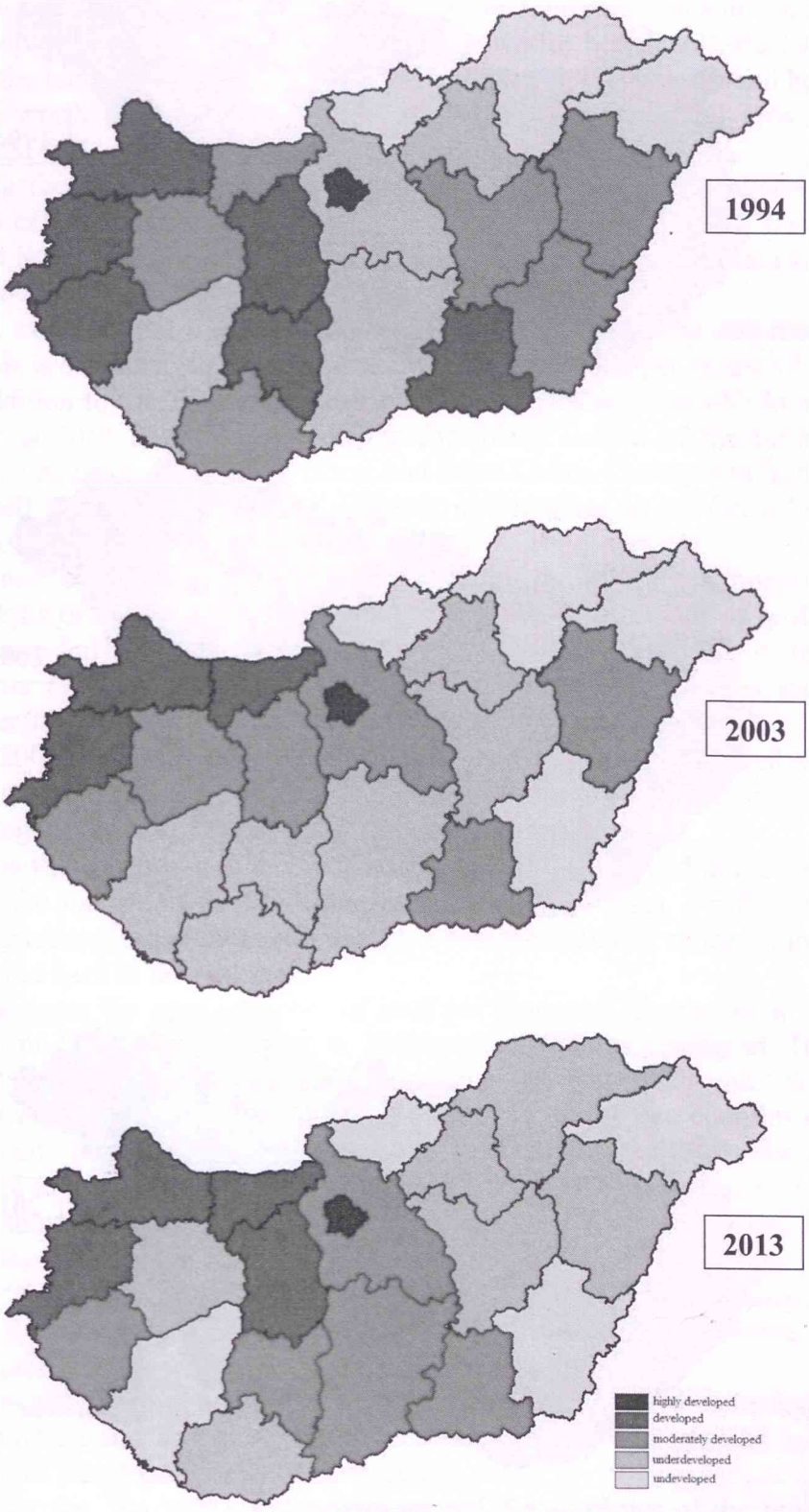

Figure 1. Per capita gross domestic product (GDP) (thousand HUF- at current price)
Source: own calculation

