

The dimensions of peripheral areas and their restructuring in Central Europe

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Abstract

The current paper tries to provide a general overview about the restructuring spatial pattern of peripheral areas in Central Europe. The Visegrad Countries are regarded as Central European countries, in this case, Poland, Slovakia, the Czech Republic and Hungary are involved. Major methodological problems hampered the process of data collection and the comparison of different delimitations of peripheral areas in different countries. However, a general overview could have been made in order to detect the most important alterations of the spatial structures of the investigated countries. The territorial structures of peripheral areas during the socialist era and nowadays were compared to each other. The changes in the location of peripheral areas reflect back the increasing role and the influence of the capital cities and the largest towns and the ongoing development of the Western territories. At the same time, the crisis of the Eastern border areas – traditional backward areas – became deeper and it can be regarded as permanent along with the process of concentrating and cumulating social-economic problems. The structural changes triggered the backsliding of some of the former industrial and mining areas causing a new phenomenon in the pattern of peripheral territories in Central Europe.

Keywords: Central Europe, centre-periphery dichotomy, regional disparities, spatial pattern

Introduction

Central European countries have gone under a fundamental transformation during the regime change of 1989-1990. The political changes had an impact on almost all kind of socio-economic processes. The spatial pattern of the changes was significantly different from the features of the socialist era, from the centre-periphery conditions which evolved in the past decades. The changes were accompanied by the significant increase of regional disparities, differences between developed and undeveloped areas. The 1990s was the period of rapid

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changes. In addition to the crisis phenomena, the concentrated start of regional development also played a role.

The accession of Central European countries to the European Union in 2004 essentially has not changed the economic processes since they took place during the last 10 years. Out and away, the availability of financial resources opened up new perspectives for the regional policy. The assessment of the cohesion funds is controversial, because neither the convergence of the most backward areas nor the reduction of regional differences is unambiguous. It is partly because of the multi-dimensional nature of regional development and partly because of the spillover impact of the 2008 crisis.

The ineffective regional policy also played a role. The spatial pattern got "frozen" and the significant regional inequalities seemed to be stabilized in Hungary after 2000. The present study is an attempt to analyze and compare the spatial patterns of the four (until 1992 only three) countries of the socialist era and those of the period after the 2000s. In addition, the study aims to reveal the changes occurring in spatial locations as well as the regional characteristics of the peripheral areas.

The study tool is typically the review of the associated literature. In addition, I/we overviewed the most important factors which are the limitations of the testing facilities.

Definition of centre and periphery, core-periphery models

The centre means midpoint, central position in space or it represents a space portion which also involves a positive quality in addition to the geometric situation. In a particular spatial system, it refers to the relative central position designated by the quantitative and qualitative characteristics, comparing to other space element. Accordingly, it can vary depending on the position and scale of space and time together with the size of the spatial system (Regionális Tudományi Kislexikon, 2005).

The core concept is combined with social and functional content, flow and node characteristics together with a leading role in addition to the geometric nature. The centre is not only limited to points, but it may also have a more significant spatial extent major region, a country a group of countries can be identified as core areas. (TÓTH, J. and CSATÁRI, B. 1983; SÁRFALVI, B. 1991; NEMES NAGY, J. 2009).

The periphery is also relative, meaning a space element or space portion located on the edge. The geometric position can cover a negative quality, too. As the counterpart of the centre, it features the dependence from the centre, but it can also mean the lack of relationships and isolation. The peripheral issue can be analyzed by multiple disciplines, therefore a shift may occur in

the content of peripheral meaning, which can have a social filling beyond geographic point of view (NEMES NAGY, J. 2009).

The core-periphery concept is a basic social science paradigm of which dual aspect is not entirely clear. The most well-known propagator is Immanuel WALLERSTEIN who made the concept triad in a way that he created the semi-periphery category (WALLERSTEIN, I. 1983). The centre-periphery pair of concepts can be interpreted in three ways (NEMES NAGY, J. 1996):

- positional (geographical) centre and periphery where the centre means a designated, enhanced place, while the periphery means the marginalized settlements, it is more often coupled with the issue of accessibility (TÓTH, G. 2006; TÓTH, G. and DÁVID, L. 2010);

- development (economic) centre and periphery which can be identified as the economic development and underdevelopment;

- authority (social) centre and periphery in which the dependence of power and the imbalance of interests appear.

The centre-periphery situation of a particular region or settlement may change in time. The three meanings can overlap each other. It often occurs that spatial elements are both central and peripheral depending on the meaning of content (NEMES NAGY, J. 1996; LŐCSEI, H. and SZALKAI, G. 2008). However, in most cases, the principal of “the trouble does not come alone” and a peripheral phenomenon also appear in several factors as a cause or as an effect (KANALAS, I. and KISS, A. eds. 2006).

Raúl PREBISCH, an Argentinean economist, casted the first stone of the centre-periphery theory in 1950. He remarked the apropos of the international trade’s unequal exchange rates that the world market prices serve the industrial centres more and more frequently at the expense of raw material producers (BARTA, GY. 1990).

John FRIEDMANN’S well-known centre-periphery theory (FRIEDMANN, J. 1966) tries to explain the stages of regional economic growth by exploring the regional context of “Rostow’s stages of growth” model (LENGYEL, I. and RECHNITZER, J. 2004).

Based on FRIEDMANN’S Latin American studies, linked the level of development and the pace of progress of regional disparities (KOZMA, G. 2003). According to his opinion, innovation is the source of economic development which viable conditions are provided by the core cities and areas (BARTA, GY. 1990).

Thereupon, the most suitable platform for economic developments are the urban regions. Peripheries depend from the centres’ authorities, therefore the centre-periphery forms a closed spatial system. The relation system is an essential element of spatial differences which exists at different scales. The centre-periphery relations in the Central European countries have re-evaluated during the last two and a half decades, too.

The effect of change of regime on the socio-economic processes in Central Europe

The political shift of Central Europe's countries² at the end of the communist regime caused market economic transformations there the economy were determined by spatial situation (NEMES NAGY, J. 1998). Thus, the majority of the countries faced a dramatic economic setback, the drastic increase of unemployment, a structural crisis and the formation of acute crisis areas (GORZELAK, G. 1996). The significant decrease of industries which were supported during the socialist era caused very fast transformation of occupation in addition to a considerable amount of reduction of employment (KEANE, M.P. and PRASAD, E.S. 2006).

The regions which developed infrastructure, a skilled labor force, hence best survived the transition, attracted innovation supporting, competitive foreign direct investments. Consequently, the tertiarization of the economy began. The decisive factors for the success of the transformation:

- the initial stages of development, the sectoral distribution of economic activities;
- the properties of the factors of production;
- and the political and economic situation (GORZELAK, G. 1996).

In the countries, the former, more leveling spatial pattern became (much) more polarized (e.g. SZABÓ, P. 2003; ABRHÁM, J. 2011). In the 1990s, the rapidly growing regional inequalities were prevalent in those countries, compared to the more moderate socio-spatial pattern of the period of socialism.

The essentially similar regional inequality trends can be included in a single model (the modified Kuznets-Williamson's inverted U hypothesis) which focuses on the socialist redistribution. That kind of redistribution maintained the more-balanced spatial pattern artificially. As a result of the switchover to market economy, that influence eliminated and the regional differences returned to the country's appropriate level of development (NEMES NAGY, J. 2005).

Primarily, the metropolitan regions which could provide the benefits of agglomerations (HEIDENREICH, M. 2003), the major urban agglomerations (BURDA, A. 2013) and the western border areas which were closer to the developed Western Central European economic centres and generally had a higher level of development could benefit from the transformation (SÜLI-ZAKAR, I. 2007; NEMES NAGY, J. and TAGAI, G. 2011).

At the same time, the Eastern, often agro-industrial profiled border areas of the Central European countries being a continuous peripheral band evolved and the former mining and heavy industrial areas became predomi-

² In this study, under the concept of Central Europe we understand the Visegrad Countries (Hungary, Slovakia, Czech Republic and Poland).

nantly structural crisis areas. That kind of spatial structure materialized in many socio-economic indicators and progresses, e.g. migration within countries, the presence of FDI, differences in employment and income patterns.

The aim of our study is to introduce the peripheral areas of Central Europe in two segments of time, after the period of socialism and after the millennium. We try to point out the main processes of change based on two periods' spatial image and summarize the dimensions of transformation, of course, in parallel with the review of relevant literature.

The methodological problems of the delimitation of peripheral areas

As a result of the characterized processes, in some cases the spatial pattern was significantly transformed in a way that it changed the centre-periphery spatial specificities, as well. It was also pointed out that the spatial position of the peripheral areas despite the presence of the traditionally underdeveloped areas could be considered as dynamic. So it can be interpreted as an indicator of spatial processes which took place during the last nearly quarter century.