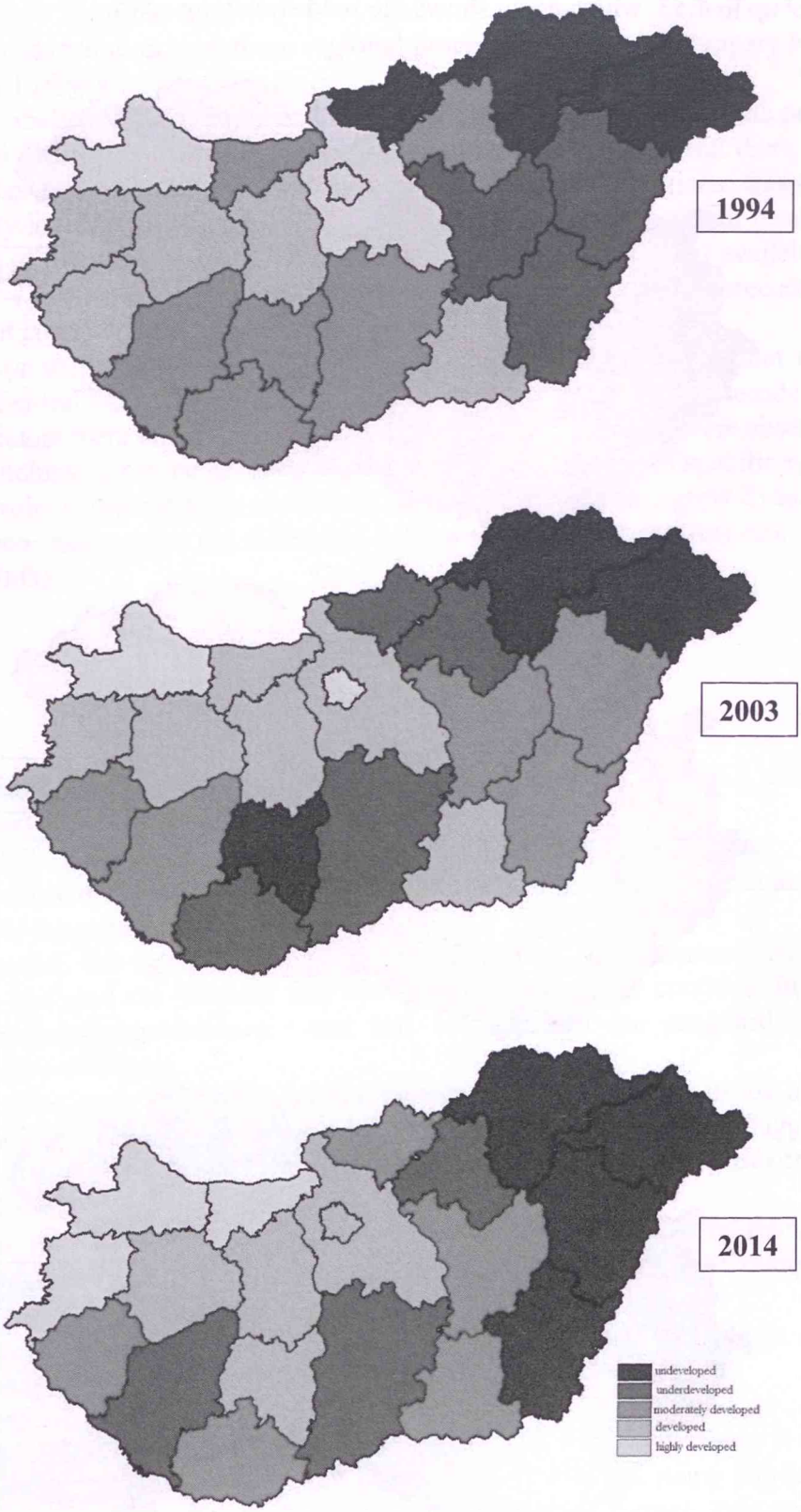

Figure 2. Unemployment rate (%)
Source: own calculation

We know that a well-developed infrastructure helps regional development. Although the development of the infrastructure does not always bring about the development of the

whole economy, however with undeveloped, underdeveloped infrastructure a modern, competitive economy cannot develop.

Not all sectors or elements of the infrastructure sector influence the development of the economy. Particularly it is good accessibility, advanced transportation and communication, and the development of human capital that have powerful beneficial effect (ABONYINÉ, 2007). Out of the latter, it is important to emphasize the role of education and health care.

It is therefore worth reviewing the changes of the key infrastructural provision of our examined spatial units.