Several studies were created focusing on spatial processes and development's spatial pattern of the Central European countries (NEMES NAGY, J. 1987; GORZELAK, G. 1996; HORVÁTH, GY. 1998, 2009; SOKOL, M. 2001; KUTTOR, D. 2009; NEMES NAGY, J. and TAGAI, G. 2011; European Commission, 2010). However, they have mainly static aspect and they focused on NUTS 2 and NUTS 3 levels using some very important indicators available in the Eurostat database.

Principally, GDP and HDI are often used as complex indicators. The recent EU Cohesion Report contains a detailed map of the disadvantaged areas of the EU, but it takes mainly natural and agricultural aspects into account (European Commission, 2010, p. 193). Lately, poverty and the analysis of marginalization in the European-scale regional analyzes get more and more emphasis.

In this paper, we try to create a more complex view in which the areas qualified as underdeveloped ones of the examined countries can go beyond national borders (as detailed regional analyzes were created in each country). One the one part the aim is that the similarities or differences should become detectable, on the other hand, the "overview" of the common border areas could be used as a guide in regional development planning (including the multi-country aspect of contiguous peripheral regions' comparative study, even exploring the possibilities of cross-border co-operations).

Unfortunately, the examination of the problem of the peripheral regions is quite difficult, because the phenomenon may appear in multiple dimensions (KANALAS, I. and KISS, A. eds. 2006) (the term itself can be approached from

several directions – see above) (NEMES NAGY, J. 1996). The impoundment of peripheral areas is, therefore, generally taken into consideration together with multiple indicators and different methods to bring the indicators to the same unit (see e.g. DÁVID, L. and BAROS, Z. 2007). The comparability problem of the calculations made in each country is due to several factors:

- the available and accessible databases are extremely heterogeneous (either the range, the content, the methodology of compilation or in terms of spatial splitting and time interval of indicators)

- partly for that reason, it is almost impossible to find a same (or similar) spatial splitting in the various countries of which delimitations apply the same methodology in the same period

- the previous statement is explained by the fact that spatial issues occur in different phasis (some factors can carry here and there serious inequalities; elsewhere they do not express the level of development or backwardness) in different countries

- the same indicator which usually outlines the peripheral areas because of the spatial characteristics well may not provide a realistic image, e.g. in the agricultural areas of Eastern and Southeastern Poland, the agriculture disguises the significant latent unemployment (TOKARSKI, T. and GAJEWSKI, P. 2003))

- moreover, calculations can have different results, none the less, they take similar methods referring to the same time and the same area into consideration (PÉNZES, J. 2010)

- all of these things can be further complicated by the issue of temporal comparison, since the content of the indicators can change in different manner. And on top of it all, a few years difference between each survey can be sufficient to distort the results

- the comparative analyses examining the same area for a longer period of time are rare (e.g. MUSIL, J. and MÜLLER, J. 2006)

- the periphery term is relative (the same is true for the term of centre), therefore either country's least developed area, optionally can count as developed one in the neighboring country.

As a consequence, it is clear that different analyses made for the delimitation of peripheral areas in each country simply cannot be inserted next to each other (although to analyze differences of the impoundment can be made such as this figure – see e.g. SZABÓ, P. 2010, figure 3, p. 30).

However, the schematic spatial pattern maps which are generalized at the appropriate level can be suitable for the illustration of relative peripheral conditions in the countries studied. A study, which would be made uniformly to all countries and based on indicators, which clearly reflects the level of development, and possibly using more detailed spatial splitting; could overcome the listed problems.

The locations of peripheral areas and the characteristics of the spatial pattern during the socialism and after the turn of the millennium

The consolidated and significantly generalized maps which were made according to the available sources, cited in the footnote, provide a characteristic point of view (Figure 1).