When studying the territorial development of the number of main telephone stations, in addition to an extremely high value in Budapest there are well-equipped counties in the Transdanubian Region, while the less equipped are located on the Great Plain and Northern Hungary (*Figure 3*).

One aspect to consider the traffic-geographical situation can be the automobile supply (*Figure 4*). This is characterized by the number of passenger cars per thousand inhabitants. In 1994, in addition to the Transdanubian counties Budapest and Bács-Kiskun was in the lead, however in 2014 Pest County took the first place instead of the former 14th; in Transdanubia some restructuring took place, and Bács-Kiskun County was in the forefront this time as well. With the exception of the latter, the counties on the Great Plain were at the back again.

The performance of a region is greatly enhanced by the education, preparedness and professional skills of the people living and working there. These kinds of territorial serial data are available only in the census. Therefore, we compared the ratio of university or college diploma holders on the basis of the 2001 and 2011 censuses regarding the population over 25 years (*Figure 5*).

In the year of 2001 Budapest, Pest and Győr-Moson-Sopron Counties as well as Csongrád, Hajdú-Bihar and Baranya Counties were outstanding in this area. The latter ones got in the prestigious category because of their universities.

The leading counties regarding in this indicator are also distinguished in the specific value of GDP with the exception of two counties on the Great Plain. So the much higher proportion of graduates is not enough in itself to boost the economy of the region, and even some of them slid back in the rankings.

When we investigate the actual number of staff per thousand inhabitants at the research and development (R & D) places, it is Budapest as well as Csongrád, Hajdú-Bihar, Baranya, Győr-Moson-Sopron and Veszprém Counties that stand out. So this high intellectual activity is not able to reverse the fall-back eg. in the two counties in the Great Plain. At the same time the higher values of the Transdanubian counties show a positive correlation between the development level of regions. Although several branches of the infrastructure show a medium, or closer relationship with the development level of the region, when the investment is implemented geographically unevenly, those regions that enjoy a long term privileged status due to the steady growth of investments, usually become more dynamic, and where less development resources are allocated, or they are less effective, permanently will fall behind (ABONYINÉ ET AL., 2011).

Krugman writes that there is tug of war between the centripetal and centrifugal forces of spatial concentration and sprawl of the economy. There are winners and losers in this opposite direction development (KRUGMAN, 1991).

The economic power, the level of development and the dynamics of the region are also determined by the pace of housing construction in the region. The number of newly built dwellings per thousand inhabitants in the past year was the highest in Győr-Moson-Sopron, Hajdú-Bihar, Pest and Somogy Counties. It also shows some consistency with the former.