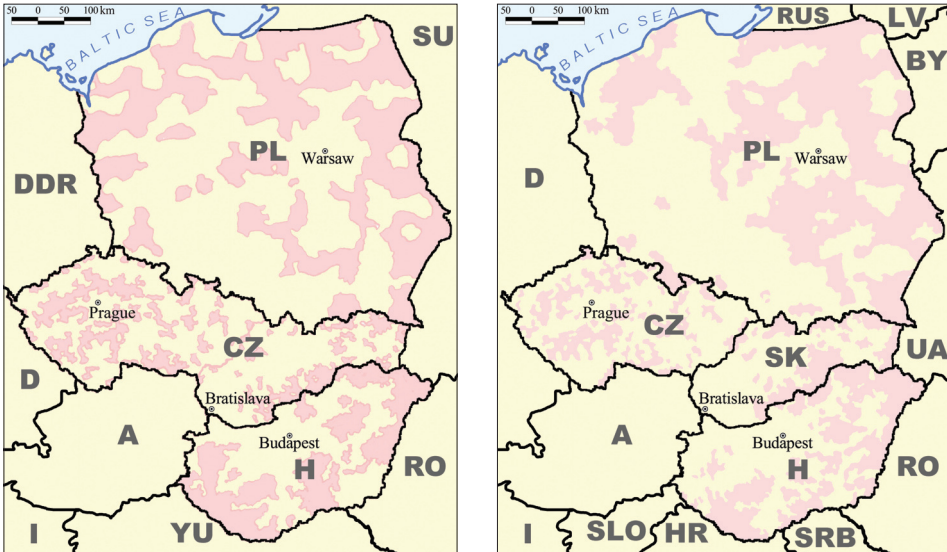


Fig 1. Peripheral areas of the Visegrad Countries during the socialist period (left) and after 2000 (right). *Source:* own edition, based on the sources in the footnote 3 (referring to map on the left)³ and footnote 4 (referring to map on the right).⁴

Unfortunately, due to the listed several methodological issues and problems, the further quantitative GIS-based comparative analysis would be a concern, therefore we only want to draw attention to the visible changes that have affected the location of peripheral regions.

The investigation of the peripheral areas was quite subordinate during the socialist era, though the conceptions and objectives also served the regional equalization (COTELLA, R. 2006) through the public development

³ By POTRYKOWSKA, A. 1985, p. 124.; CIECHOCIŃSKA, M. 1986, p. 253; GAWRYSZEWSKI, A. and POTRYKOWSKA, A. 1988, p. 91.; MUSIL, J. and MÜLLER, J. 2006, p. 38.; the data of ŠSR and BELUSZKY, P. 1976, p. 305.

⁴ By POTRYKOWSKA, A. 1985, p. 124.; CIECHOCIŃSKA, M. 1986, p. 253; GAWRYSZEWSKI, A. and POTRYKOWSKA, A. 1988, p. 91.; MUSIL, J. and MÜLLER, J. 2006, p. 38.; the data of ŠSR and BELUSZKY, P. 1976, p. 305.

policy and redistribution which resulted in a leveled spatial pattern on a superior regional level. The concentrated developments generated considerable inequalities, as well (FUCHS, R. J. and DEMKO, G. J. 1979; BELUSZKY, P. 2002). The researches related to regional differences in living conditions gained momentum in Hungary primarily during the 1970s. Since 1986, the delimitation of underdeveloped areas has occurred (although any substantive regional development policies have not evolved).

Thereafter the 1980s in Poland, researchers placed more emphasis on the territorial aspect to examine the living conditions, the quality of life and the access to services. In the former Czechoslovakia such researches were subordinated as the most important spatial disparities (especially the significant differences in the development of the Czech-Moravian and Eastern Slovak areas) were known.

Each of the countries the *capital city and rural area* spatial dichotomy was stressful. In the case of Hungary, especially conspicuous the veg ("water head") type of Budapest, which was significant during the period of socialism, too (FUCHS, R.J. and DEMKO, G.J. 1979) but became more dominant after the end of the communism (see. inter alia ENYEDI, GY. 1996; NEMES NAGY, J. 1998). In Slovakia, the appreciation of Bratislava and the neighbouring region characterized by suburbanization especially in the new millennium can be observed HALÁS, M. and HURBANEK, P. 2008). It is coupled with the constipation of the peripheral areas lying east from the capital. However, Bratislava's spatial weight is far less oppressive than in case of Hungary and the same can be said of Czech Republic, too. The role of Warsaw in Poland is less characteristic because of the feature of the city network and the existence of major metropolitan sub-centres (FUCHS, R. J. and DEMKO, G. J. 1979).

Relation to the latter country, which is more due to the large *urban-rural dichotomy*, can be highlighted – Poznań, Kraków, Wrocław and the so called 'Tricity' (Gdańsk, Gdynia and Sopot) (GORZELAK, G. 2006) – however, the largest cities are not necessarily the regional development centres, which the Polish regional policy strives to concentrate (CHURSKI, P. 2010). The urban-rural dichotomy has a significant presence in all Central European countries and its importance has grown since the democratic transition. In rural areas, the economic obsolescence was much more significant, particularly in the eastern part of the studied area which is agrarian-dominant.

The employment in the cities was revalued by a smaller decrease in the number of jobs. The phenomenon of suburbanization around the city moves forward the development, while the regions which are farther from the agglomeration lag behind (NOVÁK, J. and NETRDOVÁ, P. 2011; CZYŻ, T. 2012; PÉNZES, J. 2013; BUJDOSÓ, Z. *et al.* 2013). This process is also enhanced by the selective migration which leads to the conservation of divergences and leads to further concentration (MISZCZUK, A. and WESOŁOWSKA, M. 2012).