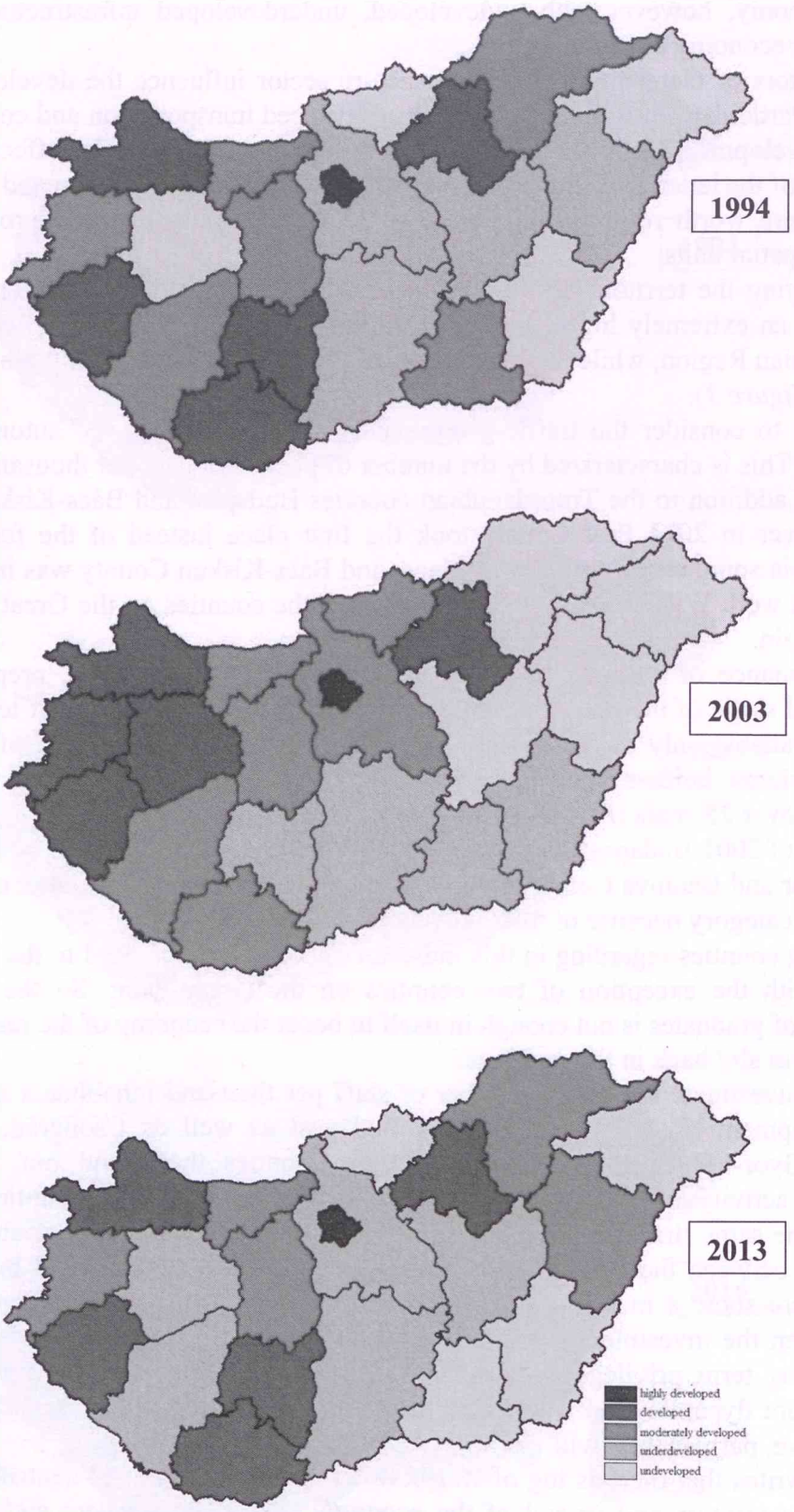

Figure 3. The number of main telephone stations per thousand inhabitants
Source: own calculation

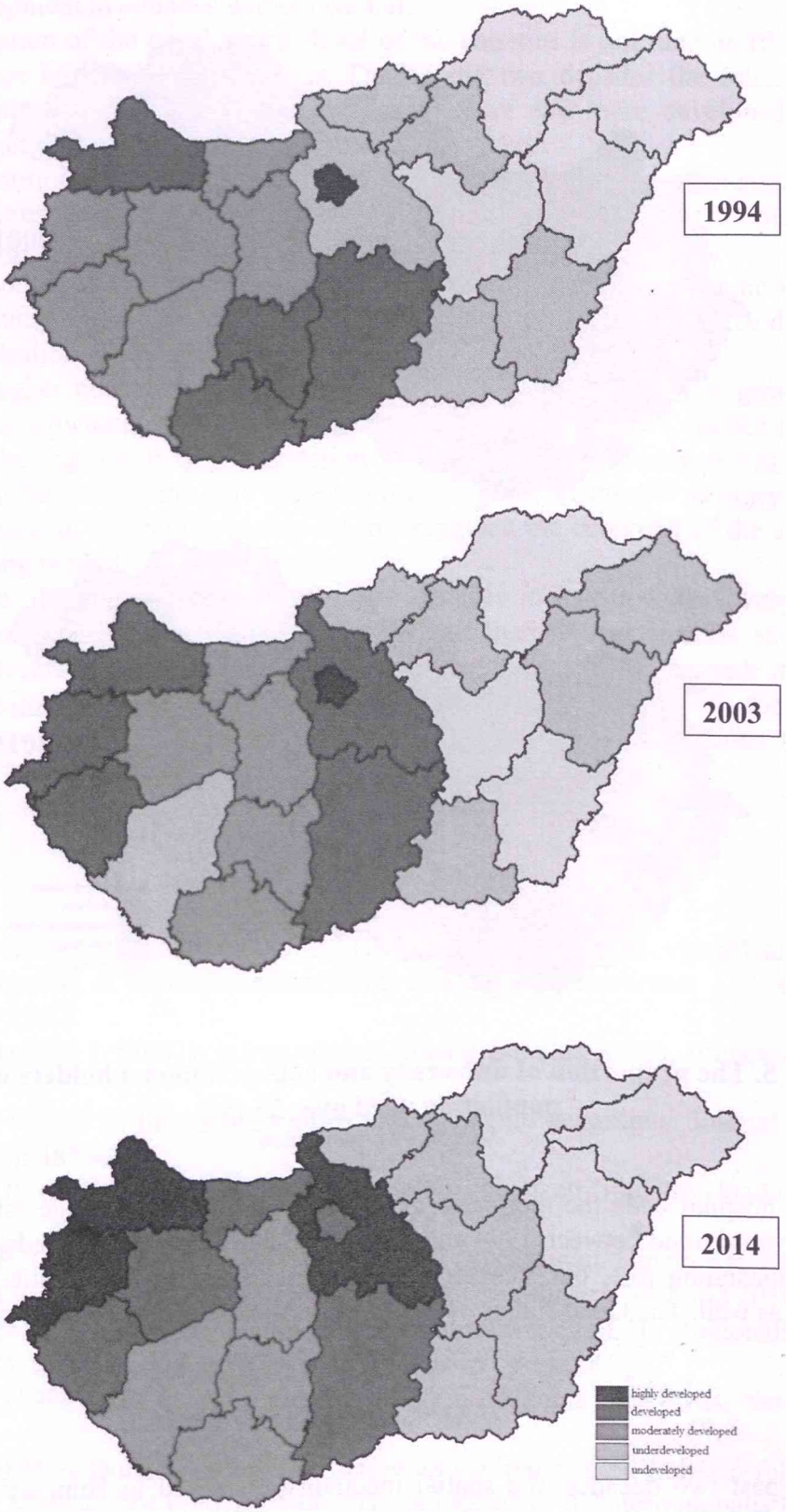

Figure 4. The number of passenger cars per thousand inhabitants
Source: own calculation