The *East-West dichotomy* can be detected in some forms in all four countries. The valorizing of the western areas and the crisis phenomena in the eastern areas are mentioned in the introduction and we also referred to the structural background (NEMES NAGY, J. 1998; GORZELAK, G. 2006; HALÁS, M. and HURBANEK, P. 2008). Due to the foreign direct investments and the proximity to the core European areas, the economy revived in the Poznań–Wrocław emerging development axis. This effect bring along the convergence of the peripheral areas of South-Western Poland (CZYŻ, T. 2012).

After the end of the communism, the progress which took place in Western Slovakia and Northwest Hungary also resulted in the transformation of the backward regions, especially along the main transport axes (LŐCSEI, H. and SZALKAI, G. 2008; TÓTH, G. 2013). The automotive industry and the related supplier sectors had a prominent role in the industrial reconstruction of the Western areas (PAVLÍNEK, P. *et al.* 2009). The process was the least spectacular in the Czech Republic as Prague and its surroundings have always been the most dynamic region.

As the other projection of the West–East lean, there is a trend which shows *the increasing spatial concentration of peripheral areas in the Eastern regions*. This concentration appears in the “Eastern Wall” zone of Poland; in the accumulated spatial problems of South-Eastern and Eastern Slovakia and the concentration of peripheral territories in North-East and East Hungary. A high level of backward areas is concentrated in the *geographical peripheries along/at the borders*. In this area, the proportion of the agricultural sector is typically high because of the agricultural trade relations with the Eastern Soviet markets. After the end of the communist era and the collapse of the Soviet Union, a prolonged crisis of the agricultural sector evolved.

In addition to the outer periphery of the Central European countries, *internal peripheries* are present, too. In the case of Poland, in the region of Warsaw–Łódź–Kielce–Lublin, the increase of peripheral areas is particularly conspicuous. The region of the Świętokrzyskie Mountains is traditionally a backward area of Poland, however, the elements of the restructuring crisis overlap the previous one. In the Czech Republic, the greater part of the internal peripheries are concentrated along the administrative borders, so called “kraj” borders and their extent have not seem to decline over the past decades (MUSIL, J. and MÜLLER, J. 2006). In Hungary, the Central Tisza Region (“Közép-Tiszavidék”) is regarded as an internal periphery, in which the post-communist processes have resulted in the strengthening of the peripheral status (PÉNZES, J. 2011).

The structural crisis of the mining, textile- and heavy industry caused the emergence of unfamiliar socio-economic difficulties including high unemployment, high social inputs, declining tax revenues and environmental problems in the areas which were prosperous during the socialism, for instance, in

the region of Upper Silesia and Łódź in Poland, and in the surroundings of Salgótarján, Ózd and Komló in; Hungary.

A significant part of the region is traditionally backward, therefore its peripheral status is not recent. In Eastern Poland, the fragmented farm structure of agriculture and the neighborhood of Belarus and Ukraine conserve the disadvantages which go hand in hand with similar socio-economic problems in all countries (e.g. low employment rate, selective and significant emigration) (MISZCZUK, A. and WESOŁOWSKA, M. 2012). In case of Slovakia and Hungary (in the North-Eastern part and in the South-Western part), social and employment problems of the Roma population aggravate the close up of the region (MATLOVIČOVÁ, K. *et al.* 2012).

Conclusions

As a conclusion, it can be stated that in the peripheral territories, the most significant features are the change, the dynamic transformation and consistency. Because of the non-homogenous nature of the change, after the years of communism, there were regions in each of these countries which once were about to be prosperous, but did not succeed. It can be observed especially in the structural crisis-stricken areas and also in the converging peripherals (primarily along the Western border, in the capital and in the main cities of the agglomerating, suburbanizing areas).

However, some of the peripheral areas are traditionally backward ones (mainly the eastern border regions and the so called internal peripherals), which has a convergence that is still not detected. The regional problems and the socio-economic symptoms overlap each other in many cases and they show a number of common elements in the Central European countries.

Although with different emphasis, the evolution of regional inequalities, the question of increasing polarization in the future, the exploration of peripheral territories' processes and in particular to outline the response capabilities of the regional policy in all of these countries are present in this research. It is mainly due to the distribution of the EU's regional development funds and the consumption which serve the regional cohesion. The analysis of the summarized processes and the detailed methodological problems submitted in the present study will be the definite object of further studies.

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