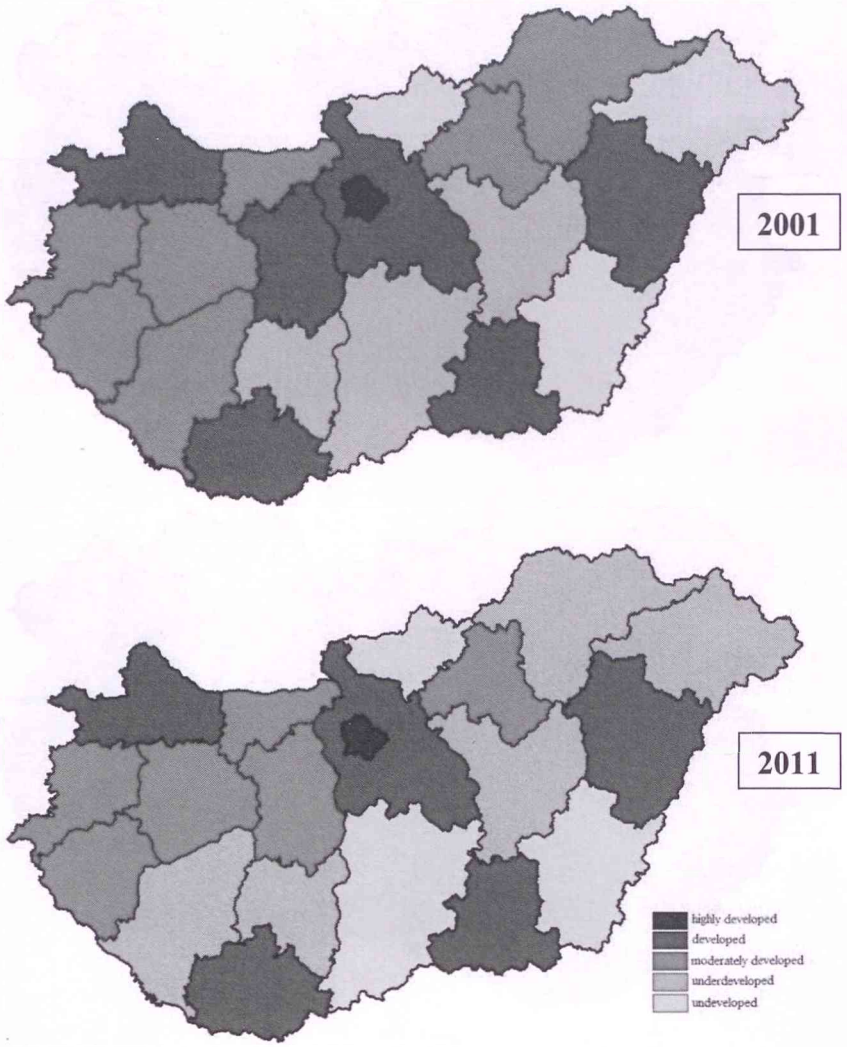

Figure 5. The proportion of university and college diploma holders out of the population aged over 25 (%)
Source: own calculation

In terms of hospital beds the picture is quite heterogeneous. The range ratio, of course, shows an upward trend between 1994 and 2014 (2.2, then 2.6 and 3.0). Budapest has by far the most outstanding role, but Veszprém, Baranya and Csongrád Counties also indicate high values as well. The Great Plains counties are located at the end of the rankings again.

CONCLUSIONS

During the past two decades, the spatial inequality increased in Hungary based on the following indicators.

The prominent role of Budapest not only became steady but also the intensity rose through its dynamic growth.

The backlog of the coherent, extensive peripherals (South West Hungary, Northern and Southern Great Plain, Northern Hungary) strengthened. In this respect, Békés and Nógrád Counties falling behind the more developed regions are particularly spectacular.

The difference between the extremes and ratio indicators (range-rate) also increased on the level of development in counties without capital.

The differentiation of the development level of the counties is not random (the change in this area is not hectic) but tendentious. During the two decades the relative level of development showed that the developed became more and more developed, while the undeveloped got more and more lagging behind.

This trend is more reflected in the unemployment rate. The range ratio increased from 2.66 to 4.53. In this respect, the field is most drawn apart, despite the fact that internal migration had a slight pull-back effect on the process.

The specific value of main telephone stations and automobile supply indicate a similar trend. Pest County forging ahead is due to the radiation of Budapest and the development of the agglomeration in and near the capital.

The rate of higher education graduates indicates similar differentiation growth. In this context, it is conspicuous that Csongrád, Hajdú-Bihar and Baranya Counties stand out as islands from the regions. It is in connection with the three major universities and related institutions. At the same time it is thought-provoking that in the 21st century knowledge and skilled labour in this region cannot act to strengthen the economy of the counties and stop them falling behind.

It is clear from the above that during the two decades in question, the strengthening of spatial differences occurred instead of levelling. Over the past two decades, and especially since the EU accession of Hungary, the resources used for development made it possible to have some territorial cohesion. A more rational use of development funds for innovative, more competitive productive sectors could have prevented the tendentious fall-back of large areas such as the Great Plains region.

REFERENCES

ABONYINÉ PALOTÁS, J., KOMAREK, L. (2011): Összehasonlító vizsgálatok az ipari beruházások ágazati és területi szerkezetének alakulásáról. Comitatus – Önkormányzati Szemle 29(9): 25-33.

ABONYINÉ PALOTÁS, J. (2007): Infrastruktúra. Dialóg Campus Kiadó, Budapest-Pécs. 184 p.

KRUGMAN, R. P. (1991): Increasing returns and economic geography. Journal of Political Economy. 99(3): 483-499.

KRUGMAN, R.P. (2003): Földrajz és kereskedelem. Nemzeti Tankönyvkiadó, Budapest. 162. p.

KRUGMAN, R.P., OBSTFELD, M. (2003): Nemzetközi gazdaságtan. Panem Kft. 872 p.

KSH annals as well as itsvolumes referring to the census of years 2001 and 2011.

NEMES, N.J. (ed.) (2005): Regionális elemzési módszerek. ELTE Regionális Földrajzi Tanszék – MTA-ELTE Regionális Tudományi Kutatócsoport. 284 p.

PORTER, E.M. (1990): The Competitive Advantage of Nations. Free Press, New York. 875 p.

VERES, L. (2010): A Duna komplex fejlesztése az európai területi kohézió folyamatában. pp. 15-22. In.: Veres L. (ed.) (2010): Duna-Térségi Kohézió II. Interregionális Nemzetközi Tudományos Konferencia tanulmánykötet, Szabadka. 440 p.